Oracle® Cloud

What's New for Oracle Integration Generation 2

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August 2024

What's New for Oracle Integration

Learn about the new and changed features of Oracle Integration.

> **Notes:**
>
> - Starting in June 2020, the minimum Oracle Integration version required for each new feature is listed in the component tables. See Why Don't I See the Latest Changes?.
> - Learn about new and changed endpoints for the Oracle Integration REST API. See REST API for Oracle Integration.
> - Learn about changes in the latest version, Oracle Integration 3. See What's New for Oracle Integration 3.

Topics:

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August 2024

Common Features

Feature	Description	Minimum Version Required
New options for Process upgrade	There following new options are available when upgrading Process to Oracle Integration 3: • There is now an option to **Ignore active instances and proceed with upgrade**. If you have Process runtime instances, but you don't need them, you can choose to ignore those instances and proceed with upgrade. If you choose to do so, all running and completed Process instances will be lost. See Process Automation Prechecks in *Provisioning and Administering Oracle Integration 3*. • There is now a bulk migration API, which allows you migrate all your Process applications at one time. See Migrate Process Applications to the New Instance in *Provisioning and Administering Oracle Integration 3*.	N/A

Feature	Description	Minimum Version Required
Changes to Upgrade page	The following changes were made to the **Upgrade** page: • There is a new **Unsupported AgentGroup Identifier** precheck. If any of your agent groups have a space in their identifiers, they won't be migrated to Oracle Integration 3. See Connectivity Agent Prechecks in *Provisioning and Administering Oracle Integration 3*. • There is a new **Daily Email Limit** precheck. Oracle Integration 3 can send a limit of 10,000 emails in a rolling 24-hour window, as described in Service Limits. If your deployment needs to send more than that, you can instead use your customer tenancy. See Instance Prechecks in *Provisioning and Administering Oracle Integration 3*. • There is a new **DT API Basic Auth to OAuth action** precheck. If your instance includes integrations that use a REST connection with basic authentication to access design-time built-in APIs, you must change them to use OAuth. See Integrations Prechecks in *Provisioning and Administering Oracle Integration 3*. • There is a new **VBCS** precheck. If you use Visual Builder (VB) with your own Oracle database instance (BYODB), Autonomous Transaction Processing (ATP) must be up and running during upgrade. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*. • The **VB VCN OCID** now appears in the list of IP addresses. See Update Allowlists in *Provisioning and Administering Oracle Integration 3*.	N/A

Process Features

The following table lists the Process features that have been deprecated in August 2024.

Feature	Description	Workaround
Human tasks: Renew	When an expiration on a task is set, the renewal policy allows the expiration date to be extended until it reaches the specified amount of renewals allowed.	Consider setting up a timer boundary on the human task that will recreate a new task for the assignee once expiry is reached.
Message throw	A message throw event is used to send data to and starts another process or external service.	Use the Send activity instead to start another process asynchronously. Use the Integration or Service Activity to communicate with an external service.
Message catch (intermediate event)	A message catch event is used to receive data from another process or external service.	Use the Receive activity instead to receive data from another process or external service.
Message end	Message end events are used to send messages when the process reaches an end event.	Use the Send activity right before a None End event to notify another process of completion. Use an Integration/Service task right before a None End event to notify an external service of completion. Use async delayed response semantics (communicate process completion via Send/Service Task Activity) to address use cases previously met with a synchronous message end type.
Insight activity	Browse Oracle Integration Generation 2 Insight models and send data to them.	Oracle Process Automation can push data to external monitoring and reporting systems to provide real-time insight into business operations.
Attaching a form to an email notification	Allows a process designer to send a copy of the Human Task form inline or as an attachment in a notification email.	Use email templates to provide approvers with the context they need to make a decision when acting on a task.
Dynamic process call activity	Incorporate a dynamic process within your structured process by using a Dynamic Process element	If you need to call a dynamic process from a structured process you can use a REST connector that points to an instances REST endpoint.
Business parameters	Cross-process variables (only for structured processes) with values that can be modified without redeploying the application	You can replace business parameters with data objects, but the data objects will behave like regular variables without any way to update values after activation. Alternatively, you can implement a Decision or an Integration serving business parameter values that can be shared across process applications and updated independently.

Feature	Description	Workaround
Event gateway	Event gateways allow you to make a decision based on events. The process will wait at the gateway until one event is triggered.	Use a timer boundary over a Receive activity to simulate situations where you need to wait for a message to arrive or a timer to expire. If the message is not received within a certain amount of time the timer boundary will fire.
Spaces	Control access to applications via spaces, which allow certain users to access to a subset of applications	Use Oracle Integration projects in Oracle Integration Generation 2 to enforce access control rules.
Dynamic process REST sentries	Drive conditional triggers with REST calls	Use a combination of data sentries, event sentries, and REST calls to achieve a similar outcome.
Dynamic process DMN sentries	Drive conditional triggers with DMN calls	Use a combination of data sentries, event sentries, and DMN calls to achieve a similar outcome.
Application, process, and task documentation and reports	Rich text editor available to process designers at the application, process, and task levels. Used to document processes and contained activities. Also used to generate process documentation reports.	Oracle Process Automation supports a description field at these levels. Short definitions can be stored in this description field.

Visual Builder Features

This release of Visual Builder uses Oracle JET 16.1.*x* libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 24.10 Visual Builder Runtime, to take advantage of the full spectrum of 24.10 features. JET 16.1.*x* is primarily a bug fix release, but it does include some visual and behavior changes. To see a list of what's new in JET 16.1.*x*, go to the JET Release Notes and select **v16.1.0**.

You can upgrade to the latest JET and Visual Builder Runtime versions from your visual application's Settings editor. See Manage Runtime Dependencies for Visual Applications.

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Dark theme for web apps	When you create a *new* web app using the default template, you can now customize the app's theme to show components against a dark background, instead of the default light background with dark text. You can even let your users choose between a Light and Dark theme. CSS variables to override the default Redwood look and feel are still supported—only now you make those overrides in the CSS files specific to the Light and Dark theme. See Customize a Web App's Appearance.	n/a
Opt-in for Core Pack components	Core Pack components, available under the **Early Access** category in the Components palette since 24.04, now require an opt-in if you want to use them in your application's pages. If you use these Core Pack components in your app, take note that Core Pack does not support theming at this time. The only way to theme your app is to roll back Core Pack usages in your app to Legacy components and re-implement your application. If you don't ever plan to theme your app, you can choose to enable Core Pack components in the Components palette for use in your app's pages. See Opt In to JET Core Pack Components.	n/a
Business rules	Business rules, which control the logic that determines what's displayed on the page at runtime, are now available for all extensions as well as visual applications. See Use Business Rules With Your Rule Sets.	n/a
Enhanced variable and type creation	We've optimized the process of creating multiple variables and types, so each variable or type is generated with a default name. You'd then use the Properties pane to update the name and other properties as needed. See Create Variables and Create Types. With this update, the ability to create a custom type that defines a list of enumeration values is deprecated. Instead you can create a variable, then use the **Subtype** option in the variable's **Design Time** tab to define your enumerated list. See Create Variables.	n/a

Feature	Description	Minimum Version Required
Enhancements for JavaScript action chains	• Actions within custom code You can now drop an action between single line and block statements in custom code, functionality that can improve productivity. Additionally, you can also take advantage of code completion in a Code action's Properties pane. See Add a Code Action. • Shorthand syntax for variables, constants, functions in current scope When you create a new JavaScript action chain or add actions to an existing chain, the underlying code now uses shorthand syntax, by default, to retrieve the value of variables, constants, and functions defined in the current scope. So for a page, where previously the syntax was `$page.variables.myvar` or `$page.functions.myfunc`, you'll now see `$variables.myvar` or `$functions.myfunc` instead in your action chain. • Duplicate option in JS action chains You can now duplicate an action, or a code block within an If, Switch, or Run in Parallel action. See Create Action Chains in Design Mode as well as Add an If Action, Add a Switch Action, and Add a Run In Parallel Action. **Note:** The option to toggle between JSON and JavaScript action chains in the Action Chains tab is no longer available. This change does not impact existing JSON action chains, which you can continue to edit—but all new action chains default to JavaScript. Further, you can no longer create new tests for JSON action chains, though	n/a

Feature	Description	Minimum Version Required
	existing tests will continue to run.	
New `dirtyDataStatus` property in `vbBeforeExit` payload	If you track changes in a variable's state to detect unsaved changes, you can now use the `vbBeforeExit` event listener's `dirtyDataStatus` payload (instead of the Get Dirty Data Status action) to check whether navigating away from a page will result in the tracked variable losing its data. See Add a Get Dirty Data Status Action.	n/a
Dependent fragment property for display	When curating fragment properties for display in the Properties pane, you can now use an item's **Dependent On** field in the Design Time tab to specify other items that this item depends on for its data. This way, when the fragment is used on a page or container, the dependent item won't show in the Properties pane until the other items have their value. See Section Fragment Properties for Display in the Properties Pane.	n/a
Upgrade support for imported resources	Resources that are using an older set of runtime dependencies when your app is imported can now be made compatible with the app's current runtime version. See Upgrade Imported Resources.	n/a
Option to select existing field for M:1 and 1:1 business object relationships	A new and improved editor is now available when you create many-to-one and one-to-one relationships between business objects. Besides other improvements, the editor gives you the option of creating a new field as the referenced key (default), or selecting an existing field of the correct type. See Create a Many-To-One or One-To-One Relationship. Many-to-many relationships continue to use the existing editor, now without the ability to change cardinality. A new **+ Many to Many Relationship** option is also added to a business object diagram's context menu.	n/a

Feature	Description	Minimum Version Required
Usability improvements	• Application Name field renamed The **Application ID** specified when you create or duplicate an application is now **Application Name**. Also, what used to be **Application Name** is now **Application Display Name**. With this change, the app's display name, name, and ID are displayed on the Settings editor, so you can pick the correct value when building REST URLs for cURL commands. See Create a New Visual Application, Create a Copy of an Application, and Manage Visual Application Settings. • New Select Variable icon in the Properties pane The Select Variable icon in the Properties pane has been changed to better represent the variable picker. You'd now click (x) (instead of ▾ previously) to select a variable. • Listener shortcut on the Events editor You can now use a shortcut to create a listener when you're working with custom events in the Events editor, instead of switching to the Events Listener editor. Simply select the new **Create Event Listener** option in an event's right-click menu to create a new event listener in the same scope as the event. See Create Event Listeners for Events.	n/a

June 2024

Common Features

Feature	Description	Minimum Version Required
Additional instances are ready for upgrade	The following instances can now be upgraded to Oracle Integration 3: If you're actively using Process in a production environment, Oracle can't automatically migrate you to Oracle Process Automation during the upgrade to Oracle Integration 3, but you can now perform the migration manually so that you can upgrade to Oracle Integration 3. See Migrate Actively Used Process Applications to Oracle Integration 3 in *Provisioning and Administering Oracle Integration 3*.	N/A

Feature	Description	Minimum Version Required
Changes to Upgrade page	The following changes were made to the **Upgrade** page: • The **Legacy Stage File** precheck has been removed because the upgrade automatically updates the stage file action in your integrations. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*.	N/A

April 2024

Common Features

Feature	Description	Minimum Version Required
TLS cipher rotation update	Oracle Integration has rotated the following TLS ciphers: • TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256 • TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384 • TLS_DHE_RSA_WITH_AES_256_CBC_SHA256 • TLS_DHE_RSA_WITH_AES_128_CBC_SHA256 • TLS_DHE_RSA_WITH_AES_128_GCM_SHA256 Applications using the above TLS ciphers can no longer communicate with Oracle Integration. If your application is configured to use one of the above rotated TLS ciphers, replace it with one of the following supported TLS ciphers: • TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256 • TLS_DHE_RSA_WITH_AES_256_GCM_SHA384 • TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384 See Inbound and Outbound Endpoints and Transport Layer Security Server Version Support in *Using Integrations in Oracle Integration Generation 2*.	April 2024

Feature	Description	Minimum Version Required
Additional instances are ready for upgrade	The following instances can now be upgraded to Oracle Integration 3: If you used Process in Oracle Integration Generation 2 but have no active usage, Oracle Process Automation will be provisioned as part of the upgrade to Oracle Integration 3. Process applications will be migrated on a best-effort basis. **Note:** If you have Process usage in production, wait until Oracle provides further guidance. You must complete some steps before the upgrade. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*. See Upgrade from Oracle Integration Generation 2 to Oracle Integration 3 in *Provisioning and Administering Oracle Integration 3*.	N/A

Feature	Description	Minimum Version Required
Changes to Upgrade page	The following changes were made to the **Upgrade** page: • The **Identity Certificates** precheck now shows the names of the identity certificates and the connections that use them. • The Connectivity Agent Status table includes a new **Allowlist status** column, which shows whether the connectivity agent's allowlist has been updated to configure connectivity from the connectivity agent to Oracle Identity Cloud Service (IDCS) and Oracle Integration. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*.	N/A

February 2024

Common Features

Feature	Description	Minimum Version Required
Additional instances are ready for upgrade	The following instances can now be upgraded to Oracle Integration 3: • Instances that use allowlists. You must complete some steps before the upgrade. See Update Allowlists and Complete Pre-Upgrade Tasks in *Provisioning and Administering Oracle Integration 3*. • If you use the Processes capability but aren't using it in production, you have the option to skip process applications during upgrade. This approach is appropriate if you've tried Processes in non-production Oracle Integration Generation 2 environments but don't need or want to retain it in Oracle Integration 3. **Note:** – If you have process in production, wait until Processes upgrade is supported. – Importing process applications created in Oracle Integration Generation 2 into Oracle Integration 3 isn't currently supported. You must complete some steps before the upgrade. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*. See Upgrade from Oracle Integration Generation 2 to Oracle Integration 3 in *Provisioning and Administering Oracle Integration 3*.	N/A

Feature	Description	Minimum Version Required
Upgrade to Oracle Integration 3	• **Automatic KeyStore conversion** If your agents use JDK 17, your JKS KeyStore will automatically be converted to the PKCS12 KeyStore during upgrade. Alternatively, you can still convert the JKS KeyStore to the PKCS12 KeyStore yourself. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*. • **Copy allowlist IP addresses** The upgrade page now includes buttons to easily copy the allowlist IP addresses. See Schedule the Upgrade and Configure Settings in *Provisioning and Administering Oracle Integration 3*.	N/A

Integration and Connectivity Features

Feature	Description	Minimum Version Required
SAP Commerce Cloud (Hybris) Adapter - Certification update	The Shopify Adapter has been certified on Shopify version 2211. See Connectivity Certification Matrix.	24.1.2
Shopify Adapter - Certification update	The Shopify Adapter has been certified on versions 2023-07 and 2023-10. See Connectivity Certification Matrix.	24.1.2

Visual Builder Features

This release of Visual Builder uses Oracle JET 15.1.*x* libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 24.04 Visual Builder Runtime, to take advantage of the full spectrum of 24.04 features. To see a list of what's new in JET 15.1.x, go to the JET Release Notes and select **v15.1.0**.

You can upgrade to the latest JET and Visual Builder Runtime versions from your visual application's Settings editor. See Manage Runtime Dependencies for Visual Applications.

Some new Visual Builder features can’t be used until you’ve upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Dark theme	You can now personalize the Designer's theme to switch from the default light theme to a dark theme more suited for low-light conditions. You can also sync your environment's color palette with your OS settings. See Tour the Designer. With support for a dark theme, favicons can now be set independently for light and dark themes for each of your applications. You can set the favicon to any image in the image gallery by simply changing the favicon in the application's Settings editor. See Manage App Settings.	n/a
Highlighting of default flow/page in the navigator	The default page and flow within your app are now badged as `default` in the navigator for easier identification. This way, you can quickly identify the entry points for your app without having to check artifact configuration. See How are Applications Structured?	n/a
Page header fragment	New pages in web applications now include a `page-header` fragment to hold page-specific boilerplate content that appears above the page's visual stripe. While you won't work with the fragment directly, you can customize the fragment to create a custom page-level header. See Customize Page Headers. **Note:** Pages created with previous versions will not be affected. These pages will maintain their original structure even after your app is upgraded to 24.04.	n/a

Feature	Description	Minimum Version Required
Fragments	• Fragments as sections for dynamic containers It's now possible to add fragments as sections in a dynamic container. By default, all fragments tagged as `pageContent` become available for selection when you add a section to a dynamic container. You also have the option of indicating a particular fragment as preferred content for all sections in the container. See Add Fragments as Sections in a Dynamic Container. • InstanceFactory types for fragments Types from code, known as *InstanceFactory* types, can now be defined in fragments, making these types accessible to fragments. As with all fragment artifacts, these types are local to the fragment. See Create a Type From Code. • New properties for fragment slots The Fragment Slot component now provides several new properties to help you configure a named slot, including a **Preferred Content** option that indicates the type of content the slot can contain. See Add Slots to a Fragment. • Drag and drop for fragment slots Fragment consumers can now drag and drop their component of choice onto a fragment slot in the fragment's Properties pane, in addition to the **Insert Component** option. See Add Slots to a Fragment. • Improvements on customizing fragment variable display in the Properties pane – If your fragment variable uses an array of primitives (for example, `string[]`), you can now edit the fragment's JSON to display a drop-down menu showing all values for each item in the array. See **Subtypes and valueOptions for arrays** in Customize How a Fragment Variable is Displayed in the Properties Pane. – When an object-type input parameter in a fragment is customized to display an endpoint picker, fragment users can use the Configure Endpoint quick start to select a suitable endpoint and choose its URI parameters. See Customize How a Fragment Variable is Displayed in the Properties Pane. – When sectioning fragment properties, you can now use a **Label** field to provide a user-friendly name for the fragment variable. This is particularly useful for dynamic components with data that might take a while to display in the Page Designer. See Section Fragment Properties for Display in the Properties Pane.	n/a

Feature	Description	Minimum Version Required
Buffering Data Provider type	Oracle JET's Buffering Data Provider, which temporarily stores data changes in a buffer until they are ready to be committed to the data source, is now available as a type out of the box in Visual Builder. You can create variables based on the Buffering Data Provider type and bind them to tables, list views, or any component that accepts a data provider. See Create Variables to Temporarily Store Data in a Buffer.	n/a
Audit improvements	We've made several improvements, including performance updates, to enhance the auditing experience, key among them being: • Navigator badge to indicate audit error Audit errors are now badged in the Navigator to indicate that action must be taken to resolve the issue. The badge persists until the error is fixed or until the session ends. • New **Copy to Clipboard** option A new **Copy to Clipboard** option in the right-click menu allows you to copy one or all audit issues to your clipboard for further processing. See Audit Application Code.	n/a
Build-related logs	You can now troubleshoot build-related issues that prevent your app from being staged or published. Build logs are available in a new **Logs** tab at the bottom of your browser. See Troubleshoot Build Issues.	n/a
Prerendered pages for improved SEO	In an effort to improve search engine optimization (SEO), Visual Builder now prerenders and caches your application's pages, returning a fully rendered page to web crawlers for indexing. To further improve response times, use the `vb-prerender-cache-warm` Grunt task to warm the cache for URLs listed in your application's sitemap, so web crawlers always get the fastest possible response when requesting those URLs. See Optimize Your App for Search Engines.	n/a

Feature	Description	Minimum Version Required
Page Designer improvements	• Core Pack in Components palette The next generation of Oracle JET components, known as Core Pack components, are now available in the Components palette as part of the **Early Access** category. These components, written entirely using the VComponent API and the JET Virtual DOM architecture, are available as a completely new set of components, so you can use Core Pack and legacy components side by side in your application. Core Pack components provide improved rendering performance over legacy components. See Add Components to Pages. • Page input parameters from parent flows When input parameters for a page are defined beyond its current scope (say, at the app or flow level), those parameters are now listed in the Page Input Parameters dialog, allowing you to readily pass the input parameter from parent flows and pages. See Enable Variables as Input Parameters. • Live/Design toggle change To switch between Live and Design modes using the Ctrl key (Cmd on Mac), the cursor must now be on the canvas. This way, the mode won't switch when the canvas is not in focus. Releasing the key to switch the toggle back works anywhere. See Use the Page Designer.	n/a
Option to reopen closed tabs	To reopen recently closed tabs, you can now simply right-click an empty space on the tab bar in the Page Designer and select **Reopen Closed Tab**—until you get to the tab you want to reopen. See Tour the Designer.	n/a
Automatic endpoint selection in collection quick starts	When using a business object or a service with expected endpoints, Visual Builder now automatically selects the correct endpoint in the Add Create Page, Add Edit Page, and Add Detail Page quick starts. You only need to select the fields you want to display in your pages. See Use the Create Page Quick Start, Use the Add Edit Page Quick Start, and Use the Add Detail Page Quick Start.	n/a

Feature	Description	Minimum Version Required
Event enhancements	• Event editor updates to improve developer productivity We've reworked how new action chains are generated when you create a listener for an event. Previously, you would use several clicks to create a new action chain at the desired scope with a particular name in the Create Event Listener wizard. Now you simply click the **Create *{scope}* Action Chain** option to generate an action chain with a name in the format ***{event/varId}*ChangeListener**. See Create Event Listeners for Events. • New behavior type for custom events The `transform` behavior type for custom events is deprecated and replaced by the new `tranformPayload` behavior type for *new* event listeners. The change does not impact existing apps with events configured to use the `transform` type, but the new `tranformPayload` type addresses issues with invoking event listeners in the correct order. You are, therefore, encouraged to switch to the new behavior type for your existing apps. See Choose How Custom Events Call Event Listeners.	n/a

Feature	Description	Minimum Version Required
JavaScript action chain enhancements	• **Actions** tab renamed The **Actions** tab is now the **Action Chains** tab. • New options for local functions You can now *convert* a local function to an action chain so it can be used by other action chains. Simply right-click the local function and select the new **Convert Function to Chain** option. It's also possible to *create* a local function from an action on the canvas. Just drag an action on the canvas onto the **Create Function** button, or onto the green line that appears before or after a local function. See Design Editor. • Summary button to simplify action chain view You can now visually simplify your view of an action chain by hovering over the canvas's upper-left corner and clicking the **Summary** button. The **Summary** button hides the input parameter details of each action (except for the Assign Variable and Reset Variables actions). Click the **Full** button to switch back to the complete view. See Design Editor. • Simplified display for action parameters We've simplified and enhanced how parameters display in different actions. Parameters displayed in actions such as Open URL, Call REST, and Fire Data Provider Event are now grouped. Also, the **Store Result In** variable has been added to the header to make it more readable. • Changes to the Assign Variable action – The Assign Variable action can now be used to create a local variable, by adding the action and using the Properties pane to define it. – Consecutive Assign Variable actions are now consolidated into a single action. See Add an Assign Variable Action. • Support to drag and drop an action into an else branch You can now drag and drop an action into an `else` branch on the canvas.	n/a

Feature	Description	Minimum Version Required
Business objects	• UI changes for business objects based on your own schema When working with business objects that use your own schema, you'll notice some UI changes, primarily when adding or editing a business object's fields. See Create a Business Object Based on a DB Table or View and Add Fields to a Business Object Based on a DB Table or View. • Improved error handling for business object diagrams When business objects and their relationships don't display on the Diagram canvas because of syntax errors, the editor now displays an error message and allows you to edit the JSON source file (`diagram.json`) to fix the error.	n/a
Support for OCI Process Automation	Oracle Cloud Infrastructure Process Automation, a service that quickly automates business approval workflows, can now be integrated in Visual Builder. To leverage this functionality in your application, create an OCI Process Automation backend, then create service connections for the REST APIs you want to use. See Connect to Oracle Cloud Infrastructure Process Automation APIs.	n/a

December 2023

Common Features

Feature	Description	Minimum Version Required
Additional instances are ready for upgrade	Instances that use allowlists can now be upgraded to Oracle Integration 3. See Upgrade from Oracle Integration Generation 2 to Oracle Integration 3 in *Provisioning and Administering Oracle Integration 3*.	N/A

Feature	Description	Minimum Version Required
Upgrade to Oracle Integration 3	Changes to **Upgrade** page: • The **Stage Action** eligibility check was added. If your instance includes integrations that use stage action, the instance can't be upgraded yet. Wait until Oracle starts upgrades for this capability. • The **FTP Connection** eligibility check was added. In Oracle Integration 3, the FTP adapter is supported only as an invoke connection. If your instance includes an FTP trigger and invoke connection, redesign it as only an invoke connection. See Create a Connection in *Using the FTP Adapter with Oracle Integration 3*. • The upgrade eligibility check table now includes new columns. The **Owner** column shows who is responsible for managing the condition. The **Due Date** column shows the date by which the condition should be met. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*. • You can now see detailed upgrade eligibility status for your connectivity agents in the **Connectivity Agent Status** table. See Schedule the Upgrade and Configure Settings in *Provisioning and Administering Oracle Integration 3*.	N/A

Process Features

Feature	Description	Minimum Version Required
Deprecation of Oracle Process Mobile App	The Oracle Process Mobile app is being deprecated and will not be available in Oracle Integration 3. Alternatively, you can either use your browser when interacting with Process via your mobile device or build a progressive web application for mobile devices with Visual Builder.	N/A

Feature	Description	Minimum Version Required
Process features in Visual Builder to be deprecated	The following Process related features will be deprecated in Visual Builder: • Register deployed processes • Use of Process Actions in Action Chains • Support for Process code snippets • Process related Quick Starts Although you can still use these features in Oracle Integration Generation 2, but as you plan the transition to Oracle Integration 3 you should leverage service connections instead to interact with Process. See this blog for more details.	N/A
Document features to be deprecated	The following document management features will be deprecated: • Document and Folder initiated processes • Ability to Manage Folders/Documents from process applications • Upload and view documents stored in Oracle Content Management through human tasks. You can continue to use these features in Oracle Integration Generation 2. However, note that their availability will be based on Oracle's plans for the Oracle Content Management service.	N/A

November 2023

Common Features

Feature	Description	Minimum Version Required
Upgrade to Oracle Integration 3	Instances that use Visual Builder can now be upgraded to Oracle Integration 3. After the upgrade, you'll need to complete the following post-upgrade task: Set the IAM Policy for Managing the Visual Builder Instance.	N/A

October 2023

Common Features

Feature	Description	Minimum Version Required
JDK 8 and 11 Deprecation	To comply with Oracle security standards, JDK 8 and JDK 11 are being deprecated for use with the on-premises connectivity agent. You must upgrade to JDK 17 as soon as possible and convert the JKS keystore to the PKCS12 keystore at the same time. See Complete Upgrade Prerequisites in *Provisioning and Administering Oracle Integration 3*. Note the following key deadlines: • Support for the connectivity agent on JDK 8 and JDK 11 ends on December 31, 2023. If you continue to use either version, you no longer receive quarterly updates for the connectivity agent and support for any submitted service requests that involve the connectivity agent. • Some services that depend on the connectivity agent may not function properly after January 15, 2024. This means that connectivity agent traffic on JDK 8 and JDK 11 may be blocked by Oracle. The new announcements banner on the Home page also provides information about the JDK 8 and 11 deprecation. **Note**: The announcement banner does *not* disappear after upgrading to JDK 17 and the PKCS12 keystore. To dismiss the banner: 1. In the navigation pane, click **Settings**, then **Upgrade**. 2. Run the upgrade eligibility program regardless of whether you are preparing to upgrade. The banner goes away shortly.	N/A
Upgrade to Oracle Integration 3	The **Basic routing integrations with duplicate endpoint names** eligibility check was added. You can view steps to take in Basic Routing integrations with duplicate endpoint names.	N/A

August 2023

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Shopify Adapter - certification updates	The Shopify Adapter has been certified on Shopify versions 23.01, 23.04, and 23.07. See Connectivity Certification Matrix.	23.3.2
SAP Ariba Adapter - Integration toolkit (ITK) deprecation	The SAP Ariba integration toolkit (ITK) has been deprecated. ITK has been replaced with the term task/event in the documentation. In addition, the **Ariba ITK Authentication Policy** field has been renamed to **Shared Secret-based Authentication** on the Connections page. See SAP Ariba Adapter Capabilities in *Using the SAP Ariba Adapter with Oracle Integration Generation 2*.	23.3.2

Visual Builder Features

This release of Visual Builder uses Oracle JET 14.1.*x* libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 23.10 Visual Builder Runtime, to take advantage of the full spectrum of 23.10 features. JET 14.1.x is primarily a bug fix release, so you may want to refer to the JET 14.0.0 release notes for the major updates that are still relevant to JET 14.1.x. To see a list of what's new in JET 14.1.x, go to the JET Release Notes and select **v14.1.0**. To see what's new in JET 14.0.0, select **v14.0.0**.

You can upgrade to the latest JET and Visual Builder Runtime versions from your visual application's Settings editor. See Manage Runtime Dependencies for Visual Applications.

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Changed upgrade policy	Our upgrade policy has been changed to support applications built on the current runtime version as well as the *three* previous versions. Previously, it was the current runtime version and the *two* previous versions. See Upgrade Policy.	23.10

Feature	Description	Minimum Version Required
JavaScript action chains	You can now create action chains in JavaScript. JS action chains allow you to debug them using the browser's developer tools; they are also easier to manage through Git actions. A Design view that reflects code structure helps you build functionality by dragging and dropping actions; you can also choose to work entirely in Code view. With this update, all *new* action chains (including those created by Quick Starts) will default to JavaScript—though you can still create JSON action chains. Existing JSON action chains will continue to work as before. As a part of this update, you'll notice a few usability improvements: • List view for Actions palette The Actions palette in the Action Chains editor now has a new **List** view, in addition to the default **Grid** view, allowing you to view available actions alphabetically in each category. Customizing the view saves your palette preferences separately for each action chain. • "Surround With" options When working with an action in Diagram mode, you can now use the **Surround With** options in an action's right-click menu to wrap the action in an If or Try-Catch action. • Code insights When working with an action in Code mode, you can now use Code Insight to quickly reference scoped artifacts and local variables. Simply enter `$` to bring up the insights pop-up menu, then make your auto-fill selection. See Work with JavaScript Action Chains.	23.10

Feature	Description	Minimum Version Required
Mobile apps deprecated	Mobile apps have been deprecated in favor of Progressive Web Apps (PWAs)—although mobile functionality won't be entirely removed from the product until July 2024. Starting with 23.10, you can no longer create a new mobile app, but you can import an existing mobile app and deploy it as a PWA for use on mobile devices. Functionality relating to hybrid mobile applications (deprecated since April 2021) has also been removed from the product. This means that the use of build configurations to build native `.ipa` and `.apk` files for distribution to iOS and Android devices—as well as the Cordova custom plug-in option—are no longer available. You can no longer create new hybrid mobile apps or new build profiles for existing apps; build configurations for existing apps will be ignored. For apps that target mobile devices, enabling PWA support is the recommended approach for distribution. See Run Mobile Applications as PWAs. You can continue to use your existing mobile apps until July 2024 when mobile apps (including PWA-enabled ones) reach End of Life (EOL). To be able to use your mobile PWAs beyond July 2024, we strongly urge you to transition your mobile app as a web app and deploy it as a PWA.	23.10
Improved diagnostics for IDCS client apps	We've made it easier for you to identify and troubleshoot issues with your visual application's client apps created in IDCS. A new **IDCS Details** tab, available under **Application Profiles** in the app-level Settings editor, provides details to help you inspect IDCS details and identify any configuration issues. See How Do I View Details of Client App in IDCS?	23.10
Variable enhancements	• Variable tracking to detect unsaved changes You can now track a variable's state to detect unsaved changes in your app. Tracking a variable marks it as "dirty" any time its value changes. You can then query for dirty variables using a new JavaScript-based Get Dirty Data Status action. If you don't want a change to be considered dirty, you can reset variable state using the Reset Dirty Data Status action (also based on JavaScript). See Track Variables to Detect Unsaved Changes. • Filter for input parameters A new **Show Input Parameters only** option on the Variables editor now allows you to filter variables used as input parameters. See Enable Variables as Input Parameters.	23.10

Feature	Description	Minimum Version Required
Fragment enhancements	• Slots in fragments A new Fragment Slot component, available in the Components palette, now allows you to add slots to a fragment where users can drop in their own content. A fragment with slots, when used on a page, reveals its slots on the canvas, the page structure, and as part of the fragment's properties. Fragment slots are similar to component slots and users work with them in much the same way. See Add Slots to a Fragment. • Autowiring of fragment variables To simplify the process of creating pages with fragments, we've added a new property for fragment variables enabled as input parameters to be automatically created on the page where the fragment is used and wired back to the fragment variable's value. See Automatically Create and Wire a Fragment Variable on Its Container. • Design Time support to display an enhanced UI for fragment input parameters A new Design Time tab in a fragment variable or constant's Properties pane now allows you to customize the UI component shown in the Properties pane when the fragment is selected on a page or container. Previously, you had to do this by editing the JSON metadata. See Customize How a Fragment Variable is Displayed in the Properties Pane. • Support to display fragment input parameters in sections You can now group a fragment's input parameters and dynamic components by sections using a new Design Time editor that appears in the fragment's toolbar. Use this option to display a fragment's most important properties in the Properties pane when the fragment is selected on a page or container. See Section Fragment Properties for Display in the Properties Pane. If the fragment is used as a page template to create a page, the sectioned view also shows on the page's Properties pane and the Structure view, with the fragment considered the root element instead of the page. See Create Pages From Fragments.	23.10

Feature	Description	Minimum Version Required
Service/backend enhancements	• Backends mandatory for new service connections If you're looking to create a *new* service connection by providing a specification document or an endpoint URL, you now need an existing backend to be able to create the service connection. If a backend doesn't exist, you'll be prompted to create one as part of the Create Service Connection workflow. With this update, all new service connections will require a backend. Making backends mandatory simplifies the task of managing server connection attributes, especially credentials, across environments. Service connections created previously without a backend will continue to work and their configuration settings can be changed as well. • Default service name change New service connections no longer include a default name. You can now specify your own service name for easier identification. See Create a Service Connection from the Catalog, Create a Service Connection from a Service Specification, and Create a Service Connection from an Endpoint.	23.10
Support for pinning columns in dynamic tables	You can now "freeze" table columns in dynamic tables, so that a column will remain visible when horizontally scrolling within a table. See Configure How Columns Render in a Dynamic Table's Layout.	23.10
Other enhancements	We've made several updates (including performance enhancements) to improve your design experience. Here are the key updates: • Multiple undo and redo options in the Designer When working in the Designer, you can now undo and redo multiple actions at one shot; previously, you could undo and redo only your most recent change. See Tour the Designer. • Audit improvements As a part of performance improvements to enhance application auditing, a new **Opened Artifacts** setting only audits artifacts that are currently open. To audit the entire application, change this setting to **All Artifacts**. Further, results in the Audits pane now show in a tree view, instead of a column view. With this change, issues are grouped by artifact, helping you view *all* issues in a particular artifact. See Audit Application Code.	23.10

June 2023

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Deprecation of JDK versions 8 and 11 with the connectivity agent	JDK versions 8 and 11 have been deprecated for use with the Oracle Integration Generation 2 connectivity agent. Support for both versions will be provided for a limited time. Oracle recommends that you upgrade to JDK 17. This version is required for upgrading to Oracle Integration 3. Instances using JDK 8 or 11 for the connectivity agent are not eligible for upgrading to Oracle Integration 3. See System Requirements in *Using Integrations in Oracle Integration Generation 2*.	N/A
Automation Anywhere Adapter and UiPath Robotic Process Automation Adapter deprecation	The Automation Anywhere Adapter and UiPath Robotic Process Automation Adapter have been deprecated in Oracle Integration Generation 2. Neither adapter is available in Oracle Integration 3.	N/A

May 2023

Common Features

Feature	Description	Minimum Version Required
REST APIs	A new API is provided to register sites for cross-origin resource sharing when using the Oracle Integration APIs. See Register sites for cross-origin resource sharing (CORS) processing.	23.2.2

Integration and Connectivity Features

Feature	Description	Minimum Version Required
SAP S/4HANA Cloud Adapter - Version 2302 support.	SAP S/4HANA Cloud Adapter is certified to work with Version 2302. See the Connectivity Certification Matrix.	23.2.2

Feature	Description	Minimum Version Required
JDK 17 support	The connectivity agent has been certified to support JDK version 17. Oracle recommends that you upgrade to version 17. Using the connectivity agent, you can create hybrid integrations and exchange messages between applications in private or on-premises networks and Oracle Integration. **Note**: JDK 17 is the mandatory version required for upgrading the agent from Oracle Integration Generation 2 to Oracle Integration 3. This requirement is part of the upgrade pre-check tests. See System Requirements in *Using Integrations in Oracle Integration Generation 2*.	23.2.2

File Server

Feature	Description	Minimum Version Required
Increase in maximum concurrent connections	For File Server, the maximum number of concurrent connections per service instance has increased from 20 to 50.	23.2.2

April 2023

Common Features

Feature	Description	Minimum Version Required
Additional instances are ready for upgrade	**Upgrades for additional adapters** Instances containing integrations that use the following adapters can now be upgraded to Oracle Integration 3: • Oracle Intelligent Advisor Adapter • Oracle Intelligent Track and Trace Adapter • AS2 Adapter If your connections use identity certificates, you must complete some steps before and after the upgrade. See below. See Upgrade from Oracle Integration Generation 2 to Oracle Integration 3 in *Provisioning and Administering Oracle Integration 3*. **Upgrades for instances with identity certificates** Instances with identity certificates cannot be upgraded to Oracle Integration Generation 2. However, a workaround is now available if you'd like to upgrade soon: Delete the identity certificate before the upgrade and then upload a new identity certificate after the upgrade. Identity certificates establish client identity during two-way SSL communication. You can create connections that use identity certificates based on the AS2 Adapter and the REST Adapter. You must complete some tasks before and after the upgrade. See Update Allowlists and Complete Pre-Upgrade Tasks and Complete the Post-Upgrade Tasks in *Provisioning and Administering Oracle Integration 3*.	Latest version

February 2023

Common Features

Feature	Description	Minimum Version Required
Additional instances are ready for upgrade	The following instances can now be upgraded to Oracle Integration 3: • Instances that use B2B for Oracle Integration. You must complete some steps before the upgrade, and be aware that your data retention settings impact whether you can upgrade. See Considerations for Capabilities in *Provisioning and Administering Oracle Integration 3*. • Instances that use the connectivity agent. You must complete some steps before the upgrade. See Considerations for Capabilities in *Provisioning and Administering Oracle Integration 3*. • Instances that use the Oracle Unity Adapter. See Upgrade from Oracle Integration Generation 2 to Oracle Integration 3 in *Provisioning and Administering Oracle Integration 3*.	Latest version
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Integrate Oracle Fusion Cloud SCM Master Data with Oracle MICROS Inventory Management • Integrate Oracle MICROS Inventory Management with Oracle Fusion Cloud SCM for Order Processing • Integrate Oracle Fusion Cloud HCM with Oracle MICROS Labor Management for Employee Creation • Integrate Oracle MICROS Labor Management with Oracle Fusion Cloud HCM Time and Labor for Payroll Processing See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Oracle WebLogic JMS Adapter - Filter out weighted distributed queues	The Oracle WebLogic JMS Adapter doesn't support weighted distributed queues. Oracle Integration filters out weighted distributed queues in order to ensure successful agent connectivity with the on-premises JMS WebLogic cluster. Oracle recommends that you use uniform distributed queues instead of weighted distributed queues. See Oracle WebLogic JMS Adapter Restrictions in *Using the Oracle WebLogic JMS Adapter with Oracle Integration Generation 2*.	23.1.2
SAP ASE (Sybase) Adapter - Pagination support for invoke connections	SAP ASE (Sybase) Adapter invoke connections now provide support for pagination. Pagination enables you to fetch a large number of results in the SAP ASE (Sybase) database. Pagination helps you to segregate the total number of results. See SAP ASE (Sybase) Adapter Capabilities in *Using the SAP ASE (Sybase) Adapter with Oracle Integration Generation 2*.	23.1.2
Oracle Intelligent Advisor Adapter - Decision services support	You can use the Intelligent Advisor decision service for outbound invokes from Oracle Integration. Intelligent Advisor decision services can be called by the Oracle Intelligent Advisor Adapterr to make decisions and calculations. It processes data through a deployed set of rules and automatically describes the required inputs and the possible outputs using the contract defined for each project. See Oracle Intelligent Advisor Adapter Capabilities in *Using the Oracle Intelligent Advisor Adapter with Oracle Integration Generation 2*.	23.1.2
Workday Adapter - OAuth three-legged integration flow support	The Workday Adapter supports OAuth three-legged integration flows. See Workday Adapter Capabilities in *Using the Workday Adapter with Oracle Integration Generation 2*.	23.1.2
Shopify Adapter - Shopify version support -	The Shopify Adapter is certified on API versions 22.07 and 22.10 of Shopify. See the Connectivity Certification Matrix.	23.1.2
Enforcement of 700 active integrations limit	You can activate up to 700 integrations per instance. When the limit is exceeded, you are prevented from activating additional integrations. See Activate an Integration and View the Dashboard in *Using Integrations in Oracle Integration Generation 2*.	23.1.2

Visual Builder Features

This release of Visual Builder uses Oracle JET 13.1.*x* libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET

version, as well as to the 23.04 Visual Builder Runtime, to take advantage of the full spectrum of 23.04 features. JET 13.1.x is primarily a bug fix release, so you may want to refer to the JET 13.0.0 release notes for the major updates that are still relevant to JET 13.1.x. To see a list of what's new in JET 13.1.x, go to the JET Release Notes and select **v13.1.0**. To see what's new in JET 13.0.0, select **v13.0.0**.

You can upgrade to the latest JET and Visual Builder Runtime versions from your visual application's Settings editor. See Manage Runtime Dependencies for Visual Applications.

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Accessible UI	The Visual Builder Designer, which provides a declarative user interface through pages, wizards, and other browser-based tools to create and modify web applications, is now fully accessible. The new accessibility features help developers with disabilities leverage the productivity of Visual Builder to create apps. See Accessibility Features and Tips for Oracle Integration.	23.04

Feature	Description	Minimum Version Required
Fragment improvements	• Create pages with a fragment's content You can now create pages prepopulated with a fragment's content when the fragment is tagged with the `page` metadata that surfaces it as page-level content. This way, you create pages easily with initial content, both from the Create Page dialog as well as the app-level Flow Diagram. See Create Pages From Fragments and Add a Page in the Flow Diagram. Because this option essentially uses a fragment as a page template, it's also possible to change the page's content at the click of a new **Select Page Template** button. This option allows you to remove everything from the page, including associated files, but keep the same page name. See Change Page Templates. • Write back changes in a variable's value to a fragment's parent container When a fragment variable is marked as an input parameter for a page variable, a new **Write Back to Container** property, available on a fragment variable's Properties pane, allows you to automatically write back changes in the fragment variable's value to the page variable used as an input parameter. This option provides a convenient and powerful alternative to raising custom events that emit to the parent container. See Automatically Write Back a Fragment Variable's Value to Its Container Variable. • Customize a fragment variable's Properties pane You can now customize a fragment variable's Properties pane to suit the UI component that will be used to edit the variable in the Page Designer. Previously, the Properties pane always used text field components for editing the values of fragment variables. See Customize a Fragment Properties Pane. • Suggest a fragment for particular components A new **Implements** setting now allows you to suggest a fragment as preferred content for particular components. For example, if you choose `FoldoutPanelElement`, users working with a foldout layout will see this fragment suggested as content that can be added as a foldout section. See Manage Fragment Settings. With this update, the `listItem` and `foldoutPanel` options are no longer available for the **Used For** setting. • Create a fragment from the Components palette A small but nifty enhancement allows you to create a fragment directly from the Components	23.04

Feature	Description	Minimum Version Required
	Palette, by using the + icon next to the Fragments category. See Create and Add a Fragment to a Page.	
App lifecycle management	We've made it simpler for you to delete several applications, including versions of the same application, all at once. Where previously this involved several steps, all you need to do now is select the applications/versions on the Home page, click a new **Move to trash** button, and confirm deletion. See Delete a Visual Application. Deleted applications are moved to a Soft Deleted status and can be restored within 30 days if they've not been permanently deleted. See Restore a Deleted Application.	23.04
Smart delete	When you delete items such as variables, types, event listeners, and action chains, Visual Builder now provides a "smart delete" functionality that detects if the item is currently used in your app, or if it has related but unused items elsewhere in the app.	23.04
Offline support for PWA-enabled web apps	When you use Grunt build tasks to deploy your applications, offline support for PWA-enabled web apps is now on par with that of mobile PWAs. The Grunt-based `vb-pwa` task, which runs within the `vb-package` task, pre-caches application resources such as pages, CSS, and JavaScript files, so they are all available when a user goes offline. See vb-pwa.	23.04

Feature	Description	Minimum Version Required
Pages based on Redwood templates and patterns	You can now create pages based on Redwood templates and patterns to leverage high-fidelity interactions and responsive performance for your app's pages out of the box. While these templates and patterns are useful in creating pages that provide a consistent user experience across your app, it's just as easy to customize them to suit your business requirements. See Create Pages From Page Template Patterns. It's also possible to change the page's content at the click of a new **Select Page Template** button. This option allows you to remove everything from the page, including associated files, but keep the same page name. See Change Page Templates. **Note:** To work with template patterns, the Redwood components associated with your application must be on 2301 or later. Template patterns are **not** available in version 2210 or earlier.	23.04

Feature	Description	Minimum Version Required
Business object enhancements	• Data type changes for fields You can now change the data type for business object fields—functionality that allows you to use a non-numeric field as the object's primary key field. Previously, you could change data types only when creating business objects from a file. See Change a Field's Data Type. This functionality is also supported for business objects that use your own schema, where creating a field based on a DB column always sets the field's data type to the column's default type. See Change a Data Type of a Field Based on a DB Column. • Custom audit fields It's now possible to use your own fields to audit your business object's history. While this functionality is available for native business objects, it's most useful for business objects that use your own schema when you have existing DB columns that you want to use for auditing. See Set a Field for Auditing. It's also useful for business objects created from a file, when your data file has audit information that you can use to track the object's history, instead of the default audit fields. See Set Audit Fields for an Imported Business Object.	23.04
Service connection enhancements	• New type viewer for service endpoints You can now use a new Type viewer to see the type structure for an Endpoint's request/response. This means that you no longer have to create a web app and use a query string or type from the Endpoints tab in the Page Designer to see the type structure. See Create a Service Connection from an Endpoint. • Audit warning for IP-based service URLs An IP address audit warning is shown for service connections that use IP-based addresses in URLs, as a reminder to use DNS-based addresses instead. See Create a Service Connection from an Endpoint.	23.04

Feature	Description	Minimum Version Required
Other enhancements	We've made several updates (including performance enhancements) to improve your design experience. Here are the key updates: • View page initialization time A new icon in the Page Designer's canvas now displays a breakdown of how long different tasks (such as bootstrapping and loading a shell page) take to display the page. You can use this information to isolate runtime issues that may cause your app to load slowly. • Improved tab bar We've redesigned the tab bar to always show the active tab, even when the window is resized. When you have multiple tabs open, you can use the mouse or keyboard to scroll through them—though moving the focus away will bring the active tab back into focus. You can also use a new icon to view a drop-down list of overflow tabs; from here, you can open a particular tab or close it. • Components in Components palette categories expanded by default The default view for the Components palette is now changed to always show components in every category. This view is controlled by a new **Expanded By Default** option in the Components palette's options menu. • Advanced category in Components palette For discoverability reasons, all JET components are now available in the Components palette, with those that don't have design-time properties showing under a new **Advanced** category. Components in the Advanced category typically require you to manually code different aspects of their functionality. • Preferred category of components for use in slots When you use **Insert Component** in the Structure view to drop a component directly into a slot, a list of recommended components show up under a Preferred category. These components are recommended based on the type of component that can be used in the slot. • Options to insert a component in code editors It's now possible to insert a component before, inside, or after an existing component from a code editor's right-click menu.	23.04

Feature	Description	Minimum Version Required
How to abort HTTP calls	We've added documentation to help you cancel long-running HTTP calls using `AbortController`, a browser-based interface that lets you abort a web request. `AbortController` was an experimental feature previously, but is now supported by all browsers. See Abort Pending REST Calls.	23.04

December 2022

Common Features

Feature	Description	Minimum Version Required
Additional instances are ready for upgrade	Oracle Integration Generation 2 instances that use File Server can now be upgraded to Oracle Integration 3. Additionally, instances that use the Oracle Responsys Adapter can also be upgraded. Previously, instances that used File Server or the Oracle Responsys Adapter were not ready for upgrade. See Upgrade from Oracle Integration Generation 2 to Oracle Integration 3 in *Provisioning and Administering Oracle Integration 3*.	Latest version
Updated titles for guides	The titles of most guides now include *Generation 2*. This information helps you more easily distinguish Oracle Integration Generation 2 and Oracle Integration 3 guides in search.	N/A
Disaster recovery	Instructions are now available for building a customer-managed disaster recovery solution for Oracle Integration Generation 2. See *Configuring a Disaster Recovery Solution for Oracle Integration Generation 2*.	N/A

November 2022

The November update doesn't include any new features. However, upgrades are available to some customers. Additionally, new recipes are released often. Keep reading for details.

Common Features

Feature	Description	Minimum Version Required
Upgrade to Oracle Integration 3	Upgrades to Oracle Integration 3 have begun! When your instance becomes eligible for upgrade, you receive an email from Oracle about the timing. Resources in *Provisioning and Administering Oracle Integration 3*: • Get answers to your questions. See About the Upgrade Workflow and Upgrade FAQs. • Understand who's eligible for upgrade, and complete prerequisites. See Instances That Cannot Be Upgraded Yet and Complete Upgrade Prerequisites. • After you're eligible for upgrade, specify your upgrade requirements. See Schedule or Reschedule the Upgrade.	Latest version
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Migrate integration artifacts between instances • Post Slack notifications for Oracle ERP Cloud purchase order approvals • Import employee records from Oracle HCM Cloud to Oracle E-Business Suite • Integrate Oracle MICROS Reporting and Analytics with ATP • Sync Customer and Campaign Data Between Oracle Unity and Salesforce Marketing Cloud See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

October 2022

Common Features

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Create activities in Oracle Primavera Cloud for Jira issues • Create Jira issues for project tasks in Oracle NetSuite • Import orders from Shopify to Oracle ERP Cloud • Integrate Oracle MICROS Reporting and Analytics sales data from ATP with Oracle Financials Accounting Hub • Import sales orders from Oracle NetSuite to Oracle Autonomous Data Warehouse • Read and write files on an FTP server See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

September 2022

Common Features

Feature	Description	Minimum Version Required
Oracle Integration availability in a new region	Oracle Integration is now available for provisioning in the Spain Central (Madrid) region. See Availability in *Provisioning and Administering Oracle Integration Generation 2*.	22.3.2
New recipe	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Create project tasks in Oracle NetSuite for Jira issues • Get opportunity details from Oracle B2B Service • Export new hire info from Oracle HCM Cloud • Share YouTube video posts on socials • Sync email accounts between Okta and Oracle HCM Cloud • Sync employee identities between Oracle HCM Cloud and an LDAP instance • Sync work schedules between Workday and Oracle Field Service Cloud See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

August 2022

Common Features

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Sync contacts between Salesforce and Oracle B2C Service • Create JIRA issues for ServiceNow incidents See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A
Oracle Integration availability in new region	Oracle Integration is now available for provisioning in the Mexico Central (Queretaro) region. See Availability in *Provisioning and Administering Oracle Integration Generation 2*.	22.3.1

Integration and Connectivity Features

Feature	Description	Minimum Version Required
NAT Gateway IP Address (outbound IP address) in the **About** Menu	You can obtain the NAT Gateway IP address (outbound IP address) of your Oracle Integration instance from the **About** menu. The outbound IP address is required to allowlist the instance. This feature eliminates the need to file a service request to obtain the outbound IP address. See Obtain the NAT Gateway IP Address of the Oracle Integration Instance in *Provisioning and Administering Oracle Integration Generation 2*.	22.3.2
SAP ASE (Sybase) Adapter - New adapter	The SAP ASE (Sybase) Adapter is the newest addition to the database group of adapters. The SAP ASE (Sybase) Adapter enables you to integrate with the SAP ASE database residing behind the firewall of your on-premises environment through use of the Oracle Integration on-premises connectivity agent. You can use the SAP ASE (Sybase) Adapter to poll for new and updated records for further processing in Oracle Integration. For example, any new row added to the Customer table in your SAP ASE database can be synchronized with a target CRM application with Oracle Integration. The SAP ASE (Sybase) Adapter also supports executing SQL queries and stored procedures in your SAP ASE database. See SAP ASE (Sybase) Adapter Capabilities in *Using the SAP ASE (Sybase) Adapter with Oracle Integration Generation 2*.	22.3.2

Feature	Description	Minimum Version Required
Oracle Unity Adapter - New adapter	The Oracle Unity Adapter is the newest addition to CX group of adapters. The Oracle Unity Adapter enables you to create an integration between Oracle Unity using Oracle Integration seamlessly without any complexities. See Oracle Unity Adapter Capabilities in *Using the Oracle Unity Adapter with Oracle Integration Generation 2*.	22.3.2
SAP SuccessFactors Adapter - OAuth2 authentication support	You can execute the SOAP API using the SuccessFactors SAML Bearer Assertion Flow with Username Password Token Support security policy without providing a password. Previously, a password was required in the connection properties to execute the SOAP API using the SuccessFactors SAML Bearer Assertion Flow with Username Password Token Support security policy. See SAP SuccessFactors Adapter Capabilities in *Using the SAP SuccessFactors Adapter with Oracle Integration Generation 2*.	22.3.2
Shopify Adapter - Access token authentication support	The Shopify Adapter now supports Shopify access token-based authentication. You must create a custom application in Shopify and provide the Admin API access token in Oracle Integration to successfully connect to the Shopify application. This is now necessary because Shopify deprecated private applications starting in January 2022 (therefore, the need to create a custom application). The Shopify Adapter is now certified with Shopify API version 2022-04. See Shopify Adapter Capabilities in *Using the Shopify Adapter with Oracle Integration Generation 2*.	22.3.2

Process Features

Feature	Description	Minimum Version Required
New date-time operator for simple expressions	A new date-time operator is available for simple expressions: `toTimezone`. Use the `toTimezone` operator to return the date-time expressed in the time offset corresponding to the timezone ID provided. See Date and Time Operators in *Using Processes in Oracle Integration Generation 2*.	22.3.2

Visual Builder Features

This release of Visual Builder uses Oracle JET 12.1.*x* libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 22.10 Visual Builder Runtime, to take advantage of the full

spectrum of 22.10 features. JET 12.1.x is primarily a bug fix release, so you may want to refer to the JET 12.0.0 release notes for the major updates that are still relevant to JET 12.1.x. To see a list of what's new in JET 12.1.x, go to the JET Release Notes and select **v12.1.0**. To see what's new in JET 12.0.0, select **v12.0.0**.

You can upgrade to the latest JET and Visual Builder Runtime versions from your visual application's Settings editor. See Manage Runtime Dependencies for Visual Applications.

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Security	• Role-based access for pages and flows It's now possible to control role-based access to your app at the flow and page level. Previously you had to modify JSON code to do this, but now you can define user roles in a new **Security** tab that appears for flow and page artifacts. See Restrict User Access to an Application, Flow, or Page. • Changes for anonymous Access We've refactored the **Security** tab of an application's Settings editor, so how you enable anonymous access for your app has changed. To enable anonymous access, you'll need to *deselect* the new **Require authentication access** option, instead of the previous **Allow anonymous access** option. See Allow Anonymous Access.	22.07
DB Usage	As an administrator, you can now check how much space in the tenant's database is being consumed by each of the tenant's applications. See Inspect Database Usage.	22.10

Feature	Description	Minimum Version Required
Business object enhancements	• Changes to how business object relationships are represented We've changed how we represent related business objects by displaying the accessor that connects objects. You'll notice this accessor as a column under Relationships in the Overview tab, as a separate field in the Fields tab, as well as in a field's Properties pane both in the Fields tab and in the Diagram view. See Edit Business Object Fields and Create a Business Object Relationship. As a part of this update, we've introduced new Type icons: { } for object accessors and [ ] for collection accessors. In addition, all reference fields now use # instead of ; the Type icons for Email, URI, Phone, and Percentage are no longer used. • New **Source** tab A business object's editor now includes a **Source** tab, where you can view JSON metadata that describes the object. See About Working with Business Objects. • Refresh cached schema option When you use your own database schema, the details of tables and views available for use are fetched initially and cached. You now have a refresh option to pull in updates when the schema (or tables and views within in) is updated without having to reload your browser. See Create a Business Object Based on a DB Table or View.	22.07
Fragment improvements	• Usages view A new **Usages** property in a fragment's Properties pane tells you where the fragment is consumed and allows you to readily navigate to the page, if needed. • Edit icon on canvas to go to fragment A new fragment Edit icon on the page canvas allows you to go directly to a fragment from the canvas. The **Go to fragment** link is still available on the fragment's Properties pane. • **Used For** and **Icon** settings in Properties pane Settings that let you surface a fragment in the right context (**Used For**) and add custom icons (**Icon**) are now available in a fragment's Properties pane as well as its Settings editor. For visual apps, see Create and Add a Fragment to a Page.	22.07

Feature	Description	Minimum Version Required
Dynamic components	• Sortable virtual field for dynamic tables You can now select which of the fields in a virtual field should be used for sorting when the virtual field is displayed in a dynamic table. See Create a Virtual Field. • Support for field templates in dynamic tables You can now use field templates to render fields in dynamic tables.	22.07
Other enhancements	We've made several updates (including performance enhancements) to improve your design experience. Here are the key updates: • VDOM variants for dynamic components New variants of dynamic components based on JET's Virtual DOM (VDOM) architecture are now available in the Components palette. Except for the dynamic table, these components are marked as `oj-dyn` and are preferred over the older `oj-dynamic` variants for applications starting with 22.10. VDOM is a new development path that uses the Preact library for building web components with JET. See VDOM architecture in JET documentation. • Input parameters in Events tab for a component We've simplified how you pass component values to an action chain by enabling you to create input parameters right in the **Events** tab of the component's Properties pane. See Start an Action Chain From a Component. • Visual indicator for missing required input parameters When a page requires an input parameter to load data but a value isn't assigned to it, you'll now see a visual indicator of the missing input parameter. See Enable Variables as Input Parameters. • Component palette changes We've reordered categories in the Components palette and collapsed them by default. To control this setting, use the new **Expand All** and **Collapse All** options in the palette menu. See The Components Palette.	22.07
Changed requirements for Apache Cordovo custom plug-in	As part of maintenance for the deprecated but still supported Cordova custom plug-in, we've updated the minimum version of Cordova and iOS required to build hybrid mobile apps. For details, refer to the `readme.md` file bundled with the Cordova Project Source file in the **Custom Plugins** tab of your mobile application's **Settings** editor. See Add a Custom Plugin to Your Mobile Application.	22.07

July 2022

Common Features

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Import leads from SugarCRM to Oracle ERP Cloud • Create Zendesk tickets for Salesforce cases • Create sales orders in ERP Cloud for Salesforce opportunities • Sync Salesforce accounts with Shopify customers • Encrypt and decrypt data using OCI Vault • Export Workday employees to an FTP server See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

Process Features

The following table lists the process automation features that are going to be *deprecated* in an upcoming release of Oracle Integration.

Feature	Description
SOAP connector	We'll no longer support the use of SOAP connectors. Instead, use REST connectors for integrating with other applications. See Create a REST Connector in *Using Processes in Oracle Integration Generation 2*. Alternatively, you can configure SOAP endpoints in an integration and use the integration in a process application.
Import Business Objects from XML Schema	We'll no longer support the import of Business Objects from XML schema. Instead, you can import business objects based on JSON schema. See Import a Business Object from JSON in *Using Processes in Oracle Integration Generation 2*. If you have integrations based on SOAP and XML, consider updating them to use REST that supports JSON.
Upload XML Schema files	We'll no longer support the upload of new XML schema files. Instead, you can use JSON schema for your business needs. If you have integrations based on SOAP and XML, consider updating them to use REST that supports JSON.
List View in Decisions	We are going to deprecate List View in Decisions, and you won't be able to create decision models in List view. Instead, create decision models in Graph view as Graph view is more user friendly and helps you to visually represent your decision models with decision requirement diagrams (DRD). See Graph View in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Micro Processes	You'll no longer be able to create and use micro processes in process applications. Instead, you can communicate between processes using service calls with REST connectors.
Oracle Social Network (OSN)	We'll no longer support OSN for conversations while integrating with Oracle Content Management. Instead, you can facilitate real time collaborations between specific users and task assignees by tagging them from comments in tasks. See How do I send email notifications from a comment?
Business Intelligence Cloud Service (BICS)	You'll no longer be able to create custom dashboards using BICS. Instead, you can analyze process data and create dashboards with Insight and Oracle Analytics Cloud.

June 2022

Common Features

Feature	Description	Minimum Version Required
New recipe	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Sync Salesforce accounts with ServiceNow companies • Sync Salesforce contacts with ServiceNow users • Integrate DiCentral with Oracle Fusion Cloud SCM See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A
Oracle Integration availability in new region	Oracle Integration is now available for provisioning in the France Central (Paris) region. See Availability in *Provisioning and Administering Oracle Integration Generation 2*.	22.2.2

May 2022

New Features

Common Features

Feature	Description	Minimum Version Required
New role: ServiceEndUser The ServiceEndUser role is available only for new instances created using version 22.2 or later. This role cannot be granted to existing instances created prior to version 22.2.	A user with the ServiceEndUser role has the same privileges as the ServiceUser role, but can access only Processes and Insight features in Oracle Integration. This user does not have access to Integrations, B2B, File Server, Visual Builder, adapters, recipes, or accelerators. In Processes, a user with the ServiceEndUser role can access the My Tasks page in the Processes runtime environment (Workspace) and also Processes runtime APIs and CCA components. This user cannot access the Administration UI in Processes runtime environment or the Processes design time environment. In Insight, a user with the ServiceEndUser role can view, create, manage, edit, and delete Insight dashboards through the Consoles page. This user does not have access to models through the Models page. For more information about user roles, see Oracle Integration Service Roles in *Provisioning and Administering Oracle Integration Generation 2*.	22.2.2
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Create sales orders in Oracle NetSuite for Salesforce opportunities • Sync accounts in Salesforce with Zendesk organizations • Sync leads between Marketo and Salesforce • Sync Salesforce cases with ServiceNow incidents • Import orders from Shopify to Salesforce See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Email notification limit	You can send up to 10,000 emails daily from Oracle Integration. When the limit is exceeded, email delivery occurs successfully one last time. For the next (second) delivery, emails stop being sent. You are prevented from sending additional emails until you drop below the 10,000 limit for your 24 hour window. See Monitor the Number of Emails Sent from Oracle Integration in *Using Integrations in Oracle Integration Generation 2*.	22.2.2
Activated integrations limit	You can activate up to 700 integrations per Oracle Integration instance. This limit and the number of currently activated integrations are displayed in the System Health section of the Dashboard page. See View the Dashboard in *Using Integrations in Oracle Integration Generation 2*.	22.2.2
Suppression list email addresses	The suppressed email addresses are automatically displayed in the Email Suppression List drawer. This eliminates the need to manually search for these addresses. See Remove Email Addresses from the Suppression List in *Using Integrations in Oracle Integration Generation 2*.	22.2.2
HubSpot Adapter - New adapter	The HubSpot Adapter is the newest addition to the CRM group of adapters in Oracle Integration. The HubSpot Adapter enables you to connect to a HubSpot instance. The HubSpot Adapter supports outbound invoke connections to execute the REST APIs. This enables you to perform operations such as Create companies, Create products, Update deals, Delete tickets, and others on the HubSpot-exposed business resources. See HubSpot Adapter Capabilities in *Using the HubSpot Adapter with Oracle Integration Generation 2*.	22.2.2
QuickBooks Adapter - New adapter	The QuickBooks Adapter is a new addition to the ERP category of adapters in Oracle Integration. The QuickBooks Adapter enables you to connect to the QuickBooks application. The Oracle Integration supports outbound invokes to execute the REST APIs. This enables you to perform Create, Update, Delete, and Query operations on the QuickBooks-exposed business resources. For example, you can create new records in QuickBooks for the modules such as Account, Bill, Customer, Payment, Invoice, and so on. See QuickBooks Adapter Capabilities in *Using the QuickBooks Adapter with Oracle Integration Generation 2*.	22.2.2

Feature	Description	Minimum Version Required
Increased message payload size support	The supported message payload size for trigger and invoke connections is 50 MB for endpoints accessed using the SOAP Adapter, REST Adapter, SAP Adapter, File Adapter, and FTP Adapter. This means that an external application can send XML or JSON payloads of up to 50 MB in size to Oracle Integration. **Notes**: This increase may lead to additional memory consumption in Oracle Integration. To ensure stability, it is recommended that the percentage of large payloads coming into Oracle Integration should not increase the number of total messages by more than 3%. See Service Limits in *Provisioning and Administering Oracle Integration Generation 2*.	22.2.2
SAP S/4HANA Cloud Adapter - X509 Auth support	The SAP S/4HANA Cloud Adapter provides support for client certificate x.509-based authentication. You must upload your own certificate in Oracle Integration to communicate with SAP S/4HANA Cloud. This adds a layer of security to the authorization process (access to the host) and eliminates the risk of exposing credentials to an unknown entity. See SAP S/4HANA Cloud Adapter Capabilities in *Using the SAP S/4HANA Cloud Adapter with Oracle Integration Generation 2*.	22.2.2
Magento Commerce Cloud Adapter - Search support	The Magento Commerce Cloud Adapter now includes search functionality. This feature allows you to perform search operations to get single or multiple records using customized filters. The filter values can be dynamically specified in the mapper. See Magento Commerce Cloud Adapter Capabilities in *Using the Magento Commerce Cloud Adapter with Oracle Integration Generation 2*.	22.2.2
Jira Adapter - Inbound trigger support	The Jira Adapter now provides inbound support. You can configure the Jira Adapter as a trigger connection in an integration and process a message from the Jira application to Oracle Integration when certain events occur in Jira (for example, when an issue is updated). This is achieved through Jira Webhooks, which include JQL configuration. See Jira Adapter Capabilities in *Using the Jira Adapter with Oracle Integration Generation 2*.	22.2.2
Zendesk Adapter - Inbound trigger support	The Zendesk Adapter provides inbound support. You can configure the Zendesk Adapter as a trigger connection in an integration and process a message from the Zendesk application to Oracle Integration when a ticket is created or updated in Zendesk. See Zendesk Adapter Capabilities in *Using the Zendesk Adapter with Oracle Integration Generation 2*.	22.2.2

Feature	Description	Minimum Version Required
Microsoft Office 365 Calendar Adapter, Microsoft Office 365 People Adapter, and Microsoft Office 365 Outlook Adapter - Graph API support	Microsoft Office 365 adapters (Microsoft Office 365 Calendar Adapter, Microsoft Office 365 People Adapter, and Microsoft Office 365 Outlook Adapter) are among the most heavily used social and productivity adapters in Oracle Integration. The Microsoft Office 365 Adapters have been upgraded to use the Graph API. This is time critical because Microsoft is decommissioning the Outlook REST APIs starting in November, 2022. Oracle recommends that you migrate your integration flows to use the newer Microsoft Graph APIs. See Invoke Operations Page in *Using the Microsoft Office 365 Calendar Adapter with Oracle Integration Generation 2*, Invoke Operations Page in *Using the Microsoft Office 365 People Adapter with Oracle Integration Generation 2*, and Invoke Operations Page in *Using the Microsoft Office 365 Outlook Adapter with Oracle Integration Generation 2*.	22.2.2
Adapter name changes	The following adapters have been renamed: • Adobe Sign Adapter (formerly the Adobe eSign Adapter) • Google Gmail Adapter (formerly the Gmail Adapter) • Google Tasks Adapter (formerly the Google Task Adapter) • Mailchimp Adapter (formerly the MailChimp Adapter) • Microsoft Office 365 Calendar Adapter (formerly the Microsoft Calendar Adapter) • Microsoft Office 365 People Adapter (formerly the Microsoft Contact Adapter) • Microsoft Office 365 Outlook Adapter (formerly the Microsoft Email Adapter) • Oracle CX Sales and B2B Service Adapter (formerly the Oracle Engagement Cloud Adapter) • Oracle Taleo Enterprise Edition Adapter (formerly the Oracle Talent Acquisition Cloud (Taleo EE) Adapter) • Oracle Taleo Business Edition (TBE) Adapter (formerly the Oracle Talent Cloud for Midsize (Taleo BE) Adapter)	22.2.2

Visual Builder Features

This release of Visual Builder uses Oracle JET 12.0.*x* libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 22.07 Visual Builder Runtime, to take advantage of the full spectrum of 22.07 features.

Among JET 12's many new features is the ability to show dynamic status indicators to your tab bar headers with new icons, badges, and metadata. There's also a new `oj-message-banner` component that you can use to render brief, semi-permanent messages that communicate information in the context of the current page or actions in progress, without blocking interaction on that page. To see what's new in JET 12.0.*x*, go to the JET Release Notes and select **v12.0.0**.

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Custom actions	In addition to Visual Builder's palette of built-in actions, you can now use JavaScript to define and implement your own actions. Custom actions can be defined at a web or mobile app-level and you use them in action chains just the way you'd use built-in actions. See Custom Actions.	22.07
New Flow Diagram view	When working with flows in the Diagram view, a new Flow Diagram now displays navigational relationships between pages in the flow. The Flow Diagram, different from the standard Diagram view, provides a more intuitive and interactive view that allows you to focus on navigation between pages in the flow. See View a Flow's Navigation in Diagram View. You can also use this view to create pages and actions chains when you want to build workflows from scratch, just by dragging pages and actions from the Components palette and dropping them into the diagram. A subset of built-in actions (as well as custom actions) are available in the Components palette for you to use in your workflow. See Add Pages and Action Chains to a Flow in Diagram View.	22.07

Feature	Description	Minimum Version Required
Fragments	• Existing fragments in Components palette When adding an existing fragment to a page, you can now drag and drop the fragment directly from the Components palette onto the canvas, where previously you had to drop a fragment container before selecting the fragment. This way, a fragment container configured with the selected fragment is automatically created for you. As a part of this update, we've also changed the fragment's Structure view, so you'll see the fragment's name, rather than a generic fragment container, for easier identification. See Create and Add a Fragment to a Page. • Fragment metadata To provide a richer experience when using fragments, we've introduced metadata settings that enable a developer to better describe their fragments. As a fragment developer, you use this metadata: – To surface a fragment in the right context and filter it out where it isn't suitable (for example, to tag a fragment as `formTemplate` and make it available only to users working with dynamic form templates). See **Used For** in Manage Fragment Settings. – To associate a fragment with icons that display anywhere the fragment is surfaced (for example, when the fragment appears in the Components palette in the Page Designer or the Layout editor). See **Icon** in Manage Fragment Settings. – To control how fragment parameters are to be used inside a fragment by providing the information that Visual Builder requires to suitably generate metadata and expressions when the fragment is used in a component. This information can be specified in the Binding Type property that appears anytime a variable or constant parameter in a fragment is marked as enabled or required. See details about **Binding Type** in Pass Data Between a Page and Its Fragment.	22.07

Feature	Description	Minimum Version Required
Components palette enhancements	• **Show Categories** and **Show Alphabetically** options We've added two new options to give you more control over how components display in the Components palette. If you want to view a flat list of all components, you can choose to deselect the **Show Categories** option, enabled by default to show components in categories. If you keep the default, you can choose to view components in alphabetical order or a predefined order (as before). See The Components Palette. • New category for existing fragments A new **Fragments** category in the Components palette now displays all existing fragments. To control which fragments show in the palette, you can change a fragment's **Used For** metadata in the Settings editor. By default, all fragments use the `pageContent` tag and show in the Components palette. See Manage Fragment Settings.	22.07
Structure view enhancements	• Shading to highlight visible components in Structure view Sometimes, the Structure view might be overwhelmed with information, including components that are not visible on the page at the moment. We've now added shading to the Structure view to indicate which components on the page are currently visible; those not visible fade into the background to provide better context about what part of the page the Structure view represents. To further trim background information, you can select a new **Show Visible Components Only** option. This way, your view only displays nodes of components visible on the page. • **Show Empty slots** is now **Show Slots** The **Show Slots** option (previously **Show Empty Slots**) now displays the location of empty as well as occupied slots. You can also right-click a slot and use a new **Insert Component** option to drop a component directly into a slot. See The Structure View.	22.07
Changed requirements for Apache Cordovo custom plug-in	As part of maintenance for the deprecated but still supported Cordova custom plug-in, we've updated the minimum version of Cordova and iOS required to build hybrid mobile apps. For details, refer to the `readme.md` file bundled with the Cordova Project Source file in the **Custom Plugins** tab of your mobile application's **Settings** editor. See Add a Custom Plugin to Your Mobile Application.	22.07

Feature	Description	Minimum Version Required
Dynamic form enhancements	You can now configure form field properties so that fields are displayed as multi-line text areas instead of the default single-line text field. You can set the number of rows of text area to display, and the max number of rows to which a text area can grow. See Set a Field to Display as a Text Area in a Form .	22.07
Business object enhancements	• App profiles to switch schemas for business objects based on existing DB tables and views When you use your own database schema, you can now associate application profiles with different phases of your application, to switch the schema that your app connects to during its lifecycle. For example, you might use a particular schema during the development phase, but switch to another one for testing or production. See Switch Schemas Used During an App's Lifecycle. • Schema validation for business objects based on existing DB tables and views For business objects based on existing DB tables and views, we've added validation to make sure a field's metadata is compatible with the corresponding table/view column. If there's a discrepancy, you'll see validation messages around the UI component as well as in audits. See Create a Business Object Based on a DB Table or View. • New performance metrics when tracing GET requests When you enable tracing for a business object's REST requests, you now have an indicator of the maximum response size for GET requests, a theoretical value that can help you determine whether you need to take steps to reduce the response size. See Enable Tracing to Monitor Endpoint Calls.	22.07

Feature	Description	Minimum Version Required
Enhancements for services and backends	• Declarative support for Transforms Transforms has now moved from its own tab to an area in the Overview tab for backends, service connections, and some endpoints. With this update, transforms can be defined in the backend catalog and thus, inherited by services and endpoints. You can also override transforms at the service and endpoint level. See Add Transforms. • Form Data and Binary payload support for Service endpoint testing You can do much more with the Endpoints Test tab under Services. POST, PATCH, and PUT REST APIs with `application/octet-stream` and `multipart/form-data` formats can be tested from the Service Connection Test tab. In addition, you can download binary data or save textual data in the response body. If the response body doesn't contain text, a message indicates that it contains binary data. See Test Service Connection Responses.	22.07

April 2022

New Features

Common Features

Feature	Description	Minimum Version Required
Oracle Integration on US Government Cloud	Oracle Integration on US Government Cloud is now available in the following locations: • The West (Phoenix) region for the OC2 realm (Oracle Cloud Infrastructure US Government Cloud with FedRAMP Authorization) • The West (Phoenix) region and North (Chicago) region for the OC3 realm (Oracle Cloud Infrastructure US Federal Cloud with DISA Impact Level 5 Authorization) See Get Started with Oracle Integration on US Government Cloud in *Using Oracle Integration Generation 2 on Oracle Cloud Infrastructure US Government Cloud*.	22.1.3

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Import employee records from Oracle HCM Cloud to Jira • Import employee records from Oracle HCM Cloud to Zendesk • Import a payment request into Oracle ERP Cloud • Import employee records from Oracle HCM Cloud to Salesforce • Synchronize Oracle Service Cloud incidents with Oracle CPQ transactions • Invoke pop-up notifications for events in Oracle Fusion Applications • Synchronize contacts in Salesforce with Zendesk user accounts See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Support for invoking OAuth-protected, private REST endpoints using the REST Adapter and connectivity agent	The REST Adapter now supports the invocation of OAuth-protected, privately accessible REST endpoints. A REST Adapter connection configured with an agent group must be used to invoke these privately accessible REST endpoints. When configuring the REST Adapter for use with the connectivity agent, the following security policies are now supported: • OAuth Client Credentials • OAuth Custom Two Legged Flow • OAuth Resource Owner Password Credentials See REST Adapter Restrictions and On-Premises REST API Support with the Agent in *Using the REST Adapter with Oracle Integration Generation 2*.	22.2.1

Visual Builder Features

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Custom app URLs for web PWAs	If you use custom URLs for your apps, those URLs can now be used to access web apps that are deployed as Progressive Web Apps (PWAs). No additional configuration is required to support custom URLs for PWAs. To set up the custom URL, see Specify a Custom App URL. To enable PWA support for web apps, see Enable Progressive Web App Support.	22.04.2

March 2022

New Features

Common Features

Feature	Description	Minimum Version Required
View Oracle Integration Generation 2 instance regions status	You can check the current status of the regions in which your Oracle Integration Generation 2 instances are running on the system status page in the Oracle Cloud Infrastructure Console. This page provides real-time and historical data on system performance.	N/A
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Create Products in Shopify for Items in Oracle ERP Cloud • Create Salesforce accounts for SAP ERP customers • Create suppliers in SAP Ariba for vendors in SAP ERP • Create SAP ERP orders for closed Salesforce opportunities • Create Salesforce accounts for SAP S/4HANA customers • Import supplier records from SAP S/4HANA to Oracle ERP Cloud • Import customer records from Shopify to Stripe • Post Slack notifications for Oracle CPQ quote approvals See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

February 2022

New Features

Common Features

Feature	Description	Minimum Version Required
Oracle Integration availability in a new region	Oracle Integration is now available for provisioning in the Johannesburg (South Africa) region. See Availability in *Provisioning and Administering Oracle Integration Generation 2*.	21.4.3
Oracle Help Center recipes update	The Oracle Help Center for Oracle Integration has been enhanced to include a page that provides a centralized location for viewing all supported recipes. Recipes enable you to build integrations quickly by providing all your integration resources in a single package.	N/A

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Magento Commerce Cloud Adapter - New adapter	Oracle continues to improve Oracle Integration connectivity with third party applications and services by introducing new adapters that enable you to perform plug and play integrations. With this release, the Magento Commerce Cloud Adapter is a new addition to the e-commerce category of adapters in Oracle Integration. Magento is an e-commerce platform for building online stores. The Magento Commerce Cloud Adapter provides seamless connectivity with the Magento store and helps businesses improve marketing, sales, operations, and other aspects. Use cases that can be implemented using the Magento Commerce Cloud Adapter in Oracle Integration include performing e-commerce operations on products, inventory, orders, customers, shipments, and others. See Magento Commerce Cloud Adapter Capabilities in *Using the Magento Commerce Cloud Adapter with Oracle Integration Generation 2*.	22.1.2
Oracle Hospitality Adapter - Enhanced business event processing	Oracle Hospitality Adapter business event processing has been improved to enable the adapter to trigger integration instances when processing OPERA Cloud business events only when there is business content to be processed. See Fetch Business Events from OPERA Cloud in *Using the Oracle Hospitality Adapter with Oracle Integration Generation 2*.	22.1.2
SAP Adapter - JCO connection property file enhancements	The SAP Adapter connection properties have been enhanced to support the inbound secure network communications (SNC) connection type. See JCO Connection Properties Files in *Using the SAP Adapter with Oracle Integration Generation 2*	22.1.2

Process Features

Feature	Description	Minimum Version Required
JET CCA upgrade	With the JET CCA upgrades, we now ensure seamless integration with Oracle Visual Builder Cloud Service (VBCS) and support the following: • Process owners/reviewers can view full task history in task detail UI snippet. • The `beforeSubmit` event is added to the task action UI snippet component. When a task action (Approve, Reject or Submit) is performed, it triggers the `beforeSubmit` event. A VBCS application can capture this event to validate its custom form and save its payload. The VBCS application can act on success/failure scenarios to proceed with the task action (confirm method) or abort the task action (cancel method) on the component.	22.1.2
Process History default view	You can now set the default view for process history from the UI Customization page in Workspace. See Set the Default View for Process History in *Using Processes in Oracle Integration Generation 2*.	22.1.2
Total task counts in user and shared filters	In the My Tasks page of Workspace, you can view the total task counts in user and shared filters. See details in the note of Filter the Task List in *Using Processes in Oracle Integration Generation 2*.	22.1.2

Visual Builder Features

Visual Builder Features

This release of Visual Builder uses Oracle JET 11.1.x libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 22.04 Visual Builder Runtime, to take advantage of the full spectrum of 22.04 features.

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
Responsive web app templates	New web app templates are now enhanced for responsive design. Available in three navigational styles, these templates adjust to various screen sizes and provide better support for responsive layouts and progressive web apps. See Create a New Web App. Common elements for these web apps, such as the header, footer, and navigation items, are defined in fragments, enabling you to reuse each piece in the web app's root page as well as other pages. You can also customize these elements however you want to create your own look and feel. See Edit the App Header and Footer. **Note:** Web apps created with version 22.01/21.10 or earlier will not be affected. These apps will maintain their original look and feel even after you upgrade them to 22.04.	22.04
Support for JET's Stable theme	When customizing a Redwood-themed application, you can now use the *Stable* base theme to override only what you want to change, where previously you might have had to override all variables directly in the *Redwood* base theme. The Stable theme (introduced in JET 11.0.0) is meant to be as stable as possible; as a result, you can override the variables you want to change while inheriting all other updates to the Redwood theme. See Customize the Redwood Theme for a Web Application.	22.01

Feature	Description	Minimum Version Required
Fragments	If you've always wanted to break up complex pages into parts that are easier to work with, fragments is for you. A fragment encapsulates a page's section in its own HTML, JSON, and JavaScript files, helping you share it across pages in an application. Besides reuse, it provides performance gains and makes for easier organization and code management. See Work With Fragments. You can add standard as well as dynamic components (including dynamic containers) to your fragment. You can also create input parameters for a fragment right from the Properties pane of the fragment container on the page where the fragment is used. See Create a Fragment. You can also create input parameters for a fragment right from the Properties pane of the fragment container on the page where the fragment is used. See Pass Data Between a Page and Its Fragment for a sample scenario.	22.04
Background processing of action chain tests	Action chain tests, accessible through the Tests tab at the bottom of an application's window, now include some usability improvements. Instead of showing a full list of tests, this tab shows failed tests alone to highlight items that require you to take action. Test results are also cached across browser sessions now to improve performance. See Test Action Chains. The tests also run in the background, even when you are not actively working on your application. If you are, only tests impacted by your changes (for example, if you added a new variable or changed an existing function) are scheduled to run again. This way, your test results stay up-to-date even as you develop your application, helping you detect bugs earlier and maintain your tests more easily. See Manage All Tests in a Visual Application.	22.04

Feature	Description	Minimum Version Required
Dynamic layout enhancements	We've made a bunch of updates to enhance UIs based on dynamic components. When you add a dynamic component (table, form, or container), you'll notice that the **Dynamic UIs** tab in the Navigator is now called **Layouts**. Other significant enhancements include: • Dynamic components in Components palette by default Dynamic components, such as tables, forms, and containers, are now present by default in the Components palette. Previously, you had to install these components from your environment's Component Exchange before you could use them in your application. Now, dragging and dropping them from the **Dynamic Components** section of the Components palette onto the canvas automatically installs them to the application and brings up the **Layouts** tab in the navigator. See How to Create Layouts With Dynamic Components. • Option to preview a dynamic component's layout When you define multiple layouts, you now have the option of selecting any layout in a dynamic component's Properties pane to preview the layout as it would appear on a page, even if those conditions are not met. You no longer need to run the page and ensure the conditions are met at runtime to check how the layout renders. See Preview Different Layouts. • Enhancements for dynamic containers – We've improved how you edit *sections* (formerly *templates*) in dynamic containers. So you can now edit sections directly in the Page Designer, rather than in the Template editor. Because of this, you can see the component (including dynamic tables and forms) rendered on the page as you work with the container. See Add a Dynamic Container to a Page. – Container templates for dynamic containers Sections created by templates in a dynamic container, by default, stack vertically on top of each other. You can now use *container templates* to change this layout, for example, to show sections in a row. See Change a Dynamic Container's Layout. • Condition builder changes The condition builder in the Rulesets editor now groups fields for selection under **Fields**, **Responsive**, **User**, and so on, making it easier for you to select from the drop-down list. We've also changed the list of user roles that show by default	22.04

Feature	Description	Minimum Version Required
	for Oracle Cloud Applications, so the drop-down lists the available Job and Abstract roles, but you'll need to manually enter Duty roles in the Value field. See Add Display Logic to Determine What's Displayed at Runtime. • New User Assistance Density property The Properties pane for forms and fields in layouts contains a new property that allows you to set how a field's user assistance text (messages, help text, hints, and so on) are displayed in forms. See Set How User Assistance is Rendered in a Layout. • *BaseComponentContextType* In addition to *ComponentContextType* parameters which let you augment a dynamic layout with values provided by your application, you can now define *BaseComponentContexType* parameters to define values at the service level. Much like component context parameters, base component context parameters become part of the *$componentContext* system variable and can be used anywhere in the dynamic layout (for example, in a layout's conditions and expressions). See Define Custom Contexts for Components in a Layout. • Suggested and required fields We've made some updates to improve user experience when working with a dynamic layout's Fields palette. A new **Suggested Fields** section now emphasizes fields that might be important or relevant to include in the layout. Further, when you create a new layout within the Rule Sets editor, fields that are marked as required are automatically added to the layout. See Create a Layout for a Dynamic Table or Form. • Converter and validator improvements Adding a validator or converter to a field in a dynamic layout now selects a default based on the field type. For example, if you were adding a converter to an ID field, the Number converter is selected for you by default because ID is a number field. To simplify configuration, only the most commonly used options are displayed for your selection. We've also added support for an expression validator to check whether a field's value matches a pattern defined by a regular expression and an expression converter that converts the field's value to a regular expression for evaluation. See Add Converters and Validators to Fields. • Column sorting and sizing in dynamic tables When a field is added to a dynamic table, you can now use several properties to control sorting and	

Feature	Description	Minimum Version Required
	sizing for the field's column. These properties are available in the Properties pane when you select a field in a dynamic table's layout. See Configure How Columns Render in a Dynamic Table's Layout.	
JavaScript editor changes	• ES6 syntax for JavaScript in web apps For new JS files in web apps, we now generate the ECMAScript 6 (ES6) syntax with class declarations. Previously, this syntax was used only for JS files in mobile apps. ES6 syntax is supported wherever you generate declarative JS or directly author JS. For example, you can use ES6 syntax to build expressions for rule set conditions or variables. • Code snippets for common JS structures We've also enhanced the JavaScript editor to offer code snippets for common JS structures, such as "for" loops and conditional statements. For example, typing in the JavaScript editor will show you options to select different "for" loop formats. Selecting one will populate the structure and allow easy navigation of the cursor to the relevant areas.	22.04

Feature	Description	Minimum Version Required
Business object updates	• Create business objects based on existing tables and views in an Oracle database If you use an external database like DBaaS or Autonomous Transaction Processing (ATP) with your Visual Builder instance, you can now use your own DB schema and create business objects based on existing tables and views. These business objects, in general, are the same as native business objects, but there are restrictions. See Switch to Your Own Schema for Business Objects. • Database schemas used in different app phases You can now view the names of the database schemas associated with a particular phase of an app's lifecycle (Development, Stage, and Live). If you are using your own Oracle database, this information can help you access data using other tools for import or export, or access the tables for your own purposes. See View Database Schemas Used During an App's Lifecycle. • Validation of a business object field's properties The Field Name of a Business Object's field is now underlined in red on the Fields tab to indicate errors that affect not only the Field Name property, but also any properties on that specific field. See Edit Business Object Fields. • Mark your own ID column when importing business objects When you import spreadsheets and CSV files to create business objects, you can now use your own column as the primary key field, instead of the system-generated `id` field. This option is available only for non-blank data containing numeric fields. See Create Business Objects from a File. • Specify encoding format for an imported file When creating business objects from a file, you can specify a variety of encoding formats for the imported file via a new **Character Encoding** field. If a value isn't specified or if the specified value is not valid, UTF-8 is used as the default. See Create Business Objects from a File.	22.04

Feature	Description	Minimum Version Required
Enhancements for app lifecycle management	• Roll back live app to last published version When you publish multiple versions of a live app, you can now roll back the current live version to the previous published version. See Roll Back Application to the Previously Published Version. • Custom page for locked app When an application is locked for maintenance, Visual Builder displays a default "Application Locked" screen when someone tries to access the locked app. You now have the option of creating a custom page to display to your users, instead of the default. See Create a Custom Lock Page.	22.04

Feature	Description	Minimum Version Required
Backends and service connections	• Server authentication options renamed The server authentication type descriptions have been updated and two types were renamed: – "Propagate Current User Identity" is now called "Delegate Authentication " – "OAuth 2.0 Resource Owner" is now called "OAuth 2.0 Resource Owner Password Credentials" See Identity Propagation Authentication Mechanisms. • Support for server variables in a server URL Server variables are now automatically created when you enter a valid URI template expression in a server URL. When your server URL is defined as, for example, `https://restcountries.com/{version}/{lang}`, we create the `version` and `lang` server variables for you. All your server variables are listed under a new Server Variables section in the Servers editor, where you can manage them to set a default value (required by the OpenAPI3 specification) or to add an enumerated list. A new Server Variables tab has also been added to the Test tab of the Endpoints editor, allowing you to set the server variable value when testing an endpoint. • List of service connections for a backend Any service connections defined for a backend now display on the backend's Overview tab (below the **+ Service Connection** button). Dynamic service connections are automatically shown. Static service connections are shown when the **Load more related connections** link is selected. See Manage Backends in Your Visual Application. • New flow to replace endpoint definitions for static Integrations connections For static Integrations service connections, you can now use the Replace button in the Endpoints tab to replace all endpoint definitions without manually creating a new connection and deleting the old one. See Edit Service Endpoints for a Static Service Connection. • Support for modifying service authentication and connection settings in the instance Administrators of a Visual Builder instance can now use the Services tab in the Tenant Settings page to configure authentication and connection settings for backend services available in the instance. An administrator can also edit connection details to override the settings	22.04

Feature	Description	Minimum Version Required
	inherited from child backend services. See Edit Authentication Settings for a Backend Service	
Enumerated type	It's now possible to create an enumerated custom type in the Types editor to define a list of values, usually for variables that have a small set of possible values. See Create a Custom Enumeration Type.	22.04
Page Designer enhancements	• **Data** palette Where you might use components to design a page, you can now use data sources—via a brand new *Data* palette in the Page Designer—to design your page. Just as you'd drag and drop components from the Components palette, you drag and drop data sources (say, an Employee object's endpoints) and choose from a suggested list of components tailored to best display your data. See The Data Palette. • Panel placement and breadcrumbs You can now reposition the **Components**, **Data**, **Structure**, and **Properties** panels within the Page Designer to customize the canvas for your convenience. With the introduction of the Data palette, the Structure view has been placed, by default, in the bottom left corner of the canvas, but you can change this up however you want. We've also added breadcrumbs in a separate bar at the bottom of the canvas to help you navigate a selected component's hierarchy. See The Page Designer Toolbar. • New **Insert Component** option In addition to the standard drag-and-drop from the Components palette, you can now add components using an new **Insert Component** option. This option is available when you right-click on the canvas and in Structure view (where it's most useful to position a component in complex layouts). See The Structure View.	22.04

Feature	Description	Minimum Version Required
Other enhancements	• Properties pane in the Diagram view We've added a Properties pane to an application's Diagram view, so you can view more details about an application's pages and sub-flows in a central location. See Use the Diagram View. • Custom properties in Properties pane It's now possible to view, edit, or add custom properties for a component via its Properties pane, in the **All** tab. Custom properties are those not defined in component metadata, for example, `data-*` attributes, and can be added by clicking **+** next to General Attributes in the **All** tab. • Slot value in Properties pane You can now change the slot used by a component inside a parent component's slot via the Properties pane, in the **General** and **All** tabs. You can change the slot value to move, for example, a button's icon from the `startIcon` slot to the `endIcon` slot. This way, you can modify the slots of dropped components without accessing the HTML code. • Support for optional chaining operators When referring to optional object properties, you can now use optional chaining operators (`?.`) in JavaScript syntax without it being flagged by audits. These operators, supported in standalone `.js` files as well as in HTML/JSON file expressions, make it simpler to access the values of deeply nested properties and return an `undefined` value instead of an error when the reference or function doesn't exist. For example, `[[ $page.variables.customerObj.address?.street3 ]]` would return `undefined` if `street3` does not exist in the address property. See Optional Chaining in developer documentation.	22.04

January 2022

New Features

Common Features

Feature	Description	Minimum Version Required
Oracle Integration on US Government Cloud	Oracle Integration is now available in the OC3 realm (Oracle Cloud Infrastructure US Federal Cloud with DISA Impact Level 5 Authorization) in the US DoD East (Ashburn) region. See Get Started with Oracle Integration on US Government Cloud in *Using Oracle Integration Generation 2 on Oracle Cloud Infrastructure US Government Cloud*.	21.4.3
Oracle Integration availability in new regions	Oracle Integration is now available for provisioning in the following regions: • Stockholm (Sweden) • Muscat (Oman) See Availability in *Provisioning and Administering Oracle Integration Generation 2*.	21.4.3

December 2021

New Features

Common Features

Feature	Description	Minimum Version Required
Oracle Integration availability in new regions	Oracle Integration is now available for provisioning in the following regions: • Abu Dhabi • Jerusalem • Marseille • Milan • Singapore See Availability in *Provisioning and Administering Oracle Integration Generation 2*.	21.4.1 for all except Milan (21.4.3)
New recipes	The following new recipe has been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Synchronize Supplier Updates Between Oracle Procurement Cloud and Oracle ATP See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

November 2021

New Features

Common Features

Feature	Description	Minimum Version Required
Identity domains in Oracle Integration	Setting up users and groups in Oracle Cloud Infrastructure for access to Oracle Integration now differs depending on whether or not your cloud account uses identity domains. See About Setting Up Users and Groups in *Provisioning and Administering Oracle Integration Generation 2*.	Region rollout for new cloud accounts begins on November 9.

Integration and Connectivity Features

Feature	Description	Minimum Version Required
eBay Marketplace Adapter - New adapter	The eBay Marketplace Adapter enables you to connect to the eBay application. The eBay Marketplace Adapter supports outbound invocations to execute the REST APIs, enabling you to perform operations such as Create offer, Delete inventory item, Update offer, and others on the eBay-exposed business resources. The eBay Marketplace Adapter supports three modules: Buy, Sell, and Commerce. See eBay Marketplace Adapter Capabilities in *Using the eBay Marketplace Adapter with Oracle Integration Generation 2*.	21.4.2
SugarCRM Adapter - New adapter	The SugarCRM Adapter is the newest addition to the CRM category of adapters. The SugarCRM Adapter enables you to connect to the SugarCRM application. SugarCRM helps businesses manage customer relations more easily and effectively. SugarCRM key features include Sales Forecasting, Campaign Management, Project Management, Case Management, Bug Tracking, and so on. See SugarCRM Adapter Capabilities in *Using the SugarCRM Adapter with Oracle Integration Generation 2*.	21.4.2

Feature	Description	Minimum Version Required
Oracle Hospitality Adapter - New adapter	The Oracle Hospitality Adapter is the newest addition to the industries category of adapters. The Oracle Hospitality Adapter enables you to connect with OPERA Cloud PMS. The Oracle Hospitality Adapter supports inbound invocations to fetch OPERA Cloud business events in near real time and outbound invocations to use Oracle Hospitality Integration Platform (OHIP) REST APIs. This enables customers and partners to execute operations on the OPERA Cloud-exposed business resources through OHIP. For example, you can create or check reservations on the PMS platform. See Oracle Hospitality Adapter Capabilities in *Using the Oracle Hospitality Adapter with Oracle Integration Generation 2*.	21.4.2
Jira Adapter - Authorization Code Credentials security policy support	The Jira Adapter provides support for the Authorization Code Credentials security policy. You provide a client ID, client secret, and scope on the Connections page. You must create an OAuth app to generate a client ID and client secret, then copy and paste it to the Connections page. See Jira Adapter Capabilities in *Using the Jira Adapter with Oracle Integration Generation 2*.	21.4.2
Salesforce Adapter - Change Data Capture (CDC) events support	The Salesforce Adapter supports receiving change event notifications using change data capture (CDC) events for the entities you selected in Salesforce.com See Salesforce Adapter Capabilities in *Using the Salesforce Adapter with Oracle Integration Generation 2*.	21.4.2
Zendesk Adapter - New operation support	The Zendesk Adapter now supports the following operations for the Tickets module: • Show Attachment • Delete Attachment Upload • Upload Attachment • Redact Comment Attachment See Invoke Operations Page in *Using the Zendesk Adapter with Oracle Integration Generation 2*.	21.4.2
SAP S/4HANA Cloud Adapter - Connection page simplification	The SAP S/4HANA Cloud Adapter Connections page has been simplified to require only the SAP S/4HANA host name to establish a connection with the SAP S/4HANA environment. The field in which you previously needed to enter the supported ODATA API version has been removed. See Configure Connection Properties in *Using the SAP S/4HANA Cloud Adapter with Oracle Integration Generation 2*.	21.4.2

Feature	Description	Minimum Version Required
Connectivity agent - JDK 11 support	The connectivity agent is a key component that enables business use cases that require communication between applications hosted on public cloud and resources residing in an on-premises network or private cloud. The connectivity agent has been certified to support JDK Version 11. See System Requirements in *Using Integrations in Oracle Integration Generation 2*.	21.4.2

File Server Features

Feature	Description	Minimum Version Required
Maximum concurrent connections is now 20	You can now have up to 20 concurrent connections to File Server. Previously, the limit was 10 connections.	21.4.2

October 2021

New Features

Common Features

Feature	Description	Minimum Version Required
Oracle Integration on US Government Cloud	Oracle Integration is now available on US Government Cloud in the US Gov East (Ashburn) region in the OC2 realm. Your Oracle Integration experience in US government regions is slightly different than in commercial regions. These differences are described in the documentation. See Get Started with Oracle Integration on US Government Cloud in *Using Oracle Integration Generation 2 on Oracle Cloud Infrastructure US Government Cloud*.	21.4.1

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Send SurveyMonkey Surveys to Salesforce Contacts by Email • Send Notifications to Salesforce Lead Owners Using Twilio • Generate Oracle Hospitality Access Tokens • Synchronize Inventory Items Between Oracle Product Hub Cloud and Oracle E-Business Suite • Export Messages from Apache Kafka to Amazon S3 • Import Marketo Leads to Oracle Autonomous Data Warehouse • Send Order Fulfillment Notifications from Oracle ERP Cloud Using Microsoft Email See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

Visual Builder Features

Visual Builder Features

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
New format required for Android apps	Starting in August 2021, Google requires that all *new* applications uploaded to Google Play use the Android App Bundle (`.AAB`) format. You can still continue to upload updated versions of your existing apps in the `.APK` format. To create an `.AAB` file for your Android app, see Build an Android App Bundle for Google Play.	21.10.2

September 2021

New Features

Common Features

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Attach Files to Salesforce Records • Create Salesforce Cases for Jira Issues • Create Zendesk Tickets for Jira Issues • Post Slack Notifications for New Marketo Leads • Send Documents from Salesforce to DocuSign See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Monitor emails sent from Oracle Integration	You can send up to 1000 emails daily from Oracle Integration Generation 2. See Monitor the Number of Emails Sent from Oracle Integration in *Using Integrations in Oracle Integration Generation 2*.	21.3.3

August 2021

New Features

Common Features

Feature	Description	Minimum Version Required
Oracle Assistant	This release continues to expand the artificial intelligence capabilities within Oracle Integration by debuting a new digital assistant named Oracle Assistant. Use Oracle Assistant to learn how to get started with Oracle Integration, find answers to your questions, and more. See the blog.	21.3.2
Integration with the Oracle Cloud Infrastructure logging service	You can use the public logging service capabilities of Oracle Cloud Infrastructure to collect and manage the activity stream (`ics-flow` log file) of integrations. See Capture the Activity Stream of Integrations in Oracle Cloud Infrastructure Console in *Provisioning and Administering Oracle Integration Generation 2*.	21.3.2

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Self-service support for email address suppression	You can view and remove email addresses from the suppression list, as necessary. This feature eliminates the need to file a service request to remove addresses from the suppression list. See Send Service Failure Alerts, System Status Reports, and Integration Error Reports by Notification Emails in *Using Integrations in Oracle Integration Generation 2*.	21.3.2
Automatic integration reactivation after a connection update	Updating a connection automatically reactivates the integrations using that connection. This eliminates the need to manually deactivate and reactivate an integration after a connection update. See Reactivate Integrations after a Connection Update in *Using Integrations in Oracle Integration Generation 2*.	21.3.2
Zendesk Adapter - New adapter	The Zendesk Adapter is the newest addition in the CX segment of adapters. The Zendesk Adapter offers customers connectivity with the Zendesk application. The Zendesk Adapter supports outbound invocations to execute the REST APIs, which enables you to perform Create or Update, Delete, and Query operations on the Zendesk-exposed business resources. For example, you can bulk import tickets, bulk import users, search for open tickets, and so on. See Zendesk Adapter Capabilities in *Using the Zendesk Adapter with Oracle Integration Generation 2*.	21.3.2
SAP S/4HANA Cloud Adapter - New adapter	The SAP S/4HANA Cloud Adapter is the newest addition to the ERP group of adapters. The SAP S/4HANA Cloud Adapter enables you to connect to and offer connectivity with the SAP S/4HANA Cloud instance. The SAP S/4HANA Cloud Adapter supports outbound invocations to execute the OData APIs, which enables you to perform operations such as Create a new item in the collection A_SalesOrderType on the SAP S/4 HANA Cloud-exposed business resources. See SAP S/4HANA Cloud Adapter Capabilities in *Using the SAP S/4HANA Cloud Adapter with Oracle Integration Generation 2*.	21.3.2
Salesforce Adapter - Support for consuming platform events	The Salesforce Adapter now supports the popular Salesforce platform events to allow the exchange of real-time event data from Salesforce with any other application in Oracle Integration. You can define custom platform events in Salesforce that are then delivered through the Salesforce Adapter. See Salesforce Adapter Capabilities in *Using the Salesforce Adapter with Oracle Integration Generation 2*.	21.3.2

Feature	Description	Minimum Version Required
SAP SuccessFactors Adapter - OData support	SAP SuccessFactors Adapter provides support for consuming OData endpoints. See SAP SuccessFactors Adapter Capabilities in *Using the SAP SuccessFactors Adapter with Oracle Integration Generation 2*.	21.3.2
Jira Adapter - Jira Query Language (JQL) support	The Jira Adapter supports declaratively defining and executing a Jira Query Language (JQL) query. See Jira Adapter Capabilities in *Using the Jira Adapter with Oracle Integration Generation 2*.	21.3.2
Marketo Adapter - Custom objects support	The Marketo Adapter supports all custom objects created by the user at Marketo.com. See Marketo Adapter Capabilities in *Using the Marketo Adapter with Oracle Integration Generation 2*.	21.3.2
Oracle E-Business Suite Adapter - Support for Business Service Objects as a subtype of Java APIs as invokes (targets) in integrations.	The Oracle E-Business Suite Adapter supports Business Service Objects as a subtype of Java-based APIs from Oracle Integration when adding the Oracle E-Business Suite Adapter as invoke (target) connections. In addition to Java Bean Services and Application Module Services subtypes of Java APIs, you can now find Business Service Objects available when using Java-based REST services for invocation from Oracle Integration. See Invoke Oracle E-Business Suite Java APIs from Oracle Integration in *Using the Oracle E-Business Suite Adapter with Oracle Integration Generation 2*.	21.3.2
Oracle Intelligent Advisor Adapter - Support for checkpoints	The Oracle Intelligent Advisor Adapter now supports checkpoints - the ability for authenticated users to resume in-flight interviews. See Understand the Oracle Intelligent Advisor Adapter in *Using the Oracle Intelligent Advisor Adapter with Oracle Integration Generation 2* and Integrate using Oracle Integration.	21.3.2
Oracle Intelligent Advisor Adapter - Support for dynamic reference data loading	The Oracle Intelligent Advisor Adapter now supports dynamic reference data loading - the ability to load in additional data (for example, business address or transaction history information) from connected applications using information provided by the user during the interview. See Understand the Oracle Intelligent Advisor Adapter in *Using the Oracle Intelligent Advisor Adapter with Oracle Integration Generation 2* and Integrate using Oracle Integration.	21.3.2

Feature	Description	Minimum Version Required
Oracle Utilities Adapter - Enhancements	The Oracle Utilities Adapter now supports scope level error handling for SOAP services using different fault patterns, Open API 3.0 support for catalogs including GET, PUT and POST services in Oracle Utilities Application Framework applications, DELETE operation support is included for the REST part of the Oracle Utilities Adapter. See Oracle Utilities Adapter Capabilities in *Using the Oracle Utilities Adapter with Oracle Integration Generation 2*.	21.3.2
Deprecated integration and connectivity features	The following features are being deprecated with this release: • Reporting incidents. See Report Incidents in *Using Integrations in Oracle Integration Generation 2*. • FTP Adapter read multiple files operation. See Invoke Operations Page in *Using the FTP Adapter with Oracle Integration Generation 2*. • Subscribe to OIC/Publish to OIC integration patterns. See Understand Integration Patterns in *Using Integrations in Oracle Integration Generation 2*. • Oracle Asserter. See Test Integration Instances in *Using Integrations in Oracle Integration Generation 2*. • Activity Stream Download option and API. See View the Activity Stream in *Using Integrations in Oracle Integration Generation 2*. • FTP Adapter in basic routing integrations. See Add the FTP Adapter Connection to a Basic Routing Integration in *Using the FTP Adapter with Oracle Integration Generation 2*. • Metadata catalog URL, Swagger definition URL, and RAML definition URL connection types in a REST Adapter connection. See Configure Connection Properties for Invoke Connections in *Using the REST Adapter with Oracle Integration Generation 2*.	21.3.2

Process Features

Feature	Description	Minimum Version Required
Identity-related APIs	An Identities category has been added to the Process category in the Oracle Integration REST APIs for working with identities and roles. See the **What's New** topic under **Get Started** in Oracle Integration REST API.	21.3.2

Insight Features

> **Note:**
>
> Insight is only available in Oracle Integration Generation 2.

Feature	Description	Minimum Version Required
Progress tracker dashboard customization	When you embed a progress tracker dashboard in another application, you can now customize the dashboard to hide selected milestones and to show all milestones that have not been passed (skipped), including Error and Terminal Error milestones, regardless of whether the business transaction is Completed or Active. See these topics in *Using Integration Insight in Oracle Integration Generation 2*: • Progress Tracker Dashboard • Embed Insight Dashboards in Other Applications	21.3.2
Insight Designer enhancements	In the Integrations feature of Oracle Integration, you can now: • Create a new Insight model from the Insight Designer. Previously, models could be created only in Insight, then selected in the Insight Designer. • Map an integration action to a new milestone in one step by dragging the action to a new milestone area. Previously, you had to first create the new milestone, then drag the integration action to the milestone. See Map Milestones to Integration Actions in *Using Integration Insight in Oracle Integration Generation 2*.	21.3.2
Switch business transaction views in the URL builder	When constructing an embedded dashboard URL in the URL builder, you can use the new **View** icons in the URL builder to switch between the progress tracker and Business Transaction Details views. Previously, switching between these views required navigating to the respective dashboard and clicking the **Embed Dashboard** icon to open the URL builder for that dashboard. See Construct a URL Using the URL Builder to Embed Insight Dashboards in *Using Integration Insight in Oracle Integration Generation 2*.	21.3.2

Feature	Description	Minimum Version Required
Deprecated feature	The following feature is being deprecated with this release: • Embedded dashboards using custom web components in other applications. Instead, you can embed dashboards using the other supported methods. See Embed Insight Dashboards in Other Application in *Using Integration Insight in Oracle Integration Generation 2*.	21.3.2

Features

Feature	Description	Minimum Version Required
Settings in the AS2 Adapter - Support for two-way SSL connections	You can configure the AS2 Adapter to support two-way SSL connections in the outbound direction on the Connections page. See AS2 Adapter Capabilities in *Using the AS2 Adapter with Oracle Integration Generation 2* .	21.3.2

Visual Builder Features

Visual Builder Runtime and Oracle JET Version for 21.10

This release of Visual Builder uses Oracle JET 10.1.*x* libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 21.10 Visual Builder Runtime, to take advantage of the full spectrum of 21.10 features. For example, JET 10.1.0 provides chroming options for buttons out of the box, including a new one called *danger*, to help you draw a user's attention to important actions on your UI. To see everything that's new in JET 10.1.0, see the Release Notes.

You can upgrade to the latest JET and Visual Builder Runtime versions from your visual application's Settings editor. See Manage Runtime Dependencies for Visual Applications.

Visual Builder Features

Some new Visual Builder features can’t be used until you’ve upgraded your Visual Builder Runtime to 21.10. The Minimum Version Required column shows the runtime required to use each feature.

Feature	Description	Minimum Version Required
PWA support for web apps	To help you build apps that scale from desktop to tablet to mobile, we've expanded our PWA capabilities to web apps, in addition to mobile apps. This option allows you to create responsive web apps that users can add to their mobile devices as mobile apps. You can use the new **PWA** tab in a web app's Settings editor to enable PWA support for a web app. We also provide a default offline page that you can display to users when the PWA-enabled app isn't connected to the Internet. The default offline page is based on a responsive Redwood page template, but you can customize it to suit your requirements. See Configure Progressive Web App Support.	21.10.0
Page flow enhancements	• Revamped page flow diagram The **Page Flow** tab, used to display an application's structure at the application and flow levels, has been revamped to use the Redwood design language. Now called **Diagram**, this view provides a hierarchical view of an application's flows and pages within a flow. It also allows you to view default pages, navigation flows, and more. See Use the Diagram View. • Nested `flows` shows only when flows exist We've streamlined the Navigator view for a web or mobile app so that the nested `flows` node shows only when a flow is created. To create a new flow, you'll now need to click **+** next to the application node. To create a subflow, you click **+** next to an existing flow. See Create a Page Flow.	21.07.0
Redwood icon gallery	Visual apps that use the Redwood theme now leverage Redwood's comprehensive icon library and are available to you right from an app's icon gallery. As a part of this update, we added the icon's stylesheet to an app's imports, so you'll always see the latest Redwood icons when new versions of the icon font are released. You access the icon gallery as usual, say when you add an icon to a page or a navigation list component. See Add an icon component to a page.	21.07.0

Feature	Description	Minimum Version Required
Action chain enhancements	• Action chains in separate JSON files To optimize performance and reduce Git merge conflicts, we've moved an action chain's source from the artifact JSON to its own JSON file. While action chains created with version 21.10 will use separate JSON files by default, you have the option of migrating action chains created in earlier versions. See Create an Action Chain and Migrate an Action Chain. • Deprecated actions We've deprecated two built-in actions: The takePhotoAction is deprecated for web apps while the transformChartDataAction is deprecated for both web and mobile apps. It's now possible to view actions that have been deprecated in a release by selecting the **Show Deprecated** menu option in the Actions palette. See Built-in Actions. Any action chains that use the previously deprecated `navigateToPageAction` action will be automatically migrated to the new `navigateAction` when you upgrade your app to version 21.10.	21.10.0
Data provider enhancements	We've added some design-time options that you can configure from a built-in data provider's properties on the Variables tab: • Text Filter Attributes and Fetch by Offset for SDPs For Service Data Provider (SDP) type variables, you can now configure the **Text Filter Attributes** field when you want user-specified text to filter results shown in a list component like Select Single. See Filter Component Data by Text. This field was previously added to an Array Data Provider variable's properties. We've also added **Fetch by Offset** to the list of Fetch Capabilities to provide random access for endpoints that support querying using a specified offset. • Sort Comparators for ADPs For Array Data Provider (ADP) type variables, you can configure the **Sort Comparators** field to specify your own comparators for sorting.	21.07.0

Feature	Description	Minimum Version Required
Business object updates	• New Groovy timeout override When you use Groovy code for business logic, you can now override the default Groovy timeout if you think your script's processing time will overrun the default duration. You can change this setting via the **Timeout Override** option when you use Groovy expressions to define formula fields, default values, and business rules. See Override the Default Timeout for Groovy Scripts. • New Create options to add formulas and aggregate functions to fields You can now create aggregate and formula fields directly from a business object's Fields page. Previously you had to create a field, then edit it to add a formula or an aggregation function. See Add a Field for Aggregating Data and Add a Formula to a Field. • Fields display in diagrams changed We've changed how fields display by default in business object diagrams. They now show by attribute names, rather than display labels, to match what you'll use in REST API calls or Groovy code. You can still view fields by their display labels by turning off the **Show Field Names** option. See Work with the Business Object Diagrammer. • Tracing for endpoint monitoring You can now enable tracing for a business object's REST requests to diagnose performance bottlenecks and other issues in your application. See Enable Tracing to Monitor Endpoint Calls.	21.07.0
Other Designer updates	• New debug mode for preview You can now troubleshoot runtime issues with your application using a new **Debug Preview** option that uses the debug variants of the Visual Builder runtime and Oracle JET libraries. See Preview an App in Debug Mode. • Changed default for Page Designer screen setting **Fit to Canvas**, the option that resizes the canvas to always take up all available space between the left and right panes in the Page Designer, is now the default screen option. See The Page Designer Toolbar.	21.07.0

Feature	Description	Minimum Version Required
Reset HEAD for a visual app integrated with a Git repo	When you link a visual app to a Git repo in a Visual Builder Studio project, you can now reset your current local branch HEAD to use the latest branch head or any other commit. This feature is useful to resolve push and pull failures when the commit referenced by the local branch HEAD is removed from the remote branch. See Change the Branch Head in a Linked Git Repository.	21.07.0

July 2021

There are no new features for July.

June 2021

New Features

Common Features

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Export Invoices from PayPal to an FTP Server • Post Slack Notifications for ServiceNow Activities • Create Customer Records in Oracle NetSuite • Import Customer Records from Shopify to Stripe • Import Files from an FTP Server to Oracle NetSuite • Synchronize Opportunities in Oracle CX Sales and B2B Service with Oracle NetSuite Orders See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	N/A

May 2021

New Features

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Header mapping support in local invocations for REST-based integrations	If the child integration is REST-based and has defined HTTP headers/custom headers, you can map the headers if you call that integration from the parent integration. See Invoke a Co-located Integration from a Parent Integration in *Using Integrations in Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Attachment support in the request body of the Test page	The Test page for REST Adapter trigger-based integrations in Oracle Integration supports multipart attachments. See Test REST Adapter Trigger Connection-Based Integrations in *Using Integrations in Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Connection replacements in inactive integrations in a package	You can replace connections used by the inactive integrations in a package. For example, if a package contains five integrations, and one integration is inactive, you can replace the connection for only that integration. The connections in the other four integrations cannot be replaced. See Edit and Replace Dependent Resources in a Package in *Using Integrations in Oracle Integration*.	12.2.1.2.1-210505.1400.40942
Automatically stop a schedule during integration deactivation	If you attempt to deactivate a scheduled integration, any active and paused schedules are also stopped as part of integration deactivation. See Deactivate an Integration in *Using Integrations in Oracle Integration*.	12.2.1.2.1-210505.1400.40942
Jira Adapter - New adapter	The Jira Adapter is the newest addition in the social/productivity category of adapters. With this release, the Jira Adapter enables you to connect with the Jira application. Jira is a powerful work management application and is used for project management, bug tracking, and issue tracking. Example use cases with the Jira Adapter include: • Create an incident in the incident tracking system that automatically creates an issue in Jira. • Create/update a case in a CRM system that creates/updates an issue in Jira. • Synchronize a new/updated issue from Jira to a customer ticketing system. See Jira Adapter Capabilities in *Using the Jira Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942

Feature	Description	Minimum Version Required
Oracle Autonomous Transaction Processing Adapter and Oracle Autonomous Data Warehouse Adapter - Bulk load operation support	Oracle Integration continues to advance, improve, and enrich our feature-rich database adapters to meet your cloud-scaling needs and use cases. One such enhancement is Oracle Autonomous Transaction Processing Adapter and Oracle Autonomous Data Warehouse Adapter support for performing bulk load operations natively through the database. This results in huge performance gains for you because it is built on cloud-native data load features provided by Oracle Autonomous databases that use Oracle Cloud Infrastructure functionality and services to boost performance. See Oracle Autonomous Transaction Processing Adapter Capabilities in *Using the Oracle Autonomous Transaction Processing Adapter with Oracle Integration Generation 2* and Oracle Autonomous Data Warehouse Adapter Capabilities in *Using the Oracle Autonomous Data Warehouse Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Apache Kafka Adapter and Oracle Cloud Infrastructure Streaming Service Adapter - Avro format support	As you look to leverage event-based streaming services such as Oracle Cloud Infrastructure Streaming Service and Apache Kafka to modernize your business ecosystem and reap the advantages of digital technologies in their core business processes, Oracle Integration addresses your needs and use cases by continuing to invest in the feature-rich, enterprise messaging adapters. With this Oracle Integration release, enterprise messaging adapters have been enhanced to support the Apache Avro format for serialization and deserialization of messages to and from supported enterprise messaging platforms. Additionally, both enterprise messaging adapters now support the bytes serializer and deserializer along with the string message type. See Apache Kafka Adapter Capabilities in *Using the Apache Kafka Adapter with Oracle Integration Generation 2* and Oracle Cloud Infrastructure Streaming Service Adapter Capabilities in *Using the Oracle Cloud Infrastructure Streaming Service Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942

Feature	Description	Minimum Version Required
REST Adapter - SHA-256 signing method support	Oracle Integration enables you to connect applications and technologies in a secure manner. With this release, the REST Adapter has been enhanced to support the SHA-256 signature method for the OAuth 1.0a authentication scheme. SHA-256 is a cryptographic hash function for the encryption of data, and is more secure than SHA-1. Many applications are phasing out SHA-1 in favor of SHA-256. This includes Oracle NetSuite, which has deprecated support for SHA-1 in the 2021.1 release and is removing support for SHA-1 in the 2021.2 release. See Configure Connection Security in *Using the REST Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Oracle SOA Suite Adapter - HTTP headers for REST services support	The Oracle SOA Suite Adapter simplifies integrating with existing SOA and Oracle Service Bus SOAP/REST services. With this release, the Oracle SOA Suite Adapter enables you to add standard and custom HTTP headers for the REST services. See Oracle SOA Suite Adapter Capabilities in *Using the Oracle SOA Suite Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Oracle ERP Cloud Adapter and Oracle CX Sales and B2B Service Adapter - Support for token-based authentication for business events posted to Oracle Integration	Oracle Integration continues to enrich the already feature-rich Oracle Fusion Application adapters. In this release, the adapters are enhanced to support token-based authentication for business events received from the Oracle Fusion Application. This significantly improves your experience by eliminating the need for managing the Oracle Integration credentials in Oracle Fusion Applications. See Configure Oracle ERP Cloud for Event Subscriptions in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2* and Configure Oracle Engagement Cloud for Event Subscriptions in *Using the Oracle CX Sales and B2B Service Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Shopify Adapter - Support for multiple stores	This update of the Shopify Adapter extends support for businesses that use more than one Shopify store. There are reasons why businesses have multiple Shopify stores. For instance, businesses selling in different countries may want to tailor their shopping experience per country. With this enhancement, you can use a single integration to listen to several stores simultaneously for a trigger (inbound) connection. See Shopify Adapter Capabilities in *Using the Shopify Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942

Feature	Description	Minimum Version Required
Salesforce Commerce Cloud Adapter - Data and Shop API support	In prior releases, the Salesforce Commerce Cloud Adapter supported only Data APIs. With this release, the Salesforce Commerce Cloud Adapter has been enhanced to support outbound invocations to execute the Shop APIs that enable you to perform Create, Update, Delete, and Query operations in the Salesforce Commerce Cloud application. See Salesforce Commerce Cloud Adapter Capabilities in *Using the Salesforce Commerce Cloud Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
MySQL Adapter - MySQL 8.0 certification	The MySQL Adapter has been certified with MySQL Database version 8.0. See Connectivity Certification Matrix and MySQL Adapter Capabilities in *Using the MySQL Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Microsoft SQL Server Adapter - Microsoft Azure SQL Database support	Oracle Integration customers need to integrate with Microsoft Azure SQL. In this release, the Microsoft SQL Server Adapter has been enhanced to connect with Microsoft Azure SQL. Note that you must configure a connectivity agent that can communicate with Microsoft Azure SQL to connect with the Microsoft Azure SQL Database. See Microsoft SQL Server Adapter Capabilities in *Using the Microsoft SQL Server Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
UiPath Robotic Process Automation Adapter – Support for orchestrator folders	The UiPath Robotic Process Automation Adapter has been enhanced to support the folders feature of the UiPath Orchestrator. Using the adapter, you can now connect to a classic or modern folder in the UiPath Orchestrator, configure resources related to the folder, and execute the required processes. See Configure Connection Properties and UiPath Robotic Process Automation Adapter Robot Configuration Page in *Using the UiPath Robotic Process Automation Adapter with Oracle Integration Generation 2*	12.2.1.2.1-210505.1400.40942

Process Features

Feature	Description	Minimum Version Required
Jet CCA components	Process UI snippets are now available as Oracle JET (JavaScript Extension Toolkit) composite components for embedding in self-service applications, services, or portals. Using these components, you can easily incorporate standalone Process UI modules into multiple JET-based applications. See Use Process UI Composite Components (CCA) in *Using Processes in Oracle Integration Generation 2*. Also see this blog: Extend Process Automation UI Components to JET-Based Applications.	12.2.1.2.1-210505.1400.40942
Insight models in structured processes	Bring real-time visibility and analytics into your process applications by linking to an activated Insight model in a structured process. See Work with Integration Insight Models in *Using Processes in Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Process design time enhancements	We've implemented the following design time enhancements: • While specifying the security properties for an integration in the **Advanced** tab of the Edit the integration dialog, you can find a new option to use generic credentials instead of the default option to use the instance creator credentials. This mitigates integration failure due to untoward situations such as when an instance creator is removed from the system. See Edit Integrations in *Using Processes in Oracle Integration Generation 2*. • A new function **Get Geolocation** that returns the current position of the user device is available to be used in forms. Find details about the Get Geolocation function in the function table of Specify Functions in *Using Processes in Oracle Integration Generation 2*. • You now have the option to bypass the default fault policy settings while activating applications. You can select **No Retries** if you want to skip retrying failed task activities during runtime. See Activate Applications in *Using Processes in Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942

Feature	Description	Minimum Version Required
UiPath Robotic Process Automation Adapter – Support for Orchestrator folders	The UiPath Robotic Process Automation Adapter has been enhanced to support the Folders feature of the UiPath Orchestrator. Using the adapter, you can now connect to a classic or modern folder in the UiPath Orchestrator, configure resources related to the folder, and execute the required processes. See Configure Connection Properties and UiPath Robotic Process Automation Adapter Robot Configuration Page in *Using the UiPath Robotic Process Automation Adapter with Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Embedded assistance in forms event editor	You can now view the functions help within the forms event editor. You browse through a list of categories and functions. Each function displays a description, a list of arguments, a return type, and examples. To view the functions help, select a control, and edit an event from the Properties pane.	12.2.1.2.1-210505.1400.40942

Insight Features

> **Note:**
>
> Insight is only available in Oracle Integration Generation 2.

Feature	Description	Minimum Version Required
Insight models in process applications	You can now associate an Insight model to a process application in Processes to easily monitor and analyze your business processes. This means you can view metrics for a business process implementation that is defined in Integrations, Processes, or that spans across both. See: • Associate a Model to a Process in *Using Integration Insight in Oracle Integration Generation 2* • Work with Insight Models in *Using Processes in Oracle Integration Generation 2*	12.2.1.2.1-210505.1400.40942

Feature	Description	Minimum Version Required
Embedded dashboards in Visual Builder web applications	In the February 2021 release, we introduced the ability to embed customized views of Insight dashboards in other applications using custom web components, built using Oracle JET Composite Component Architecture (CCA). In this release, we are providing new Integration Insight custom web components for embedding dashboards in a Visual Builder web application. See Embed Integration Insight Dashboards in a Visual Builder Application in *Using Integration Insight in Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Enhanced user experience in the Insight Designer	In prior releases, milestones, the unique instance identifier, and indicators were defined in Insight in the context of defining a model. Now, you can also define or change these model components in the Insight Designer in Integrations. See the following related topics in *Using Integration Insight in Oracle Integration Generation 2*: • Work with the Insight Designer in Integrations • Define Identifier Extraction Criteria • Define Indicator Extraction Criteria	12.2.1.2.1-210505.1400.40942
Alerts and Notifications	You can configure email notifications to alert recipients when a milestone is passed or not passed, or when an indicator is assigned a specific value. See Alerts and Define Alerts in *Using Integration Insight in Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
Indicator enhancements	An indicator (dimension or measure) can now be mapped to more than one milestone. This allows the value of the indicator to change during the progression of a business process. For example, the value of an indicator that extracts the price of an item can change when the item price is reduced. See Indicators and Define Indicators in *Using Integration Insight in Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942

B2B for Oracle Integration Features

Feature	Description	Minimum Version Required
Define transports and automatically create integrations	When you define the transport protocol (AS2 or FTP) and transport parameters to use during transactions between trading partners, you automatically create two integrations (one for sending documents and the other for receiving documents) between the two trading partners. This eliminates the need to manually create integrations on the Integrations page. See Manage Trading Partners and Integrations in *Using B2B for Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942

Feature	Description	Minimum Version Required
Duplicate control number checks	When you define an inbound agreement, you can select to check for duplicate control numbers in transactions. This prevents the processing of transactions with duplicate control numbers. See Manage Trading Partners and Integrations in *Using B2B for Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942
UN/EDIFACT support	B2B for Oracle Integration now supports designing and running UN/EDIFACT-formatted transactions with your trading partner. See About Electronic Data Interchange in *Using B2B for Oracle Integration Generation 2*.	12.2.1.2.1-210505.1400.40942

Visual Builder Features

Visual Builder Runtime and Oracle JET Version for 21.07

This release of Visual Builder in Oracle Integration uses Oracle JET 10 libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 21.07 Visual Builder Runtime, to take advantage of the full spectrum of 21.07 features. For example, JET 10 introduces support for rendering some components on dark backgrounds through the use of JET classes. To see everything that's new in JET 10, see the Release Notes.

You can upgrade to the latest JET and Visual Builder Runtime versions from your visual application's Settings editor. See Manage Runtime Dependencies for Visual Applications.

Visual Builder Features

Feature	Description	Minimum Version Required
Custom theming for Redwood-based web apps	This release bundlesOracle JET 10, and with that comes the ability to customize your application's Redwood theme. You do this using CSS variables right within the Designer, though only for web applications that use the Redwood UI: From your application's Settings editor, create a separate CSS file with the default JET CSS variables, then uncomment and update the variables you want to change. See Style Visual Builder Applications and Customize the Redwood Theme for a Web Application.	21.07.0
Enhanced upgrade and migration	When you upgrade your application to a newer release, Visual Builder now makes changes to your app to better align it with the new release. As a part of this migration, it provides a list of changes, so you get an idea of how your app is evolving. See Manage Runtime Dependencies for Visual Applications.	21.07.0

Feature	Description	Minimum Version Required
Oracle JET Dynamic Components	You can now add *dynamic* tables and forms to your visual applications. Dynamic components let you control what's displayed at runtime based on the conditions that are true for the current user or device accessing the app. For example, you might configure a dynamic table so that certain columns are hidden and others are added when the user viewing the page is a manager. Dynamic containers, which let you display your own content in regions within the container based on conditions that are evaluated at runtime, are also available in 21.07. You can install all three dynamic components from the Component Exchange; just search on "`dynamic`".	21.07.0
Page Designer toolbar changes	The Page Designer toolbar has a new **Custom** option that lets you resize the canvas to whatever size you want. The **Auto** option, introduced in the previous release, is now renamed as **Fit to Canvas**. See Page Designer Toolbar.	21.07.0

Feature	Description	Minimum Version Required
Action and action chain updates	• We've introduced a new Navigate action (`navigateAction`) that lets you navigate from a page to another page and also to another flow. With this update, the previously used `navigateToPageAction`, now labeled Navigate (Legacy) on the Actions palette, is deprecated. See Add a Navigate Action. • It's now much easier to build your apps to scan barcodes and QR codes: simply drag and drop the new Scan Barcode action (`barcodeAction`) from the Actions palette to an action chain. The action accepts an image of a barcode or QR code and will return its value. See Add a Scan Barcode Action. • For the Navigate Back action (`navigateBackAction`), a new **Parameters** field has been added to help you pass parameters to the previous page. See Add a Navigate Action. • For the Call REST action, the **Response Body Format** field (which lets you override the standard REST behavior) now supports the **formData** option. See Add a Call REST Endpoint Action and Call REST Endpoint Action. • The action chain editor now has a new toolbar, which lets you search your action chain, especially when it includes hundreds of actions. You can enter any search text—variable name, endpoint ID, action ID—to find what you're looking for. An Overview icon also provides a visual view of your action chain, with the nodes that match your search text highlighted. Both features work together to help you quickly search and navigate your action chain. See Create an Action Chain. • Similar to variable and type usages, you can now view an action chain's usage information in the Properties pane. Look under **Usages** to see (for example) which pages use the action chain. See Create an Action Chain.	21.07.0

Feature	Description	Minimum Version Required
Variable updates	• A new filter field has been added to a variable's Expression editor in the Properties pane to help you search and find variables. You can also resize the left panel, which is useful when a variable's name is long. • For common filtering scenarios in components like `select-single`, a new **Text Filter Attributes** field has been added to an Array Data Provider variable's Properties pane. Use this field to specify an array of attributes on which the filter should be applied. • For complex variable types like an Object, a new **diff** property has been added to the variable's `onValueChanged` event listener to show properties within the variable that have changed.	21.07.0
Business object changes	• It is now possible to delete business objects even when they are referenced by other business objects. When you try to delete a business object, from the **Objects** tab or the **Diagrams** tab within **Business Objects**, any relationships to other business objects will be shown in a confirmation dialog. If you confirm the selection, the fields referenced in the other business object will also be deleted. • Prior to 21.07, number fields returned in a business object endpoint response were presented in scientific format (for example, 1E3), unless the response was processed by a JSON parser (either directly or on the business object's Data tab). Now, however, the numbers are always returned in standard notation, making it possible for numbers to display consistently even without parsing. **Note:** If your application is already staged and published, make sure you re-stage and re-publish your application to leverage this update. See Staging and Publishing Visual Applications.	21.07.0
Delete referenced business objects	It is now possible to delete business objects even when they are referenced by other business objects. When you try to delete a business object, from the **Objects** tab or the **Diagrams** tab within **Business Objects**, any relationships to other business objects will be shown in a confirmation dialog. If you confirm the selection, the fields referenced in the other business object will also be deleted.	21.07.0

Feature	Description	Minimum Version Required
Service connection enhancements	Last release, we gave you the option of creating a dynamic service connection to retrieve a service's OpenAPI definition from the source URL. While this option always fetches the latest service definition for your app, it may impact performance. To optimize metadata retrieval performance, we've introduced the **Copy minimal OpenAPI to the application** option for ADF Describe-based services like Oracle Cloud Applications. This option stores minimal service metadata locally in the application's sources, but dynamically retrieves the parameter or request/response schema whenever required. See Service Connections: Static Versus Dynamic. No matter which metadata retrieval option you choose when creating a service connection, you can now change your selection later on. See Convert a Service Connection.	21.07.0
Export user-role mappings	When you export an application, its user-role mappings (as defined in `user-roles.json`) are now included in the exported archive (as `role-mapping.json`). When the application archive is later imported, the role mappings are also imported—as long as the app is imported to the same IDCS domain it was exported from. See Manage User Roles and Access	21.07.0

Resolved Issues

This release of Oracle Integration includes a number of resolved issues. For details, log in to support.oracle.com and search for document ID 2777590.1.

April 2021

New Features

The Oracle Cloud Infrastructure Console navigation menu change is the only new feature for April.

Common Features

Feature	Description	Minimum Version Required
Oracle Cloud Infrastructure Console navigation menu changes	The navigation menu for accessing Oracle Integration has changed. • For Oracle Integration Generation 2: Open the navigation menu in the Oracle Cloud Infrastructure Console and click **Developer Services**. Under **Application Integration**, click **Integration**. See Signing in to the Console in *Provisioning and Administering Oracle Integration Generation 2*. • For Oracle Integration Classic: Open the navigation menu in the Oracle Cloud Infrastructure Console and click **OCI Classic Services**. Under **Platform Services**, click **Integration Classic**. See Accessing Oracle Integration in *Administering Oracle Integration Classic*.	Available starting 4/27/21

March 2021

There are no new features for March.

February 2021

New Features

Common Features

Feature	Description	Minimum Version Required
Internet Explorer 11 deprecation	Oracle Integration has deprecated the use of Internet Explorer 11. Support for Internet Explorer 11 will be discontinued with the May 2021 release of Oracle Integration.	N/A
Screen width changes	Non-canvas views such as the Home page, Integrations page, Connections page, and other list pages now appear with a defined width to better show content on wider monitors. Canvas views such as the integration canvas and the mapper continue to show content in a full screen. See Doc ID 2751565.1 at My Oracle Support.	210129.2200.39441

Feature	Description	Minimum Version Required
Edit network access	You can restrict which networks have access to your Oracle Integration instance by configuring an allowlist (formerly known as whitelist). Only users from networks that meet the configured settings are allowed to access the integration instance. **Note:** This feature is only available in Oracle Integration Generation 2. See Restrict Access to an Instance in *Provisioning and Administering Oracle Integration Generation 2*.	210129.2200.39441
Data retention now includes Insight	Manage your Integration Insight space centrally in the common Data Retention settings area. **Note:** This feature is only available in Oracle Integration Generation 2. See Set Data Retention for Oracle Integration Features in *Provisioning and Administering Oracle Integration Generation 2*.	210129.2200.39441
Custom endpoint modifications in Oracle Integration Generation 2	You can update or replace the custom endpoint of an instance. **Note:** This feature is only available in Oracle Integration Generation 2. See Editing the Edition, License Type, Message Packs, and Custom Endpoint of an Instance in *Provisioning and Administering Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
New recipes	The following new recipes have been added to Oracle Integration Generation 2 to help you jump start your integration development. Simply install, configure, and activate. • Calculate Total Balance • Get Weather Data • Get Stocks Data • Work with Files on FTP Servers • Increment the Sequence Variable within a Loop Integration • Synchronize SurveyMonkey with Oracle NetSuite • Create an Organization in Oracle Service Cloud • Get an Organization from Oracle Service Cloud • Publish and Subscribe to the Oracle Cloud Infrastructure Streaming Service See Recipes and Accelerators on the Oracle Help Center for a list of all Oracle Integration recipes.	210129.2200.39441

Integration and Connectivity Features

Feature	Description	Minimum Version Required
File upload support in request body of the Test page	The Test page for REST Adapter trigger-based integrations in Oracle Integration now supports attachments. You can upload files to the request body in addition to typing in payload content. See Test REST Adapter Trigger Connection-Based Integrations in *Using Integrations in Oracle Integration Generation 2*.	210129.2200.39441
Run or schedule integrations on behalf of another user	You can specify the user context while scheduling an integration. This helps you schedule integrations on behalf of another user. This enables integrations to be scheduled using a service account that does not go away when a user leaves the company or moves to another department. See Change the User Submitting an Integration Schedule in *Using Integrations in Oracle Integration Generation 2*.	210129.2200.39441
Convert a scheduled integration to an app-driven orchestration integration	You can convert scheduled integrations to app-driven orchestration integrations. You previously needed to recreate the integration if you wanted to change the style. See Convert a Scheduled Integration to a REST Adapter-Triggered Orchestration Integration in *Using Integrations in Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
Oracle API Gateway support	After activating a REST Adapter trigger-based integration in Oracle Integration, you can publish the open API specification and deploy the endpoint to Oracle API Gateway. **Note:** This feature is only available in Oracle Integration Generation 2. See Manage an Integration as an API with Oracle API Gateway in *Using Integrations in Oracle Integration Generation 2*.	210129.2200.39441
Edit XSLT code in the mapper	You can directly edit the XSLT code of your mappings inside the mapper. This action is useful for use cases in which mapping is not possible in the graphical mapper. This eliminates the need to export your XSLT code from Oracle Integration, edit the code manually in a text editor or in a separate graphical tool such as Eclipse or Oracle JDeveloper, and then re-import the code into the mapper in Oracle Integration. See Edit XSLT Code in the Mapper in *Using the Oracle Mapper with Oracle Integration Generation 2*.	210129.2200.39441
Oracle CX Sales and B2B Service Adapter, Oracle ERP Cloud Adapter, and Oracle HCM Cloud Adapter - OAuth Authorization Code Credentials support	Oracle Integration continues to improve, enrich, and secure Oracle Fusion Applications adapters (Oracle CX Sales and B2B Service Adapter, Oracle ERP Cloud Adapter, and Oracle HCM Cloud Adapter), providing a best in class experience for integrating with Oracle Fusion Applications. With this latest release, the Oracle Fusion Applications adapters now support authentication using the OAuth 2.0 security policy. This simplifies credential management by eliminating the need for housekeeping credentials in Oracle Integration. See Oracle Engagement Cloud Adapter Capabilities in *Using the Oracle CX Sales and B2B Service Adapter with Oracle Integration Generation 2*, Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*, and Oracle ERP Cloud Adapter Capabilities in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
Oracle HCM Cloud Adapter and Oracle ERP Cloud Adapter - Support for consuming extensible flexfields (EFFs) and descriptive flexfields (DFFs) for REST resources	Oracle Integration is a customer-preferred platform for integrating with Oracle Fusion Applications (ERP Cloud, Engagement Cloud, and HCM Cloud). This latest release provides even more functional enrichments to the already feature-rich Oracle Fusion Applications adapters and continues Oracle Integration's lead as an integration platform of choice for customers. Oracle Fusion Applications support associating descriptive flexfields (DFFs) or extensible flexfields (EFFs) with which you can create custom attributes for business objects. As you define, associate, and leverage DFF and EFF fields for enriching business objects, the real value of enriched business objects is reaped only when the enriched information is exchanged seamlessly to and from Oracle Fusion Applications and the rest of the business applications in the customer footprint. This capability has been enhanced for the Oracle ERP Cloud Adapter and Oracle HCM Cloud Adapter. See Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2* and Oracle ERP Cloud Adapter Capabilities in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Oracle HCM Cloud Adapter - Migration from emps to worker business for an employee Atom feed	The Oracle HCM Cloud Adapter has been enhanced to support the worker business objects for an employee Atom feed. The Oracle HCM Cloud worker business object is much more enriched in comparison to the emps business object. Because a worker business object is a super set, there is no loss of functionality. The Oracle HCM Cloud Adapter continues to support the emps business object for existing integrations. However, a new endpoint configuration fetches the worker business object. See Invoke Operation Page in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Apache Kafka Adapter - Transactional producer support	Oracle Integration continues to invest in the Apache Kafka Adapter, enhancing the feature-rich adapter to meet your use cases. With this latest release, the Apache Kafka Adapter now supports configuring the producer as transactional. This enables integration architects to produce messages using the transactional producer or a non-transactional producer depending on their business needs. See Topic & Partition Page in *Using the Apache Kafka Adapter with Oracle Integration Generation 2*	210129.2200.39441

Feature	Description	Minimum Version Required
Oracle Cloud Infrastructure Streaming Service Adapter - Inbound polling	The Oracle Cloud Infrastructure Streaming Service provides a fully-managed, scalable, and durable solution for ingesting and consuming high-volume data that you can consume and process in real time. The Oracle Cloud Infrastructure Streaming Service Adapter already supports a wide array of use cases such as publishing messages to a specific stream and partition, consuming messages from a specific consumer group, and so on. With this latest release, the Oracle Cloud Infrastructure Streaming Service Adapter now enables integration architects to poll for messages in the Oracle Cloud Infrastructure Streaming Service. This enables the integration architect to subscribe to updates in the Oracle Cloud Infrastructure Streaming Service and consume the same using a wide array of connectivity adapters in Oracle Integration. Note that inbound polling configuration is only supported when the Oracle Cloud Infrastructure Streaming Service Adapter connection is configured with the connectivity agent. See Oracle Cloud Infrastructure Streaming Service Adapter Capabilities in *Using the Oracle Cloud Infrastructure Streaming Service Adapter with Oracle Integration Generation 2*.	210129.2200.39441
REST Adapter - Support for consumption and publication of OpenAPI with multipart/mixed and multipart/form-data	OpenAPI is a foundational cornerstone in the digital economy used by almost all modern applications and digital technologies and services for communicating the set of services offered by them digitally, enabling everyone to communicate efficiently in the digital economy. Oracle Integration already supports publishing REST Adapter trigger flows in OpenAPI specification. However, the OpenAPI specification generated from Oracle Integration did not contain information depicting the resource request as a multipart request. As a result, consuming clients were left unaware about support for multipart request resources. With this latest release, Oracle Integration now supports publishing and consuming the OpenAPI specification that contains the required constructs for depicting the multipart request. See Consume and Publish OpenAPI Documents with Multipart/Mixed and Multipart/Form-Data in *Using the REST Adapter with Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
REST Adapter - Trigger connection security policy support	Oracle Integration is a versatile digital platform enabling you to expose your integrations as REST APIs. In previous releases, these APIs were invoked using Basic Authentication or OAuth 2.0 security authentication schemes. In an effort to provide more robust and secure REST resources, Oracle Integration with this latest release enables you to configure the REST Adapter trigger security authentication schemes as required to meet your business requirements. The supported security policies for REST Adapter trigger connections are Basic Authentication, OAuth 2.0, and both (OAuth 2.0 or Basic Authentication). See Configure Connection Security in *Using the REST Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Oracle NetSuite Adapter - Attach and Detach operation support	Oracle Integration continues to invest in the Oracle NetSuite Adapter, further integrating with Oracle NetSuite application capabilities to meet customer needs, simplify access, and address wider use cases. One enhancement available with this latest release is support for attaching and detaching files from NetSuite records. This enables integration architects to attach and detach related documents seamlessly with Oracle NetSuite records. The attached documents can be easily accessed from Oracle NetSuite applications, making critical related information easily accessible. See Invoke Operation Page and Attach and Detach a Contact with the Oracle NetSuite Adapter in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Salesforce Commerce Cloud Adapter - New adapter	The Salesforce Commerce Cloud Adapter is the newest addition to the e-commerce group of adapters. The Salesforce Commerce Cloud Adapter enables you to connect to and offer connectivity with the Salesforce Commerce Cloud application. The Salesforce Commerce Cloud Adapter supports outbound invocations to execute the Data APIs that enable an integration developer to perform Create or Update, Delete, and Query operations on the Salesforce Commerce Cloud exposed business resources. See Salesforce Commerce Cloud Adapter Capabilities in *Using the Salesforce Commerce Cloud Adapter with Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
Oracle Intelligent Track and Trace Adapter - New adapter	The Oracle Intelligent Track and Trace Adapter enables you to submit documents to the Oracle Intelligent Track and Trace application from a variety of application connections supported by Oracle Integration. When setting up and using the Oracle Intelligent Track and Trace application, you must connect the various data sources that an organization uses to get complete visibility and trace capabilities into transactions. The Oracle Intelligent Track and Trace Adapter provides an easy interface to the specific document types that the credentialed user is allowed to submit by abstracting the flow, step, and document type details. The Oracle Intelligent Track and Trace Adapter also handles conversion of data to the appropriate JSON schema of the selected document submission endpoint. See Oracle Intelligent Track and Trace Adapter Capabilities in *Using the Oracle Intelligent Track and Trace Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Oracle SOA Suite Adapter - Standard and custom SOAP and HTTP header support	The Oracle SOA Suite Adapter simplifies integrating with existing SOA and Oracle Service Bus SOAP and REST services. With this latest release, the Oracle SOA Suite Adapter enables you to add standard and custom SOAP and HTTP headers for SOAP services. See Oracle SOA Suite Adapter Capabilities in *Using the Oracle SOA Suite Adapter with Oracle Integration Generation 2*.	210129.2200.39441
SAP SuccessFactors Adapter - Compound Employee application programming interface (API) support	The SAP SuccessFactors Adapter helps you to connect and create an integration with the SAP SuccessFactors application. With this latest release, the SAP SuccessFactors Adapter extends the capabilities and provides support for the Compound Employee application programming interface (API). This enables the integration developer to extract employee data from SAP SuccessFactors Employee Central. See SAP SuccessFactors Adapter Capabilities and Extract Employee Data from SAP SuccessFactors Employee Central in *Using the SAP SuccessFactors Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Workday Adapter - No mandatory policies required to access web services design time	The Workday Adapter enables you to create an integration with Workday in Oracle Integration. With this latest release, the Workday Integration System User (ISU) doesn't need access to the Security Configuration and Security Activation domain policies to configure Workday web services in the Workday Adapter. There are now no mandatory policies required to access web services design time for the Workday Adapter. See Prerequisites for Creating a Connection in *Using the Workday Adapter with Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
Shopify Adapter - New modules support	The Shopify Adapter enables you to design, set up, and manage digital stores across multiple sales channels including mobile, social media, web, online marketplaces, and so on. With this latest release, the Shopify Adapter extends the capabilities and provides invoke (outbound) connection support for performing various types of operations such as **Retrieves a list of countries** and so on against the Countries and Shop objects from the Store Properties module. The Shopify Adapter also provides trigger (inbound) connection support for performing various types of actions against events such as Delivery Profile create/update/delete from the DeliveryProfiles module. See Shopify Adapter Capabilities in *Using the Shopify Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Marketo Adapter - Bulk extract support	The Marketo Adapter is part of the CRM/CX adapters. The Marketo Adapter enables the user to create an integration with the Marketo application in Oracle Integration. Previously, the Marketo Adapter supported performing a bulk import of bulk records into Marketo. With this latest release, the Marketo Adapter now supports performing a bulk extract to get records from Marketo. As an example, you can extract a large volume of Leads records from Marketo and write the records to a file for future use. See Invoke Operations Page and Process Large Data Sets Asynchronously with Different Bulk Extract Operations in *Using the Marketo Adapter with Oracle Integration Generation 2*.	210129.2200.39441
FTP Adapter - Implicit SSL support	The FTP Adapter is a versatile adapter among many predefined adapters in Oracle Integration, which enables you to build integrations that consume and exchange files in a secure way with sFTP servers. In previous releases, you needed to upload the PKCS12 certificate to create the connection with a secure FTP server over SSL. With this latest release, the FTP Adapter now supports defining the connection type as implicit or explicit on the Connections page. This removes the dependency of uploading the private PKCS12 certificate. The FTP Adapter now leverages a public certificate uploaded in the central repository. See Configure an FTP over SSL Connection in *Using the FTP Adapter with Oracle Integration Generation 2*.	210129.2200.39441
Oracle Intelligent Advisor Adapter - Attachment support	The Oracle Intelligent Advisor Adapter now supports attachments, allowing decision letters, applications forms, log files, or any other documents to be directly added to the records. See Understand the Oracle Intelligent Advisor Adapter in *Using the Oracle Intelligent Advisor Adapter with Oracle Integration Generation 2* and Integrate Using Oracle Integration.	210129.2200.39441

Process Features

Feature	Description	Minimum Version Required
Force Commit option	In structured processes, a new **Force commit after execution** option was added to Service, Send, Decision, and Integration activities. Selecting the option ensures that the flow is restored to the activity for which it is checked, if a failure occurs after and it retries. See Edit an Element's Properties in *Using Processes in Oracle Integration Generation 2*.	210129.2200.39441
Control which task actions appear to users	In structured processes, you can now define which task actions assignees can see. This option allows you to display only a subset of actions to users in runtime. See Specify Task Actions Shown to Users in *Using Processes in Oracle Integration Generation 2*.	210129.2200.39441

Insight Features

> **Note:**
>
> Insight is only available in Oracle Integration Generation 2.

Feature	Description	Minimum Version Required
Embedded dashboards	In the November 2020 release, we introduced the ability to embed customized views of Insight dashboards in other applications by manually constructing a URL to render the dashboards. In this release, we are providing a URL builder in the user interface to make embedding dashboards in an iFrame even easier. Also new in this release is the ability to embed dashboards as HTML elements using Oracle JET Composite Component Architecture (CCA) components. See Embed Integration Insight Dashboards in Other Applications in *Using Integration Insight in Oracle Integration Generation 2*.	210129.2200.39441
Purge Integration Insight data	On the Data Retention page in Oracle Integration settings, you can purge Insight data by a defined schedule, when database space reaches a warning state, or immediately. See Set Data Retention in *Provisioning and Administering Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
User preferences for Integration Insight	Customize your view in Insight with new capabilities: • Highlight favorite consoles. • Rearrange dashboards for a console. • When setting the ***Transaction* Started** dashboard filter, select to use this setting for only the current console or for all consoles. See Work with Preconfigured and Custom Dashboards on the Console Page in *Using Integration Insight in Oracle Integration Generation 2*.	210129.2200.39441

B2B for Oracle Integration Features

Feature	Description	Minimum Version Required
Tracking wire and business messages	A separate tracking user interface, called the B2B Track Messages page, is provided under the **Monitoring** tab in the left navigation pane. This page provides visibility into message exchanges between your company and trading partners. A **Wire Messages** tab provides a technical view of messages actually sent and received from trading partners. A **Business Messages** tab shows business transactions exchanged with trading partners. **Note:** This feature is only available in Oracle Integration Generation 2. See Track B2B Messages in *Using B2B for Oracle Integration Generation 2*.	210129.2200.39441

Feature	Description	Minimum Version Required
Trading partner management	You can now model your suppliers, vendors, or customers with whom you exchange B2B transactions as trading partners in the user interface. You can create agreements to define which documents are exchanged and the runtime enforces them declaratively. **Note:** This feature is only available in Oracle Integration Generation 2. See Manage Trading Partners in *Using B2B for Oracle Integration Generation 2*.	210129.2200.39441

File Server Features

> **Note:**
> File Server is available only in Oracle Integration Generation 2.

Feature	Description	Minimum Version Required
View file listing	The Folders page has been renamed to Files. It now lists both folders and files contained in the selected folder. You can sort them and filter them to list only files or only folders. See Configure Folders and View List of Files in *Using File Server in Oracle Integration Generation 2*.	210129.2200.39441

Visual Builder Features

Some new Visual Builder features can't be used until you've upgraded your Visual Builder Runtime to 21.04. See Features Requiring Visual Builder Runtime 21.04 for more information.

Feature	Description	Minimum Version Required
Service connection and backend enhancements	• New navigation for service connections and backends The Services tab in the Navigator (previously the Service Connections tab) has been enhanced to show catalog backends as well. Within this tab, Service Connections now show under the **Service Connections** tab and backends show under the **Backends** tab. Previously, all backend settings were managed from the Services tab in the Settings editor. See Work with Services in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*. • Support for custom backends In addition to the built-in Integration, Process, and Oracle Cloud Application backends, it's now possible to create backends that map to other types of custom servers. You can use any OpenAPI/Swagger service specification or point to an Oracle ADF Describe to create a custom backend. See Create a Custom Backend in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*. Service connections for custom backends can be created by service specification or by endpoint URL. • New **dynamic** service connections You can now create a service connection to dynamically retrieve the service's OpenAPI definition, instead of copying the definition and storing it as part of your visual application's sources. A dynamic service connection creates a pointer to the service definition at a remote location. This keeps your application in sync with the latest service definition and enables you to re-use external definitions that aren't customized for your app. See Service Connections: Static Versus Dynamic in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*. • Smart URL and information banners Several updates were made to enhance the workflow when you create a service connection by specification or by endpoint, key among them: – A new **+ Service Connection** button enables you to create a service connection from an existing backend. – The URL input field displays a drop-down list of existing backends and filters the list based on the text you enter. A new **Detach** button ( ) lets you use the URL that the services resolves to, rather than the `vb-catalog` URL.	21.04.0 (210129.2200.39441)

Feature	Description	Minimum Version Required
	– An information banner helps you more easily identify service connections that are "derived" from a backend.	
Code editor improvements	The code editors in the Designer—HTML, JSON, JavaScript, and Code view in the Page Designer—are now based on Monaco, the same editor that provides extensive code-editing capabilities in Visual Studio Code. The HTML and JSON editors leverage this update as follows: • The HTML editor provides code completion for Oracle JET snippets. For example, when you want to add a JET combo box, typing `ojcb` in the editor will present a list of component tags that match the text. You can then select the `ojcbo` tag in the code completion window to insert a combo box code snippet and add it to your HTML file. • The JSON editor provides insights based on the file's associated JSON schema to provide tooltips, hints, and key/value completion. Note that code insight has changed—you now need to trigger it in an editor by typing Ctrl+Space or by typing a trigger character, such as the dot character (.) in JavaScript. See Work With Code Editors in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)
Declarative support to create custom types from code	It's now much easier to use your own type, such as a type class written in JavaScript or a typescript class, with a variable. Using a new From Code option in the Types editor, you can import your type definition to declaratively plug in any Oracle JET type class or a custom type class and create an instance of that type class, then use it with a new category of variable known as an InstanceFactory variable. See Create a Custom Type From Code in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)
New UI to manage resource imports	It is now possible for you to add, update, or delete imported resources, such as custom CSS files, modules, and components. You can create references to these imports at the page, flow, and application level using the new Imports tab from the Settings editor. See Import Components, CSS, and Custom Modules for an Application in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)

Feature	Description	Minimum Version Required
Improvements to the Action Chain editor	When you define an action's properties in an action chain, its default ID is now regenerated to provide a more descriptive identifier. For example, a single Call REST Endpoint action added to a chain has an initial ID of `callRest`. If you configure the actions endpoint, say, to call the Petstore `getPetById` endpoint, the action ID is automatically updated to `callRestGetPetById`, making your code more readable and easier to maintain and debug. IDs are regenerated for the following actions: Call Action Chain, Call Function, Call REST, Fire Event, Navigate, and Call Component.	21.04.0 (210129.2200.39441)
Index a business object field	You can now index a business object field to add a non-unique index to the field's database column and improve performance when you search for the field's value via REST requests or Groovy code. See Index a Field in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)
Business object relationship	When your business object includes a reference type field, you can now view and edit the relationship directly from the referenced field's properties.	21.04.0 (210129.2200.39441)
Improvements to the Variables and Types editors	• Create a variable from the Types editor You can now use a shortcut to create a variable for a specific type: select a type in the Types tab, right-click, and select **Create a variable**. • Keep track of variable and type usages in the Variables and Types editors You can now view variable and type usage information under the **Usages** section in the Properties pane. You can also click a usage to navigate there easily.	21.04.0 (210129.2200.39441)
Enhanced support for JS functions	It is now easier to call custom functions defined in JavaScript modules and imported module objects. These functions become available for selection in an action chain using the Call Function action and in a component's property (both in the Expression editor and the Variables picker). See Work with the JavaScript Editor in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)

Feature	Description	Minimum Version Required
Key usability improvements	• **Auto** setting for screen size The screen size setting that determines how your canvas displays in the Page Designer toolbar now includes an **Auto** option, which resizes the canvas to take up all available space between the left and right panes. • Revamped Visual Applications page We've made some changes to the Visual Applications Home page. With one glance at the new Origin column, you can see which apps were built in your Visual Builder instance and which originated in Visual Builder Studio. And while the only action available for VB Studio apps on the Home page is Delete, you still have access to all the other actions—you just perform them in VB Studio now. See Manage Applications Created in Visual Builder Studio. Finally, check out the new icons on the Home page that indicate an application's status, as well as the new timestamp that shows recent activity for the app.	21.04.0 (210129.2200.39441)
Recovery mode	When a visual application fails to upgrade because of syntax errors, the Designer now goes into recovery mode. In this mode, you can use tools such as Code View to fix syntax errors and then upgrade your visual application. See Resolve Issues that Prevent Upgrade of Visual Application in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)
Sitemap for a web application	You can now add a sitemap to a web application's resources to provide search engines information about your application's pages for intelligent crawling and search indexing. See Add a Sitemap to a Web Application's Resources in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)
New camera component	You can now use the new camera component when you want your application to access the camera capabilities of the devices on which it is installed. The camera component offers more configuration options than the Take Photo action, and does not require you to add a separate action to trigger taking a photo. See Add Camera Component to a Page in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	21.04.0 (210129.2200.39441)

Features Requiring Visual Builder Runtime 21.04

This release of Visual Builder uses Oracle JET 9.2 libraries and components. We recommend that you upgrade your Visual Builder applications to this latest JET version, as well as to the 21.04 Visual Builder Runtime, to take advantage of the full spectrum of 21.04 features. For example, in JET 9.2, new slots (Action, Navigation,

and Quarternary) have been added to the List Item Layout component, making it even easier to produce great-looking content for your ListViews. To see everything that's new in JET 9.2, see the Release Notes.

Here are the features that require the 21.04 VB Runtime:

Feature	Description
New **dynamic** service connections	You can now create a service connection to dynamically retrieve the service's OpenAPI definition, instead of copying the definition and storing it as part of your visual application's sources. A dynamic service connection creates a pointer to the service definition at a remote location. This keeps your application in sync with the latest service definition and enables you to re-use external definitions that aren't customized for your app. See Service Connections: Static Versus Dynamic.
Declarative support to create custom types from code	It's now much easier to use your own type, such as a type class written in JavaScript or a typescript class, with a variable in Visual Builder. Using a new From Code option in the Types editor, you can import your type definition to declaratively plug in any Oracle JET type class or a custom type class and create an instance of that type class, then use it with a new category of variable known as an InstanceFactory variable. See Create a Custom Type From Code.

Resolved Issues

This release of Oracle Integration includes a number of resolved issues. For details, log in to support.oracle.com and search for document ID 2750498.1.

January 2021

There are no new features for January.

December 2020

New Features

Common Features

Feature	Description	Minimum Version Required
Custom endpoints	You can map a custom endpoint to an Oracle Integration instance and use it to access the instance instead of the original URL generated in the Oracle Cloud Infrastructure Console. See Configure a Custom Endpoint for an Instance in *Provisioning and Administering Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Integration and Connectivity - New video	We continue to add new videos to our Training page in the Oracle Help Center. The latest video for your enjoyment is Use the Switch Action in Oracle Integration.	N/A

Resolved Issues

This release of Oracle Integration includes a number of resolved issues. For details, log in to support.oracle.com and search for document ID 2741941.1.

November 2020

New Features

Common Features

Feature	Description	Minimum Version Required
Data retention	Manage your space centrally in the common Data Retention settings area. See Set Data Retention for Oracle Integration Features in *Provisioning and Administering Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Update window	Functional updates for Oracle Integration Generation 2 are provided each quarter in two windows typically two weeks apart. Use tagging in the Oracle Cloud Infrastructure Console to identify when your Oracle Integration Generation 2 instances are updated See Choose Your Update Window in *Provisioning and Administering Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Oracle Integration announcements	Users can view announcements communicating timely, important information about their Oracle Integration service. They can also view a list of past and ongoing announcements. • To enable announcements (administrators), see Enable Announcements to Display in Oracle Integration in *Provisioning and Administering Oracle Integration Generation 2*. • To view announcements (users), see View Oracle Integration Announcements in *Getting Started with Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
Adapter monitoring metrics	You can view adapter inbound processing and outbound message invocation times and adapter inbound and outbound requests in the Oracle Cloud Infrastructure Console. See Viewing Message Metrics in *Provisioning and Administering Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

Integration and Connectivity Features

> **Note:**
>
> You *cannot* download logs or set logging levels in Oracle Integration Generation 2. Instead, use the activity stream to view instance details. See View the Dashboard and Track Business Identifiers in Integrations During Runtime in *Using Integrations in Oracle Integration Generation 2*.

Feature	Description	Minimum Version Required
Scheduled integration tracking	When you select **Submit Now** or **Start a Schedule**, an integration instance is immediately created. This instance appears on the Track Instances page and confirms not only that your action is successful, but also enables you to immediately track the execution. See Start and Pause an Integration Schedule in *Using Integrations in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Configuration Editor Enhancements	If your standalone integration type or package type is a recipe or an accelerator, you can activate or deactivate the integration from the Configuration Editor page. See Edit and Replace Dependent Resources in *Using Integrations in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Recover Unsaved Integration Changes	You can recover unsaved changes in an integration that crashes during design time because of a browser crash, loss of network connectivity, a server going down, and so on. See Recover Unsaved Integration Changes in *Using Integrations in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Support for binary payloads in local integrations	You can create a parent integration using a REST Adapter invoke connection configured with the Open API URL connection type to pass a binary payload to a child integration. See Invoke a Co-located Integration from a Parent Integration in *Using Integrations in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
Configure SPF and DKIM values in notification emails	You can optionally configure Sender Policy Framework (SPF) and Domain Keys Identified Mail (DKIM) values when configuring notification emails. See Send Service Failure Alerts, System Status Reports, and Integration Error Reports by Notification Emails in *Using Integrations in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Support for XML files containing repeating elements and multiple namespaces.	You can read large XML files containing repeating elements and multiple namespaces. See Configure a Stage File Action in *Using Integrations in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Apache Kafka Adapter - Inbound polling support	Apache Kafka is one of the modern pillars in enterprise's big data and digital ecosystem today, where large volumes of messages are ingested and consumed for depicting the state of business at a rapid pace. The Apache Kafka Adapter already supports a wide array of use cases such as publishing messages to specific topics and partitions, consuming messages from specific consumer groups, and reading from the beginning/latest topic. With this release, the Apache Kafka Adapter now allows integration architects to poll for messages in the Kafka system by configuring the Kafka connection as a trigger in an integration flow. Note that inbound polling configuration is only supported for the Kafka platform hosted behind a corporate firewall or on a private VCN network, along with the connectivity agent. This enables you to consume a high volume of messages from the Kafka topic and consume them in the integration flow. See Apache Kafka Adapter Capabilities in *Using the Apache Kafka Adapter with Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Apache Kafka Adapter - Confluent platform support	The Apache Kafka Adapter now supports integrating with Kafka hosted on the Confluent platform. Confluent Cloud is a widely-used event streaming platform powered by Kafka that enables you to leverage Apache Kafka in a fully managed, scalable, and serverless architecture in the cloud. See Configure Confluent Kafka with the Apache Kafka Adapter in *Using the Apache Kafka Adapter with Oracle Integration Generation 2*.	

Feature	Description	Minimum Version Required
Oracle NetSuite Adapter - TBA Authorization Flow security policy support	The Oracle NetSuite Adapter has enhanced its concurrency limit. This means you receive a high concurrency limit when integrating with Oracle NetSuite using Oracle Integration, regardless of your Oracle NetSuite license. The enhanced concurrency limit is applicable only for invokes performed through connections created using the new TBA Authorization Flow security policy introduced in the Oracle NetSuite Adapter. The TBA Authorization Flow security policy provides multiple benefits to customers: • It is more secure because you don't have to enter the credentials in Oracle Integration. • You receive an enhanced concurrency limit whenever invokes are performed using such connections. • It is very simple to configure the connection. You only need to click the **Provide Consent** button on the Connections page and follow the prompts. See Oracle NetSuite Adapter Capabilities in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2* and Oracle Integration November 2020 update for Oracle Applications Adapters.	20.4.2.0.0 (201009.0200.37961)
Oracle NetSuite Adapter - Support for Initialize / InitializeList operations	Oracle Integration continues to invest in the Oracle NetSuite Adapter, further integrating with Oracle NetSuite application capabilities to meet customer needs and simplifying access and thereby addressing wider use cases. One such enhancement available with this release is support for the Initialize / InitializeList operations. This is a very powerful feature for integration architects because they do not need to populate the records from scratch. Instead, they can prepopulate the records from the reference objects. For example, if you are designing a flow to initiate a cash refund, the refund is now against the cash sale. The Oracle NetSuite Adapter allows you to initialize the cash refund record from the cash sale, where the cash sale is a reference object and details such as createdfrom, line items, and amount are prepopulated. See Invoke Operation Page in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2* and Oracle Integration November 2020 update for Oracle Applications Adapters.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
REST Adapter - Generation of sample `cURL` command	The REST Adapter is a versatile adapter that enables customers to communicate with a wide array of products and services such as Oracle Functions, OCI Object storage, AWS S3, and so on, making it one of the cornerstone adapters for your modern integration solutions. As you look to leverage the REST Adapter for integrating with a wide array of products and services, you have a variety of available configuration options such as security policy, headers, parameters, and so on. As these options are configured at different stages, they get lost and you can lose visibility into the configuration. Oracle Integration addresses this need by providing an option in the Adapter Endpoint Configuration Wizard Summary page to generate the sample `cURL` command. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
REST Adapter - Standard OAuth policy improvements	The REST Adapter supports a variety of OAuth security policies out of the box (for example, OAuth Client Credentials, OAuth Resource Owner Password Credentials, and OAuth Authorization Code Credentials). One challenge is that different vendors have implemented these policies in different ways because the OAuth specification defines a high level exchange of information between participating parties. This leaves the details of implementation on the implementer. Oracle Integration is looking to support as many vendors as possible and still make it simple for customers to connect to and communicate with all the digital REST services using the supported OAuth security policy. With this in mind, the REST Adapter now supports an additional configuration parameter called Client Authentication on the Connections page. The client authentication parameters enable you to configure how Oracle Integration exchanges security tokens over the wire (for example, whether the client ID and secret are sent as a part of the basic authentication header or in the body). See Configure Connection Security for Invoke Connections in *Using the REST Adapter with Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
REST Adapter - Connectivity properties improvements	The REST Adapter is used for a wide variety of use cases, and requires additional flexibility such as querying and overriding the connectivity properties such as base URI, relative URI, or even absolute endpoint URI. This helps you to address scenarios in which you want to conditionally change endpoints based on the received payload. The REST Adapter already supports connectivity properties for the invoke endpoint. However, in previous releases, it supported only the request side. With this release, the REST Adapter supports connectivity properties for the invoke response, trigger request, and response: all four possible interactions. As an example, you want to pass the location for the next integration flow in the response of the current trigger flow. This can be achieved now by referring to the trigger REST resource base URI along with XSLT functions to formulate the location of the next integration flow. See Set REST Adapter Connectivity Properties in the Mapper in *Using the REST Adapter with Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)
Salesforce Adapter - Enablement for Salesforce Government Cloud customers	The Salesforce Adapter was recently enhanced to eliminate the need to upload the enterprise WSDL on the Connections page. With this enhancement, customers who were using the Salesforce Government Cloud were unable to create new connections due to login considerations, as mentioned in this help document. With this release, the Salesforce Adapter provides support for creating a connection with the Salesforce.com application that can integrate with Salesforce Government Cloud. See Prerequisites for Creating a Connection in *Using the Salesforce Adapter with Oracle Integration Generation 2* and Oracle Integration - Adapter Enhancements to Non Oracle Applications.	20.4.2.0.0 (201009.0200.37961)
Shopify Adapter - New modules support	The Shopify Adapter enables you to create an integration with a Shopify application in Oracle Integration. With this release, the Shopify Adapter extends these capabilities with the following new features: • Invoke (target) connection support for performing various operations against objects from the Plus (Gift cards) and Shopify Payments modules • Trigger (source) connection support for performing various types of actions against events from the FulfillmentEvents and Fulfillments modules See Shopify Adapter Capabilities in *Using the Shopify Adapter with Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
Oracle Autonomous Data Warehouse Adapter, Oracle Autonomous Transaction Processing Adapter, and Oracle Database Cloud Service Adapter - Support for wallet-based authentication with privately hosted databases	In previous releases, when connecting to a privately hosted database using Autonomous Database - Dedicated (Oracle Autonomous Transaction Processing - Dedicated or Oracle Autonomous Data Warehouse - Dedicated) or Oracle Database Cloud Service with the connectivity agent, the only supported security option was JDBC Basic Authentication. With this release, you can also specify JDBC over SSL. This allows you to connect to a privately-hosted cloud database and leverage wallet-based authentication. See Configure Connection Security in *Using the Oracle Autonomous Transaction Processing Adapter with Oracle Integration Generation 2*, Configure Connection Security in *Using the Oracle Autonomous Data Warehouse Adapter with Oracle Integration Generation 2*, Configure Connection Security in *Using the Oracle Database Cloud Service Adapter with Oracle Integration Generation 2* and Security Improvements for Database & FTP Adapters.	20.4.2.0.0 (201009.0200.37961)
Oracle Autonomous Data Warehouse Adapter, Oracle Autonomous Transaction Processing Adapter, and Oracle Database Cloud Service Adapter - Automatic database wallet and password refresh	Oracle Wallet can be used to securely store your database credentials. Wallet rotation provides the ability to create a new wallet and invalidate the existing wallet. When the wallet is rotated or expires (or if using Basic Authentication and the database password is changed), a corresponding change is required in the Oracle Integration connection for that database. Once the connection is modified in Oracle Integration, you needed to deactivate and reactivate the integrations that used that connection. This sometimes meant that hundreds of integrations required reactivation, which was very impractical. With this release, it is no longer necessary to deactivate and reactivate the integrations. However, you still need to update the Connections page with a new wallet password, as applicable. See Configure Connection Security in *Using the Oracle Autonomous Transaction Processing Adapter with Oracle Integration Generation 2*, Configure Connection Security in *Using the Oracle Autonomous Data Warehouse Adapter with Oracle Integration Generation 2*, and Configure Connection Security in *Using the Oracle Database Cloud Service Adapter with Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
Oracle Autonomous Transaction Processing Adapter - Support for connecting with a serverless (ATP-S) database configured with a private endpoint	The Oracle Autonomous Transaction Processing (ATP) database is becoming more widely adopted, along with its use within integration flows using Oracle Integration. When configuring your database, you can specify that it uses a private endpoint within your VCN of your tenancy. This allows you to keep all traffic to and from your database off the public internet. When using the Oracle Autonomous Transaction Processing Adapter in Oracle Integration to connect to an ATP instance using a private endpoint, you must set up the connectivity agent. See Oracle Autonomous Transaction Processing Adapter Capabilities in *Using the Oracle Autonomous Transaction Processing Adapter with Oracle Integration Generation 2* and Security Improvements for Database & FTP Adapters.	20.4.2.0.0 (201009.0200.37961)
PayPal Adapter - Inbound support and new modules	PayPal is a global payment provider that enables vendors to receive payments digitally from their customers and make payments to their suppliers. The PayPal Adapter enables you to create an integration with a PayPal application in Oracle Integration. With this release, the PayPal Adapter provides inbound support. This means it can be configured as a trigger connection in an integration for the events related to the Billing, Invoicing, Payment, Checkout, and Catalog modules. Furthermore, the PayPal Adapter has been enhanced to support the Transaction Search, Subscriptions, Add Tracking, and Invoicing modules. See PayPal Adapter Capabilities in *Using the PayPal Adapter with Oracle Integration Generation 2* and Oracle Integration - Adapter Enhancements to Non Oracle Applications.	20.4.2.0.0 (201009.0200.37961)
FTP Adapter - Message payload security capabilities with privately-hosted SFTP servers	When integrating with an FTP server that is hosted on-premises behind a firewall, you configure a connectivity agent in Oracle Integration to establish connectivity. In previous releases, there were certain security-related options that were not available when using the FTP Adapter with the connectivity agent. In particular: • Encrypting the message payload • Decrypting the message payload • Signing the message payload • Verifying the signed message payload The above options can now be leveraged with the connectivity agent while communicating with the privately-hosted SFTP server. See FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2* and Security Improvements for Database & FTP Adapters.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
Oracle ERP Cloud Adapter, Oracle CX Sales and B2B Service Adapter, and Oracle HCM Cloud Adapter - Selectively pick child REST resources	The Oracle Fusion Application adapters are key strategic adapters for Oracle Integration. Oracle Integration continues to update these adapters with features to meet your needs and improve the overall adapter experience. One improvement with this release is the ability to selectively pick child REST resources. This enables you to pick and chose the child resources needed for your businesses. Without this feature, you would have all child resources in the integration artifacts, resulting in an unmanageable number of elements to traverse through in the mapper and unnecessary loads at runtime. See Oracle ERP Cloud Adapter Capabilities in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*, Oracle Engagement Cloud Adapter Capabilities in *Using the Oracle CX Sales and B2B Service Adapter with Oracle Integration Generation 2*, Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*, and Oracle Integration November 2020 update for Oracle Applications Adapters.	20.4.2.0.0 (201009.0200.37961)
ServiceNow Adapter - Graceful downgrade of user experience	The ServiceNow Adapter enables you to create an integration with ServiceNow in Oracle Integration. The ServiceNow Adapter has been enhanced to run with as few privileges as possible. With this release, you must provide minimal accesses on the tables to configure the ServiceNow Adapter as a trigger or an invoke connection in an integration. See Prerequisites for Creating a Connection in *Using the ServiceNow Adapter with Oracle Integration Generation 2* and Oracle Integration - Adapter Enhancements to Non Oracle Applications.	20.4.2.0.0 (201009.0200.37961)
REST API Enhancements	There are new REST APIs for monitoring integrations, updating a library, cloning packages and updating package dependencies. See the **What's New** topic under **Get Started** in Oracle Integration REST API.	20.4.2.0.0 (201009.0200.37961)

Process Features

Feature	Description	Minimum Version Required
Process analytics APIs available in Oracle Integration	A Process analytics category has been added to the Oracle Integration REST APIs for tracking and monitoring Process-related items. See the **What's New** topic under **Get Started** in Oracle Integration REST API.	20.4.2.0.0 (201009.0200.37961)

Feature	Description	Minimum Version Required
Web form enhancements	We've made the following enhancements: • Reusable code snippets can now be used in conditional If blocks. See Reuse Event Snippets in *Using Processes in Oracle Integration Generation 2*. • New functions (Is First and Is Last) were added to control loop statements in form events by checking if the current element is the first item or the last item on a list. • A new function, Get application name, was added to return the current application name. See Specify Functions in *Using Processes in Oracle Integration Generation 2*	20.4.2.0.0 (201009.0200.37961)

Insight Features

Feature	Description	Minimum Version Required
Embedded dashboards	Embed Integration Insight dashboards in other applications in an iFrame. See Construct a URL Manually to Embed Integration Insight Dashboards in *Using Integration Insight in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Console manifest	Generate a console manifest to find the IDs for the associated model, dashboards, milestones, unique instance identifier, and indicators (dimensions and measures). See Generate a Console's Manifest in *Using Integration Insight in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Support for updating mapped integration versions	Update a model to use different versions of the integrations to which its milestones are mapped. See Update a Model to Use Different Versions of Mapped Integrations in *Using Integration Insight in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Support for additional Integrations actions	Map model milestones to additional Integrations actions: Log, Notification, Switch, Throw New Fault. **Note**: If you want to map model milestones to any of these actions in integrations activated prior to 20.4.2, you must reactivate those integrations to use the new actions in Insight. See Supported Integrations Actions in *Using Integration Insight in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

Feature	Description	Minimum Version Required
User interface improvements	Identify missing items more easily in your Insight models with user interface enhancements for: • Assigning the unique instance identifier when model milestones are mapped to multiple integrations. See Define a Unique Instance Identifier in *Using Integration Insight in Oracle Integration Generation 2*. • Notifications of incomplete mapping with a summary view of unmapped milestones. See Define Milestones in *Using Integration Insight in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

File Server Features

Feature	Description	Minimum Version Required
Enable File Server	In the navigation pane, the **File Server** link always appears to administrators in the Settings menu. If File Server isn't yet enabled, selecting the link directs to instructions for enabling it in the Oracle Cloud Infrastructure Console. See Enable File Server in *Using File Server in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Allowlist public IP addresses	Wanting to allowlist (explicitly allow identified entities access) certain public IP addresses for File Server? See Allowlist Public IP Addresses in *Using File Server in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Sorting on the Folders page	Click columns to sort folders by name or creation date. By default, folders are sorted by creation date, starting with most recent. See Configure SFTP Folders in *Using File Server in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Filter by enabled or disabled users on the Users page	Filter options now include an **Enable** field that lets you list all users, enabled only, or disabled only users. See Configure Users in *Using File Server in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Effective home on Users page	You can now more easily see user permissions on the Users page. If a user isn't configured but is part of a group that's configured, these applied permissions are reflected. See Configure Users in *Using File Server in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

Feature	Description	Minimum Version Required
Apply permissions to multiple users/ groups at once	On the folder Permissions page, you can now quickly assign a permission to all users or groups listed for the folder. In addition, a tag identifies newly added or modified users or groups to easily identify those needing permissions set. See Set Folder Permissions in *Using File Server in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Security algorithms deprecation	The following algorithms are being deprecated: Cipher Suites: • 3des-cbc • aes128-cbc • aes192-cbc • aes256-cbc Message Authentication Algorithms: • hmac-sha1-96 • hmac-sha1 For more information, see Security algorithms to be deprecated in *Known Issues for Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

B2B for Oracle Integration Features

Feature	Description	Heading Published > Minimum Version Required
Implementation Guide	You can generate implementation guides for B2B schemas that can be shared with your trading partners. See Generate an Implementation Guide in *Using B2B for Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37961)

Visual Builder Features

Feature	Description	Minimum Version Required
Enable Visual Builder in new Oracle Integration instances	To use Visual Builder in new Oracle Integration instances, first enable it for use in the Oracle Cloud Infrastructure Console. (No action is needed for existing Oracle Integration already using Visual Builder.) See Enable Visual Builder in *Administering Oracle Visual Builder in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

Feature	Description	Minimum Version Required
Business object limitation removed	Visual Builder business rules (including server-side validations, triggers, object functions, and declarative workflow) are now enabled in Oracle Integration Generation 2 environments.	20.4.2.0.0 (201009.0200.37964)
Oracle Redwood Design System	Web apps that you create using this release of Visual Builder now use the Redwood theme, a theme created with the Oracle Redwood Design System. Oracle Redwood Design System is the new Oracle standard for application look and feel. The Designer within Visual Builder has also adopted a Redwood theme. See Develop Applications in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Manage runtime dependencies	Your applications are no longer automatically upgraded to the new major runtime versions of Visual Builder Runtime and Oracle JET after your instance of Visual Builder is upgraded. You decide when to upgrade your applications using the UI that has been introduced for this purpose. See Manage Runtime Dependencies for Visual Applications in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*	20.4.2.0.0 (201009.0200.37964)
Audits	• Status indicators Red overlay icons now appear in the Navigator to identify app artifacts that include audit errors. Red underline appears on the Navigator entry and the tab for the file that includes the error. Errors are generated for broken variable and type references. Warnings are generated for unused action chains, constants, events, event listeners, types, and variables. For action chains, audits have been added to validate that required fields in the action include values. • Oracle JET Audit Framework The Audits feature now references up the Oracle JET Audit Framework (JAF) tool and metadata from Oracle's content distribution network (CDN). You can configure the built-in rules that JAF provides. See Audit Application Code in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Horizontal text tabs for artifacts in the Designer	The artifact section tabs for page flows, event listeners, and so on now appear as horizontal text tabs above the artifact instead of as a vertical icon bar. See Understand the Designer in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)

Feature	Description	Minimum Version Required
Business object data caching	You can now define a caching strategy to safely store your business object's data and improve performance, by editing the **Resource Cache Control** setting on a business object's Endpoints tab. Because all application data is deemed sensitive, by default, no data is cached. See Control Data Caching for Business Objects in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Create variables	You can now create variables from within the Assign Variables dialog that you open from the Action Chains editor. See Add an Assign Variables Action in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Mobile applications	• Deep links for mobile applications The Visual Builder Runtime now supports deep linking. Application behavior depends on the app and the environment where the app runs. Android and iOS mobile apps that you build in Visual Builder can be opened from deep links. For PWAs, iOS does not support deep links while Android provides ready-to-use support for deep links. • Adaptive icons for Android mobile applications Adaptive icons that display as a variety of shapes on different Android devices are now supported for mobile applications built on Visual Builder. The sample application image archive (available in an application's Resources section) includes adaptive icons that you can use as a base when you create custom images for your application. If your application uses an older image archive, Visual Builder will try to use those icons as adaptive icons, but it is best to provide your own icons that are in line with Android specifications. Visual Builder does not validate your icons and cannot guarantee that they will be compatible.	20.4.2.0.0 (201009.0200.37964)
Action chain tests	The `grunt-vb-build` NPM package now includes a `vb-test` Grunt task that runs the action chain tests in your visual application on your computer. See Test Action Chains Using the vb-test Grunt Task in *Developing Applications with Oracle Visual Builder in Oracle Integration Generation 2*.	20.4.2.0.0 (201009.0200.37964)
Upgrade the Oracle Sample R13 SaaS LightBlue Theme	If your application uses the Oracle SaaS R13 Light Theme, you need to upgrade the theme in your application before you run the application using this release.	20.4.2.0.0 (201009.0200.37964)

Resolved Issues

This release of Oracle Integration includes a number of resolved issues. For details, log in to support.oracle.com and search for document ID 2731136.1.

October 2020

New Features

Common Features

Feature	Description	Minimum Version Required
New videos	We continue to add new videos to our Training page in the Oracle Help Center. Here are the latest videos for your enjoyment: • Connect on-premises apps to the cloud with the connectivity agent Key Oracle Integration capabilities: • Integrations • Process Automation • Insight • B2B • File Server • Visual Builder Integration design patterns and best practices: • Architectural principles • Integration types and common patterns • Integration anti-patterns: common pitfalls	N/A
Improved search of documentation	We'd like to let you know about major improvements to our help center's search that were recently rolled out by the Information Development team. To use search, navigate to https://docs.oracle.com/en/cloud/paas/integration-cloud/index.html and enter a search query in the top utility bar. New features include: • A utility bar in the Oracle Help Center • Search preview as you enter search queries • A new book roll-up feature that shows the best results for each publication • A new way to search for more detailed content within a publication • Product cards that include all or part of a product name in a search query • New filters to refine search results • Static thumbnails that identify videos in search results • Separate search indexes for non-English content	N/A

September 2020

New Features

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Integrations and Connectivity - New video	We continue to add new videos to our fundamental integration vocabulary and concepts series. The latest video provides an overview of how to use the while action in an integration. See Use a While Action in Oracle Integration.	N/A

Resolved Issues

Integration and Connectivity Resolved Issues

Issue	Resolution
Package import certificate	An issue in which part of the package import certificate was not overwritten if it existed was resolved.
Certificate export	An issue in which multiple certificates were used, but only one was exported, was resolved.
Display of activity stream timestamps	All timestamps in the activity stream are now displayed in the user's time zone.
Activity stream rendering in non-Google Chrome browsers	The activity stream user interface is now rendered in non-Google Chrome browsers such as Safari, and Edge, and Firefox.
Display of timestamps in downloaded activity stream JSON file	The downloaded JSON file from the activity stream user interface now shows timestamps in the user's time zone.
Duplicate timestamps in the downloaded `activityStream.json` file	An issue with duplicate timestamps in the downloaded `activityStream.json` file was resolved.
Activation failures	An issue in which activations fail for integrations with stage file actions inside a loop inside a global fault handler was resolved.
For-each action	An issue in which the for-each action was not created for schema elements extending a simple type was resolved.
Lookup updates	An issue in which a lookup was getting updated with a single column using the update lookup REST API was resolved.

August 2020

New Features

Common Features

Feature	Description	Minimum Version Required
New Oracle Integration Home page for Generation 2	If you're an Oracle Integration Generation 2 user, you'll see a markedly different home page when you sign in. You can quickly navigate to the product features you want, view a mini dashboard of relevant metrics and status, get access to the new accelerators and recipes, and go directly to your current tasks, applications, and work in progress. See Get Familiar with the Home Page in *Getting Started with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)
New accelerators and recipes	Oracle Integration Generation 2 offers a rich set of run-ready business integrations or technical patterns called accelerators, and sample templates called recipes. Accelerators and recipes, which bundle all the resources required by the integrations into one package, help you jump-start your integration development. Simply install, configure, and activate. You'll find some of the available accelerators and recipes listed on the Home page. You can also search the entire collection. See Integration Accelerators and Recipes in *Getting Started with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)
Usage Metrics includes Insight	Monitor your usage more accurately now that Insight usage is included. Each business transaction in Insight counts as one message. See Monitoring Billable Messages in *Provisioning and Administering Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)
Usage Metrics error notification bar improvements	We made minor usability improvements to the Usage Metrics page. • The error notification bar remains until you close it. • Improved error messages show more error details. See Monitoring Billable Messages in *Provisioning and Administering Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Integrations and Connectivity - New videos	We continue to add new videos to our fundamental integration vocabulary and concepts series. The latest videos describe some key components used in the Create an Integration to Import and Process Bulk Files sample in *Using the FTP Adapter with Oracle Integration Generation 2*: • Bulk File Transfer with the FTP Adapter • Use the Stage File Action in Oracle Integrations • Use the For-Each Action in Oracle Integrations	N/A
Oracle Cloud Infrastructure Streaming Service Adapter - New adapter	Oracle Integration is pleased to announce the addition of the Oracle Cloud Infrastructure Streaming Service Adapter to its growing list of connectivity adapters. The Oracle Cloud Infrastructure Streaming service provides a fully managed, scalable, and durable storage solution for consuming continuous, high-volume streams of data. The Oracle Cloud Infrastructure Streaming Service Adapter lets you connect directly to the Oracle Cloud Infrastructure streaming service hosted on a public subnet or through the connectivity agent to the Oracle Cloud Infrastructure streaming service hosted on a private subnet. The Oracle Cloud Infrastructure Streaming Service Adapter enables an integration architect to publish and consume messages from the Oracle Cloud Infrastructure Streaming service in a simple declarative manner. This greatly simplifies how application updates can be posted on the Oracle Cloud Infrastructure Streaming service, or consumed from the Oracle Cloud Infrastructure streaming service making Oracle Integration a router of continuously-consumed messages on the Oracle Cloud Infrastructure streaming service. See Oracle Cloud Infrastructure Streaming Service Adapter Capabilities in *Using the Oracle Cloud Infrastructure Streaming Service Adapter with Oracle Integration Generation 2*	20.2.3.0.0 (200705.0200.36413)
PayPal Adapter - New adapter	Oracle Integration is pleased to announce the addition of the PayPal Adapter to its growing list of adapters. PayPal is a global payment provider that enables vendors to receive payments digitally from their customers and make payments to their suppliers. With the PayPal Adapter, Oracle NetSuite Adapter, and Shopify Adapter, Oracle Integration now enables you to connect and automate your business processes for web store, inventory management, order fulfillment, and so on easily through powerful Oracle Integration orchestration and transformation capabilities. See PayPal Adapter Capabilities in *Using the PayPal Adapter with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)

Feature	Description	Minimum Version Required
AS2 Adapter - New adapter	Applicability Statement 2 (AS2) is a very popular HTTP-based protocol to transfer files or messages securely over the internet. AS2 is predominantly used in B2B communications to exchange electronic documents between companies. The AS2 protocol is defined by the Internet Engineering Task Force (IETF) and covers the following key aspects of data security: • Privacy • Data integrity • Authenticity • Nonrepudiation of origin and receipt The AS2 Adapter enables you to build integrations with endpoints for receiving and processing AS2 protocol-based files and messages and sending messages and files to external endpoints supporting the AS2 protocol. See AS2 Adapter Capabilities in *Using the AS2 Adapter with Oracle Integration Generation 2* .	20.2.3.0.0 (200705.0200.36413)
Oracle Taleo Enterprise Edition Adapter - Bulk export support	Oracle Talent Acquisition Cloud is the world's most widely used recruitment platform. Oracle Talent Acquisition Cloud customers conventionally perform bulk import-based and bulk export-based integrations to update data in Oracle Talent Acquisition Cloud and extract updated data from Oracle Talent Acquisition Cloud. The current Oracle Taleo Enterprise Edition Adapter already supports performing bulk import of records to load/update the data into Oracle Talent Acquisition Cloud instances. With this feature, the Oracle Taleo Enterprise Edition Adapter now also supports performing bulk export to get data from Oracle Talent Acquisition Cloud. As an example, you may want to export new hires information and import the same information into your HRMS systems. See Implement the Export Candidate Data Pattern in *Using the Oracle Taleo Enterprise Edition Adapter with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
REST Adapter - Consumption of REST APIs described using OpenAPI	Oracle Integration continues to adopt open standards to help Oracle Integration customers simplify and streamline their integrations and reap the rewards from open standards. OpenAPI has indeed become a de facto standard for describing a REST API. The Oracle Integration REST Adapter in the conquest of open standards now supports consuming REST APIs described in OpenAPI specifications. This now helps Oracle Integration to easily integrate with applications and services that are exposing OpenAPI-based APIs descriptors. See Publish REST-Based Integrations as OpenAPI Documents in *Using the REST Adapter with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)

Feature	Description	Minimum Version Required
File Adapter enhancements	The File Adapter enables you to build integrations that allow for the reading and writing of files present in the local file system of your on-premises environment. This release contains the following significant enhancements: • Retrieving of files within specific folders using the list operation • Moving or renaming of files • Reading and writing of files using a File Adapter-specific invoke connection • Reading and writing of files up to 1 GB in size The above enhancements enable you to implement use cases such as the periodic retrieval of data extracts from on-premises applications and databases available in the local file system and the synchronization of this data with cloud applications, cloud databases, FTP servers, and external systems using Apache Kafka, Oracle Cloud Infrastructure Streaming Service, and so on. Similarly, synchronization of periodic extracts from SaaS applications, databases, and FTP servers to on-premises file systems is also possible with the help of the above enhancements. See Invoke Operations Page in *Using the File Adapter with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Salesforce Adapter - Outbound invocation support for consuming APEX classes	Salesforce.com enables customers to extend their application by developing and deploying custom business logic as APEX classes in force.com. These APEX classes can be exposed by customers as REST APIs that allow for programmatic invocation by external clients. With the new release, the Salesforce Adapter has been enhanced to allow integrations to programmatically invoke the custom business logic deployed in force.com. See Invoke Apex Operations Page in *Using the Salesforce Adapter with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
SAP Commerce Cloud (Hybris) Adapter - Customization support	The SAP Commerce Cloud (Hybris) Adapter now provides native support for integrating with SAP Commerce Cloud instances that have customizations such as the presence of custom attributes, custom APIs, custom operations, and custom objects. The SAP Commerce Cloud (Hybris) Adapter now has the ability to discover these components and make them available for use in integrations. The SAP Commerce Cloud (Hybris) Adapter now also supports the B2B extension if enabled in SAP Commerce Cloud. See SAP Commerce Cloud (Hybris) Adapter Capabilities in *Using the SAP Commerce Cloud (Hybris) Adapter with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)

Feature	Description	Minimum Version Required
Shopify Adapter - Enhancements	The Shopify Adapter has been enhanced to support the following: • Fetching the presentment prices for the product variants and current exchange adjustment data for the order transactions. The Shopify Adapter now lets the integration developer configure the required custom HTTP headers for the above use cases. • Inbound support for exposing the store name for all business events received. This support enables the integration developer to identify the event source. • Inbound support for the inventory level update business event. • Certified with the latest API version of 2020-04. See Shopify Adapter Capabilities in *Using the Shopify Adapter with Oracle Integration Generation 2*.	
Basic routing to app driven orchestration integration conversion	You must convert basic routing integrations to app driven orchestration integrations. Basic routing integrations offer limited action capabilities and are being deprecated. App driven orchestration integrations provide greater flexibility with more action capabilities. See Convert a Basic Routing Integration to an App Driven Orchestration Integration in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Import and export of design-time metadata in the user interface	You can export and import archives of integration and process design-time metadata between instances. This feature can be useful if you want to move metadata from a test to a production environment, perform manual archival backups, or automate your environment to archive backups daily to a repository such as Git. See Export and Import Design-Time Metadata Between Instances in *Provisioning and Administering Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Header support in local integrations	You can add header support to the payload of the SOAP adapter used in the co-located (child) integration. Headers are optional elements that pass extra information about your application requirements. For example, you can use the header element to specify a digital signature for password-protected services. See Invoke a Co-located Integration from a Parent Integration in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)

Feature	Description	Minimum Version Required
Build complex assignment statements	You can incrementally build a message payload from one or more existing payloads with the stitch action. The stitch action provides an editor that enables you to assign values to variables. The stitch action supports both partial and full replacement of the message payload. The stitch action also supports both scalar and complex type variables. See Build Complex Assignment Statements with a Stitch Action in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
User-friendly element names in the mapper	You can view user-friendly display names instead of technical names for source and target elements in the mapper tree and for expressions in the Expression Builder. This eliminates the need to try and understand the technical, often cryptic, names that are difficult to correlate to the user-friendly display names you see in the endpoint application's user interface. See View User-Friendly Element Names in *Using the Oracle Mapper with Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Configuration Editor enhancements	The configuration editor for integrations and packages has been enhanced to show links to the associated connections, lookups, library functions, and PGP keys at the top of the page. See Edit and Replace Dependent Resources in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Override design-time properties in an integration	You can configure integration properties outside of the regular integration design. At runtime, these integration properties take effect and override the values you configured at design time. See Override Design-Time Properties in an Integration in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Test REST Adapter Trigger Connection-Based Integrations	You can test app driven orchestration integrations designed with a REST Adapter trigger connection from Oracle Integration. This eliminates the need to use third-party software to run this type of integration. See Test REST Adapter Trigger Connection-Based Integrations in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Oracle Policy Automation Adapter - New name	Oracle Policy Automation Adapter is renamed Oracle Intelligent Advisor Adapter.	20.2.3.0.0 (200705.0200.36413)

Process Features

Feature	Description	Minimum Version Required
DRD decision modeling	Model your decisions visually using our new graph view. This decision requirement diagramming (DRD) tool is aligned with the DMN standard. You can easily move models from list view to graph view. See Understand Decision Model Views in *Using Processes in Oracle Integration Generation 2*.	20.2.2.0.0 (200524.0200.36290)
Disable/enable events in forms	You can now dynamically enable or disable events added to your forms. See Configure Events in *Using Processes in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Form filters	We've added the following capabilities for filters while specifying events in form controls: • Add an *And* condition for filtering data where the result will be the intersection of the filter condition with another filter condition. • Specify another filter as the source type. • Add expressions to connectors in Options Source Properties. • To analyze and troubleshoot payload errors for filters and connectors in forms, you can now view: – Filter logs – Connector logs See Specify Filters in Events in *Using Processes in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)
Multi-operation Integration support	In Oracle Integration, integrations were recently expanded to expose multiple operations that can trigger them. Multi-endpoints means multiple resources and operation available in an integration, so we've added support for multi-operation REST integrations in processes. In a process application, we read and create all the resources, operations, and types (representing the payload) that the integration exposes and allow you to choose which one to call in each activity. See Expose Multiple Operations with a Pick Action in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)

Feature	Description	Minimum Version Required
Import over TIP using REST	We've added the option of importing an .exp file as a tip of an already existing application of the same name. This option is important for CI/CD use cases. In post calls to create a process application in a specified space (/oic/api/1.0/spaces/{spaceId}/projects), two new boolean parameters are available to overwrite an existing project when importing an application with the same name: • `overwrite`: If set to true, the existing process application is overwritten with the imported one. The default value is false. • `discardUnpublishedChanges`: If set to true, unpublished changes in the existing process application are discarded and the existing application is overwritten by the application being imported. The default value is false. Note that `discardUnpublishedChanges` must be set to `true` if there are unpublished changes in an existing application. If there are unpublished changes and `discardUnpublishedChanges` is set to `false`, the import fails and a message indicates unpublished changes.	20.2.3.0.0 (200705.0200.36413)
Terminate action available in dynamic processes	We added support for a Terminate action for dynamic processes in Workspace (runtime). See End Dynamic Processes and Activities in *Using Integrations in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36413)

Insight Features

Feature	Description	Minimum Version Required
Insight tile on Oracle Integration home page	The redesigned Oracle Integration home page includes an Insight tile that provides a summary status of your Insight models or consoles, depending on your role. See View a Summary Status of All Models and View a Summary Status of All Consoles in *Using Integration Insight in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)
Revised console filter selection	On the Consoles page, the **Filter** icon allows you to filter the list of consoles by active, inactive, or all consoles. The **Inactive** filter replaces the previously separate **Inactive (Deactivated Model)** and **Inactive (Failed Model)** filters. See Work with the Consoles Page in *Using Integration Insight in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)

Feature	Description	Minimum Version Required
Usage metrics	Insight is included in Oracle Integration usage metrics. Each business transaction in Insight is considered one message. See Monitoring Billable Messages in *Provisioning and Administering Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)

File Server Features

Feature	Description	Minimum Version Required
Users and Groups are now listed as pages instead of tabs	We've separated the Users and Groups listing from tab to page-based. So you now configure users and groups on separate pages selected from the navigation pane. See Configure Users and Configure Groups in *Using File Server in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)
Group configurations and permissions now shown for users	Group configurations and permissions are now shown for users on the Users page. If an unconfigured user is part of an active group, all properties from the groups are displayed in the list and the details section and status are grayed out. See Configure Users in *Using File Server in Oracle Integration Generation 2*.	20.2.3.0.0 (200705.0200.36414)

Resolved Issues

Integration and Connectivity Resolved Issues

Issue	Resolution
Oracle Monetization Cloud Adapter - Notification of end of life (EOL)	If you are currently using the Oracle Monetization Cloud Adapter or need to create a new integration to Oracle Monetization Cloud with Oracle Integration, you can instead use a generic adapter such as the REST Adapter or SOAP Adapter.
Oracle Integration instance performance issue	A performance issue that made Oracle Integration production instances very slow and prevented integration activation was resolved.
Oracle Integration for SaaS Generation 2 metering console issue	An issue that caused the metering console to function incorrectly in Oracle Integration for SaaS Generation 2 environments was resolved.
Large integration performance issue	An issue with the performance of loading a large integration and scrolling through the integration canvas was resolved.
Integrations landing page issue	An error that occurred when you clicked the **Info** icon on the Integrations landing page was resolved.

Issue	Resolution
JavaScript error when editing an integration	An issue in which editing an integration caused a JavaScript error was resolved.
Approved sender issue	An issue related to registering an approved sender if you had already registered the **from address** field in a different instance for the same CNS account was resolved. This issue occurred in Oracle Integration, and not Oracle Integration Generation 2.
Complex variable deletion in a for-each action	An issue related to deleting a complex type variable in a for-each action was resolved.
Invalid payload error handling	The error handling in the Lookup REST API when an invalid payload is sent was improved.
sFTP connection testing	An issue related to sFTP connection testing was resolved.
Package REST API error handling	An issue with error handling in the Package REST API when an invalid orderBy value is sent was resolved.
Activity stream log size	The activity stream log size was increased from 24 MB to 100 MB.
IntegrationMonitor role issue	An issue related to the IntegrationMonitor role accessing integration details run from the Tracking page was resolved.
Integrations landing page issue	A display issue on the Integrations landing page where the integration list contained a Publish to OIC integration was resolved.
Auditing message issue	An issue with the auditing message related to activation steps was fixed.
Lookup import issue	An issue in which a multibyte character is present in a lookup import was resolved.
Instance and error searching	You can now search for instances or errors by specifying the timestamp in the client timezone while using the date range filter option on the Tracking and Errors pages.
Stage file write encryption issue	An issue where encryption was not working when enabled as part of a stage file write inside a for-each loop was resolved.
Integration canvas improvement	The integration canvas was improved where the connection group is not expanded by default in the drawer and connections are sorted by the last updated date in the inline menu and connection drawer.
instanceId field data type change.	The data type of instanceId field was changed from integer to string.
Stage file action issue	An issue with the **Remove Trailer** field of the **Read Entire File** operation in the stage file action was resolved.
Activity stream log wording updates	The wording when writing the payload for stage file actions to the activity stream log was changed.
Integration canvas improvement	The user experience in the integration canvas while adding or repositioning actions where the integration contains a switch with a large number of branches was improved.
Scope action variable visibility issue	An issue with variable visibility inside a scope action in the integration canvas was resolved.
Unqualified or no namespaces with a for-each action	An issue with unqualified or no namespaces with a for-each action was resolved.

Issue	Resolution
Export option with a large number of integrations in a package	An issue with the export option when there are a large number of integrations within a package was resolved.
Terminated integration count	The processed count now includes the terminated count along with the successful and error count metrics.
Message package shown on the About page	An issue with the number of message packs shown on the About page was resolved.
Empty WSDL file generated by a for-each action	An issue where an empty WSDL file was generated under some scenarios by the for-each action that resulted in an exception error when opening the mapper was resolved.
Fetching integration metrics with the REST APIs	An issue with fetching integration metrics using offset and limit parameters for the monitoring/integrations REST API was resolved.
Pick action issue	An issue when a pick action trigger was used and a throw new fault action was used, the newly added action was not persisted was resolved.
Scope action scrolling issue	An issue that allows you to grab the scroll bar on a scope action was resolved.
New **Delete Global Fault** option	A **Delete Global Fault** option was added as part of the **Global Fault** dropdown list for easy discovery.
REST API time window filter	The time window filter is now supported when fetching integration data using the monitoring/integration REST API.
Schedule pausing issue	An issue with pausing a schedule was resolved.
Identity certificate upload	An issue with uploading an identity certificate in Oracle Integration Generation 2 only was resolved.
Payload information (inside loops) in the activity stream	Partially available payload information (inside loops) is now displayed in the activity stream user interface. This situation occurs when partial data rotates out of the `ics-flow.log` file.
Notification action body in the activity stream	The activity stream user interface now handles and renders correctly even if the notification action body has `<style>` tag elements.
Lookup cell value character size increase	The lookup cell value was increased from 1024 characters to 2048 characters.
Package keywords issue	An issue related to keywords with packages was resolved.
Connectivity agent cluster status in a notification email	An issue with the status of connectivity agents grouped in a cluster in a notification email was resolved.
Notification action use of the **from address** field	The notification action uses the first part of the **from address** instead of the **ICS Mail service**. For example, if the **from address** is `abc@domain.com`, the email goes as `abc`.
Activities inside a for-each action in the activity stream	A display issue with activities inside a for-each action in the activity stream user interface was resolved.
Lookup import issue	A lookup import issue in which the file contained an empty line at the end or the lookup already existed and the lookup filename was different from the lookup name was resolved.
Expression Builder searches in the mapper	An issue with searching for functions and elements in the Expression Builder in Oracle Integration Generation 2 was resolved.

Issue	Resolution
Finding source references in the mapper	An issue with finding the sources referenced in a location path containing the wildcard character in the mapper was resolved.
Complex source node dropped on a simple target node	An issue in which a complex source node can only be dropped on a simple target node when both nodes are repeating was resolved.
`AnyType` element in the mapper	An issue with dragging and dropping an `AnyType` element in the mapper was resolved.
Schema elements mapped out of order	An issue that occurred when schema attributes were mapped out of order was resolved.
Attributes containing underscores	An issue with attributes containing underscores in the mapper was resolved.
Line endings handled by EDI Translate action	An issue in which Windows-style line endings (CR + LF) were not handled correctly by the EDI Translate action after the EDI segment terminator, whereas Linux-style line endings (only LF) worked fine, has been resolved. Either type of line ending is now correctly handled.
NetSuite Adapter file cabinet	An issue with getting file content from files in the file cabinet in the NetSuite Adapter was resolved.
REST Adapter duplication integration instances	An issue in which duplicate integration instances were getting created when using the REST Adapter as a trigger connection in an integration was resolved.

Process Resolved Issues

Issue	Resolution
Load More link not visible on My Tasks page	An issue where the **Load More** link wasn't easily visible at the bottom of the My Tasks page has been resolved.
Edited human task with new blank required fields able to be submitted	This issue was resolved by including a confirmation message upon submit that confirms if the user wants to continue without validation.
Issue creating connectors to two integrations, one with modeled SOAP fault	A collision type namespace issue when using two SOAP integrations was resolved.
Not able to select multiple tasks to perform actions	An error regarding multiple task selection was resolved.
Task worklist displays incorrect task actions	An issue regarding task action visibility was resolved.
Intermittent gateway error	An issue where browser 502/504 errors occurred while editing a process application has been resolved.

File Server Resolved Issues

Issue	Resolution
Permissions not shown in group details	On the File Server Users page with the Groups tab selected, when you expand a group, permissions on the folders appear blank. The workaround is to click Permissions (key icon), which displays the Permissions page with the correct permissions for the group.
Public key not saved for unconfigured user	If you upload a public key for a user that has not been configured yet for File Server, the key isn't saved. The workaround is to configure the user first and then upload the key.
Uploading a public key using Firefox on a Mac doesn't work	If you try to upload a public key for a user using Firefox on a Mac, the popup closes and the upload is not successful. The workaround is to use Chrome.
Default idle timeout incorrectly listed	On the File Server Settings page, the default value shown on screen for the Idle Timeout field in the General section is incorrectly displayed as 600. The default value is 240 seconds.
Home and permissions not shown in expanded view	User effective home and permissions are not shown in search view and expanded view when group is enabled.
Display issues switching between Users and Groups tabs	Issues were discovered when switching between Users and Groups tabs. Separate pages are now shown for users and groups.

July 2020

New Features

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Integrations to Processes integration enhancement	When creating an integration that invokes a process, you can select a check box to use the default version of the process. This action enables the default process version to be triggered regardless of the version you selected. For example, if the process you selected is using process version 4.0, and the process version is later upgraded to version 4.1, this means that none of your integrations must be deactivated, edited, and reactivated. The process automatically starts using the latest version of the process (for this example, version 4.1). See Create an Integration that Invokes a Process in *Using Integrations in Oracle Integration Generation 2*.	20.2.2.0.0 (200517.0200.35623)

June 2020

New Features

File Server Features

Feature	Description	Minimum Version Required
File Server support in Oracle Integration	File Server in Oracle Integration is available in selected data centers. For information about the rollout dates by region, see Availability in *Provisioning and Administering Oracle Integration Generation 2*. File Server provides an SFTP-compliant repository for storing and retrieving files. For more information, see About File Server in *Using File Server in Oracle Integration Generation 2*.	20.2.2.0.0 (200524.0200.35761)

Common Features

Feature	Description	Minimum Version Required
Persona-based Oracle Help Center	The Oracle Integration Get Started page in the Oracle Help Center has been redesigned to focus on the three key user personas: business user, developer, and administrator. Click a specific user persona to access documentation, videos, and tutorials of tasks and concepts applicable to that user. See Oracle Integration in the Oracle Help Center.	N/A
Usage metrics	We've added a Usage Metrics consumption chart that enables you to monitor the number of messages you are consuming. We've also included details and examples on Integration and Process usage. See Monitoring Billable Messages in *Provisioning and Administering Oracle Integration Generation 2*.	20.2.2.0.0 (200517.0200.35622)

Integration and Connectivity Features

Feature	Description	Minimum Version Required
Integrations and Connectivity - New video series describing fundamental integration vocabulary and concepts	New to Integrations and Connectivity or simply interested in taking a refresher course in fundamental vocabulary and concepts? The following video series is available: • Oracle Integration: A First Look • Elements of an Integration • Integration Adapters: A Quick Definition • Integration Patterns: A First Look • Oracle Data Mapper: A First Look • Configure a Simple Integration in Oracle Integration	N/A

Feature	Description	Minimum Version Required
Integrations UI enhancements - Progressive Web App UI experience	The navigation experience for Integrations has been enhanced to make it quicker and easier to navigate in Oracle Integration. The new UI is built using Oracle JavaScript Extension Toolkit (Oracle JET), which utilizes the full benefits of JavaScript, CSS3, and HTML5 design and development principles. This new UI is compliant with the latest UX standards and offers a consistent user experience across integration designer pages. See Integration Pages - Progressive Web App UI Experience and Get Started with Integrations in *Using Integrations in Oracle Integration Generation 2*.	20.2.2.0.0 (200517.0200.35622)
Salesforce Adapter - Elimination of WSDL upload task on the Connections page	The Salesforce Adapter has undergone a significant productivity enhancement with the elimination of the need to upload the enterprise WSDL on the Connections page. You were previously required to generate and download the enterprise WSDL file from https://www.salesforce.com and upload it on the Connections page. This was painstaking because the updated WSDL upload was required every time you performed a customization in Salesforce.com. This enhancement greatly simplifies the Connections page by asking you to simply select the target Salesforce instance type (for example, production or sandbox environment and Salesforce API version). Existing connections continue to work the same (with upload of the WSDL), but new connections created are not required to generate and upload the enterprise WSDL in the Salesforce connection. See Configure Connection Properties in *Using the Salesforce Adapter with Oracle Integration Generation 2*	20.2.2.0.0 (200529.1400.35761)

Feature	Description	Minimum Version Required
Oracle NetSuite Adapter - Custom fields made human-readable	Oracle Integration continues to focus on enriching Oracle NetSuite Adapter capabilities by incrementally meeting NetSuite customer needs. The Oracle NetSuite Adapter is an all-around resourceful adapter in the Oracle Integration adapter portfolio, supporting a wide array of use cases for the integration specialist to implement in a declarative way. The integration specialist can use the Oracle NetSuite Adapter to make real-time invocations to NetSuite to perform create, read, update, and delete operations and perform extensive search operations on standard and custom business objects. With this update, native support is added for seamlessly using custom fields in all supported operations. However, there was one caveat with the existing adapter: custom fields in standard business objects were not human-readable in the mapper. With this update, the Oracle NetSuite Adapter has undergone a significant productivity enhancement. Custom fields found in standard business objects are now human-readable in the mapper and are also entirely portable. See Custom Fields Discovery with the Oracle NetSuite Adapter in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2*	20.2.2.0.0 (200529.1400.35761)
Shopify Adapter - Event support	The Shopify Adapter has been enhanced to support consuming business events from Shopify. Shopify generates a wide array of business events on supported resources when certain actions are completed on resources, such as customer, order, addition of product, and so on. This enables an integration architect to trigger integrations in near real time as a desired business event occurs in the Shopify resources. The Shopify Adapter also added support for custom fields created with the Metafields object. See Shopify Adapter Capabilities in *Using the Shopify Adapter with Oracle Integration Generation 2*	20.2.2.0.0 (200517.0200.35622)

Feature	Description	Minimum Version Required
Oracle HCM Cloud Adapter - Native HCM Data Loader (HDL) support	Oracle Integration continues to simplify integration with Oracle HCM Cloud by adding native support for more Oracle HCM Cloud integration touch points. Oracle Integration now supports Oracle HCM Data Loader (HDL) jobs, a powerful tool for bulk data loading into Oracle HCM Cloud. The Oracle HCM Cloud Adapter has been enhanced with native support for invoking HDL jobs and monitoring the status in a declarative way. With enhancements done to Oracle HCM Cloud to let you generate an Oracle Integration-compliant data definition document for your data files, bulk data import of large data files using HDL is vastly simplified using the Oracle HCM Cloud Adapter and Oracle Integration. See Import Business Objects with the HCM Data Loader (HDL) *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*	20.2.2.0.0 (200517.0200.35622)

Process Features

Feature	Description	Minimum Version Required
Certificates	Administrators can now manage runtime certificates for processes and integrations centrally from the Oracle Integration **Settings** menu. • Developers continue to upload and manage certificates during *design time* in Process, as described in Manage Security Certificates during Design Time in *Using Processes in Oracle Integration Generation 2*. • Administrators upload and manage certificates for *runtime* by selecting **Settings** in the Oracle Integration home page, then **Certificates**. See Upload an SSL Certificate in *Provisioning and Administering Oracle Integration Generation 2*.	20.2.2.0.0 (200517.0200.35622)

May 2020

New Features

Common Features

Feature	Description	Published
Stopping and starting Oracle Integration Generation 2 instances	You can stop and start Oracle Integration Generation 2 instances. After a stop request is initiated, the instance goes into a pausing state. During the pausing state, no new integrations and processes are started. In-flight integrations and processes continue until they either complete or reach a checkpoint. When the integrations and processes are no longer running, the instance goes into a completely paused state. During this state, Oracle Integration design time, settings, and monitoring capabilities are unavailable. See Stopping and Starting an Oracle Integration Instance in *Provisioning and Administering Oracle Integration Generation 2*.	May 4

Integration and Connectivity Features

Feature	Description	Published
Marketo Adapter - Import bulk data support	This feature allows integrations to seamlessly perform bulk imports of large data sets into Marketo such as importing bulk leads or campaigns from Mailchimp. See Process Large Data Sets Asynchronously with Different Bulk Operations in *Using the Marketo Adapter with Oracle Integration Generation 2*.	May 20
Integrations - Access integration metadata	You can access the integration name, identifier, and version instead of hardcoding those values in integrations. You can also access runtime data and environment data inside the integration. See Use Metadata in Integrations in *Using Integrations in Oracle Integration Generation 2*.	May 20
Integrations - Editing and replacing dependent resources in individual integrations or in all integrations in a package	You can edit the connections, lookups, library functions, and PGP keys of an integration or all the integrations in a package from a single page in Oracle Integration. You can also replace a connection with another connection of the same role and replace PGP keys in an integration or in all the integrations of a package. See Edit and Replace Dependent Resources in a Package and Edit and Replace Dependent Resources in an Integration in *Using Integrations in Oracle Integration Generation 2*.	May 20
Oracle Mapper - JET user interface	The Oracle Mapper has moved from an Application Development Framework (ADF) user interface to a JavaScript Extension Toolkit (JET) user interface. See Get Started with the Mapper in *Using the Oracle Mapper with Oracle Integration Generation 2*	May 4

April 2020

New Features

Integration Insight Features

Feature	Description	Published
Integration Insight support in Oracle Integration	Integration Insight is available in Oracle Integration. With Integration Insight, business users can define milestones that an integration architect maps to an integration to extract meaningful business metrics in real time, allowing business executives to gain insight into their business using dashboards. For more information, see *Using Integration Insight in Oracle Integration Generation 2*.	April 30

B2B for Oracle Integration Features

Feature	Description	Published
B2B for Oracle Integration support in Oracle Integration	Oracle Integration now provides business-to-business (B2B) support in integrations. B2B for Oracle Integration provides for the secure and reliable exchange of business documents between Oracle Integration and trading partners. Oracle Integration supports the EDI X12 business protocol for the exchange of business documents between Oracle Integration and trading partners. See Introduction to B2B for Oracle Integration in *Using B2B for Oracle Integration Generation 2*.	April 27

Integration Features

Feature	Description	Published
Support for sending and receiving attachments while invoking private SOAP APIs or invoking private REST APIs	This feature enables an integration developer to receive and send attachments from SOAP private endpoints with the connectivity agent. This enables the SOAP Adapter to process files from services running within a corporate firewall. The SOAP Adapter can send and receive attachment files of up to 1 GB in size from cloud to ground, and vice versa. This feature also enables an integration developer to receive and send attachments from REST private endpoints with the connectivity agent. This enables the REST Adapter to process files from services running within a corporate firewall. The REST Adapter can send and receive attachment files of up to 1 GB in size from cloud to ground, and vice versa.	April 30

Feature	Description	Published
Notification actions - Attachment support in Generation 2	Attachments are supported in notification actions in Oracle Integration Generation 2. See Send Notification Emails During Stages of the Integration with a Notification Action in *Using Integrations in Oracle Integration Generation 2*.	April 24
Scheduled integration status	Scheduled integration status is now included as part of migration. See Learn About Migrating to Oracle Cloud Infrastructure in *Migrating Oracle Integration Classic Instances to Oracle Cloud Infrastructure* and Learn About Migrating to Oracle Cloud Infrastructure in *Migrating Oracle Integration Cloud Service and Process Cloud Service Instances to Oracle Cloud Infrastructure*.	April 24
Oracle Asserter - Saving recordings	The number of Oracle Asserter recordings that you can save has increased to twelve. See Test Integration Instances in *Using Integrations in Oracle Integration Generation 2*.	April 24
Oracle HCM Cloud Adapter - `getAll` operation enhancements	The Oracle HCM Cloud Adapter REST `getAll` operation includes support for the `effectiveDate` query parameter. See Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*.	April 24

Process Features

Feature	Description	Published
My Tasks	We've resolved a user experience issue with the Process runtime navigation experience. When you select **My Tasks** from the Oracle Integration navigation pane in the home page, full runtime options become available. Instead of clicking an **Initiate Request** button, select **My Apps** in the navigation pane to start a process application. See Tour the My Tasks Page in *Using Processes in Oracle Integration Generation 2*.	April 24
External UI custom payload	Define a custom payload for your external UI connection. See Create an External UI Connection.	April 24

Feature	Description	Published
Forms	We added these web form enhancements: • **Simple text control:** Use this new basic control to include labels without binding on your forms. See Configure Simple Text Fields in *Using Processes in Oracle Integration Generation 2*. • **Current browser language:** A new function was added that returns the user browser locale (language). See Specify Functions in *Using Processes in Oracle Integration Generation 2*. • **Select/Unselect All action:** A new action added to the Checklist control enables users to select/unselect all options. See Select or Unselect All Check List Options in *Using Processes in Oracle Integration Generation 2*.	April 24

Resolved Issues

Integration Resolved Issues

Issue	Resolution
FTP Adapter - PGP key	The FTP Adapter supports use of the PGP key without a pass phrase.
Oracle Commerce Cloud Adapter - Security token	A security token is no longer displayed in the Connections page of the Oracle Commerce Cloud Adapter.
Lookups - Display dependencies	Display dependencies for lookups are now shown in the APIs and user interface.

Process Resolved Issues

Issue	Resolution
Form preview doesn't trigger on load events	An issue where the form preview didn't trigger with On Load events was resolved.
Process names with spaces caused issues	An issue where the filenames of attachments passed to another process were changed if they contained spaces (a space was changed to a code) was resolved.
Unable to test activate	An issue where activating a process in test mode resulted in a version override error has been resolved.
Error activating a process application using REST API	A REST API issue with customization payload during activation was resolved.
Removed customize form controls from translation editor	A web form issue with localization on a customized presentation was resolved.

Issue	Resolution
Administrators and process owners can reassign tasks	Administrators and process owners can reassign tasks, even when they are not the current task assignee.

March 2020

New Features

Common Features

Feature	Description	Published
Oracle Integration Generation 2 monitoring metrics in the One Console of Oracle Cloud Infrastructure	You can view charts that show the total number of message requests received, message requests that succeeded, and message requests that failed for each instance. See Viewing Message Metrics in *Provisioning and Administering Oracle Integration Generation 2*.	March 4

Integration Features

Feature	Description	Published
Registered library updates	You can update an already registered library with an updated Javascript file. See Update Library Functions in *Using Integrations in Oracle Integration Generation 2*.	March 26
Oracle NetSuite Adapter - Asynchronous API support	The Oracle NetSuite Adapter is one of the key adapters in the Oracle Integration portfolio. Oracle Integration continues to focus on enriching this adapter by targeting NetSuite customer needs. The current Oracle NetSuite Adapter in Oracle Integration already allows the integration specialist to configure the Oracle NetSuite Adapter to make real-time invocations to NetSuite to perform create, read, update, and delete operations and perform extensive search operations on standard and custom business objects. With this update, support is added for submitting all of the above operations in an asynchronous mode. This capability allows integrations to seamlessly perform bulk imports of large data sets into NetSuite and bulk data extracts from NetSuite in a declarative way. See Oracle NetSuite Adapter Capabilities and Implement Common Patterns Using the Oracle NetSuite Adapter in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2*.	March 25

Feature	Description	Published
Apache Kafka Adapter - Mutual TLS and TLS security policy support	The Apache Kafka Adapter introduced earlier this month has been significantly updated with support for TLS and mutual TLS based authentications. Mutual TLS-based authentication uses Kafka brokers to assert the client identity before establishing the trusted communication channel. This enables the Kafka brokers to ensure that the requests sent by Oracle Integration through the Apache Kafka Adapter are trustable and no man-in-the-middle attack has occurred. See Configure Connection Security in *Using the Apache Kafka Adapter with Oracle Integration Generation 2*.	March 25
Connectivity Agent - Automatic upgrade on Windows	The connectivity agent is a pivotal part of Oracle Integration, enabling integrations and the exchange of information between on-premises applications and Oracle Integration. Customers currently running the connectivity agent on Windows have been required to upgrade the connectivity agent manually. This created a challenge for customers trying to keep updated to the latest connectivity agent version. The automatic upgrade feature relieves customers of this requirement. Customers are required to manually upgrade for one last time, after which the connectivity agent automatically upgrades itself and no further manual upgrade is required.	March 19
REST Adapter - Multiple resources and verbs support	Oracle Integration announces yet another structural improvement in the REST Adapter. The REST Adapter had previously supported publishing only a single resource with a single verb in inbound orchestrated integrations. This created an impediment for creating pure resource-based APIs in Oracle Integration and forced integration architects to create multiple integrations to support different verbs and subresources. The REST Adapter now supports adding multiple verbs to the resource and adding subresources in the inbound definition. As an example, assume you want to have a single resource to support different combinations of operations on a sales order resource through multiple verbs and subresources. You can now design such an orchestrated integration and pick the verb, resource, or subresource from the client as desired using a single resource URI. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2* and Receive Requests for Multiple Resources in a Single REST Adapter Trigger Connection in *Using Integrations in Oracle Integration Generation 2*.	March 16

Feature	Description	Published
Oracle Asserter - Integration testing framework support	The Oracle Asserter testing framework enables you to record tests of integration instances and replay them to reproduce potential issues. You can simulate the behavior of both a trigger connection and the response from an invoke connection. You can also export integrations with recordings and import and test the integration in a different environment (for example, move it from a design environment to a test environment). You can also submit recordings to Oracle for analysis of errors. See Test Integration Instances in *Using Integrations in Oracle Integration Generation 2*.	March 13
Notification actions - Attachment support	You can add attachments to emails in a notification action. See Send Notification Emails During Stages of the Integration with a Notification Action in *Using Integrations in Oracle Integration Generation 2*.	March 13
Invoking co-located, active integrations from a parent integration	You can invoke a co-located (child), active integration from the parent integration that you are designing through use of the local integration adapter. Co-located means the integration is running on the same host instance or in the same domain. Upon activation and invocation of the parent integration, it invokes and consumes the co-located integration. See Invoke a Co-located Integration from a Parent Integration in *Using Integrations in Oracle Integration Generation 2*.	March 13
For-each action - Support for parallel processing	If you drag a for-each action into a scheduled integration or the for-each action is not inside a while action, for-each action, scope action, and so on, an additional field called **Process items in parallel** is visible at the bottom of the dialog. When selected, iterations of the for-each action are run in parallel. See Loop over Repeating Elements with a For-Each Action in *Using Integrations in Oracle Integration Generation 2*.	March 13
Activity stream enhancements	The activity stream has been enhanced to combine the audit trail with tracing information and provide a more compact and easily readable activity stream. See Track Business Identifiers in Integrations During Runtime in *Using Integrations in Oracle Integration Generation 2*.	March 13
Oracle HCM Cloud Adapter - Deprecation of certain Oracle HCM Cloud SOAP APIs	Following Oracle HCM Cloud's deprecation of some of their SOAP APIs, the Oracle HCM Cloud Adapter has been enhanced to only show supported SOAP APIs in the Adapter Endpoint Configuration Wizard. For the current list of SOAP APIs supported by Oracle HCM Cloud, see Business Object Services in *SOAP Web Services for HCM* and also Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*.	March 10

Feature	Description	Published
Slack Adapter - New adapter	Oracle Integration announces the general availability of the Slack Adapter in the social and productivity space. Slack is a collaboration hub that helps enterprises automate their workflows, enhance team productivity, and gain business efficiency by streamlining their business processes. The Slack Adapter provides support for outbound-based integrations with Slack. This enables integrations to publish updates to individuals or channels as necessary through Slack. As an example, you want to publish sales order updates for critical customers to the critical sales orders channels so that customer sales representatives can easily stay updated with their key customer order information. See Slack Adapter Capabilities in *Using the Slack Adapter with Oracle Integration Generation 2*.	March 3
Box Adapter - New adapter	Oracle Integration announces a new addition to its growing list of connectivity adapters. The Box Adapter is the newest addition to the list. Box.com provides content management and file sharing as a cloud service. The Box Adapter supports both inbound and outbound integrations with Box.com on the Oracle Integration platform. You can create outbound integrations to upload your business critical documents such as sales orders, service contract agreements, lease agreements, and so on as parts of integrations. You can also create inbound integrations that are triggered based on real-time events in Box such as *file is modified*. As an example, you want to execute an integration that updates your ERP backend system with supplier acknowledgment of the order (that is, whenever the supplier uploads the confirmation/ acknowledgment document for the order in the Box.com folder). The Box Adapter enables organizations to share, process, and streamline business critical documents between Oracle, non-Oracle, cloud, or on-premises applications with rich integration capabilities as well as a vast number of adapters to connect to these applications. See Box Adapter Capabilities in *Using the Box Adapter with Oracle Integration Generation 2*.	March 3

Feature	Description	Published
Apache Kafka Adapter - New adapter	Oracle Integration announces the addition of the Apache Kafka Adapter to its growing list of connectivity adapters. In an era of digital transformation, more and more enterprises are looking to leverage Apache Kafka for streamlining the publishing and consumption of information across various cloud and on-premises business applications. The Apache Kafka Adapter connects to the Apache Kafka distributed publish-subscribe messaging system from Oracle Integration and enables an integration architect to publish and consume messages from a Kafka topic. See Kafka Adapter Capabilities in *Using the Apache Kafka Adapter with Oracle Integration Generation 2*	March 3

Process Features

Feature	Description	Published
Header support in SOAP connectors	You can use headers specified in the WSDL of a SOAP connector to create data inputs and outputs during data association. See Use SOAP Headers in Data Asoociations in *Using Processes in Oracle Integration Generation 2*.	March 23
Web form events	We added the following enhancements: • Support for looping, enabling you to execute the same action multiple times in a form control. See Examples of Loops in Forms in *Using Processes in Oracle Integration Generation 2*. • Dynamically populate information about a current logged in user's data such as name, email, user id and so on in forms using the Current Logged in User Data function. See Example of Current Logged in User Data Function in *Using Processes in Oracle Integration Generation 2*.	March 23
Tag assignees in comments	Users can now notify task assignees of comments by tagging them using an `@` keyword. In the Comments field, tag assignees in one of these ways: • Enter `@assignees` to send an email to all users assigned the task. • Enter `@`*`userid`* (for example `@john doe`) to address specific users in task comments. An email notification addressing the specified user is sent. See How do I send email notifications from a comment? and Email Notifications from Comments in Tasks in *Using Processes in Oracle Integration Generation 2*.	March 26

Feature	Description	Published
New translation framework for multi language support	We added support for human task title and action localization and overall process application localization. See Localize Applications in *Using Processes in Oracle Integration Generation 2*.	March 23
Micro process	Dynamically discover active BPMN processes in other process applications, for cross-application process reuse. See Create and Use Micro Processes in *Using Processes in Oracle Integration Generation 2*.	March 23
External UI	You can now use an external form in human tasks to interact with end users. See Create an External UI Connection in *Using Processes in Oracle Integration Generation 2*.	March 26

Visual Builder Features

Feature	Description	Published
OpenAPI 3	Visual Builder now supports the use of REST services described by the OpenAPI 3 specification. When you open an existing visual application in this release or import a ZIP containing a visual application, Visual Builder upgrades the pre-existing `service.json` file (Swagger v2 format) to an `openapi3.json` file that uses the OpenAPI 3 format. If this operation fails because, for example, the `service.json` file is invalid, you will need to edit the `service.json` file so that it is valid and Visual Builder can successfully upgrade to the OpenAPI 3 format in the `openapi3.json` file. In addition, all `*-flow.json` files in web and mobile apps will have references to `services/*/service.json` in the services map upgraded to point to the new `openapi3.json` file. Visual Builder continues to support the use of REST services that are described by JSON files using the Swagger v2 specification. For information about creating connections to REST services, see Work with Service Connections.	March 18
Application Profiles	Use application profiles to specify different application configurations for different environments and deployments. You can, for example, use an application profile to specify a service connection to different REST instances (development, test, and production) for each lifecycle phase of application development. See About Application Profiles.	March 18

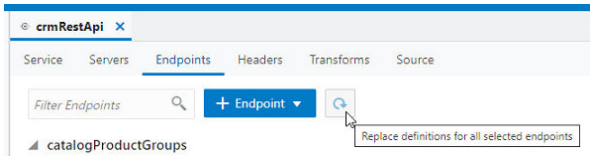
Feature	Description	Published
Connection Type(s) for CORS	Connection type is a new field where you control how your service connections communicate with external REST services depending on whether these services support CORS or not. Visual Builder automatically migrates service connections in existing applications to the appropriate connection type. The **Direct (Bypass Proxy)** authentication mechanism no longer appears and, in this release, the equivalent configuration is an authentication type of **None** and a connection type of **Dynamic, Service supports CORS**. See Use an Appropriate Connection Type to Handle CORS for REST Services.	March 18
Oracle Cloud Infrastructure API Signature 1.0	You can now use a signature to create an AppID flow using a single Oracle Cloud Infrastructure (OCI) user to natively connect to OCI endpoints. See Fixed Credentials Authentication Mechanisms.	March 18
Action Chain Tests	Visual Builder now provides test automation capabilities for action chains, helping you to adopt test driven development. A new declarative interface helps you to define tests for the action chains in your web and mobile applications that you can run individually or simultaneously. See Test Action Chains.	March 18
New Array Data Provider	The page model provides a new built-in type, `vb/ArrayDataProvider2`, which new applications should use. The legacy `vb/ArrayDataProvider` type is supported in existing applications. ArrayDataProvider2 does not allow writes to individual properties of ArrayDataProvider2.data, unlike the legacy ArrayDataProvider. Instead, ArrayDataProvider2 supports using either the fireDataProviderEventAction or the assignVariablesAction to mutate data, while the legacy ArrayDataProvider supports only the assignVariablesAction. See Array Data Provider 2.	March 18
Custom JET and Runtime Versions for Mobile Applications	You can now specify custom JET and runtime versions for mobile applications where previously you could only do this for web and progressive web apps. See Specify Custom JET and Runtime Versions for Applications.	March 18
Favicons for Web Applications	Oracle Visual Builder now provides two default favicons for use in web applications and Progressive Web Apps. One favicon is for use in light mode and the other is for use in dark mode. Overwrite the default favicons if you want to use your own favicons. See About Application Resources.	March 18
Mobile Build Configurations	The mobile build configurations that you define for Android and iOS must be assigned to an application profile. The checkboxes that you previously used to specify a default build configuration for publish or stage operations have been removed. See Build Mobile Applications.	March 18

Feature	Description	Published
Business Processes	Application profiles can be used to manage the connection to the Process Servers that your visual applications use. See Configure the Connection to a Process Server.	March 18
Open URL Action for Native Mobile Applications	The existing Open URL action has been updated to support opening local file attachments on native mobile applications. See Open URL Action.	March 18
$application.deployment	The $application.deployment built-in variable has been added to facilitate code sharing between web, mobile, and progressive web applications developed using Visual Builder. See Built-in Variables.	March 18
Create File Menu Action	A Create File menu action is now available on folders in the source navigator tree to allow you to create custom files and subfolders almost anywhere in your app. The following are the exceptions where Visual Builder does not show the Create File menu action on a folder: • Some folders are special and do not allow for the creation of singular files: – Root folders for web and mobile apps – Any folder in the hierarchy with the name *flows* or *components* • Some folders already have a Create action that creates singular files, in which case adding a Create File action would be superfluous: – `resources/js` – `resources/css`	March 18
Create JS and CSS Files	You can now more easily create JS and CSS files by using the Create JS File and Create CSS File dialogs that you invoke from the + icon that appears beside the entries for these artifacts in the Navigator.	March 18
New vbDataProviderNotification Event Listener	You can register an event listener for vbDataProviderNotification code events to display any errors from the Service Data Provider.	March 18
Improvements to the Events Editor	The following improvements were made to the Events editor: 1. Event Payloads are shown with full details in the Mapper. If there is no payload for an event it is not shown. 2. When creating a new listener for Events, new action chains are populated with input parameters matching the event's payload and are also mapped automatically. 3. The default action chain created for **vbBeforeEnter** and **vbBeforeExit** listeners returns a payload with cancel set to false, plus a description describing how to cancel this action.	March 18

Feature	Description	Published
Secure Storage	Sensitive data such as passwords and certificates are no longer stored in areas of storage excluded from versioning and export (private storage). Instead, they are stored in the new secure storage of Visual Builder, which is a repository of sensitive pieces of data keyed by a unique key that is stored in the source. This makes it possible to securely transfer sensitive data between Visual Builder instances. Source files, such as mobile build configuration files, now contain references to the secure storage rather than private storage. Visual Builder updates all existing applications to use secure storage.	March 18
Reset an Expired Password or ATP Wallet for Your Oracle DB Instance	Visual Builder administrators can now reset an expired password or an ATP wallet for the Oracle DB instances that you use to replace the database provisioned with your Visual Builder instance. See Reset an Expired Password or ATP Wallet for Your Oracle DB Instance.	March 18

Feature	Description	Published
Business Object REST Endpoints	You can now add or remove the endpoints that the business objects in your visual application expose. Using a new business object resource editor, you can configure the business object to include only the endpoints that you require, thereby reducing the size of the metadata file that describes your business object REST endpoints. See Add or Remove Exposed Endpoints. **Note:** For existing applications, especially those that contain many business objects, we strongly recommend that you trim the exposed endpoints of each business object to include only those that you require. You can apply the default setting to expose only the first level of endpoints for each object, but if deeper nested endpoints were included in the object's resource definition, you must modify the default selection to include those endpoints.	March 18
Business Object Data Manager	The Data tab now includes menu buttons that allow you to duplicate data rows and to filter the fields that display in the data table. See Edit the Data in Business Objects.	March 18

Feature	Description	Published
Business Object Diagram	Business object diagrams now show object accessor field names by default in a separate field of the business object node. You can disable the default behaviour using the Fields and Show Object Accessors menu entries that you access from the menu for the business object diagram. Also, you can now save business object diagrams to your computer as SVG or PNG graphic files. See Work with the Business Object Diagrammer.	March 18
Visual Builder Grunt Tasks	• A new task, `vb-package`, can be used to package visual application sources. It can also perform application optimization (`vb-optimize`) and generate a build manifest (`vb-manifest`). See vb-package. • The `vb-manifest` task now includes two new options. The `xx-version` option allows you to set an alternative version value for the visual extension manifest, and the `git-repository-url` option specifies the URL for the Git repository. See vb-manifest. • The `vb-build` task now includes two options, `cdnURL` and `insertBaseURL`, that facilitate the hosting of application assets on a Content Delivery Network (CDN). See Host an Application on a Content Delivery Network (CDN).	March 18
Oracle Visual Builder Add-in for Excel	Visual Builder includes version 2.1 of the add-in. Notable changes in this newer version include: • Ability to create tables and other layouts using OpenAPI 3 service descriptions • Ability to modify details of service description, such as alter a field title • Ability to configure lists of values for any REST service • Support for object-typed fields and subfields • A prompt for path parameter values • Ability to apply custom actions to existing rows • Ability to edit the form fields for an existing parent row in a Form-over-Table layout See Get Started with the Oracle Visual Builder Add-in for Excel.	March 18
Internet Explorer 11	Visual Builder runtime has deprecated the use of Internet Explorer 11. Users will now receive a deprecation warning if accessing a Visual Builder application from Internet Explorer. In a subsequent release of Visual Builder in the second half of 2020, Visual Builder runtime will discontinue support of Internet Explorer 11.	March 18

Feature	Description	Published
Upgrade the Oracle Sample R13 SaaS LightBlue Theme	If your application uses the Oracle SaaS R13 Light Theme, you need to upgrade the theme in your application before you run the application using this release. For more details and instructions on how to perform the upgrade of the theme, read this blog post.	March 18
Lists of Values Endpoints for Oracle Cloud Applications	This is not a new feature, but be aware that Oracle Cloud Applications (OCA) has changed the way that it manages lists of values endpoints. The service connections that you created in visual applications prior to this release might use an older version of the definition for lists of values endpoints from OCA. This does not create problems for existing applications, but we advise you to use the **Replace definitions for all selected endpoints** button on the service connections in your visual applications that use these types of endpoints to refresh all definitions. Clicking the **Replace definitions for all selected endpoints** button marks an older version of an endpoint as obsolete, but does not remove it from your apps as a web or mobile app might reference this endpoint in some screens. In Visual Builder's Endpoints tab, a strike through appears for an endpoint that has been marked as obsolete. For best performance and to use the latest way of surfacing the endpoints for lists of values, we recommend that you manually replace the obsolete endpoints in your web and mobile apps to use the newer definition for lists of values endpoints from OCA. The following image shows the **Replace definitions for all selected endpoints** button. For information about service connections in visual applications, see About Service Connections. 	March 18

February 2020

New Features

Common Features

Feature	Description	Published
Oracle Integration for Oracle SaaS provisioning	Oracle Integration for Oracle SaaS Generation 2 is now available for provisioning. Oracle Integration for Oracle SaaS Generation 2 is a streamlined version of Oracle Integration that gives you the features and benefits of Oracle Integration with a focus on SaaS. See Oracle Integration for Oracle SaaS in *Provisioning and Administering Oracle Integration Generation 2*	February 28

Integration Features

Feature	Description	Published
Migration enhancements	• Scheduled parameters are supported when migrating Oracle Integration. • The Merge feature for merging artifacts and configurations when migrating to an instance is supported.	February 28
Logging changes	Logger settings and log file downloads are not available in Oracle Integration Generation 2. Tracking and tracing are improved to make problem resolution easier.	February 28
REST API update	The Audit API is enhanced to support pagination.	February 28
FTP Adapter - Support for integrating with a privately hosted sFTP server	You can configure the FTP Adapter with the connectivity agent. This means the FTP Adapter can process files from FTP/FTP(s)/sFTP servers running within a corporate firewall. The FTP Adapter can also transfer files up to 1 GB in size from cloud to ground, and vice versa. See FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2*.	February 19

Feature	Description	Published
Oracle ERP Cloud Adapter, Oracle HCM Cloud Adapter, and Oracle CX Sales and B2B Service Adapter - Simplification of the Connections page	The Connections page for the Oracle ERP Cloud Adapter, Oracle HCM Cloud Adapter, and Oracle CX Sales and B2B Service Adapter (formally Oracle Sales Cloud Adapter) previously required you to enter the service catalog URL, the interface catalog URL and events catalog URL. Customers found that gathering this information was painstaking and error prone. This enhancement greatly simplifies the connection page by asking you to simply enter the cloud base URL, which is a URL pattern, starting with `https://` (for example, `https://` *`customer_chosen_domain_name`*`.fa.`*`DC`*`.oraclecloud.com`). Oracle Integration deciphers the rest of the information pertaining to service catalog, interface catalog, and event catalog URLs automatically. See Configure Connection Properties in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*, Configure Connection Properties in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*, and Configure Connection Properties in *Using the Oracle CX Sales and B2B Service Adapter with Oracle Integration Generation 2*.	February 19
Shopify Adapter - New adapter	The Shopify Adapter is now available in Oracle Integration. The Shopify Adapter enables you to create an integration with a Shopify application in Oracle Integration. The Shopify Adapter provides support for the Orders, Products, Inventory, and Customers modules. Use the Shopify Adapter to create, update, or delete records in Shopify. See Shopify Adapter Capabilities in *Using the Shopify Adapter with Oracle Integration Generation 2*.	February 19
SAP Commerce Cloud (Hybris) Adapter - New adapter	The SAP Commerce Cloud (Hybris) Adapter is now available in Oracle Integration. The SAP Commerce Cloud (Hybris) Adapter enables you to create an integration with an SAP Commerce Cloud application in Oracle Integration. Use the SAP Commerce Cloud (Hybris) Adapter to create, update, or delete records into SAP Commerce Cloud and perform create, update, query, or delete operations against objects defined under Omni Commerce Connect (OCC) of the SAP Commerce Cloud. See SAP Commerce Cloud (Hybris) Adapter Capabilities in *Using the SAP Commerce Cloud (Hybris) Adapter with Oracle Integration Generation 2*.	February 19
Oracle Responsys Adapter - Support for merging data into Responsys supplemental tables	You can merge data into Responsys supplemental tables. A supplemental table is required if nonprofile data, such as purchase data or product information, must be transferred into Oracle Responsys using the Oracle Responsys Adapter. See Create a Supplemental Table in *Using the Oracle Responsys Adapter with Oracle Integration Generation 2*.	February 19

Process Features

Feature	Description	Published
New security policy for UiPath adapter	The UiPath Robotic Process Automation Adapter provides support for a new security policy to authenticate against the Cloud or Community Edition of the UI Path orchestrator. See Understand the UiPath Robotic Process Automation Adapter in *Using the UiPath Robotic Process Automation Adapter with Oracle Integration Generation 2*.	February 28
Form layout enhancements	You can now group controls both horizontally and vertically in panels and sections. You can place and position controls within panels and sections as in the normal form canvas. See Position Controls on Forms and Place Controls in Panels, Sections, or Tabs in *Using Processes in Oracle Integration Generation 2*.	February 28
Event subprocess	Use event subprocesses to handle exceptions that occur in the runtime life cycle of a process and cause it to fail. See Handle Errors with Event Subprocesses in *Using Processes in Oracle Integration Generation 2*.	February 28
Expression builder usability	We've improved the web form expression builder you use to configure dynamic behavior such as events, actions, conditions, and functions. See Add Dynamic Behavior to a Form in *Using Processes in Oracle Integration Generation 2*.	February 28

Resolved Issues

Integration Resolved Issues

Issue	Resolution
Nested anonymous complex types	Nested anonymous complex types in WSDLs are supported.
Performance improvements	Multiple performance improvements have been implemented.
Salesforce Adapter - Local process calling	When used as a trigger connection, the Salesforce Adapter can call a local process.
Retrieve Integration API enhancements	The Retrieve Integration API now provides dependent lookups and integrations.
Improved error reporting	Error reporting is improved for activation failures.
Consumption of Swagger documents	Consumption of Swagger documents with a request/response type as a top-level JSON array are supported.

Issue	Resolution
FTP Adapter - Passive IP support	The FTP Adapter supports the use of a passive IP.
Open API document - octet-stream support	The octet-stream is supported in a published Open API document.
Notification action checking	A check is added for if there are no contacts specified in the notification action.
REST Adapter - Amazon Execute API	The REST Adapter supports the Amazon Execute API.
Integration activation cancellation	You can cancel an integration activation request if event activation takes longer than 10 minutes. You can also check the status of activation through an icon in the user interface.

Process Resolved Issues

Issue	Resolution
Comments not updated when approving multiple tasks	An issue where comments entered when approving multiple tasks were not retained was resolved.
Required property symbol (*) disappearing	An issue with a missing asterisk on the web form's select control was resolved.

January 2020

New Features

Integration Features

Feature	Description	Published
Oracle Autonomous Data Warehouse Adapter - New adapter	The Oracle Autonomous Data Warehouse Adapter is now available in Oracle Integration. The Oracle Autonomous Data Warehouse Adapter enables you to integrate the Oracle Autonomous Data Warehouse database instance with Oracle Integration. Use the Oracle Autonomous Data Warehouse Adapter to execute SQL queries or stored procedures in the Oracle Autonomous Data Warehouse database. See Oracle Autonomous Data Warehouse Adapter Capabilities in *Using the Oracle Autonomous Data Warehouse Adapter with Oracle Integration Generation 2*.	January 28

Feature	Description	Published
Oracle Autonomous Transaction Processing Adapter - Connectivity agent support	Oracle Integration announces support for connecting with a privately-hosted Oracle Autonomous Transaction Processing database instance using the connectivity agent and the Oracle Autonomous Transaction Processing Adapter. See Oracle Autonomous Transaction Processing Adapter Capabilities in *Using the Oracle Autonomous Transaction Processing Adapter with Oracle Integration Generation 2*.	January 28
REST Adapter - Octet-Stream support for inbound (trigger) direction	REST continues to be an important technological pivot for integrating systems in a simple, rapid, and revolutionary way. Oracle Integration further enhances the REST Adapter to enable sending binary files to REST APIs through the `application/octet-stream` content-type. This enables you to send binary files read from one end to another end seamlessly. As an example, you can build an integration flow to expose a REST endpoint that can accept structured/unstructured content such as CSV-formatted files and PDF documents as raw/binary data and have them processed and sent to downstream applications such as Oracle ERP Cloud/sFTP servers. See REST Adapter Trigger Request Page and REST Adapter Trigger Response Page in *Using the REST Adapter with Oracle Integration Generation 2*.	January 21
Publishing interfaces for Oracle Integration flows as OpenAPI documents	Oracle Integration continues to adopt open standards for publishing integration flows and simplify consumption of Oracle Integration flows from external systems. In the same endeavor, the REST Adapter in Oracle Integration has started automatically publishing OpenAPI documents for all of the Oracle Integration flows that have the REST Adapter as a trigger. OpenAPI has become a de facto standard for describing a REST API. You can download the OpenAPI documents and use the documents to build the client applications for consuming the Oracle Integration flow exposed as a REST API.	January 21
Oracle CX Sales and B2B Service Adapter and Oracle ERP Cloud Adapter - Custom business event support	Oracle Integration can consume custom business events that are configured on custom objects in Oracle Fusion Applications. The Oracle CX Sales and B2B Service Adapter and Oracle ERP Cloud Adapter provide support for consumption and processing of events that are raised based on operations on custom objects. See Oracle Engagement Cloud Adapter Capabilities in *Using the Oracle CX Sales and B2B Service Adapter with Oracle Integration Generation 2* and Oracle ERP Cloud Adapter Capabilities in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*.	January 21

Feature	Description	Published
Oracle CX Sales and B2B Service Adapter - Upsert operation support	Oracle CX Sales and B2B Service Adapter (Sales Cloud) has been enhanced to support the upsert operation. This enables the service invoke to perform an update on a business (REST) resource if it exists or create a new business resource if it doesn't exist. This simplifies how you create/update a business resource without worrying about the existence of the business resource. You select the upsert operation for the selected business resource from the **Select the Operation to Perform on the Selected Resource** list on the Operations page when configuring the Oracle CX Sales and B2B Service Adapter as an invoke connection. See Invoke Operations Page in *Using the Oracle Engagement Cloud Adapter with Oracle Integration* and REST API for Oracle Engagement Cloud in *REST API for Sales and B2B Service in Oracle Fusion Cloud Customer Experience*.	January 10
Google Gmail Adapter and Microsoft Office 365 Calendar Adapter - Attachment support	The Google Gmail Adapter and Microsoft Office 365 Calendar Adapter are critical parts of the connectivity portfolio enabling an integration architect to poll/send mail or invites to the appropriate resources. The Google Gmail Adapter and Microsoft Office 365 Calendar Adapter have been further enhanced to support sending attachments through mail and calendar invites. For example, assume you want to fetch a sales proposal document and send it as an attachment through mail. This can now be easily achieved using the Google Gmail Adapter and Microsoft Office 365 Calendar Adapter. See Invoke Operation Selection Page in *Using the Google Gmail Adapter with Oracle Integration Generation 2* and Invoke Operations Page in *Using the Microsoft Office 365 Calendar Adapter with Oracle Integration Generation 2*. .	January 7
FTP Adapter - FTP Multilevel authentication support	This policy uses multiple independent credentials to log in to the server. This process creates an extra layer of defense against unauthorized users. With this policy, you provide a user name, user password, private key, and private key passphrase to connect to the sFTP server. You also configure the first authentication sequence between the password and the public key. See FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2*.	January 2

Process Features

Feature	Description	Published
REST API updates	We've made improvements to Process Instance APIs in the Oracle Integration REST APIs. See the **What's New** topic under **Get Started** in Oracle Integration REST API.	January 31

Resolved Issues

Integration Resolved Issues

Issue	Resolution
FTP Adapter - PGP decryption	The FTP Adapter can decrypt a PGP-encrypted file if the file is encrypted with a simple signature.

December 2019

New Features

Integration Features

Feature	Description	Published
Oracle ERP Cloud Adapter - Simplification when integrating with File-Based Data Integration (FBDI)	Use of FBDI with the Oracle ERP Cloud Adapter is a widely adopted feature. However, the prerequisite for enabling this capability (filing a service request against Oracle ERP Cloud to get the required certificates) was daunting. The Oracle ERP Cloud Adapter has simplified integration with FBDI significantly by removing this prerequisite. See Oracle ERP Cloud Adapter Capabilities in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*.	December 5

Feature	Description	Published
Oracle SOA Suite Adapter - New adapter	Oracle Integration greatly simplifies how to use your existing Oracle SOA Suite (including Oracle Service Bus) and Oracle SOA Cloud Service investments to build new hybrid integrations with the Oracle SOA Suite Adapter. The Oracle SOA Suite Adapter can connect, discover, and invoke composites/projects on Oracle SOA Suite/Oracle Service Bus or Oracle SOA Cloud Service with simplicity and ease. The Oracle SOA Suite Adapter supports connecting to Oracle SOA Suite/Oracle Service Bus or Oracle SOA Cloud Service directly or through the connectivity agent if Oracle SOA Suite/Oracle Service Bus are behind a firewall. See Oracle SOA Suite Adapter Capabilities in *Using the Oracle SOA Suite Adapter with Oracle Integration Generation 2*.	December 5
IBM MQ Series JMS Adapter - New adapter	Oracle Integration now supports integrating with an IBM MQ Series JMS server. The IBM MQ Series JMS Adapter supports both invoke- and trigger-based operations with IBM MQ Series by publishing messages to the queue or subscribing to the messages in a topic. See IBM MQ Series JMS Adapter Capabilities in *Using the IBM MQ Series JMS Adapter*.	December 5
Oracle Intelligent Advisor Adapter - Inbound support	The Oracle Intelligent Advisor Adapter can be used for regulated industries such as public sector, financial services, medical devices, and retail; for human resources decision-making; or anywhere that policy-based decisions must be integrated. The Oracle Intelligent Advisor Adapter has been enhanced for inbound support (that is, triggering an integration based on an event in the Oracle Policy Automation tool). See Oracle Policy Automation Adapter Capabilities in *Using the Oracle Intelligent Advisor Adapter with Oracle Integration Generation 2*.	December 5

Process Features

Feature	Description	Published
Read only form control containers	You can now set form container controls to read-only, making all contained controls automatically read-only rather than having to individually set them with this property. See Place Controls in Panels, Sections, or Tabs in *Using Processes in Oracle Integration Generation 2*.	December 19

Feature	Description	Published
Configure query parameters dynamically in form connector calls	We added support in form REST connector calls to use expressions when setting query parameters. See Execute REST Connector Calls in Events in *Using Processes in Oracle Integration Generation 2*.	December 4

Visual Builder Note

Feature	Description	Published
Business rules are disabled in Oracle Integration Generation 2 environments	The ability to define Business Rules (including server-side validations, triggers, object functions, and declarative workflow) is available in all environments except in Oracle Integration Generation 2. You'll see a message in the Business Rules tab for business objects if business rules can't be configured in your environment.	December 4

Resolved Issues

Integration Resolved Issues

Issue	Resolution
Escaping standard XML characters	You can escape standard XML characters that were coming as part of the value in the QueryCSV MTOM response for the Oracle Service Cloud Adapter.
REST Adapter mappings	Mappings reflect the change in query parameters in the REST Adapter.
Oracle Commerce Cloud Adapter performance	A runtime slowness issue with the Oracle Commerce Cloud Adapter has been resolved.
Integration completion reporting	There is improved reporting of integration completions in the activity stream.
Twitter Adapter mappings	Mappings reflect the change in query parameters for the Twitter Adapter.
FTP Adapter schema upload	You can upload a schema containing an attribute reference in the FTP Adapter.
LinkedIn Adapter REST API support	LinkedIn REST API version 2 in the LinkedIn Adapter is supported.
Email notification message failures	A detailed description of failed messages in email notifications is provided.

Process Resolved Issues

Issue	Resolution
Integration connection timeout	You can now modify the default timeout of integration flows discovered from Processes to a lower value than 30 seconds.
Opening form displays blank page	An issue was resolved where a form didn't render properly when opened. The error message included *Cannot read property 'length'*.
API did not return retired instances along with active applications	Resolved an issue where the ProcessMetaDataService.listProcessMetaDataSummary API omitted retired applications from its list of active process applications. These retired applications are still valid as they hold references to completed process instances and need to be available via API calls.
User list issue during dynamic process role assignment	An issue was resolved where not all available active users could be found when browsing to assign roles in dynamic processes.
Player flow does not work for human tasks	An issue was resolved where running a new process instance using the player resulted in the process instance getting stuck at the first human task after initiating the process via a form start.
Unable to update some integrations in process applications	An issue was resolved where existing integration flows in a process application could not be successfully updated.
Error mapping roles during test activation	An issue was resolved where activating in the test partition resulted in the error message *Failed to map roles to the current user.*
Deleted web service instance listed in manage web service list	Process SOAP WSDLs now properly refresh when message-based start events are removed from the process and a new version is activated.

Process Features

Feature	Description	Published
REST API updates	We've made improvements to Process Instance APIs in the Oracle Integration REST APIs. See the **What's New** topic under **Get Started** in Oracle Integration REST API.	August 22

November 2019

New Features

Common Features

Feature	Description	Published
New to Oracle Integration?	• If you have created an Oracle Cloud account on or after November 13th in one of the following seven regions, you can create instances in Oracle Cloud Infrastructure Gen 2. To get started, see Provisioning and Administering Oracle Integration on Oracle Cloud Infrastructure. – US East (Ashburn) – US West (Phoenix) – Canada Southeast (Toronto) – India West (Mumbai) – South Korea Central (Seoul) – Australia East (Sydney) – Japan East (Tokyo) • For all other customers, see the provisioning steps described in Ready, Set Up, Go.	November 13

Integration Features

Feature	Description	Published
ServiceNow Adapter - Attachment support	You can download, upload, or delete attachment metadata from or to a specific record in a module when configuring the ServiceNow Adapter as an invoke connection. See Invoke Action Page in *Using the ServiceNow Adapter with Oracle Integration Generation 2*.	November 27
Marketo Adapter - New adapter	Marketo is a SAAS-based customer relationship management system that helps automate marketing campaigns and sales lead generation. The Marketo Adapter enables you to create an integration with a Marketo application. You can configure the Marketo Adapter as an invoke connection in an integration in Oracle Integration. See Marketo Adapter Capabilities in *Using the Marketo Adapter with Oracle Integration Generation 2*.	November 17
Enhanced diagnostics for inbound flows	Oracle Integration continues to improve the diagnostics and troubleshooting experience by providing more self-service mechanisms to alert users of system failures. Oracle Integration now captures inbound flow launch failures and shows it as a fault on the Monitoring page.	November 17

Process Features

Feature	Description	Published
DMN samples	Developers can now easily create a decision model by selecting a sample model and saving it under a new name. Advanced developers can promote decision models to samples to share with others. See Create a Decision Model from a Sample and Promote Decision Models as Samples to the Gallery in *Using Processes in Oracle Integration Generation 2*.	November 27
From email registration	We improved and resolved some issues related to properly registering "From" email addresses.	November 27
Extract and reuse event snippets	Developers can now define complex event snippets once and reuse them across other events and across presentations of the same form. See Reuse Event Snippets in *Using Processes in Oracle Integration Generation 2*.	November 27
Support predefined variables in dynamic processes	We added support for predefined variables to dynamic processes, particularly to track the process instance ID.	November 27
Data purge for dynamic processes and analytics	We added support to purge dynamic process instances along with other process instances using the same process purge setting. See Schedule Instances Archive and Purge in *Using Processes in Oracle Integration Generation 2*.	November 27
Web forms	We've added the following enhancements to web forms: • **Clear error:** A new action called *Clear Error* lets you clear error messages in form fields. • **Side by side controls:** You can now place form controls beside each other inside form containers such as panels, tabs, tables, sections, and repeatable sections. • **Append and delete values:** You can append and delete values to/from a select control. See Add an Option to a List of Value Field and Clear All Options From a List of Value Field in *Using Processes in Oracle Integration Generation 2*. • **Date functions:** We've added new functions for date manipulation. See Specify Functions in *Using Processes in Oracle Integration Generation 2*. • **Reorder actions in events:** You can now easily reorder actions within form control events. See Configure Events in *Using Processes in Oracle Integration Generation 2*. • **Reorder columns in tables:** You can now easily reorder table columns.	November 13

Feature	Description	Published
New bot activity in the structured process editor	Drag the new Bot element onto the BPMN canvas to add an RPA (Robotic Process Automation) native activity to your process. See Work with Bot Activities in *Using Processes in Oracle Integration Generation 2*.	November 13
Migrating basic forms to web forms	Here's a reminder that when you migrate process applications that contain basic forms from Oracle Process Cloud Service to Oracle Integration, a placeholder web form is created automatically. Opening the imported form completes the transformation from basic form to web form. The new web form contains business objects, presentations, and layouts identical to the original form. Note that certain features of basic forms aren't supported or supported differently in web forms. See Processes Migration Restrictions and Perform Post Import Steps for Processes in *Migrating Oracle Integration Cloud Service and Process Cloud Service Instances to Oracle Cloud Infrastructure*.	November 13
Dynamic Process on screen text enhancements	We've improved our overall terminology consistency for dynamic process modeling.	November 13

Resolved Issues

Integration Resolved Issues

Issue	Resolution
Sample request payloads	Sample request payloads have been added to the Open API/Swagger definition for integration endpoints.
Oracle HCM Cloud Adapter AbsoluteEndpointURI element	The Oracle HCM Cloud Adapter AbsoluteEndpointURI element in the mapper correctly overrides configured endpoints at runtime.
REST Adapter JSON sample	The formatting is retained when pasting an inline JSON sample in the REST Adapter.
EFF element descendant types	EFF element descendant types successfully appear in the mapper after re-editing and regeneration.
Integration deactivation	An integration with an active schedule can be deactivated without causing performance issues.
Faulted instances	Faulted instances are created in monitoring for any authentication failures while calling integration endpoints.
Activity stream	The activity stream does not throw an `ICSLogReader:readLogLines()` error when data is not present.

Issue	Resolution
Instance execution status	Instance execution status is not reported as both a success and failure when the instance has faulted on the Monitoring page.
REST Adapter request and response	Integrations in which the REST Adapter is configured with a multipart/form-data request and JSON or XML sample response are successfully activated.
Oracle Database Adapter operation change	You can change the operation configured for the Oracle Database Adapter during editing in the Adapter Endpoint Configuration Wizard.
Instance tracking data	When there is a large amount of instance tracking data, an `EclipseLink` error does not appear on the Monitoring page.
XPath validation issues in the Expression Builder	A `NullPointerException` error due to XPath validation issues in the Expression Builder no longer occurs.
Oracle Database Cloud Service Adapter-based integrations	Existing Oracle Database Cloud Service Adapter-based integrations can connect to a migrated Oracle Autonomous Transaction Processing database. It is recommended that you use the Oracle Autonomous Transaction Processing Adapter for new connections and integrations created after migration to the Oracle Autonomous Transaction Processing database.
Low database space	When underlying database space is low, an EclipseLink-related error is not displayed on the Monitoring page.
FTP Adapter with PGP encrypted and signed files	PGP encrypted and signed files with the FTP Adapter are processed successfully.
xsi:nillable attribute in the REST Adapter	The xsi:nillable attribute in the provided JSON sample for the REST Adapter is supported.
FTP Adapter and PASV mode	PASV mode for the Microsoft IIS FTP server in the FTP Adapter is supported.
REST Adapter translation of array elements	Translation of array elements having empty strings in XML to JSON in the REST Adapter is supported.
Oracle HCM Cloud Adapter Atom feed entries	The Oracle HCM Cloud Adapter does not miss Atom feed entries with identical update dates.
Artifact propagation during activation	Artifact propagation during activation through an automatic retry is successful.
REST Adapter and empty JSON arrays	An issue with generation of empty JSON arrays in the REST Adapter has been resolved.
Tracking instance for a scheduled orchestrated integration	You can view the tracking instance for a scheduled orchestrated integration whose scheduled parameters did not have default values.

Issue	Resolution
Lookups referenced in the integration	Lookups referenced in the integration are packaged in the IAR file.

Process Resolved Issues

Issue	Resolution
Exception cloning a structured process	A null pointer exception that prevented correct BPMN process cloning has been resolved.
Dynamic process issue	An issue where an activity activation was not being evaluated after a milestone was executed has been resolved.
Process issue with Integrations tab	An issue where integration flows from within a process application were not displayed has been resolved.
QuickStart human tasks set to 1 day expiration	An issue where human tasks in QuickStart Apps were set to expire in 1 day was resolved.
Start Form error after upgrade	A CORS issue when invoking UI snippets embedded in other applications (such as Sales Cloud or Content and Experience) was resolved.
Suspended state upon form submission	An issue where a process instance was incorrectly set to a suspended state after a form was submitted has been resolved.
Reassigning tasks to groups	An issue where task reassignment to an Oracle IDCS group was not working correctly has been resolved.
Getting specific fields from /tasks not working as expected	The `taskID` attribute in the GET REST API /tasks?fields=X,Y,Z endpoint was missing and restored.
Structured process suspended when invoked from a dynamic process	Resolved an issue where a BPMN process was suspended when it was invoked from a dynamic process.
Host missing in Swagger Json	Resolved an issue where the Process REST API Swagger file was missing the host attribute, resulting in applications such as Visual Builder unable to dynamically discover Process REST APIs.
Slow deletion of dynamic process roles	Resolved a performance issue concerning deleting dynamic process roles using Internet Explorer 11.
Unable to change a form control's name	Resolved an issue where it was not possible to change a form control's name once dropped onto the main form canvas.
Spaces did not show all users	Resolved an issue where not all Oracle IDCS users were shown when assigning space membership.
Decision model overwrite	To prevent undesired side effects, a warning now displays when you activate a decision model runtime version that contains interface changes.
Invalid taskid resulting in 500 error	A 500 error that displayed when calling /tasks/{taskId}/payload REST API endpoint with an invalid taskId was resolved.
Email notification issue	An issue registering email addresses when setting up email notification has been resolved.
REST connector trimmed leading zeros	An issue has been resolved where values retrieved via connectors to display in form select controls removed prefixed zeros for numeric values represented as strings.

Issue	Resolution
Activation cleared role membership	An issue was resolved where activation cleared BPMN role memberships for existing activated process applications.
Attachment names with white spaces	An issue was resolved where email notifications with attachment files containing white spaces in them weren't delivered.
Dynamic process activities corrupted	An issue that occurred when two concurrent tasks called from a dynamic process were executed at the same time was resolved.
Human task expiration incorrectly set	An issue was resolved where all human tasks in a cloned BPMN process were set to 1 day expiration.
Improperly populated connector select controls	An issue where web form select controls backed by connector information were not properly populated has been resolved.
Attachment names containing spaces	Implemented a consistent way of displaying attachment names containing white spaces using the process and task REST API endpoints.
Incorrect .exp file created	Exporting an application snapshot via REST API created an incorrect export file.
Null field incorrectly rendered	An issue where a null keyword used in email notifications still rendered has been resolved.
Attachments panel can't be closed	An issue where the Attachments panel couldn't be closed after downloading an attachment from the Process details page has been resolved.
Process Applications page not loading	An issue where the Process Applications list page did not load has been resolved.

October 2019

New Features

Integration Features

Feature	Description	Published
REST Adapter - Payload format name change in the Adapter Endpoint Configuration Wizard	When creating an invoke connection in the Adapter Endpoint Configuration Wizard, the **Raw** request and response payload format selection is now called **Binary** on the Request and Response pages.	October 14

Feature	Description	Published
REST Adapter - Oracle Cloud Infrastructure (OCI) Signature Version 1 security policy support	As Oracle Cloud Infrastructure continues to build modern, scalable, and secure cloud services, security has its prime place in the Oracle Cloud solution. In the same endeavor, Oracle Cloud Infrastructure provides a signature to enable a more robust and secure way of invoking Oracle Cloud Infrastructure services. The REST Adapter now supports Oracle Cloud Infrastructure signature-based authentication to facilitate invoking Oracle Cloud Infrastructure cloud service REST APIs such as Oracle functions, streaming, storage and so on as an integral part of Oracle Integration orchestration flows. See REST Adapter Concepts in *Using the REST Adapter with Oracle Integration Generation 2*.	October 11
Monitoring pages - Custom time range with which to filter the search for instances	You can specify a custom time range with which to filter the search for instances with the **From** and **To** buttons on the monitoring pages for Integrations. This enables you to select a time range as small as a minute and track only those instances processed within that specified time range. The specified time range is preserved by default and applied to the data being displayed when you navigate from one monitoring page to another (for example, when you move from the Track Instances page to the Integrations, Track Runs, or Errors page). See Track Business Identifiers in Integrations During Runtime in *Using Integrations in Oracle Integration Generation 2*.	October 11
Orchestrated integrations - Pseudo view and layout view	Multiple layouts of an orchestrated integration are provided. Pseudo view enables you to view the integration vertically with child nodes indented. Details about each node in the integration are displayed to the right. You can edit the integration by selecting the **+** sign to invoke an inline menu for adding invokes and actions. Layout view enables you to view the integration horizontally or vertically. See Create an Orchestrated Integration in *Using Integrations in Oracle Integration Generation 2*.	October 11

Process Features

Feature	Description	Published
Improved activation experience	The override option when activating a process application is no longer available. This is to avoid accidentally selecting it and losing all the instances for the version that you are activating. • If you want to delete all the existing instances for testing purposes, select the test partition when you activate your process application. If you use the test partition, the existing instances are deleted each time you activate. • To keep existing instances, activate using the production partition, and use incremental version numbers each time you activate. To delete all the existing instances in a production partition, deactivate the process version and then reactivate it again using the same version number. When you deactivate a version of a process, that version ceases to exist. See Activate Applications in *Using Processes in Oracle Integration Generation 2*.	October 30, 2019

September 2019

New Features

New Common Features

Feature	Description	Published
My Services replaced with Platform Services in the Oracle Cloud Infrastructure Console	After signing into Oracle Cloud, account administrators use the Oracle Cloud Infrastructure Console to access Integration under Platform Services. Previously you accessed these services from the My Services Dashboard. See Access Oracle Integration in *Administering Oracle Integration Classic* and the Oracle Cloud Infrastructure Blog.	September 9

Integration Features

Feature	Description	Published
Scheduled parameters - business identifier assignment	You can create and assign scheduled parameters as business identifiers that enable you to track fields in messages during runtime. See Create Parameters in Scheduled Integrations in *Using Integrations in Oracle Integration Generation 2*.	September 20

Visual Builder Features

Feature	Description	Published
Upgrade Oracle JET design time and runtime	The Visual Builder design-time was upgraded to use JET 7.0.1 and the JET runtime was upgraded to version 7.1.0.	September 27
New declarative actions	The following new actions have been added: • A new geolocation action has been added to allow declarative access to the user's current location. • A new Share action allows mobile applications to invoke the native sharing capabilities of the host platform and share content with other applications, such as Facebook, Twitter, and Slack. • Support for Cordova's pause and resume events (`vbPause`, `vbResume`) was added. The `vbPause` event fires when the native platform puts the application into the background, typically when the user switches to a different application. The `vbResume` event fires when the native platform pulls the application out from the background. • A "video" option was added to the list of mediaType parameters of the TakePhoto action. Selecting "video" will record a video or allow an existing videos to be selected. In web apps, selecting the video mediaType will open a dialog where non-video files are filtered out. In PWA apps on iOS and Android and iOS native apps, the option allows video recording using the camera, or selecting a video file. In Android native apps, only file selection is allowed. Recording using the camera is not supported.	September 27
New Custom Event contract	A new "navigateToItem" custom event is declared by default in new mobile and web applications created with templates using navigation items (drawer/tab) on the root page (or Shell Page). The custom event provides an easy way for you to configure navigation between items/tabs. An event listener for switching the item/tab is defined by default in the root or shell page.	September 27
New UI for building filters	A new UI has been added in the mapper to help with creating FilterCriterion to filter the output for SDP (Service Data Provider) variables and call REST actions.	September 27
Added support for registering your own Oracle DB instance	An administrator can now use a wizard in the Tenant Settings to switch the Tenant schema to another Oracle DB instance that has more space. By using your own Oracle DB instance you will also have direct SQL access to the tables created for your business objects. In the wizard, the administrator can specify a DBaaS or Autonomous Database instance. The wizard includes a tool for selecting which projects in the tenant are downloaded prior to switching to the new DB instance.	September 27

Feature	Description	Published
New UI for managing user roles	The UI in the Settings editor for creating and managing user roles in a visual application has been updated and streamlined. When creating a user role, the user role and the users and groups assigned to it, are now created directly in the IDCS application. The "virtual roles" mechanism used in earlier releases is no longer supported. If you are developing an application that used virtual roles, you will need to use the new UI to replicate those users and roles because the virtual roles won't be converted to the new role mapping mechanism.	September 27
Improvements in Action Chain editor	The following improvements and features were added to support for Actions: • The action chain editor is now displayed as a tab within the artifact tab in the Designer. This makes it easier to switch between the action chain and other artifact editors. • The action chain editor now includes an overview window that shows the entire diagram when in diagram view. The visible part of the diagram is highlighted. When zooming or panning the diagram, the overview window updates its highlighted area to match. Also clicking on the overview window or dragging the highlighted area pans the diagram.	September 27

Feature	Description	Published
Improved templates and wizards for mobile apps	The following improvements were made to the wizards and templates for mobile apps: • A new wizard was added for creating root pages, allowing you to select the nav style and page template. When creating a new root page, you can choose to create new flows or select existing flows for the new root page. If the nav-style of the new root page is None, you can choose to create a flow or page, and choose page templates. • The wizard for creating apps now allows you to select from multiple nav styles (Horizontal, Vertical and None), page templates for individual flows can be selected, and the UI was improved for Nav styles that need multiple items. • The application no longer has a single scrollbar enabled at the root of the application. Instead, the scrollbar is within the content of the template. • The tab bar at the top of an application can be locked in place, and the content in a tab can now be scrolled. This is implemented by default in new mobile applications. Existing applications can add it by simply slotting the tab bar to the "navigationBarTop" slot and moving it directly into the "oj-ext-mobile-page-template" parent node. • Scrolling now supports momentum scrolling for a more native feel on iOS. • Safe margins for iPhone X (R, S, SMAX) are correct in portrait and landscape modes. • New pages created with the "Summary with Content" template now use content scrolling, and the summary is locked in place. • Two new template pages can now be created with the wizards: Form and List. Sample code is provided as starting points for the ListView and Form layouts commonly used in mobile applications.	September 27
Improved templates and wizards for web apps	The following improvements were made to the wizards and templates for web apps: • The wizard for creating web apps now supports two navigation styles: None and Tabbed. • The tabbed web application template is responsive, providing a shell that displays the navigation drawer in smaller screen sizes (like phones), and a tabbed display in desktop/tablet form factors. • The wizard for creating root pages allows you to select existing flows or create a new flow. When nav-style None is selected you can choose if you want to create a flow.	September 27

Feature	Description	Published
Added PWA loading spinner	The starter mobile application template now adds a spinner to the `index.html`. This spinner is taken down once the application is initialized and content is displayed.	September 27
Extra Headers for Basic Auth in Mobile apps	It is now possible to specify extra HTTP headers when using Basic Auth authentication in Mobile apps, enabling integration with Oracle Mobile Hub (OMH).	September 27
Improvements to the Events editor	The following improvements were made to the Events editor: • The event listeners UI has been updated to show more information about where events are fired and which components are firing them. • Events and their payloads can now be defined in the Events editor and fired using the Fire Custom Event action. This allows the runtime to propagate events to their desired listeners and to help you configure when the events are fired.	September 27

Feature	Description	Published
Improvements to the Page Designer	The following improvements and features were added to the Page Designer: • The Component Palette, Page Structure and Property Inspector panels are now visible in Code view. Switching between Design and Code modes only swaps the canvas and code editor. Component selection and changes are now synced across all panels and views. • You can now drag and drop components from the Components Palette directly into the Code view and reposition them in Code view using the Page Structure view. • Cut/Copy/Paste is now supported for selected components in the Page Structure view and Design mode. The actions can be invoked using standard shortcuts (ctrl+x, ctrl+c and ctrl+v, CMD key on macOS), and are also available in the component's popup menu. When a component is pasted into a page it is automatically assigned a unique ID. When a component is pasted on a different page, all property values that are expressions are removed. • A "Temporary Override" option has been added to some properties in the Property Inspector which allows you to set a temporary value for the property. The value is only applied during design time. For boolean-type properties, you can select a Temporary Override option of Off, True or False in the component's popup menu. In the Page Structure view, an orange badge is used to indicate when a Temporary Override is currently used on a component. The Temporary Override settings are only valid until the page designer is reloaded or the page's code is edited in Code mode. The Temporary Override option is available for the following component properties: – "test" property of `oj-bind-if` component. Using this enables the contents wrapped by the IF to be displayed in the page designer. The option allows you to override a default value of false that would otherwise be the result of the IF condition. – "expanded" property of `oj-collapsible` – "expanded" property of `oj-ext-mobile-navigation-bar-drawer` – "initial-visibility" property of `oj-dialog` • The `oj-dialog` component is now supported in the Design mode and has been added to the Components Palette. When designing an app, you can choose to keep dialog components open in the canvas while designing its contents by using the Temporary Override option in the Property Inspector or the component's popup menu to set	September 27

Feature	Description	Published
	the initial-visibility property. In Live mode you can invoke the action that opens the dialog, for example, if the dialog opens when a button is clicked. When the dialog is open in the canvas, only the components inside the dialog on the canvas are selectable and drop indication feedback is enabled for them. • Unused component import is removed from the page model when the last instance of the component is deleted from the page. • Components dropped into a parent's slot are wrapped with a template element if the slot's metadata includes attribute data. • Non-field components dropped into a form layout container are now all accompanied by a label component to allow default column alignment with regular field components. • Layout helpers have been added for simple non-component HTML elements (for example, `<div>`). This enables children (deleting, moving, adding child components) inside the element to be easily manipulated.	

Feature	Description	Published
Improvements to the Property Inspector in Page Designer	The following improvements and features were added to the Property Inspector in the Page Designer: • Docs hyperlink has been added to the help popups on properties and slots of the component in its Property Inspector. The link leads to the particular JSdoc page in the component's documentation based on its metadata. • Menu components in Slots sections now offer Divider and Menu Multi-Select subcomponents in the Add Action drop-down. • In the Table Columns customizer, the drop-down list of identified column fields has been renamed from "Fields" to "Simple Field Columns". The list includes only the fields which are not represented by separate components in the column templates' code. • Basic support for a mobile application's Drawer component (available in New Mobile Application wizard as Vertical navigation style option) was added to the Property Inspector. In the Page Structure view, you can now see a "Mobile Navigation Bar - Drawer" component after opening the Page Designer for an application's root page (root pages / app). In the Property Inspector, the Drawer component contains: – A Navigation Items section which helps you customize the navigation items in the drawer, similar to customizing items of the Bottom Bar component – An Expanded property with a Temporary Override section that allows you to force a value to be True in the design time. This enables you to make the Drawer visible on the canvas so that you can work with it visually. • The Styling section in the General tab now displays classes for components that have a predefined set of styling classes listed in its styleclasses metadata.	September 27
Improvements to Quick Starts	When using a Quick Start, the following improvements were made to help locate data in the Endpoint Selector: • improvements to how the focus is shown for single items • improved tooltip for switch between simplified and advanced mode • the search keyword is now highlighted	September 27

Feature	Description	Published
Enhancements to Business Object editor	The following improvements and features were added to the Business Objects editor: • In the Diagrams view, when no objects are selected in the diagram you can now select which business objects are displayed in the Property Inspector. When a business object is selected, you can use the Property Inspector to edit the business object, its fields and relationships. • The business object directory structure has changed. All json files for the artifacts (business objects and diagrams) are now under the businessObjects directory. Business object metadata defined in Application Settings is now stored in `businessObjects.json` instead of `settings/security.json`.	September 27
Enhanced business object security definitions	Enhancements were made to the Data Security Rules section that you use to define business object security. Support for Groovy expressions has been improved. You can now use a Groovy expression to identify the current user instead of a JavaScript expression, and you can use any expression that can be evaluated to a literal constant when the business object REST API is called. When creating conditions, you can now also choose fields from a related object in the Field drop-down list.	September 27
Added support for constant variables	Constant variables are now supported when you add a new variable. A constant can have a value specified via it's default value or when provided as an input parameter, but it cannot be changed at runtime.	September 27
Improved UI for Service Catalog	Catalog settings can now be defined both for the tenant and at the application level. When editing the catalog settings at the application level, you can view the current tenant settings and choose to override them.	September 27
Improvements to connecting to Fusion Applications catalogs in the Tenant Settings	In the Tenant Settings editor, specifying the base URL for a Fusion Applications catalog for the tenant has been simplified: • You now only need to supply a valid Fusion Applications base URL. The path to the interface catalog will now be resolved automatically. • When you enter the FA base URL, the connection is tested to ensure that the endpoint is accessible without authentication and is CORS compliant. The catalog will not be created if these criteria are not met. . The alternative to setting the catalog at the tenant level is to set it at the visual application level where more options are available.	September 27

Feature	Description	Published
Improvements to the External Build process	The following improvements were made to support using the external build tools: • Support was added for creating custom `requirejs` module bundles for visual applications. You can use this to help improve application performance by creating multiple bundles and customizing the content of each bundle. You can then control which bundles are loaded initially and which are loaded when they are needed. • The external build can be configured to produce bundles that conform to the pure EcmaScript 5 standard supported by older browsers and also produce an ES6 set of bundles. This allows you to write more modern code (EcmaScript 6) in your application and also have an application that can run on IE11 and other old browsers.	September 27
EcmaScript 2018 support	The code editor for `.js` files now has editing and audit support for EcmaScript 2018 (ES2018) in mobile apps and when using the external build process. ES2018 is not supported in web apps, which continue to use ES5.	September 27
JET Audit tool added	The JET audit tool has been integrated into the design time. The tool currently works on all HTML files, and can help produce pages that conform to the JET guidelines.	September 27
Added settings for JET and runtime versions	It is now possible to specify a Visual Builder runtime and JET version in web and mobile application settings.	September 27
Added support for IDCS multi-stripe	Visual Builder can now be used in IDCS accounts which use multiple stripes.	September 27
Improved Who am I dialog	The UI of the Who am I dialog is streamlined to be more intuitive, and to disallow some combinations of selected items.	September 27

August 2019

New Features

Integration Features

Feature	Description	Published
FTP Adapter - FTP server operating system selection	The FTP Adapter connecting to an FTP server over SSL can be hosted on a Unix or Windows operating system. Because Unix and Windows both have different line ending characters, the FTP Adapter must know the operating system to parse the file correctly. The FTP Adapter is enhanced to list the operating system for selection on the Connections page. An additional option is provided to let you select the channel of encryption (namely, control, data, both, and none). See Configure Connection Properties in *Using the FTP Adapter with Oracle Integration Generation 2*.	August 22
Orchestrated integrations - Wait action enhancement	In addition to hours and minutes, you can delay the execution of an integration for seconds with a wait action. See Delay Integration Execution for a Specified Time Period with a Wait Action in *Using Integrations in Oracle Integration Generation 2*.	August 22
Oracle Database Cloud Service Adapter - Support for direct connectivity	Oracle Integration now supports direct connectivity with Oracle Database Cloud Service without connecting through the connectivity agent. Customers that have migrated to the Oracle Autonomous Transaction Processing database can use existing Oracle Database Cloud Service Adapter-based integation flows to connect to the migrated database. However, Oracle recommends that you use the Oracle Autonomous Transaction Processing Adapter for new connections/new integrations created after migration to the Oracle Autonomous Transaction Processing database. See Prerequisites for Creating a Connection in *Using the Oracle Database Cloud Service Adapter with Oracle Integration Generation 2*.	August 22
Oracle CX Sales and B2B Service Adapter - New name	Oracle Sales Cloud Adapter is renamed to Oracle CX Sales and B2B Service Adapter.	August 22

Process Features

Feature	Description	Published
REST API updates	We've made improvements to Process Instance APIs in the Oracle Integration REST APIs. See the **What's New** topic under **Get Started** in Oracle Integration REST API.	August 22

Resolved Issues

Integration Resolved Issues

Issue	Resolution	Publication Date
Activity stream	The activity stream for notification and wait actions has been improved.	August 22
Oracle CX Sales and B2B Service Adapter	When using the Oracle CX Sales and B2B Service Adapter (formerly the Oracle Sales Cloud Adapter), the Oracle Engagement Cloud client (through SOA Composer) can now call an Oracle Integration service without an endpoint security policy error.	August 22
Oracle CX Sales and B2B Service Adapter	The Oracle CX Sales and B2B Service Adapter is successfully listed/filtered in the Create Connection - Select Adapter dialog.	
Oracle Cloud Customer Connect forum	Messages and cross-linking to the Oracle Cloud Customer Connect forum during integration activation failures have been improved.	August 22
Oracle Autonomous Transaction Processing Adapter	The Oracle Autonomous Transaction Processing Adapter now accepts case insensitive connection names.	August 22
Oracle Database Adapter	When using the Oracle Database Adapter, you no longer receive an error when you click **SQL Edit** and add a parameter to query by clicking **Add New**.	August 22
Integration activation	New integration activation attempts are now handled successfully when the server is down.	August 22
List of errors page	The created/last updated date is shown in the list of errors page.	August 22
Recoverable errors	You can search, view, or filter by recoverable errors.	August 22
Expression Builder	An Expression Builder expression containing a function call with an incorrect number of parameters now shows as invalid.	August 22
Lookup cloning	Cloning a lookup through the REST API when the lookup does not exist no longer results in an HTTP `500` error.	August 22
Mapper performance	Performance when closing the mapper and returning to the canvas has been improved.	August 22
Integration activation	You can now activate an integration when a stage read action is used alongside an application adapter.	August 22
Oracle Integration	Oracle Integration REST API performance for listing lookups and connections has been improved.	August 22
Redirect URLs	Redirect URLs are successfully resolving on Oracle Integration instances.	August 22
Host key security	The host key security between Oracle Integration and Oracle Managed File Transfer no longer fails with a `CASDK-0004 Host Key Verification` error.	August 22

Issue	Resolution	Publication Date
ServiceNow Adapter	All plugins that are activated in a ServiceNow instance are enabled. You can send attachments using the ServiceNow Adapter. The labels have also been modified for describing operations.	August 22

Process Resolved Issues

Issue	Resolution	Published
Space sharing error	When editing a space, users couldn't share a space on the space details page.	August 22
Application unlock	Improved the message shown when users unlock a process application on the design-time Administration page.	August 22

July 2019

New Features

Integration Features

Feature	Description	Published
Throw New Fault action - New orchestrated integration action	You can create and throw your own faults in an integration with a throw new fault action. During configuration of this action, you define the condition under which to throw the fault and the point in the integration at which to throw the fault. You can add this action at the end of a block (for example, a for-each action, switch action, and so on). Nothing can be dropped after this action in the block. See Throw Faults with a Throw New Fault Action in *Using Integrations in Oracle Integration Generation 2*.	July 26
Scheduled integrations - Override scheduled parameters	You can override schedule parameter values set at design-time when submitting an ad-hoc schedule request or starting a schedule in an activated integration. This feature enables you to provide parameter values while invoking an integration without deactivating it. See Override Schedule Parameter Values in *Using Integrations in Oracle Integration Generation 2*.	July 26

Feature	Description	Published
Oracle Field Service Cloud Adapter - OAuth security policy support	Support is provided for configuring the Oracle Field Service Cloud Adapter to use the OAuth security policy. Recommendations are also provided for when to use Basic Authentication or OAuth (Client Credentials) as your security policy. See Configure Connection Security and Migrate to Oracle Field Service Cloud Version 19c in *Using the Oracle Field Service Cloud Adapter with Oracle Integration Generation 2*.	July 19
Salesforce Adapter - Support for the Resource Owner Password Credential (ROPC) for OAuth	Oracle Integration supports a wide array of security policy mechanisms to connect and authenticate with Salesforce.com applications. The newest addition to the authentication schemes is the ROPC security policy, This policy enables you to refresh the OAuth token without having to authenticate. See Use the Salesforce OAuth Three-Legged Security Policy in *Using the Salesforce Adapter with Oracle Integration Generation 2*.	July 19
Stage file action - File reference and schema support	You can specify a file reference to process when you select to read the entire file, read a file in segments, or unzip a file. Support is also provided for ZIP/JSON/XML-based schemas. See Process Files in Scheduled Integrations with a Stage File Action in *Using Integrations in Oracle Integration Generation 2*.	July 19
Business identifiers - Primary and secondary values search	You can search for values across both primary and secondary business identifier values on the Tracking page. See Track Business Identifiers in Integrations During Runtime in *Using Integrations in Oracle Integration Generation 2*.	July 19
Scheduled integrations - Initiating an instance	You can select how to initiate an instance of an activated integration when prompted. • Ad hoc request: The instance is executed independently of the scheduled run for the integration (if any). • As part of schedule: The instance runs in sequence with the scheduled run and shares schedule parameters (if any) See Create a Schedule in *Using Integrations in Oracle Integration Generation 2*.	July 19

June 2019

New Features

Common Features

Feature	Description
New Oracle Integration user roles	Two new user roles are available with instances provisioned after May 8th: • ServiceInvoker: This role enables you to execute an integration from outside the Oracle Integration user interface. The user cannot log in to the Oracle Integration user interface with this role. • ServiceViewer: This role enables you to navigate to all Integrations resource pages (for example, integrations, connections, lookups, libraries, and so on) and view details. The user cannot edit any resources or navigate to the administrative setting pages.
Quiesced mode	We improved error messaging for administrators when Oracle Integration is in a quiesced mode.

Integration Features

Feature	Description
SurveyMonkey Adapter - API version support	The SurveyMonkey Adapter now supports API version 3.
New adapter - Oracle Autonomous Transaction Processing Adapter	The Oracle Autonomous Transaction Processing Adapter enables you to integrate the Oracle Autonomous Transaction Processing database with Oracle Integration through use of direct connectivity. Use the Oracle Autonomous Transaction Processing Adapter to execute SQL queries or stored procedures in the Oracle database. See Oracle Autonomous Transaction Processing Adapter Capabilities in *Using the Oracle Autonomous Transaction Processing Adapter with Oracle Integration Generation 2*.
Oracle Utilities Adapter - Secure WSDL, REST, and OAuth 2.0 support.	The Oracle Utilities Adapter provides support for the following: • Secure WSDL support • An enhanced REST interfaces user interface • REST catalog parsing enhancements if the adapter is running with the connectivity agent See Oracle Utilities Adapter Capabilities in *Using the Oracle Utilities Adapter with Oracle Integration Generation 2*.
FTP Adapter - Signing support	Supports signing verification and validation during the download of PGP-encrypted files from an sFTP server. Signing provides a method for authenticating the sender of the file. See FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2*.

Feature	Description
Scheduled integrations canvas - Defining the schedule	You can click the **Schedule** icon at the top of a scheduled integration to display an option for invoking the Edit Schedule page to define the schedule details. See Create a Scheduled Integration in *Using Integrations in Oracle Integration Generation 2*.
Unlocking an integration	You can unlock an integration that you own. For example, when an integration you created is in edit mode and the browser crashes, the integration becomes locked. You can unlock this integration and resume re-editing. See Unlock an Integration in *Using Integrations in Oracle Integration Generation 2*.
SOAP Adapter- OAuth security policy support	You can configure inbound SOAP endpoints with the OAuth 2.0 security policy. See SOAP Adapter Capabilities in *Using the SOAP Adapter with Oracle Integration Generation 2*.

Process Features

Feature	Description
Canvas changes	We've introduced unified and better color coded icons in our structured process modeling canvas. You'll see new toolbars and icons in the elements palette. See New Process Icons for a side-by-side comparison of new and old icons. • **Icons:** Many items stay the same color: Human tasks are still green, Decisions are yellow, and System and Integrations are still blue. But we've introduced new colors: – **Events,** such as Form Start and End, are purple. – **Gateways** are orange. – Note icons (**Other** category) are pink. • **Toolbar:** All icon functionality stays the same, but they've been repositioned and updated.
Common expression builder in Decision modeling editor	We’ve enhanced the design-time interface of decision models for consistency and ease of use. Entering expressions in decision tables, decision input data, or type definition is now a uniform, intuitive experience. Additionally, new modes are now supported in decision table cells that make populating tables quick and simple. See Define Decision Input and Type and Define Decision Table Input in *Using Processes in Oracle Integration Generation 2*.
Conditional expressions in data association	You can now control data execution in runtime for both structured and dynamic processes by applying conditions while mapping data from the Data Association editor. In such cases, data executes in runtime only when the defined condition is met. See Define Conditions for Data Associations *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Smart sentries in dynamic processes	Define smart sentries as conditions that decide if an activity, stage, or process gets activated or terminated. • Add a decision to a dynamic process: Apply an activated decision to a stage or activity's condition so that it activates or terminates the stage or activity. See Smart Sentries in Dynamic Processes in *Using Processes in Oracle Integration Generation 2*. • Add a REST connector to activate or terminate a stage, activity, or process in a dynamic process. See Configure a REST Sentry in a Dynamic Process in *Using Processes in Oracle Integration Generation 2*.
Promote process application samples to the gallery for easy sharing	The QuickStart gallery has expanded to include samples in addition to QuickStart Apps. From any regular process application, developers can promote it to the gallery. Other users can then browse the gallery, select a sample, and create their own copy of the sample application. See Promote Applications as Samples to the Gallery in *Using Processes in Oracle Integration Generation 2*.
QuickStart Apps enhancements	We've made it easier for users to create process applications from QuickStart Apps and added flexibility for developers: • When users create by starting from the gallery, items now display a QUICKSTART or SAMPLE label to easily distinguish them. • We made usability improvements to QuickStart Apps. Developers can better order artifacts of different types (such as approvals, submits, roles, integrations, and others) and users can more easily configure apps. See Create Your First Application (a Quick Start) in *Using Processes in Oracle Integration Generation 2*.
Robotic process automation adapter for Automation Anywhere	Use the new Automation Anywhere Integrations adapter to automate repetitive human tasks and integrate with applications that do not offer APIs or for which there is no adapter. See Integrate with Robotic Process Automation Tools in *Using Processes in Oracle Integration Generation 2* and Understand the Automation Anywhere Adapter in *Using the Automation Anywhere Adapter with Oracle Integration Generation 2*.
REST API updates	We've made additions and added examples to the Process/Process Instance APIs in the Oracle Integration REST APIs. For example: • **Retrieve Activities Flow for a Process Instance:** Use the new `activityType` query parameter to the to return only a subset of activities that match the specified type. • **Update the Process State:** Use the new `suspend` and `resume` actions to alter the flow of a process by passing `activityChanges` in the JSON body. See the **What's New** topic under **Get Started** in Oracle Integration REST API.
Application activation	We improved the process application activation dialog so that it now shows your current retention policy settings.

Feature	Description
Dynamic process enhancements	We've added support for the following special types of data association to dynamic processes (already supported in structured processes): • **Transformations:** Use them for input and output data types that don't match. They're particularly useful for matching slightly differing data attributes, such as address or employee data. See Work with Transformations in *Using Processes in Oracle Integration Generation 2*. • **Append to arrays:** Use the Append action in the data association editor to add elements to a target array. See Append to Array in *Using Processes in Oracle Integration Generation 2*. • **Array filter:** Now available in dynamic processes. In the Data Association editor of a structured process or transformation, you can selectively filter elements from a source array object and assign them to a target array. See Filter Array Data Objects in *Using Processes in Oracle Integration Generation 2*.
Forms enhancements	Updates include: • You can now access an object from a Select control while displaying one value but using other non-visible object attributes in select control events. For example, you might show the label of an object, but use the ID internally to populate other form controls. See Configure Drop-down Select Fields in *Using Processes in Oracle Integration Generation 2*. • You can now easily reorder actions in web form events. • You can now reorder table columns in web forms.
Data retention	We improved the process application activation dialog so that it now shows your current retention policy settings.

New Process Icons

Category	Icon	New	Old
Human	**Submit**		
Human	**Approve**		
System	**Abstract**		
System	**Data Mapper**		
System	**Service**		

Category	Icon	New	Old
System	**Call**		
System	**Send**		
System	**Receive**		
System	**Notify**		
System	**Dynamic Process**		
System	**Decision**		
System	**Sub-Process**		
Events	**Start**		
Events	**Form Start**		
Events	**Message Start**		
Events	**Message Catch**		
Events	**Timer Catch**		
Events	**Error Boundary**		
Events	**Message Throw**		

Category	Icon	New	Old
Events	**End Event**		
Events	**Message End**		
Events	**Error End**		
Events	**Terminate End**		
Gateways	**Exclusive**		
Gateways	**Inclusive**		
Gateways	**Parallel**		
Gateways	**Event Based**		
Integrations	**Integration**		
Other	**Note**		

Resolved Issues

Integration Resolved Issues

Issue	Resolution
FTP Adapter - Host key security	Host key security between Oracle Integration and MFTP no longer fails for the FTP Adapter with the following error: `CASDK-0004 Host Key Verification`.
SOAP Adapter - Usability enhancements	Text for the SOAP Adapter in the user interface has been enhanced to improve usability.
REST Adapter - Usability enhancements	In-context help for the multiple operations feature in the REST Adapter has been added.
REST Adapter - Use in a for loop	When using the REST Adapter in a for loop, you can specify individual parameters as repeating elements.

Issue	Resolution
REST Adapter - Parse special characters.	The REST Adapter can parse JSON responses with special characters such as an `@`.
REST Adapter - Schemas with reserved words	The REST Adapter now provides a design time error instead of an activation failure error when the schema provided uses a reserved namespace.
SOAP Adapter - Rejected messages	Messages rejected by an inbound SOAP Adapter trigger are no longer shown in the Tracking page with an invalid flow version.
Integration activation error	Integration activation no longer fails with out-of-memory errors in the logs.
Salesforce Adapter - Field types change	An issue is resolved where a change in field types to `sObject` by Salesforce in version 46 had resulted in the query parser being unable to resolve the relationship. This had previously resulted in a `NullPointer` exception.
Activation failure error	The `java.lang.NoClassDefFoundError: weblogic/application/Module` activation failure error has been fixed.
Oracle HCM Cloud Adapter - ATOM feed entries	Oracle HCM Cloud Adapter processing no longer fails if entries in the ATOM feed have a title with a tab character.
Salesforce Adapter - IAR project import issue	After importing the project IAR in 19.2.1, the **Use Default Header** checkbox was selected on the Operation page. This was unexpected and has been resolved.
Connectivity agent - install location	The connectivity agent installation experience is the same regardless of whether the agent installer is run from a directory other than the agent install location.
Microsoft SQL Server Adapter - Usability enhancement	Text for the Microsoft SQL Server Adapter in the user interface has been enhanced to improve usability.
FTP Adapter - Timeout period increase	When using the connectivity agent with the FTP Adapter, the timeout period for runtime requests has been changed to 580 seconds.
FTP Adapter - Digital signing	The FTP Adapter supports digital signing.
SOAP Adapter - Error message enhancement	SOAP Adapter error messages have been enhanced to include remedial actions when the inbound connection has no security policy configured (and therefore, defaulted to Username Token policy) and if the runtime request does not have the Username Token policy.
Connectivity agent - Temp files reduction	The number of temp files created by the connectivity agent has been reduced.
Connectivity agent restart	Restarting an already running connectivity agent no longer causes PID file deletion.

Issue	Resolution
Oracle ERP Cloud Adapter - OAuth support	Support is provided for OAuth (manual OAuth client creation is required) in the Oracle ERP Cloud Adapter.
Workday Adapter - User domain policy access	The Workday Adapter user is now only given domain policy access to the feature that they are using (Web Services, RAAS, or EIB) instead of to all three. When testing the connection, only access to that specific feature is validated.
Oracle Autonomous Transaction Processing Adapter - Error message enhancements	More helpful and actionable error messages are provided for when the wrong password or service name is entered for the Oracle Autonomous Transaction Processing Adapter.
Oracle E-Business Suite Adapter - Open interfaces	Support has been added for open interfaces to the Oracle E-Business Suite Adapter.
Ariba response message sandboxResponse element	The sandboxResponse element has been added in the Ariba response message. This element is used when creating an integration to test whether Ariba is accepting the upload request or the request is already in progress.
Connectivity agent installation location	A useful error is shown when the connectivity agent installer is run when pointing to a JAR file in a different folder.
SOAP Adapter - Validation improvements	Validation has been improved for duplicate SOAP and HTTP headers in the SOAP Adapter.
SOAP Adapter - invalid data types	Validation and testing no longer passes for a WSDL with invalid data types in the SOAP Adapter.
Connectivity agent upgrade	Generated backups are deleted as a part of the connectivity agent upgrade.
SAP Concur Adapter - Summary page issue	You no longer face an issue with the Summary page when configuring the SAP Concur Adapter in an integration.
Salesforce endpoint configuration	You can now configure the Salesforce endpoint while configuring a SOQL-Query operation when any field name in the SOQL query contains " from " (surrounded by white spaces).
Requests with a no content-length header	Requests with a no content-length header no longer return a `500` error instead of a `411` error in the adapter framework.
Oracle Responsys Adapter - Profile extensions	The Oracle Responsys Adapter now shows profile extensions for the profile list containing space.
Oracle ERP Cloud Adapter - Connection description	The description is now shown for the Oracle ERP Cloud Adapter connection.

Issue	Resolution
Oracle Advanced Queuing (AQ) Adapter	When used with the Oracle Advanced Queuing (AQ) Adapter, a connectivity agent error message now shows what was required to alleviate the error.
Oracle Utilities Adapter - Enhancements	Open authorization support and fault handling in REST is provided in the Oracle Utilities Adapter.
SAP Adapter - Mapping issue	You can refresh the SAP Adapter in an integration without losing any of the mappings in an integration.
FTP Adapter - Connections page validation	Validation has been added on the Connections page of the FTP Adapter for an incorrect PGP encryption key.
Integrations page performance improvement	Performance has been improved when saving integrations on the Integrations page.
Bell notification icon linking improvement	When you click the bell notification icon for a failed connectivity agent in the upper right corner of the page, a dialog is displayed with a link to the Dashboard page for more details.
Valid predicates	The Expression Editor correctly identifies valid predicates.
`attributeFromDefault` attribute	Support is provided for the `attributeFromDefault` attribute in XML schemas.
Migration of expressions with wildcard characters	The migration of expressions with wildcard characters from Oracle Integration Cloud Service to Oracle Integration is supported.
Improved error messages for integration activation failures	A user friendly error message and remedial actions are provided for errors introduced when activating an integration that was imported into a service instance with missing lookup artifacts.
Reclaim space procedures improvements	Reclaim space procedures (shrink and move) in Oracle Integration have been enhanced to include the dynamic process tables of Processes.
Integration invocation from global fault handlers	The invocation of integrations from global fault handlers during a resubmit is now supported.
Load performance improvements	The load performance for the Home, Monitoring, and Design-time Metrics pages has been improved.
Substitution groups	Schemas that have substitution groups are supported.
Help link updates	The Help page links for the Agents page, Connections page, Create New Connection page, and Settings page have been updated.
Scheduled orchestration job cancellation	A scheduled orchestration job is now canceled when the underlying database experienced a service disruption.

Issue	Resolution
Runs page improvement	The wrong information is no longer displayed on the Runs page.
Tracking page improvements	Consistent terminology in reporting the status of integration executions in the Tracking pages is provided.
Tracking variable deletion	If the trigger connection for a Basic Routing integration changes to point to a different resource, the tracking variable is deleted.
Stage file action ZIP file	The stage file action no longer creates a corrupted ZIP file if the input directory was the parent of the output.
Connections page API key field	The field length of the API key field in the Connections page has been increased to 2048 characters.
DocuSign Adapter - Authorize code flow support	Supports the authorize code flow in the DocuSign connection.
REST Adapter - Trigger connection	A trigger connection using an XML schema no longer fails with a `CASDK-0005` error.
Oracle Advanced Queuing (AQ) Adapter - Password special character support	Activation no longer fails when the password had special characters.
Microsoft Office 365 Outlook Adapter - Attachment element in the mapper	An attachment element now appears in the mapper.
Oracle E-Business Suite Adapter - Test connection issue	A test connection no longer fails intermittently with an `Unexpected Error` or `Internal Server Error` (`NullpointerException`).
SAP Adapter - New interface	Implemented a new interface to `CloudSapAdapter` (class) and added logic in `handleActivation` (method) to refresh the JCA after any connection change.
Oracle Database Adapter - Error message enhancement	The error message has been enhanced for when the payload size exceeds the threshold.
Oracle Database Adapter - Connectivity agent credentials	New credentials with the connectivity agent are now reflected at design time.
Oracle Database Cloud Service Adapter - Special character validation	Enhanced special character validation at design time is provided.
SOAP Adapter - Timestamp issue	A timestamp is now received in the response from an invoke, although it was sent as a part of the request.
Salesforce Adapter - SOQL query operation	The SOQL query operation can now build a `parentRelationshipField` based on a CAM-contained relationships map that is built through a `describeSObject` API call, instead of relying on a CAM-contained `CloudDataObjectNode`.
ServiceNow Adapter - Field Service Management enhancements	The Field Service Management plug-in in the adapter and the dependent plug-ins of the Field Service Management plug-in have been enabled.

Issue	Resolution
SAP Ariba Adapter - CombinedDataPull enhancements	Valid entries for the value of "Data Import Task Name" and "File Name" for the "CombinedDataPull" sheet are created.
Oracle ERP Cloud Adapter - SAML assertion signature digest verification	Multiple error codes are now displayed when a SAML assertion signature digest verification failed with callbacks.
Workday Adapter - Integration regeneration and activation	The adapter can now select the version from the runtime WSDL (the version on which the Workday Adapter endpoint was originally configured) after regeneration and activation of the integration. For creating and editing an integration, the Workday Adapter can now pick the latest version from the Connections page.
Oracle ERP Cloud Adapter - Create and Update Contact	The adapter no longer fails when Create and Update Contact are used in the same integration.
Function callouts	Function callouts have been renamed to Javascript in the user interface.
Delete Schedule REST API	The Delete Schedule REST API no longer throws a `NullPointerException` when invoked on active schedules.
Trigger metadata connection refresh	The second tracking field now appears after refreshing the trigger metadata connection.
Scheduled integration runs	Fixed an issue where scheduled integration runs (in an error state) were shown even when run with an unauthorized user account.
Mapper error reporting	The mapper now reports an error on a specific invalid mapping.
Assign action help text	The help text for the assign action has been improved.
Connection security policy	A null pointer exception is handled in case of an invalid or null security policy for a connection.
Trigger menu of orchestrated integration	Adapters that do not support trigger functionality now longer appear in the trigger menu of an orchestrated integration.
Retrieve Monitoring Metrics REST API	The Retrieve Monitoring Metrics REST API is no longer missing the LastUpdated field.
Mapping Recommendations Settings page	The help text on the Mapping Recommendations Settings page has been improved.
Notification email copyright date	The copyright date in the footer note of the notification email sent from Oracle Integration has been fixed.
Batch retry	If a batch processing error is received after a server restart (recovery mode), the job can use that information to retry the batch.

Issue	Resolution
XSL maps	Issues related to the usage of unsupported functions in the XSL map are reported and successfully handled.
Schema elements in for-each groups	Schema elements in for-each groups that have substitution groups are successfully handled.
XPath expressions	Quotes in XPath expressions are successfully handled.

Process Resolved Issues

Issue	Resolution
Nested forms	Resolved issue when attaching form images as email notifications when the forms contained other nested forms.
Link fix	Fixed the Learn More link on the Oracle Integration Welcome page.
List scroll	List scroll issue prevented all available process applications from being shown.
Clone applications	Users with Space viewer only permissions could not clone process applications.
My Apps	An internal memory cache synchronization issue prevented the My Apps Workspace page from opening.
Append in dynamic process arrays	Using the append operation in dynamic process array data associations resulted in an error.
Null keywords incorrectly included in email notifications	Email notifications included "null" keywords even when null checks were added to the email notification template via Mustache syntax.
Attachments panel couldn't be closed	The Attachments panel on the Process Details page couldn't be closed after downloading a file. This issue occurred in Workspace, not on the My Tasks page from the Oracle Integration Home page.
Process attachment API issue	The process attachment API incorrectly replaced a space with a "+" character in the attachment file name was resolved.
500 error returned with invalid taskID for payload endpoint	A 500 error was returned when an invalid taskId was used accessing the REST API endpoint /tasks/{taskId}/payload.
Warning missing when overwriting decision model after changes	The warning dialog was not shown when overwriting an existing decision model and its input and output parameter changes.
Attachments couldn't be added when documents not configured	Users couldn't add attachments to tasks on the Workspace Task Details page when Content and Experience wasn't configured.
Loading time for large processes	We've improved process loading and renderization for very large processes rendered incrementally. The loading time is affected by the browser being used. The loading issue was more common with Internet Explorer version 11.
Issue loading integrations	Process could no longer load integrations after a used integration (previously discovered and used) was removed from the active integrations list.
My Apps returned blank page	The My Apps page was not loading correctly and showing a blank page due to concurrent access to a time-consuming operation.

Issue	Resolution
Decision connector editable when read only	A DMN connector was editable when the model was read-only.
Presentation not cloned	A form presentation containing many controls couldn't be cloned.
Form print issue in Firefox	Printing a web form with multiple tabs in Firefox omitted the first tab.
Human task action issue	Human task actions containing non-ASCII characters caused the action processing to break the page. This happened more frequently when showing actions with accents or similar characters in non-English languages.
Audit API response fix	Fixed values provided in the Audit API response where `inforRequestedFrom` and `infoSubmittedTo` parameters were returning userid instead of the display name.

May 2019

New Features

Common Features

Feature	Description
Improved Home page loading time	Through dynamic loading, we've improved the speed and performance of the Oracle Integration Home page and its sections.
Oracle Integration Home page - Common About page	A common About page is now accessible from the Oracle Integration Home page.

Integration Features

Feature	Description
Recovery job ID search on Tracking page	Searching on the Tracking Instances page has been enhanced to search for recovery job IDs that run to process failed instances. See Manage Business Identifiers for Tracking Fields in Messages in *Using Integrations in Oracle Integration Generation 2*.
JMS Adapter - Header support	JMS headers in both the trigger and invoke directions are supported. You can set message headers to dequeue messages from queues and set message headers to enqueue messages into queues. See Oracle WebLogic JMS Adapter Capabilities in *Using the Oracle WebLogic JMS Adapter with Oracle Integration Generation 2*

New Processes Features

Feature	Description
Query parameter added to Alter Flow REST endpoint	The new activityType parameter enables you to return only a subset of activities that match the specified type.

Resolved Issues

Integration Resolved Issues

Issue	Resolution
Connectivity agent - Restart	Improved the agent restart time after an agent is upgraded.
Connectivity agent - Group updates	Added support to update the agent group through the Oracle Integration REST API.
Adapter SDK	An issue in the adapter SDK for a protected/secured WSDL (using the SOAP proxy) with an authorization header is resolved.
SOAP Adapter - Callback invoke	A callback invoke fails if configured with the URL instead of an uploaded WSDL.
FTP Adapter - Error message	Improved the error message for when a user enters the wrong host key.
FTP Adapter - Design-time	Improved the design-time experience for multi-level authentication.
JMS Adapter - Inbound header element	A JMS inbound header element (for example, Message Id) being mapped to a JMS outbound header element (for example, Correlation Id) no longer throws an exception upon activation.
Adobe eSign Adapter - Regional subdomains	Adobe eSign Adapter: Fixed support for regional subdomains (for example, na1, na2, in, and em2 in OAuth).
Oracle ERP Cloud Adapter - Error message improvement	Oracle ERP Cloud Adapter: Improved the user error message when an FBDI upload integration shows errors for being unable to move a file at the target location.
REST Adapter - Error message improvement	REST Adapter: Improved the user error message when an `ArrayIndexOutOfBound` occurs during JSON translation.
File Adapter - Pipe-separated file content	Fixed an issue when reading pipe-separated file content while skipping certain lines.
Adapter SDK custom validation	Enhanced the adapter SDK to support custom validation of connection properties.
Integration runtime failure	Integrations no longer fail at runtime when the dynamic invoke feature is not enabled. No headers are available in an incoming SOAP payload and there is at least one mapping done.

Issue	Resolution
Application WSDL validation	Enhanced adapters to intelligently validate application WSDLs where the target namespaces do not match the parent schema import. 'Import' is used instead of 'Include' or cross-referenced schemas are present without import namespaces in the definition.
Operation invocation on Fusion Applications	Invoking operations on custom objects for Fusion Applications adapters no longer fail.
Error message improvement	Improved error message with an action recommendation when an adapter 'Test Connection' fails due to a self-signed certificate not having the subject alternate name.
Collapsed scope actions	Users can reposition collapsed scopes within orchestration integration flows.
Activation errors	Activation errors caused by XML schema definitions containing references to it are successfully handled (recursive schema imports or includes).

Processes Resolved Issues

Issue	Resolution
Import issue	An issue was resolved where deleting a process application and then re-importing it under the same name resulted in the old deleted process application rather than the new version.
Process application open issue	An internal server error was fixed that prevented process applications from opening in Processes design time.
Identities REST endpoint issue	An issue was resolved that resulted in an HTTP 500 error returned when invoking the bpm/api/4.0/identities REST endpoint when Oracle Identity Cloud Service (IDCS) contained a very large number of users. A similar situation occurred with the Identities web form control and other select controls in Process forms when Oracle Integration was pulling a full list of users, and was resolved.
Correlations issue	An issue was resolved that prevented users from opening the FX correlations mapping editor and configuring correlations in structured (BPMN) processes.
Web form preview mode issue	An issue was resolved where web form elements visible when editing were not visible in Preview mode.
Title update issue	An issue was discovered where the process instance and task titles were not properly updated when configured inside a parallel gateway. After the fix, the main thread title propagates to all child threads inside the parallel gateway flow.

April 2019

New Integration Features

Feature	Description
Orchestrated integrations - nested scopes	You can add nested (child) scope actions to a basic scope action. This provides a more sophisticated way of organizing or separating actions into a subsection of the integration. See Manage a Group of Actions and Fault Handlers with a Scope Action of *Using Integrations in Oracle Integration Generation 2*.
Oracle E-Business Suite Adapter - Support for Java APIs as invokes (targets) in integrations	The Oracle E-Business Suite Adapter supports Java-based APIs including Java Bean Services and Application Module Services subtypes from Oracle Integration when adding the Oracle E-Business Suite Adapter as invoke (target) connections. In addition to PL/SQL, concurrent program, open interface REST services, Java APIs are now available as REST services for invocation from Oracle Integration. See Oracle E-Business Suite Adapter Capabilities and Invoke Oracle E-Business Suite Java APIs from Oracle Integration in *Using the Oracle E-Business Suite Adapter with Oracle Integration Generation 2*.
Oracle Advanced Queuing (AQ) Adapter - New video	See how the Oracle Advanced Queuing (AQ) Adapter supports the trigger connection using the object queue data type in Oracle Integration. See Use the Oracle Advanced Queuing (AQ) Adapter for Object Queue Type.
Canceling long running integration instances	You can cancel an integration instance that is not completing as expected. See Cancel a Running Integration Instance in *Using Integrations in Oracle Integration Generation 2*.
Unlocking scheduled integrations	When a schedule is in edit mode and the browser crashes, the schedule becomes locked, which prevents it from being edited. You can unlock an integration schedule to resume editing. See Unlock an Integration Schedule in *Using Integrations in Oracle Integration Generation 2*.
Oracle NetSuite Adapter - Token-based authentication	Token-based authentication allows you to generate secure, revocable, and nonexpiring tokens for integration clients to use when connecting to Oracle NetSuite. The end user credentials are never exposed and the password does not expire. See Oracle NetSuite Adapter Capabilities in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2*.
Oracle NetSuite Adapter - Custom records	You can perform CRUD operations on custom records in an integration. Custom records are dynamic and customizable building blocks that enable you to create custom fields, lists, and special links with other NetSuite records and transactions. See Oracle NetSuite Adapter Capabilities in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2*.

Feature	Description
REST Adapter - Amazon Web Services (AWS) Signature Version 4 support	The REST Adapter can invoke external REST endpoints supporting the Amazon Web Services (AWS) Signature Version 4 authentication type. See Configure the REST Adapter to Consume an Amazon Web Services (AWS) REST API in *Using the REST Adapter with Oracle Integration Generation 2*.

New Process Features

Feature	Description
Clone processes	As a time saver, you can now clone processes within a process application. On the Processes page in design time, click the new clone icon for a structured or dynamic process, and specify a new name. Cloning copies all design-time metadata for the process. Forms and integrations used in the process are linked to but not cloned, and data associations are retained. See Clone a Structured Process and Clone a Dynamic Process in *Using Processes in Oracle Integration Generation 2*.
Forms divider	Use the new divider control to separate your forms into sections or categories. See Configure Divider Controls in *Using Processes in Oracle Integration Generation 2*.
Dynamic process service task errors	When a service task fails to execute in runtime, an icon now appears for the service task under Activities. Hover your cursor on the error to see details about the service task failure's cause.

March 2019

New Integration Features

Feature	Description
Migrate to Oracle Cloud Infrastructure	Ready to move your integrations to our most powerful infrastructure platform? • See Learn About Migrating to Oracle Cloud Infrastructure in *Migrating Oracle Integration Classic Instances to Oracle Cloud Infrastructure*. • See Learn About Migrating to Oracle Cloud Infrastructure in *Migrating Oracle Integration Cloud Service and Process Cloud Service Instances to Oracle Cloud Infrastructure*.
Connectivity agent high availability	You can use the connectivity agent in high availability environments. You install the connectivity agent twice on different hosts. There are no differences in agent installation. You specify the same agent group identifier during both installations. See Use the Agent in High Availability Environments of *Using Integrations in Oracle Integration Generation 2*.

Feature	Description
Oracle HCM Cloud Adapter - Support future-dated events for Atom feeds	The Oracle HCM Cloud Adapter now supports the new approach to future-dated entries in Oracle HCM Cloud and also enables you to choose how you want to handle future-dated entries when consuming ATOM feeds from Oracle HCM Cloud. See Oracle HCM Cloud Adapter Capabilities of *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*.
Oracle Advanced Queuing (AQ) Adapter - New video	The Oracle Advanced Queuing (AQ) Adapter supports the trigger connection using the raw queue data type in Oracle Integration. See *Use the Oracle Advanced Queuing Adapter for Business Event System*.

New Process Features

Feature	Description
Migrate to Oracle Cloud Infrastructure	Ready to move your processes to our most powerful infrastructure platform? • See Learn About Migrating to Oracle Cloud Infrastructure in *Migrating Oracle Integration Classic Instances to Oracle Cloud Infrastructure*. • See Learn About Migrating to Oracle Cloud Infrastructure in *Migrating Oracle Integration Cloud Service and Process Cloud Service Instances to Oracle Cloud Infrastructure*.
Oracle Process Mobile 6.1 available	The Oracle Process Mobile app has been certified and released for both iOS and Android. Users can download it from the Apple Store and Google Play. The app works for both Oracle Process Cloud Service and Oracle Integration flows (both autonomous and classic). Follow these tips: • Uninstall any previous versions of the app before installing the new version. • Install version 6.1. Avoid installing an older version with the same name but an older version number.
New videos	New to Process and want to learn more? See *About Process in Oracle Integration*. See how you can invoke processes from integrations: • See *Invoke a Process from an Integration: Build a Process*. • See *Invoke a Process from an Integration: Build and Track an Integration*.
Array manipulations in web forms	You can use the new array manipulation actions to perform various operations on arrays (such as set, insert, append, clean, and delete) when an event occurs. See Work with Presentations in *Using Processes in Oracle Integration Generation 2*.

New Visual Builder Features

Feature	Description
Support for Progressive Web Application	You can now enable the mobile applications that you create in Visual Builder as Progressive Web Apps. Among other benefits, this allows you to distribute your application through a URL for users to access.
Take Photo action	The Take Photo action has been enhanced so that, in addition to mobile applications, you can use it in web and Progressive Web Apps that you create in Visual Builder. The runtime behavior depends on the type of application that you use the action in.
Open URL action replaces Navigate to External action	A new action, Open URL, replaces the deprecated Navigate to External action. Using the Open URL action, you can choose where to open the URL: • From a web application, in a new or existing browser tab • From a mobile application, in the native browser, such as Safari on iOS, in app browser, or the current web view
New Navigation Drawer template for mobile apps	For mobile applications, Visual Builder now provides a new navigation option that you can implement when you select the Vertical navigation style when creating a new mobile application.
Improvements to staging and publishing using DevCS	The workflow for staging and publishing using the Developer Cloud Service pipeline has been improved.
Improved support for the Component Exchange	You can now use the Component Exchange component catalog to add reusable components published by Oracle to your application. In the Component Exchange, you can now see all available versions of a component in addition to the latest one, and choose the version you want to install.

Feature	Description
Improvements to the Page Designer	The following improvements and features were added to the Page Designer: • You can now select multiple components in the canvas and in the Page Structure view. On the canvas, you select multiple components by holding the Shift key while clicking on the components. In Page Structure View, you select multiple components by holding the Ctrl/Cmd key while clicking on nodes of the tree. When multiple components are selected, they can be moved together to a different place on the same page, and actions invoked in the popup menu are applied to all the selected items. When the Delete action is selected, all the selected components are removed. The Surround actions make the chosen option the common parent of the selected components, for example, two selected adjacent components can be surrounded with one oj-bind-if. Selecting the Parent submenu in the popup menu will show all the common parents of the selected components. • The Page Structure view has been redesigned and the following functions added: – An options dropdown menu was added – Tooltips on nodes now show all details, including IDs, classes and content hints even when these details are hidden in the tree – A new popup was added showing the slots on nodes of components which have slots – Special wrapping `div` elements used for sizing inside grid container are now displayed as Cell and Gap elements • The Variables drop-down in the Property Inspector now includes a Create Variable action for all scopes to allow direct creation of a new variable to bind to the property. • The oj-tab-bar component now preserves the selected tab while the page is refreshing in canvas.
Changes to Security settings	The following changes were made to how security settings are configured: • Anonymous access is now set at the level of the artifacts (web, mobile, service connections, business objects) instead of the visual application. The Allow Anonymous Access checkbox in the visual application's Settings editor has been removed. • A Business Objects tab has been added to the visual application's Settings editor, and the Security tab has been removed. The tab contains security settings for business objects, the URLs for the Catalog APIs and the tool for getting an access token.
Improvements to Application Wizard	The design of the New Application wizard has been updated.

Feature	Description
Improvements to business rules editor	A new tab was added to the Editor's palette for object functions that shows the parameters of the current object function. This list of parameters updates automatically when you edit the function's parameters using the business rules Property Inspector.
Support for secure static headers for web services	You can now define secure static headers at the server level. The header value is encrypted and stored by the vb proxy, and the vb proxy will apply the secure header when a request is made by the service. Warning messages are shown if the service connection is not using the vb proxy.
Improvements to Audits	You can now select individual issues and use the menu in the Audits pane to execute all tasks related to the selected issue, including fixing the issue.
Improvements to translations	When downloading translation files, the downloaded file is now fully ARB-compliant.
Improved support for Excel Add-in	The UI for the REST console has been improved.
Changes to relationships between business objects	The way relationships between business objects are modeled in the `entity.json` has been modified to improve scalability. The `entity.json` of both business objects in a relationship now contain some details of the relationship. This enables the existence of all relationships for a given business object to be known without loading the whole data model. The following changes were made to the UI for relationships: • In the Overview tab, incoming relationships (for example, 1:M) are shown as a dotted line until clicked, at which point the full details from the owning business object are loaded to enable the cardinality and required status to be determined. • In the Relationship Editor, the optional Accessor name fields that only appeared in Edit mode has been replaced with mandatory relationship name fields in both Edit and Create. Using the name as an accessor is optional, and you can enable and disable the option. • Many-to-many relationships are no longer derived from the existence of the two many-to-one relationships, but are persisted in `entity.json`. If a many-to-many is needed and the intersection business object already exists, this can be selected in a dropdown list in the Create Relationship dialog.
Optimized mobile template size	The Debug and the Release versions of the iOS and Android templates have been optimized to reduce their size.

February 2019

New Integration Features

Feature	Description
Oracle Advanced Queuing (AQ) Adapter - New video	See how the Oracle Advanced Queuing (AQ) Adapter supports both trigger and invoke connections using the Business Event System in Oracle Integration. See *Use the Oracle Advanced Queuing Adapter for Business Event System*.
Oracle Taleo Enterprise Edition Adapter - New adapter	Use the Oracle Taleo Enterprise Edition Adapter to asynchronously import data in bulk into Oracle Talent Acquisition Cloud (Taleo EE) (formerly known as Taleo Enterprise Edition) from other applications. You can also import attachments when you use the Oracle Taleo Enterprise Edition Adapter to import data from an external application into Oracle Talent Acquisition Cloud (Taleo EE). The Oracle Taleo Enterprise Edition Adapter is supported only as an invoke in an integration flow; adding it as a trigger is not supported. See Oracle Oracle Talent Acquisition Cloud (Taleo EE) Adapter Capabilities in *Using the Oracle Taleo Enterprise Edition Adapter with Oracle Integration Generation 2*.

New Process Features

Feature	Description
Saving web form data	You can capture form data at multiple points in a process, and store it in a database or file system for archiving or auditing purposes. For example, you might capture a form snapshot after an end user submits a form and then again after a manager approves the form. See Save Web Form Data in *Using Processes in Oracle Integration Generation 2*.
If-Then-Else decisions	You can now introduce additional test statements (Else If statements) in If-Then-Else decisions. See Create If-Then-Else Statements in *Using Processes in Oracle Integration Generation 2*.
Set analytics retention	You can set the number of days to retain completed analytics before automatic purging. The default number of retention days is 7. Because increasing retention days increases database consumption, you'll need to balance your organization's retention needs with database capacity. Specify the retention setting in runtime administration. See Schedule Analytics Archive and Purge in *Using Processes in Oracle Integration Generation 2*.
Array filtering in structured processes	In the Data Association editor of a structured process or transformation, you can selectively filter elements from a source array object and assign them to a target array. See Filter Array Data Objects in *Using Processes in Oracle Integration Generation 2*.
Decision FEEL loops	You can now create a Loop decision to iterate over lists or arrays. This decision type supports For, Every, and Some loops. See Create Loops in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Decision modeling best practices	We've added guidelines to make decision models easy to develop, maintain, and interpret. These best practices use a simple vacation days decision calculation as an example. See Best Practices for Modeling Decision Logic in *Using Processes in Oracle Integration Generation 2*.
IMPORTANT: Set instances purge retention	Here's a reminder to set the number of days to retain completed process instances before they get purged. (Purged instances cannot be recovered.) The default number of retention days is 7. Because increasing retention days increases database consumption, you'll need to balance your organization's retention needs with database capacity. Specify the retention setting in runtime administration. See Schedule Instances Archive and Purge in *Using Processes in Oracle Integration Generation 2*.

January 2019

New Common Features

Feature	Description
Streamlined product name	For simplicity, we've shortened our name from **Oracle Integration Cloud** to **Oracle Integration**. Our user-managed version is now called **Oracle Integration Classic**. This change has no impact on functionality.

New Integration Features

Feature	Description
Errors are displayed for rejected messages in trigger connections	Inbound rejected messages are tracked. These are messages that are too large and are rejected by the inbound adapters. The audit trail page shows the trigger connection in red when a rejected message is encountered.

New Process Features

Feature	Description
Use base64 images in forms	You can now upload images encoded in base64 format to forms. See Upload and Preview a Base64 Image in *Using Processes in Oracle Integration Generation 2*.

December 2018

New Common Features

Feature	Description
Change the BYOL Metering Option of an Existing Instance	You can change the BYOL metering option of an already existing instance, as necessary. This feature is useful for the following scenarios: • You selected the wrong option when creating a new Oracle Integration instance and need to change it. • You need to shift the location of an on-premises license in the cloud. For example, you need to move the license from one Oracle Integration instance to another or even to a different type of cloud service instance such as Oracle SOA Cloud Service. See Change the BYOL Metering Option of an Existing Instance in *Administering Oracle Integration Classic*.

New Integration Features

Feature	Description
E-mail notification addresses	You can send an e-mail notification from an e-mail address of your choice. See Send Notification Emails During Stages of the Integration with a Notification Action and Send Service Failure Alerts, System Status Reports, and Integration Error Reports by Notification Emails in *Using Integrations in Oracle Integration Generation 2*.
Oracle Field Service Cloud Adapter - filter expression support	Support is provided for entering filter expressions when subscribing to events in the Adapter Endpoint Configuration Wizard. You enter the filter expression to apply to the operation. Only events matching this filter are added to the event subscription. See Trigger Events Filter Selection Page in *Using the Oracle Field Service Cloud Adapter with Oracle Integration Generation 2*.
Improved icons	Icons have been improved in the Integrations canvas.
REST API enhancement	Pagination with a limit and offset in integrations, connections, and lookups is supported.

New Process Features

Feature	Description
New dynamic process Integration activity	Easily insert and configure integration activities in dynamic processes using the new Integration activity. Add an activity, select **Integrations**, and choose an integration that has been activated and set to visible. Configure its use as needed. See Create Activities and Define General Properties for an Activity in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Improved web forms expression editor	We've streamlined the user experience to make it easier to build expressions in web forms. As you add actions, conditions, and connectors, and filters, use the collapse icons to see summaries and the expand icons to view and edit details. See Add Dynamic Behaviors to a Form in *Using Processes in Oracle Integration Generation 2*.
Drive dynamic behavior in web form screenflow	Use dynamic data, such as values entered in controls, payload data, or data from connectors to trigger the Change Presentation action. See Change Form Presentations Dynamically in *Using Processes in Oracle Integration Generation 2*.
New performance management QuickStart App added	We're adding more ready-to-activate QuickStart Apps you can use as is or adapt as needed. The new Performance Management app manages the performance management cycle for managers who review employee performance within an organization.
New simple forms editor	Ready to create a form in seconds? Select **Use Simple Editor** when creating the form, then use the simple intuitive interface to quickly build your form. If at any time you need options available only in the full form editor, click the **Use Full Editor** button to upgrade the form to full editor mode. See Use the Simple Editor in *Using Processes in Oracle Integration Generation 2*.
Streamlined process application and decision model creation	Creating process applications and decision models is now faster and more intuitive. Click **Processes** on the Oracle Integration Home page. Process application and decision models now have separate links in the navigation pane. Click either link to see its new streamlined list, then **Create** to try out creating applications or models. See Quick Tour of the Processes Page in *Using Processes in Oracle Integration Generation 2*.
Robotic process automation adapter for UiPath	You can now use robotic process automation (RPA) tools in your structured and dynamic processes to extend process automation. Use the new UiPath Integrations adapter to automate repetitive human tasks and integrate with applications that do not offer APIs or for which there is no adapter. See Integrate with Robotic Process Automation Tools in *Using Processes in Oracle Integration Generation 2* and Understand the UiPath Robotic Process Automation Adapter in *Using the UiPath Robotic Process Automation Adapter with Oracle Integration Generation 2*.
Expanded Process task view for authorized users	We've provided the Process Owner and Process Reviewer roles better visibility into the task history of process instances. Users assigned these special roles see a task history dropdown field with two options: • **Task View** (default) shows the current task's history. • **Full View** shows history for all tasks executed in the process so far. The assigned role determines the task details available: • Process Owners see tasks for processes they own by selecting **Administered by Me** under **My Tasks**. They can see task details of all tasks (current and completed) in the process. • Process Reviewers see tasks for processes they review by selecting **Reviewed By Me** under **My Tasks**. Process Reviewers can see task details for current tasks; they see completed tasks but without details. See Assign and Manage Roles in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Dynamic process iFrame support	We’ve made dynamic process components available for iFrame integration using embeddable components. For example, you can now embed case details, dynamic process instance lists, and milestone and activity lists. See Experiment with Process UI Components in *Using Processes in Oracle Integration Generation 2*.
Timezone support on forms	The Date Time control has been enhanced to adjust to users' timezones. When a user enters data into a Date Time control, the timezone information of the user is saved in UTC format. When other users access this data, the date-time information is displayed in timezones specific to them. See Configure Date and Time Fields in *Using Processes in Oracle Integration Generation 2*.
Business object updates (WSDL)	You can now update external business objects being used in a process application by uploading a new WSDL file. (Updates for XSD and JSON files were also recently added.) A warning is displayed if incompatible definitions are found. See Work with Web Service Definition Files in *Using Processes in Oracle Integration Generation 2*.

New Visual Builder Features

Feature	Description
Upgrade to Oracle JET 6.0	The Visual Builder generated applications now use Oracle JET 6.0 libraries and components.
Improvements to the Page Designer	The following improvements were made to the Page Designer for visual applications: • iPad added as device option in the Page Designer for mobile apps • Quick Starts now generate ojAction events instead of click events for buttons • The Settings editor for a shell page now contains a Default Flow setting to be used when nested flows are embedded in the page using the Flow Container component (oj-vb-content) • Pages in design-time are now automatically refreshed when navigating to them to update data changed in a different page (for example, when saving data in Live mode in one tab that affects the data displayed in another tab.) • Empty container-like components on the canvas are now highlighted to indicate the area they occupy (rendered border) and their name (gray label). This applies to the Form Layout, Grid/Flex/Bar Containers and Rows, and Toolbar and Masonry components. • Support for drop handling for flex in mobile page templates was improved. • Improved drop support for oj-form-layout means that any component can be dropped into a form layout, and form layouts can also be nested. A component can be paired with the oj-label that precedes it in the source code, so components without a label-hint attribute set can have their label in the form. • A Flow Container component was added to represent the oj-vb-content element. The component can be used in the page to embed a nested flow's page.

Feature	Description
Improvements to Quick Starts	The following improvements were made to Quick Starts: • The Bind Data step of Quick Starts for List View, Table and Create/Edit/Detail pages now includes component selection dropdown for all the selected fields. • Quick Starts now generate ojAction events for buttons instead of previously generated click events • Updated default label position attribute (label-edge) in forms generated by Quick Starts for web and mobile apps.
Improvements to Action Chain editor	The following improvements were made to support for working with actions in the Action Chain editor: • When adding a Call Component Method action, the component id input is now populated with a list of ids from the page. Upon selection, the component method input is also populated with the methods that are valid for the selected component. • When adding a Call REST Endpoint action, placeholders are now shown for the failure outcome in addition to the success outcome.
Added support for nested flows	Visual Builder now supports nested flows, and the following features were added: • The Settings editor for pages now contains a Default Flow setting that is used when a nested flow is embedded in the page using the Flow Container component. • Nested flows can be created in the flows folder under any flow.
Added support for iPad deployment for mobile apps	iPad was added as a deployment target option when building mobile apps.
Support for Integrations	A new tab for setting the Oracle Integration server URL and authentication was added in the application's Settings editor. An Oracle Integration service catalog was added that lists REST integrations defined in Oracle Integration, and you can now use the service connection wizard to select integrations from the catalog and add them to your application.
Improved support for installing components	The following improvements were made to support adding components: • A mechanism was added for updating components installed from Component Exchange. • When opening an application, the Component Exchange is automatically checked for new versions of installed components, and a message is displayed when updates are available. • The window displaying Component Exchange items now contains individual Browse, Installed and Updates tabs. The Updates tab lists the new versions of components when they are available and can be used to update components.
Improvements in the Property Inspector	The following improvements were made to the Property Inspector for visual applications: • An Array type customizer in the All tab for array types can be used to create and manage the array items. • A Slots customizer in the General tab and in Page Structure view now lists the component's slots in a logical order. – default slot first, contextMenu slot last, the other slots in between – startIcon, endIcon slots (for example, for button components) – start, middle, end slots (for example, for a bar layout component) • For components inside For Each, the `$current` and the As alias are now available in the mapper/expression editor opened from Property Inspector. • The names of action chains created from the Events tab now have "Chain" appended to the name (for example, ButtonActionChain).

Feature	Description
Improvements to Event Listeners	The mapper for custom events and variable change listeners now displays `$event` in the sources. Notification messages are now displayed when an event listener refers to an action chain that does not exist, calls an action chain without mapping required parameters and calls an action chain with unrecognized parameters.
New notifications for variables and types	Notifications were added to indicate invalid or missing details for variables and types: • Type is not defined as a valid object or array • Type references another type that doesn't exist • Type references an invalid type • Variables: Default value is invalid • Variables: SDP: No endpoint defined • Variables: MSDP: No SDPs specified
Settings window now opens in tab	The application's Settings are now displayed in an editor tab in the designer instead of a modal window.
Support for child business objects in business rules editor	The custom code editor for business rules now contains the option to select a template with code for working with child business objects.
Added support for Visual Builder Add-in for Excel plugin	The Oracle Visual Builder Add-in for Excel is a plug-in for Microsoft Excel that allows Excel users to edit business data available from Oracle REST services.
Support for vanity URLs	You can now specify a vanity URL for an application in the Application tab of the visual application's Settings editor.

November 2018

New Integration Features

Feature	Description
Oracle HCM Cloud Adapter, Oracle CX Sales and B2B Service Adapter, and Oracle ERP Cloud Adapter - Parent and child business resource support	When configuring the adapter as an invoke connection, you can select parent business resources and their corresponding child business resources. See Oracle ERP Cloud Adapter Capabilities in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*, Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*, and Oracle Sales Cloud Adapter Capabilities in *Using the Oracle CX Sales and B2B Service Adapter with Oracle Integration Generation 2*.
IBM DB2 Adapter and MySQL Adapter - Table operation enhancements	Support is provided for performing operations on a table: insert, update, insert or update (merge), and select. See Oracle DB2 Adapter Capabilities in *Using the IBM DB2 Adapter with Oracle Integration Generation 2* and MySQL Adapter Capabilities in *Using the MySQL Adapter with Oracle Integration Generation 2*.

Feature	Description
Oracle WebLogic JMS Adapter - Schema archive upload support	The upload of a schema archive is supported. A schema archive can have a single top level schema with nested imports and includes that contain absolute or relative paths. See JMS Adapter Capabilities in *Using the Oracle WebLogic JMS Adapter with Oracle Integration Generation 2*.
Oracle Advanced Queuing (AQ) Adapter raw and object support	Raw and object queues are supported. See Oracle Advanced Queuing (AQ) Adapter Capabilities in *Using the Oracle Advanced Queuing (AQ) Adapter with Oracle Integration Generation 2*.
Oracle HCM Cloud Adapter, Oracle CX Sales and B2B Service Adapter, and Oracle ERP Cloud Adapter - dynamic endpoint invocation support	You can dynamically invoke a REST endpoint/URL at runtime without requiring you to configure any extra invoke connection or REST outbound details. See Oracle ERP Cloud Adapter Capabilities in *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2*, Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*, and Oracle Sales Cloud Adapter Capabilities in *Using the Oracle CX Sales and B2B Service Adapter with Oracle Integration Generation 2*.

New Process Features

Feature	Description
Forms	We've added the following enhancements to the forms editor: • **Presentation customizer:** You now have the option of customizing presentations in addition to cloning them. Customizing creates a new presentation whose controls are linked to the base presentation, and you choose which controls are visible. See Work with Presentations in *Using Processes in Oracle Integration Generation 2*. • **Post connectors in events:** You can now initiate a POST operation while executing REST connector calls in form events and set the request-body data for the operation. See Execute REST Connector Calls in Events in *Using Processes in Oracle Integration Generation 2*. • **Matches function:** This new function checks if two strings or expressions match and returns a Boolean value. See Specify Functions in *Using Processes in Oracle Integration Generation 2*. • **Global error handling:** When configuring global connectors, select the new **Ignore connector error** option to ensure that even though error handler messages appear in controls, all other events execute normally when a form loads. See Global Connectors in Work with Presentations in *Using Processes in Oracle Integration Generation 2*. • **Train component PDF support:** You can now print forms that contain train component controls. Note that only the selected step is printed. See Configure Advanced Controls in *Using Processes in Oracle Integration Generation 2*.
Append to an array	Use the new Append action in the data association editor to add elements to a target array. See Append to Array in *Using Processes in Oracle Integration Generation 2*.
Data mapping default value	While mapping data within structured processes, you can now specify a fallback (default) value in addition to a data source argument. See Get or Else functions in Work with Expressions in *Using Processes in Oracle Integration Generation 2*.
Multiple output decision tables	You can now create decision tables with more than one output variable. See Define Decision Table Output in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Business object updates (XSD and JSON)	As part of iterative design, you can now update external business objects already being used in a process application by uploading a new XSD or JSON file. A warning is displayed if incompatible definitions are found. See Upload a New Version of a XML Schema File in *Using Processes in Oracle Integration Generation 2*.
Dynamic processes	REST API options for retrieving dynamic process resources were added. These endpoints are useful for calling dynamic processes from Visual Builder. See the **What's New** topic under **Get Started** in Oracle Integration REST API. Note that by selecting **Form** as input to a dynamic process, you can now use either a form or REST service to start a process. See Define Process Input and Output in *Using Processes in Oracle Integration Generation 2*.

October 2018

New Common Features

Feature	Description
Oracle Integration - Export design-time metadata support	Support is provided for exporting Oracle Integration design-time metadata from a user-managed environment to an autonomous environment. You can also export an Oracle Integration instance running in one autonomous environment to another autonomous environment. See Move Assets Between Environments in *Administering Oracle Integration Classic*.

New Integration Features

Feature	Description
SOAP Adapter - Dynamic endpoint discovery support	Supports is provided for the dynamic discovery of endpoints. This is useful for scenarios in which the endpoint invoked by the SOAP Adapter must be dynamically configured based on runtime logic. See olink:ICSSO-GUID-0C668F00-C232-4E7E-8234-70C62FF3B97A in *Using the SOAP Adapter with Oracle Integration Generation 2*

Feature	Description
Oracle E-Business Suite Adapter - Support for open interface tables and views as invokes (targets) in integrations.	The Oracle E-Business Suite Adapter supports outbound integrations with open interface tables and views from Oracle Integration when adding the Oracle E-Business Suite Adapter as invoke (target) connections. In addition to PL/SQL and concurrent program REST services, open interface tables and views are now available as REST services for invocation from Oracle Integration. See *Using the Oracle E-Business Suite Adapter*.
REST API enhancement	You can change the connection in an integration using the REST API.

New Process Features

Feature	Description
Upgrade process applications	Use an automated tool to move process applications from Oracle Process Cloud Service or another Oracle Integration instance to Oracle Integration. If you prefer, you can import and upgrade process applications individually. See Import Process Assets to Oracle Integration in *Administering Oracle Integration Classic*.
Forms enhancements	We've added the following enhancements to the forms editor: • **Assign names to events:** You can now assign names to events in events options. This helps you easily identify multiple events configured for a control or presentation. See Configure Events in *Using Processes in Oracle Integration Generation 2*. • **Labels on repeatable sections:** You can now assign labels to repeatable sections. See Configure Repeatable Sections in *Using Processes in Oracle Integration Generation 2*. • **Events enhancements:** We now support relational operations within events. We've also added new logical functions. See Specify Functions in *Using Processes in Oracle Integration Generation 2*.
Integration updates	Easily keep integrations in process applications up-to-date. On the Integrations view, icons identify integrations that have been deactivated or deleted, or active ones whose definitions have changed. Choose the update option that works for your process application. See Update Integrations in *Using Processes in Oracle Integration Generation 2*.
Embeddable components	We've added new information on integrating Process snippets such as forms or task lists into other environments such as ERP, CX, or HCM applications. See Best Practices for Embedding Process UI Components in *Using Processes in Oracle Integration Generation 2*.

New Visual Builder Features

Feature	Description
Upgrade to Oracle JET 5.2	The Visual Builder generated applications now use Oracle JET 5.2 libraries and components.

Feature	Description
Improvements to the Page Designer	The following improvements were made to the Page Designer for visual applications: • HTML serialization has been improved to minimize escape characters in attribute values: – Single quotes (') are used to delimit an attribute value if the value contains more double quotes (") than single quotes – The symbols "greater than" (>) and "lesser than" (<) are not escaped in attribute values – Ampersands (&) in attribute values are not escaped when they are immediately followed by a white-space character or another ampersand • The Delete button for components in the Property Inspector was removed. You now delete components using the Delete item in the context menu at the top of the Property Inspector. • The All tab in the Property Inspector now displays an indicator when a property has a sub-property where values have been set. • The Property Inspector header now contains a Back button with the parent component name in some cases – Components in named slots of parents - e.g. "< Button | Icon" for an icon in a slot of a button – Components that declare a link to one of its ancestor tags - e.g. "< List View | Swipe Tile" where swipe action tile is in a swipe actions element inside a list view's template element • The Property Inspector now provides improved support for CCA component metadata: – Create General and Data tabs for properties marked in their component.json with propertyGroup 'common' or 'data' – When marked with 'format', the following properties will have more specialized customizers created in the Property Inspector: date, time, datetime, color. – Events marked as 'common' will appear in event Quick Starts, and as 'suggested' events in the Create Event UI • A tool for uploading images and accessing an image gallery was added to the Data tab for image components in the Property Inspector. • The List View in the Property Inspector now contains a customizer for Swipe Actions. • The HTML code editor now supports Oracle JET 5.1 elements. Insight shows element and attribute documentation. Insight also helps with attribute enumeration values and binding variables.

Feature	Description
Improvements to Quick Starts	The following improvements were made to Quick Starts: • Variables created by Quick Starts now use a shorter "SDP" suffix instead of the previously long "ServiceDataProvider" • Types are now created by Quick Starts into the page scope instead of the flow scope • Add Data to List Quick Start now generates components into slots of oj-vb-list-item row CCA (instead of binding fields to attributes of the CCA). • The Select Endpoint step of Quick Starts now contains an updated Endpoint picker. The panel shows the simplified view by default and contains an option to switch to the detailed view. • The Bind Data step of Quick Starts has been updated to have an Endpoint Structure view where you can drag and drop fields to select them. The step contains an area for adding fields that are included in the data but not rendered in the page. • For mobile apps, the Edit Page and Delete Action Quick Starts now generate the appropriate action in List View as a swipe action. • A Quick Start Create Static List of Options was added for generating combobox, select and radio buttons components
Improvements to Action Chain editor	The following improvements were made to the Action Chain editors: • Actions that are not fully configured will show a warning symbol. A tooltip will indicate the missing configuration. • Clicking placeholder node will open a menu with options for adding an action. • Action chains can be renamed in the Property Inspector • Flow input parameters can be specified for navigateToPage events that changeFlow. • A text field for filtering actions was added to the Actions palette.
Improvements to the Artifact Browser	You can now import single files and zip archives by dragging them from your local system directly onto folders in the Artifact Browser. The Import Resources dialog box opens when you add the file.
Improved support for variables and types	The following improvements were made to the support for variables and types: • You can now create Multi Service Data Provider (MSDP) variables. • Types can be promoted to a wider scope, allowing them to be reused and reducing the number of duplicated type definitions across pages. • Unsupported attributes of ADP/SDP/MSDP have been removed. • The event listener tab for variables has been simplified • Add field is exposed consistently for types

Feature	Description
Improved support for connecting to services	The following improvements were made to the connecting to services: • In the Services tab of the application's Settings dialog box, a button was added for testing the connection to the catalog URL using the authentication credentials. Problems connecting to the URL are displayed in the dialog box. • In the Authentication tab of the Services editor, the "Allow anonymous access" option replaces "Use different authentication for a logged in user". The upper authentication option is for the logged in user and the lower authentication option is for anonymous users. The Source tab for displaying the Swagger now contains the property "anonymousAuthentication" and the property "diffAuth" is no longer used. • In the Authentication tab of the Services editor, "Propagate Current User Identity" was added as an authentication mechanism. This is the preferred option for propagating identity from web or mobile apps to service connections. In order to use the new Implicit Flow authentication at the web app level or "Basic" authentication at the mobile app level, the authentication mechanism for service connections needs to be set to "Propagate Current User Identity". In previous releases, mobile apps that were set with "Basic" at the app level could use "Direct" as an authentication mechanism to propagate identity to services. With this release this combination will no longer propagate identity. Instead of using "Direct", the authentication mechanism for these service connections will be automatically changed to "Propagate Current User Identity" when the visual application is reopened. You are strongly advised to review the service connections for mobile apps that use identity propagation. You must also restage/ republish these apps for the new changed settings to take effect and to consume any security related fixes, which is recommended. • In the Authentication tab of the Services editor, a new authentication type "Same as Authenticated User" is available when the Allow Anonymous Access option is selected. When "Same as Authenticated User" is selected, the anonymous user will inherit the user credentials from the logged in user (the credentials selected in the Authentication Mechanism dropdown list). • Developers can now test service endpoints as an anonymous user by selecting As Anonymous User in the Test tab of a service endpoint. This feature can be use when the Allow Anonymous Access option is selected in the service's Authentication tab and an anonymous authentication mechanism is selected in the dropdown list. • In the Endpoints tab of the Services editor, a button was added that enables you to replace the service definitions of all selected endpoints with the latest updated definitions from the service. The Replace Definitions button is available when the registered service connection is registered via the Catalog (Fusion Applications) or a service specification document ("ADF Describe"). The button opens the service wizard and you are prompted to verify the definitions that will be replaced.
Improved support for business objects	The following changes were made to the business object editors: • In the business object Diagrammer, the context menu now contains a Find command (cmd+f or ctrl+f) for locating a business object in the Diagrammer. • In the Business Objects panel of the Artifact Browser you can open the contextual menu of a business object and select Find in Diagram to locate the business object in the Diagrammer. • In the Endpoints tab of the business object editor, you can now click an endpoint to view the endpoint's details in the editor. The editor is read-only, but you can use the Test tab to send requests and see the responses with specified parameter values.

Feature	Description
Changes to build settings for mobile apps	The following changes were made to the configuration for mobile app build settings: • The Build Profiles tab was renamed to Build Configurations. • For each platform, you can now individually specify the default build configuration that is used for staging and for publishing. • The option was added to force the built app to run in portrait mode.
Permission strings for iOS mobile apps	You can now provide custom permission strings to replace the strings provided by Visual Builder for the mobile apps it builds for iOS.
Updated application templates	Web and mobile application templates have been updated to use oj-messages, which provides a more modern UI as well as support for additional display options. New applications will automatically be created using the new templates. Existing apps would need to be manually migrated to use oj-messages.
Improvements to security settings	The following changes were made to the security configuration settings: • Instance administrators can now use a Certificates page to upload and manage certificates, including self-signed certificates. • User identity is now propagated to other co-located services without any explicit login when "Oracle Cloud Account" authentication is used. • Added support for OAuth2 implicit grant flow in the web app settings.
Improved support for translations	In the Property Inspector you can now choose the resource bundle to use for storing a translation string.
Improved Git support	Git Tags are no longer used for keeping track of application sources. Commit SHAs are now used instead of tags.

September 2018

New Integration Features

Feature	Description
Timezone support in scheduled integrations	When you create a scheduled integration, you can specify the preferred timezone. See Create a Schedule and View Future Runs in *Using Integrations in Oracle Integration Generation 2*.
Monitoring Integrations page enhancements for scheduled integrations	For scheduled integrations on the Monitor Integrations page, navigation links are provided that take you to the Schedule and Future Runs page. See Monitor Integrations in *Using Integrations in Oracle Integration Generation 2*.
Oracle Service Cloud (RightNow) Adapter - New name	The Oracle RightNow Adapter has been renamed to the Oracle Service Cloud (RightNow) Adapter. See Oracle Service Cloud (RightNow) Capabilities in *Using the Oracle Service Cloud (RightNow) Adapter with Oracle Integration Generation 2*.

Feature	Description
Oracle Intelligent Advisor Adapter - New adapter	The Oracle Intelligent Advisor Adapter enables you to send data from any cloud or on-premises application to Oracle Policy Automation for complex decision-making. Use the Oracle Intelligent Advisor Adapter for regulated industries such as public sector, financial services, medical devices, and retail; for human resources decision-making; or for anywhere policy-based decisions must be integrated. See Oracle Policy Automation Adapter Capabilities of *Using the Oracle Intelligent Advisor Adapter with Oracle Integration Generation 2*
Oracle Taleo Business Edition (TBE) Adapter - New adapter	The Oracle Taleo Business Edition (TBE) Adapter enables you to create an integration in Oracle Integration. The Oracle Taleo Business Edition (TBE) Adapter uses Oracle Talent Cloud for Midsize (Taleo BE) (formerly known as Taleo Business Edition) APIs to provide access to objects and operations such as requisitions, employees, offers, and so on. See Oracle Talent Cloud for Midsize (Taleo BE) Adapter Capabilities in *Using the Oracle Taleo Business Edition (TBE) Adapter with Oracle Integration Generation 2*.
Microsoft SQL Server Adapter and Oracle Database Cloud Service Adapter - Table operation enhancements	Support is provided for performing operations on a table: insert, update, insert or update (merge), and select. See Oracle Database Cloud Service Adapter Capabilities in *Using the Oracle Database Cloud Service Adapter with Oracle Integration Generation 2* and Microsoft SQL Server Adapter Capabilities in *Using the Microsoft SQL Server Adapter with Oracle Integration Generation 2*.
Oracle HCM Cloud Adapter and Oracle ERP Cloud Adapter - File upload to Oracle WebCenter Content	You can upload files to Oracle WebCenter Content (Universal Content Manager) in encrypted or unencrypted format. Oracle WebCenter Content provides a unified repository to store unstructured content, enabling organizations to deliver the content to business users in the proper format. See Oracle ERP Cloud Adapter Capabilities of *Using the Oracle ERP Cloud Adapter with Oracle Integration Generation 2* and Oracle HCM Cloud Adapter Capabilities of *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*.

New Process Features

Feature	Description
New Service activity in dynamic processes	Use this new activity to invoke an external service, such as an OIC integration or a REST connector, from a dynamic process. See Create Activities in *Using Processes in Oracle Integration Generation 2*.
New Train control in forms	Use this new control to sequentially guide users through a multistep web form activity. See Configure Advanced Controls in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Print forms	The new **Print** action lets you print a presentation of a form when an event occurs. See Work with Presentations in *Using Processes in Oracle Integration Generation 2*.
Form event enhancements	You can now monitor form logs and test your form with custom payload data. See Preview Forms and Their Payload in *Using Processes in Oracle Integration Generation 2*.
Process runtime enhancements	We've added these enhancements to improve process execution: • **Maximum number of loops or activities:** To prevent a process executing a very large number of loops or activities as part of a single process instance, the number of direct/indirect loops is restricted to 1000, at which point execution is suspended. This restriction prevents audit data growth and releases system resources. • **Repeat failure/exception handling:** To ensure that a process instance does not result in repeated exceptions, especially when invoking an external service, we've limited auto-recovery on faulted process instances to two times.

August 2018

New Common Features

Feature	Description
Common logging configuration for Oracle Integration	Administrators can adjust logger levels and download logs for all features in one place by selecting the **Settings** link in the navigation pane on the main Home page. See Configuring Logging Settings in *Administering Oracle Integration Classic*.
New learning path	A new learning path showcasing the Integrations and Visual Builder features in a Weather API example is available on the Tutorials page in the Oracle Help Center: • Rain or Shine, Oracle Integration Has You Covered
New security, authentication, and authorization for Oracle Integration REST APIs using OAuth	Authentication and authorization in Oracle Integration is managed by Oracle Identity Cloud Service. Oracle Integration REST APIs as well as REST endpoints exposed in integrations are protected using OAuth token-based authentication. See Security, Authentication, and Authorization in *REST API for Oracle Integration*.
Oracle Integration Cloud Service to Oracle Integration export/import	You can export your Oracle Integration Cloud Service design-time metadata as an archive and import that archive into Oracle Integration. You do not need to manually configure connection endpoints and passwords and then activate the exported integrations in Oracle Integration. Integration activations occur automatically. See Move Assets Between Environments in *Administering Oracle Integration Classic*.

New Integration Features

Feature	Description
Oracle Advanced Queuing (AQ) Adapter - Outbound messaging support	Enqueueing of messages in the outbound (invoke) direction is supported. You select the queue destination for outbound messages and configure the message format. You also select to use an existing schema or no schema (message is sent in opaque format). See Oracle Advanced Queuing (AQ) Adapter Capabilities in *Using the Oracle Advanced Queuing (AQ) Adapter with Oracle Integration Generation 2*.
REST Adapter - Two-way SSL support	Support is provided for consuming external REST APIs that are protected using transport level security. The REST Adapter supports one-way SSL and two-way SSL. Oracle Integration supports a certificate management user interface to upload public certificates for external APIs that are protected either using lesser known certifying authorities (CA) or self-signed certificates. External REST APIs hosted on a two-way SSL server require client side (Oracle Integration) identity. Oracle Integration provides support for exchanging the client side identity with the server hosting the external API. See Creating an Integration that Consumes External REST APIs Hosted on a Two-Way SSL-Enabled Server of *Using the REST Adapter with Oracle Integration Generation 2*
Oracle Database Adapter – `SELECT` operation support	Performing a `SELECT` operation against database tables is supported. See Oracle Database Adapter Capabilities in *Using the Oracle Database Adapter with Oracle Integration Generation 2*.
Orchestrated integrations - Inline menu for adding actions	When you hover your cursor over an action/node in an orchestrated integration, a list appears with selections for **Commonly Used**, **Connections**, **Actions**, and **Integration Artifacts**. Only actions that are allowed to be placed between the two nodes in question are displayed. You can search for an item by typing in the search box. Only matching components appear in the output. See Adding Actions Through an Inline Menu in *Using Integrations in Oracle Integration Generation 2*.
Stage file action - Schema creation enhancements	Support is provided for creating schemas from XML, JSON, and ZIP file formats in stage file actions of orchestrated integrations. See Configuring a Stage File Action in *Using Integrations in Oracle Integration Generation 2*.
Note action	You can add placeholder notes similar to sticky notes to an orchestrated integration. See Adding Placeholder Notes with a Note Action in *Using Integrations in Oracle Integration Generation 2*.

Feature	Description
Integration activation - Detection of incomplete functions	If you attempt to activate an integration that includes a function that is not completely configured, an error message is displayed in the banner. You must complete configuration of this function before you can activate the integration. See Activating an Integration in *Using Integrations in Oracle Integration Generation 2*.

New Process Features

Feature	Description
Call a dynamic process from a structured process	You can now call a dynamic process from a structured process. From the process editor, drag and drop a Dynamic Process element from the palette's System category, select the dynamic process from the process application to call, and map data input to the dynamic process using data association. See Use a Dynamic Process in a Structured Process in *Using Processes in Oracle Integration Generation 2*.
Decision tables	You can now open decision tables and relations in an expanded dialog for easy editing. See Using Decision Tables in *Using Processes in Oracle Integration Generation 2*.
REST APIs	REST API options were added or modified. For example, deploy (activate) a process application and return the activated application's version. See the **What's New** topic under **Get Started** in Oracle Integration REST API.
My Tasks	Quickly view and access your tasks in a streamlined list right from the Home page. Open additional options only as needed. See Quick Tour of the My Tasks page in *Using Processes in Oracle Integration Generation 2*.
Forms	This release includes several enhancements for web forms: • Use the new array Concat function to concatenate array values as needed. For example, use the function to join values from two tables in a single table. See Specifying Functions in *Using Processes in Oracle Integration Generation 2*. • For panels in a form, you can add a header and a description to the top of a panel. Also, you can use style themes to format the header. For a section in a form, a new style theme lets you indent sections. See Placing Controls in Panels, Sections, or Tabs and Styling Properties in *Using Processes in Oracle Integration Generation 2*.
Process/Decision Modeling lifecycle	We've made enhancements to help you easily sync up your process model decision business objects with their decision model after making changes. • Now a decision connector within an application displays an incompatibility error when the data interface is updated for the decision model version associated with it. You can use the **Update definition** link on the connector to resolve this error. • Similarly, decision connectors display errors if the associated decision snapshot is deactivated or if the decision model is deleted. See Adding Decisions to Applications and Processes in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Decision modeling	Easily edit your decision models from within your process application. (No need to close the application and open the decision model.) From the application, select the Decisions component in the navigation pane and click the new **Edit** option to modify the decision model. To see the decision model snapshot already deployed and used by the application. click the decision component name instead. See Adding Decisions to Applications and Processes in *Using Processes in Oracle Integration Generation 2*.
Dynamic Process default values	We've set default values to enable developers to more quickly create and activate a dynamic process. For example, leave defaults selected so you can skip defining roles and assigning them to human tasks until after your dynamic process is up and running. See Learn dynamic processing basics in *Using Processes in Oracle Integration Generation 2*.
Dynamic Process inline validation	As you add and configure activities and stages in dynamic processes, get immediate feedback and fix errors inline--right where you are instead of while testing or activating the process application. See Working With Inline Validations in *Using Processes in Oracle Integration Generation 2*.
Dynamic Process role management	You can now permanently retain role mappings for application activations. Role mappings for an existing version of an application activated to production are retained even if you choose to overwrite the version during activation. See Creating Process Roles in *Using Processes in Oracle Integration Generation 2*.
QuickStart Apps	We've added new personalization options you can make available to users of your QuickStart Apps: • Let users select a different form and associated presentation for a human task activity or a start form event, from those defined in the process. Also, you can let users edit and customize certain form properties. • Let users change activity names in the QuickStart App. • Use the new simple expression editor for certain properties associated with Submit/Approve and Notification tasks. See Decide What Settings Users Can Customize and Customize the QuickStart App in *Using Processes in Oracle Integration Generation 2*.

New Integration Insight Features

Applies only to Oracle Integration Classic (user-managed).

Feature	Description
Console purge support	You can now purge metrics and events data for all consoles or an individual console, selecting to purge all data or only data from a specified number of days or weeks. See Working with the Consoles Page and Working with Preconfigured and Custom Dashboards.

Feature	Description
New Insight videos	New videos are available on the Videos page on the Oracle Help Center to provide visual instructions for using Insight to complete the tasks required to generate dashboards where you can monitor your business processes: • Create a Connection • Create a Model • Define a Milestone • Reinitialize the Unique Identifier • Map a Milestone to an Integration • Define Extraction Criteria for the Unique Identifier
UI and usability enhancements	The Business Transactions dashboard and the Business Transaction Details page have been updated to improve your experience. See Working with the Business Transactions Dashboard and Business Transaction Details in *Using Integration Insight in Oracle Integration*.
Consolidated documentation in one publication	The Insight documentation that was published in four separate publications is consolidated into a single guide: *Using Integration Insight in Oracle Integration*
Support for new Integrations actions	You can now map milestones to these Integrations actions: • **Assign** • **Error Hospital** • **Fault Return** • **Raise Error** • **Stop** See Supported Integrations Features in *Using Integration Insight in Oracle Integration*.
New custom dashboard chart types	You can now create custom dashboards using the **Line** and **Scatter** chart types. See Creating Custom Dashboards in *Using Integration Insight in Oracle Integration*.
New dashboard filter setting	The Preferences page has been removed, and the setting **Use as Default for all Consoles** has been moved to the dashboard Filter settings. See Filtering Dashboards in *Using Integration Insight in Oracle Integration*.

New Visual Builder Features

Feature	Description
Redesigned user interface and application architecture for building visual applications	The application designer now supports creating richer user interfaces by providing access to a broader set of Oracle JET UI components, direct access to the source code of your page, and a more robust visual development environment. The tool now provides greater flexibility for creating custom user interfaces and adding richer behavior. The redesigned application architecture enables easier access to external sources of data, visual definition of business logic flows, and more refined control over the user interface functionality. The Home page for visual applications using the new architecture is now the default for Visual Builder.
Upgrade to Oracle JET 5.1	The Visual Builder generated applications now use Oracle JET 5.1 libraries and components.
Improvements to the Page Designer	The following features were added to the Page Designer for visual applications: • Live and Code toggles replaced with a three-state toggle Live / Design / Code • Device selection dropdown in toolbar of mobile page designer redesigned with separate Landscape / Portrait toggles • Drag and drop support in the canvas is now based on HTML5 • A new Icon component was added to the Component Palette (a span with icon class) • Icon gallery items have been updated to add labels and improve spacing for the various preview sizes. • JET text components now support virtual keyboards so on mobile devices an appropriate keyboard shows up. This has been added to the Property Inspector for appropriate text fields and defaulted correctly by component type. • New components can now be added to the Component Palette from the Component Exchange and added to pages like other components. • The Train (`oj-train`) and Switcher (`oj-switcher`) components and Bar Layout Container were added to the Components palette. • The Bar layout container was added as a layout option for pages, and components can be positioned into the Start, Middle and End areas of the container. It is now possible to switch between any of the layout options. • A popup menu for components on the canvas and in the Page Structure view enables you to surround the component with `oj-bind-if`, `oj-bind-for-each`, or `oj-defer` components, or a Flex container. • Masonry Layout and Masonry Tile layout components are now supported. Drop feedback is available for positions between existing tiles, and the size, layout and order of tiles can be configured. • The following components were added to the Components Palette: Masonry Layout, Masonry Tile, Navigation List, Conveyor Belt, Film Strip, Messages, and Password Input field. • The Component Palette now contains a Picker category containing Inline Data Picker, Inline Date Time Picker, Color Palette and Color Spectrum components. • A Quick Start was added in the Events tab for table components to create action chains triggered by first-selected-row events. • The filterCriterion parameter replaces filterCriteria in the Add Data Quick Start.

Feature	Description
Improvements in the Page Structure view	The following improvements were made to the Page Structure view for visual applications: • Components can now be dragged from the palette into the Page Structure view, from the Page Structure view onto the canvas, and moved within the Page Structure view • The Page Structure view now displays more details about components • In the Page Structure view, slots are visible as nodes that can be drop targets. You can use the Show Slots toggle in the Page Structure to show and hide the nodes. • You can now delete or surround elements using a popup menu in the Page Structure view.
Improvements to Property Inspector	The following improvements were made to the Property Inspector for visual applications: • In the Property Inspector, an icon chooser was added for the following components: menus, tabs, radio buttons, comboboxes, selects and checkboxes • In the Property Inspector, the Slots section of some components now contains a (+) action for adding a new component directly into the slot: – Mobile Page Template component - slots Left Side (startControl) and Right Side (endControl) offer Button and Menu – Button component - slots startIcon and endIcon offer Icon and Image – many JET components - contextMenu slot offers Menu • Variable selection popup and expression editor for components in List View and Table components now include `$current` object with its attributes. Child component's event mapper in List View now includes `$current` object with its attributes, including `$current.key`. `$current.key` is passed to action chains as key parameter for components inside List View and Table components. List View and Table components now set the single selection mode on selection event quick start, if not set previously. • `oj-vb-list-item` component (list row CCA) now has a general Property Inspector tab with customizers for its attributes • Datetime, Date and Time field components now have formatting options

Feature	Description
Improvements to Quick Starts	The following improvements were made to the Quick Starts in visual applications: • pages generated by Quick Starts now include flow name as the prefix of the page name (for example, main-edit-bo1, or item1-edit-bo1). • new icons on Quick Starts tab in Property Inspector • Chart Quick Starts now generate data bindings with the JET 5.1.0 Chart Data Provider • The Field selection step in Quick Starts now includes a filter field to help locate fields in the endpoint structure panel. • Rich-type related metadata from Swagger is taken into account when creating field components in Quick Starts. With the Rich types implemented in business objects, we now generate proper components on our pages and honor the format attribute of the selected fields. Examples of the new fields include email, URL, phone, and percentage. This also includes showing proper icon in the endpoint structure. Numeric fields in business objects get additional hints for minimum, maximum and few others such as scale and precision. Generated components take those hints into account. String fields in business objects get additional hints for minLength, maxLength and pattern. When generated into form pages as a string input component, these should be honored and translated into proper component's attributes and validators. • In the page–related Quick Starts, nested objects for Create/Detail pages implemented by allowing users to select items from inside an array. When finished the page will have an initial single empty item in the array in the record variable and generated UI components will bind to that single item. • In the Edit Page Quick Start, a warning is displayed when a read-only field is selected, and conditional update based on ETag + If-Match has been added into the Edit pages generated by the Quick Start.
Improvements to Business Rules editor	The following improvements were made to the Business Rules editor: • Field-level triggers are now supported, for actions triggered by changes to a field. • The criteria builder now supports reference fields when building conditions. Fields from the references of the references, recursively, are also now supported.
Support for uploading single files	You can now upload individual files from the Artifact Browser and create folders using the import dialog box.
Simplified process for importing and exporting resources and applications	The process for importing and exporting visual application archives and resources are now the same. When exporting a visual application, you can now choose if you want to include the data in custom business objects in the ZIP archive. You can now easily expand and modify application archives locally and create a new archive that you can import. When importing an archive without business object data, the business objects are created but there are no records. You can import ZIP and OVB application archives.
Reorganized structure in Artifact Browser	The logical view of web and mobile applications in the Artifact Browser has been reorganized to simplify locating and creating artifacts.
Improved options for service connections	In visual applications, the Settings dialog box provides details on the URL of the Services Catalog and the authentication used to access the catalog. Web service connections can be marked as server side only connections by selecting the Server Only Connections check box on the service tab. You can now generate “Bearer” type access tokens that can be used with Oracle Cloud Account, User Assertion OAuth 2.0, Client Credentials OAuth 2.0, and Resource Owner OAuth 2.0 authentication to access Catalog and Business Object APIs from outside Visual Builder.

Feature	Description
Improvements to Processes integration	The following improvements were made for integrating visual applications with Processes: • A new Perform Task Action trigger was added to perform actions on a task • A new Detail Page Quick Start was added for defining detail pages for process objects • An Add Task Actions Quick Start was added for tables/lists of process tasks. The Quick Start adds controls to the page that allow actions to be performed on the task that's selected in the collection. • Added support for starting a process based on a Form Start event. • Enhanced functionality so that users can start processes accepting complex parameters. The UI for mapping complex parameters for actions and triggers has been improved. • The Processes pane in the Artifact Browser now contains menu items to open the Processes design time (Composer) and runtime (Workspace) pages.
Improvements to Audits window	The following improvements were made to the Audits window for visual applications: • Filtering is now possible by text and type/severity • A progress bar was added to indicate scanning progress
Improved support for translations	The following improvements were made to the support for translations: • Clicking the translation icon in the Property Inspector opens a popup dialog where you can specify a description for strings and the key. • A Translations tab was added to the Settings page for app artifacts, flow artifacts and pages to create and delete translations bundles. • The Property Inspector for visual applications now includes a button for generating keys for strings and including them in translation bundles. The file format for translations has been updated to allow adding metadata to the keys in the translation bundle. • The Translations tab in the Settings window can be used for uploading and downloading resource bundles. The default format for resource bundles is now ARB (Application Resource Bundle) to facilitate translating resources using various tools.
Improvements to the Variables and Types editor	The following improvements were made to the Variables and Types editors: • The UI was modified to make the Edit Type from Endpoint more discoverable. • Improved the drop down for selecting types to provide help hints on the data providers.
Support for application templates	If there are any application templates available in the Component Exchange associated with your instance, you will now see an option to choose an application template when you create a new visual application.
Component Exchange Integration	Service administrators can now set the location of a Component Exchange instance in the Tenant Settings.

May 2018

New Common Features

Feature	Description
Oracle Integration managed by Oracle Does not apply to Oracle Integration Classic (user-managed).	Oracle Integration managed by Oracle is a new service offering that provides a unified platform in which you can automate processes, integrate applications, analyze results, and visually build custom enterprise applications. You install Oracle Integration, but Oracle manages your service instance, including performing backups, upgrades, patching, scaling in/out, database administration, and more. This enables you to concentrate fully on designing and deploying your applications. See What Is Oracle Integration in *Administering Oracle Integration Classic*.
Support for Oracle Integration managed by Oracle on Oracle Cloud Infrastructure Does not apply to Oracle Integration Classic (user-managed).	When Oracle manages Oracle Integration, it runs on Oracle Cloud Infrastructure. Oracle Cloud Infrastructure combines the elasticity and utility of public cloud with the granular control, security, and predictability of on-premises infrastructure to deliver high-performance, high availability, and cost-effective infrastructure services. Oracle Cloud Infrastructure is an enterprise cloud, capable of running traditional multi-tiered enterprise applications, high-performance workloads, and modern serverless and container-based architectures. See Oracle Cloud Infrastructure and What Is Oracle Integration in *Administering Oracle Integration Classic*.

New Integration Features

Feature	Description
On-premises connectivity agent	The next generation connectivity agent with a significantly smaller foot print of less than 150 MB is delivered with Oracle Integration. This enables you to build integrations that can exchange messages between Oracle Integration and on-premises assets behind a fire wall. The connectivity agent is certified to run on JDK 8 and 9. The agent is certified to run on OEL 6 and 7, RHEL 6 and 7, SUSE Enterprise 12, and Windows Standard 2016. This next-generation connectivity agent eliminates the need for you to manually upgrade the agent whenever Oracle Integration is upgraded. The agent upgrade occurs automatically whenever Oracle Integration is upgraded/patched. With a significant reduction in foot print, the download and installation of the connectivity agent are completed in less than a few minutes. See About Agents and Integrations Between On-Premises Applications and Oracle Integration and Downloading and Running the Connectivity Agent Installer in *Using Integrations in Oracle Integration Generation 2*.

Feature	Description
Oracle NetSuite Adapter - Basic search and pagination	You can define a search criteria based on the fields of a selected business object. See Oracle NetSuite Adapter Capabilities in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2*.
FTP Adapter - GZIP support	With the support of this feature, your customers/partners can upload files to sFTP/FTP servers as GZIP files. The FTP Adapter can download, uncompress the GZIP files, and stage them for downstream processing. See FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2*.
FTP Adapter - Read file operation file size support	The FTP Adapter now supports reading files up to 10 MB in size with the read file operation. With this capability, additional modeling and processing activities needed for downloading and staging the files and using a stage file action for reading the file in segments are eliminated for processing files up to 10 MB in size. See What You See on the FTP Adapter Invoke Operations Properties Page in *Using the FTP Adapter with Oracle Integration Generation 2*.
Oracle Commerce Cloud Adapter - New business objects	New trigger request and invoke operation business objects are provided. For invoke connections, files, audiences, organization requests, and bulk import/export process operation business objects are provided. See Adding the Oracle Commerce Cloud Adapter Connection to an Integration in *Using the Oracle Commerce Cloud Adapter with Oracle Integration Generation 2*.
REST Adapter - OAuth 1.0 One Legged Authentication	The OAuth 1.0 One Legged Authentication security policy enables web sites or applications (consumers) to access protected resources from a web service (service provider) through an API without requiring you to disclose your service provider credentials to consumers. An Oracle NetSuite application, for example, protects the RESTlets using OAuth 1.0a token-based authentication. You can use the REST Adapter to invoke Oracle NetSuite REST APIs using a connection configured with this policy. See How Do I Configure the REST Adapter to Consume a REST API Protected with OAuth 1.0a One-Legged Authentication in *Using the REST Adapter with Oracle Integration Generation 2*.

Feature	Description
REST Adapter and SOAP Adapter - Size enforcements on messages and attachments	The REST Adapter and SOAP Adapter enforce new size limits on messages and attachments. For the REST Adapter, there are multipart request and responses in the inbound and outbound directions, respectively. The size limit on attachments is applicable in both the inbound and outbound directions, getting the response from the external service. For example, the REST Adapter trigger cannot take more than 1 GB of attachments combined. Assume there are two multipart attachments that are 500 MB in size. Only two attachments can be sent in that request as the inbound limit is 1 GB. This is the same with outbound responses, if an external service is sending two multipart attachments of 500 MB in size. Only two attachments can be consumed because the outbound response limit is 1 GB for the total number of attachments. The SOAP Adapter can handle an incoming unstructured payload (MTOM) of up to 512 MB in size. See SOAP Adapter Capabilities in *Using the SOAP Adapter with Oracle Integration Generation 2*.
Describing data definitions using a set of XML schema definitions in the REST Adapter, FTP Adapter, and File Adapter (complex schema support)	Do you have the need to describe the data structure for an XML-formatted message/file using a set of XML schema definitions (XSD)? Starting with this release, the FTP Adapter, File Adapter, and REST Adapter now allow for an archive (ZIP) of XML schema definitions to be uploaded to describe the data structure. The FTP Adapter and File Adapter provide this capability for read and write operations. The REST Adapter provides this support for describing the data structure when the application/XML content type is selected for request and/or response messages in both trigger and invoke connections. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2*, FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2*, and File Adapter Capabilities in *Using the File Adapter with Oracle Integration Generation 2*.
Describing data definitions using a sample XML document in the REST Adapter, FTP Adapter, and File Adapter	The REST Adapter, FTP Adapter, and File Adapter now allow you to upload sample XML documents to provide data definitions for XML-formatted messages/files. The FTP Adapter and File Adapter provide this capability for read and write operations on XML-formatted files. The REST Adapter provides support for describing the data structure when the application/XML content type is selected for request and/or response messages in both trigger and invoke connections. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2*, FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2*, and File Adapter Capabilities in *Using the File Adapter with Oracle Integration Generation 2*.

Feature	Description
Describing data definitions using a sample JSON document in the REST Adapter, FTP Adapter, and File Adapter	The REST Adapter, FTP Adapter, and File Adapter now support for allowing customers to upload sample JSON documents for describing the data definitions. The FTP Adapter and File Adapter provide this capability for read and write operations for JSON-formatted files. The REST Adapter provides this support for furnishing the data definition when the application/JSON content type is selected for request and/or response messages in both trigger and invoke connections. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2*, FTP Adapter Capabilities in *Using the FTP Adapter with Oracle Integration Generation 2*, and File Adapter Capabilities in *Using the File Adapter with Oracle Integration Generation 2*.
Oracle Siebel Adapter IP2017 certification	Oracle Siebel Adapter is certified on IP2017. See the Oracle Integration Adapters Certification matrix.

Feature	Description
Oracle Database Adapter - Bulk data import support for insert and update operations	Oracle Integration is delivering a much-sought after feature - the Oracle Database Adapter allows integration developers to declaratively define an insert-only operation and update-only operation on one or more tables. This new feature supports the sending of multiple records (for example, multiple employees details can be inserted/updated in a single request). It also supports relations (for example, multiple employees within one department can be inserted/updated in a single request). The Oracle Database Adapter enables Oracle Integration to send 10 MB of data to an Oracle database in a single request. The Oracle Database Adapter now enables you to declaratively construct your complex DML statements such as insert and update in a few clicks using a graphical editor. The editor supports only insert and update operations. The Adapter Endpoint Configuration Wizard guides you to select schemas, tables, and relationships to construct the data structure that you want to send to the database. The wizard also helps you to filter the attributes from the selected data structure to fine tune the data you may want to send to the database instead of sending all attributes. Another salient aspect of this feature is that the adapter can accept a collection of records to send to the database as a single unit of work. The following use cases can be implemented using this new capability: • Bulk data insert – You can perform mass inserts. For example, up to 10 MB in the target application's database in a single transaction in conjunction with orchestration and mapper capabilities. You can model integrations such as the synchronization of customer data from a CSV file to an Oracle database to use this capability. • Bulk data update - You can perform mass updates For example, updates of employee benefits from Oracle HCM Cloud to an on-premises database up to 10 MB in the target application's database system in a single transaction in conjunction with orchestration and mapper capabilities. See Oracle Database Adapter Capabilities in *Using the Oracle Database Adapter with Oracle Integration Generation 2*.
Oracle Advanced Queuing (AQ) Adapter and Oracle WebLogic JMS Adapter - Support for size enforcement and rejection handling	Support is provided for processing payloads up to 10 MB in size. See Oracle Advanced Queuing (AQ) Adapter Capabilities in *Using the Oracle Advanced Queuing (AQ) Adapter with Oracle Integration Generation 2*. See Oracle WebLogic JMS Adapter Capabilities in *Using the Oracle WebLogic JMS Adapter with Oracle Integration Generation 2*.

Feature	Description
Oracle Service Cloud (RightNow) Adapter - Upload and download attachment support	You can download a file as an attachment from Oracle RightNow Cloud to Oracle Integration. After the file is downloaded, the Oracle Service Cloud (RightNow) Adapter exposes the file reference in the mapper for use by other adapters for further processing. Similarly, the Oracle Service Cloud (RightNow) Adapter provides support for uploading a file as an attachment to Oracle RightNow Cloud. An integration flow can be modeled to upload a file as an attachment to an object in Oracle RightNow Cloud. See Oracle RightNow Cloud Capabilities in *Using the Oracle Service Cloud (RightNow) Adapter with Oracle Integration Generation 2*.
Oracle Service Cloud (RightNow) Adapter - Syntactic validation of ROQL-based tabular queries (QueryCSV)	Syntactic validation of ROQL-based tabular queries (QueryCSV) is done automatically to catch any syntactic errors.
SOAP Adapter - Attachment support	The SOAP Adapter now supports sending attachments as part of the payload to an external SOAP API and receiving attachments as part of the responses received from the SOAP APIs. The SOAP Adapter automatically discovers and supports attachments found in external SOAP APIs based on the Message Transmission Optimization Mechanism (MTOM) standard defined by the World Wide Web Consortium (W3C). Use cases such as the following can be implemented using the new capabilities. You can use the **Send Attachments in Request** feature in the SOAP Adapter to stream an employee's data file from Oracle Integration to UCM in Oracle HCM Cloud prior to submitting a request to Oracle HCM Cloud by invoking the Oracle HCM data loader service. Similarly, you can use the **Accept Attachments in Response** option in the SOAP Adapter to let the SOAP Adapter stream the Business Intelligence Publisher report available in UCM to Oracle Integration, which can be accessed and processed by downstream actions within that integration flow. See SOAP Adapter Capabilities in *Using the SOAP Adapter with Oracle Integration Generation 2*.
SOAP Adapter - Support for uploading a ZIP file with multiple WSDLs and schemas	The SOAP Adapter provides support for uploading complex SOAP interfaces. The WSDL archive can consist of WSDLs along with any number of artifacts such as WSDLs and schemas referenced within. The archive can be uploaded through the SOAP connection. You can use this connection for invoking an external SOAP operation defined in the WSDL archive. Similarly, you can use this connection as a trigger for implementing an integration supporting one of the operations defined in the WSDL archive. For example, you can use this feature to implement integrations that expose SOAP endpoints using OAGIS-based object definitions. See SOAP Adapter Capabilities in *Using the SOAP Adapter with Oracle Integration Generation 2*.

Feature	Description
Oracle HCM Cloud Adapter - HCM Atom feed support	The Oracle HCM Cloud Adapter supports subscribing to the HCM Atom feed. Atom feeds enable you to track changes made to feed-enabled resources in Oracle Global Human Resources Cloud. See Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*.
Oracle HCM Cloud Adapter - HCM data extracts support	The HCM data extracts feature in Oracle HCM Cloud is a flexible tool for generating data files and reports in Oracle HCM Cloud. The Oracle HCM Cloud Adapter can be configured to automatically download HCM extracts from Oracle HCM Cloud to Oracle Integration and have them be accessible for downstream processing. For example, you can schedule to run the benefits data extract in Oracle HCM Cloud and have a scheduled orchestrated integration built to automatically download the extracts to Oracle Integration and send all or partial information to downstream applications. See Oracle HCM Cloud Adapter Capabilities in *Using the Oracle HCM Cloud Adapter with Oracle Integration Generation 2*.
New adapter - Oracle Enterprise Performance Management Cloud Adapter	The Oracle Enterprise Performance Management Cloud Adapter enables you to connect to Oracle Enterprise Performance Management Cloud. This enables organizations to: • Simplify the close process in Oracle Financial Consolidation and Close Cloud and Oracle Tax Reporting Cloud • Streamline the close process through automation • Leverage first-in-class consolidation and tax reporting functionality See Oracle Enterprise Performance Management Cloud Adapter Capabilities in *Using the Oracle Enterprise Performance Management Cloud Adapter with Oracle Integration Generation 2*.
New adapter - Oracle Database Cloud Service Adapter	The Oracle Database Cloud Service Adapter facilitates integration with Oracle Database Cloud Service using the connectivity agent. See Oracle Database Cloud Service Adapter Capabilities in *Using the Oracle Database Cloud Service Adapter with Oracle Integration Generation 2*.
Oracle Utilities Adapter - trigger-based support for manual upload of WSDLs for a particular service	You can also manually upload a WSDL in the trigger (inbound) direction for a specific service instead of parsing the WSDL from the HTTP-based service catalog WSDL specified in the Connections page. This option enables you to upload a WSDL for a particular service in which element-to-element mappings can be performed to deal with `anytype` elements. See Oracle Utilities Adapter Capabilities in *Using the Oracle Utilities Adapter with Oracle Integration Generation 2*.

Feature	Description
Workday Adapter	Workday is a SAAS-based human capital management system that also supports financial management systems for organizations. Workday can be the one system for all your organizational activities such as recruiting, payroll, finance, inventory, and so on. See Getting Started with the Workday Adapter in *Using the Workday Adapter with Oracle Integration Generation 2*.
SAP SuccessFactors Adapter - inbound events support	Trigger (inbound) support is provided for receiving event notifications from SuccessFactors. See SuccessFactors Adapter Capabilities in *Using the SAP SuccessFactors Adapter with Oracle Integration Generation 2*.
SAP Concur Adapter - API option support	The SAP Concur Adapter provides support for Concur's Extract API and Payment Batch API. Concur's Extract Web Service enables you to request the extract of available data objects, such as approved expense reports, travel requests, and payment requests. Concur's Payment Batch API enables you to manage payment batches and collect their batch files. See Configuring Concur Adapter Invoke API Option Properties in *Using the SAP Concur Adapter with Oracle Integration Generation 2Using the SAP Concur Adapter with Oracle Integration Generation 2*.

New Process Features

Feature	Description
Activation	We've enhanced the process application activation wizard: • In addition to SOAP integrations, you can now configure REST integrations during activation. Note that you must configure OIC integrations in the Integrations feature. • If a process application doesn't use any REST or SOAP integrations, the Customization step is skipped and you proceed directly to validation. • If you opt to use credentials configured during design time, they are automatically populated for you during runtime activation. Otherwise, you can create separate credentials for runtime. See Activating Applications in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Email notifications	Help end users more easily respond to tasks by customizing their email notifications. In addition to templates and actions, you can now specify: • When emails are sent (upon assignment, completion, or error). You can even specify a different template and subject for each status. • How forms associated with tasks are included as attachments (as images, PDF files, inline, or not included). • Whether documents or other files previously attached to tasks are included as email attachments. See Configuring Email Notifications in *Using Processes in Oracle Integration Generation 2*.
Forms	Web form enhancements include: • **Execute actions on columns:** We've added new actions that let you hide or show table columns when an event occurs. In addition, we've added a new property in the Properties pane that lets you hide table columns. • **Execute an action on all rows:** We've added new event actions that let you: – Retrieve a control's value and apply it to each row of a table or repeatable section (For Each). See Configuring Tables in *Using Processes in Oracle Integration Generation 2*. – Copy values from one column to another for each row of a table or copy values from one control to another for each row of a repeatable section (Current Iteration Row). See Configuring Tables in *Using Processes in Oracle Integration Generation 2*. • **Change presentations dynamically:** A new action lets you dynamically switch a form's presentation, with the option of retaining the modified payload. For example, in a travel request application, change the presentation and available controls based on whether the user selects a one-way or roundtrip flight radio button. See Changing Form Presentations Dynamically in *Using Processes in Oracle Integration Generation 2*. • **Resize uploaded images:** You can now control an image's height and width on the Styling tab.
Data association process activity	A new activity, called **Data Mapper**, has been added to the structured process editor under System elements. Its sole purpose is to map data. Use it to assign values to data objects when other activities that use data association (such as human or service tasks) are not needed at that point in the process. Or include a Data Mapper activity to initialize variables for the entire process. This activity can have output only. See Working with Data Mapper Elements in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Auto mapping	Auto mapping is available in both structured and dynamic process editors. Click the **Auto Mapping** icon in the Data Association window and Process makes its best guess on data values to map, based on names and data types. You may need to make adjustments, but auto mapping works well for straightforward use cases.
Custom properties for structured process activities	You can now assign values to process activities for use in runtime. Begin by defining properties and assigning them fixed values in design time, then use a process metadata REST API endpoint in runtime to access the assigned values. See Assigning Custom Properties to Structured Process Activities in *Using Processes in Oracle Integration Generation 2*.
Test activate dynamic processes	You can now test your dynamic processes, without needing to activating them each time to see changes. See Test Activate Your Application in *Using Processes in Oracle Integration Generation 2*.
Dynamic process patterns	We've added new process patterns to get you quickly up and started creating dynamic processes. You'll see the available patterns when you add a dynamic process to a process application. See Creating a Dynamic Process in *Using Processes in Oracle Integration Generation 2*.
Customize JSON before importing business objects	You can now edit generated JSON before you import business objects from JSON. This allows you to make any adjustments needed to the best guesses made during generation but before import. See Importing a Business Object from JSON in *Using Processes in Oracle Integration Generation 2*.
REST APIs	New API options were added for dynamic processes. For example, create a new dynamic process instance after first fetching deployed dynamic process definitions. You can create a new dynamic process instance using either the id or key from the response. See the **What's New** topic under **Get Started** in Oracle Integration REST API.

January 2018

New Common Features

Feature	Description
Quick Start instance provisioning	You can provision an Oracle Integration instance with a single click. This instance automatically includes an Oracle Database Classic Cloud Service instance, but does not include an Oracle Cloud Infrastructure Object Storage Classic container instance. This instance is useful for testing integrations. See Creating a Quick Start Instance with a Single Click of *Administering Oracle Integration Classic*.

New Integration Features

Feature	Description
Integration activation and deployment phases	When you activate an integration, the banner message tells you that it is submitted for activation and to click refresh if activation status is in progress. When you click the refresh icon, the **Active** icon is displayed in green, if integration deployment is successful. See Activating an Integration of *Using Integrations in Oracle Integration Generation 2*.
Oracle Field Service Cloud Adapter — Business object and operations enhancements	A new business object and several operations have been added. See Configuring Oracle Field Service Adapter Invoke Operations Properties of *Using the Oracle Field Service Cloud Adapter with Oracle Integration Generation 2*.
Batch size configuration in the MySQL Adapter and DB2 Adapter	You can set the batch size under **Advanced Options** when configuring the MySQL Adapter and DB2 Adapter in the Adapter Endpoint Configuration Wizard. See What You See on the Trigger Polling Strategy and Options Page of *Using the MySQL Adapter with Oracle Integration Generation 2* and What You See on the Trigger Polling Strategy and Options Page of *Using the IBM DB2 Adapter with Oracle Integration Generation 2*.

New Integration Insight Features

Applies only to Oracle Integration Classic (user-managed).

Feature	Description
End-to-end business process visibility enhancements	It's now easier to get visibility into business processes that are implemented across more than one integration. See Event Correlation Across Multiple Integrations and Adding Additional Unique Instance Identifier Associations in *Using Integration Insight in Oracle Integration*. When you import a model from a previous version of Insight that has more than one unique instance identifier mapping, Insight either uses the predefined extraction criteria to associate the identifier to an existing milestone or creates a new milestone and associates the identifier to it. See What Happens When You Import a Model with Multiple Unique Instance Identifier Mappings in *Using Integration Insight in Oracle Integration*.

December 2017

New Common Features

Feature	Description
Instance provisioning with the Oracle Cloud Stack Template	You can create an Oracle Integration instance with the Oracle Cloud Stack template. A template consists of a set of services that are provisioned together (for example, Oracle Integration, Oracle Database Classic Cloud Service, and the Oracle Cloud Infrastructure Object Storage Classic container). A stack is an actual provisioned instance of a template. This option enables you to automatically provision an Oracle Database Classic Cloud Service and the Oracle Cloud Infrastructure Object Storage Classic container along with Oracle Integration during stack template provisioning. See Creating an Instance with the Oracle Cloud Stack Template in *Administering Oracle Integration Classic*.
REST API	Functions in *REST API for Oracle Integration* that are related to instance management and provisioning have been moved to a separate document for easier reference. You can now access the following REST API documents in Oracle Integration: • REST API for Oracle Integration • REST API for Managing Oracle Integration Classic The *REST API for Oracle Integration* now displays functions by feature. Functions are grouped under Integrations, Process, and Integration Insight.

New Integration Features

Feature	Description
REST Adapter — Support for dynamic REST endpoints	The REST Adapter enables you to dynamically change the (invoke) outbound endpoint configuration. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2*.
FTP Adapter — Self-diagnosing sFTP server connectivity issues	You can self-diagnose connectivity issues while integrating with external sFTP servers. See Testing the Connection in *Using the FTP Adapter with Oracle Integration Generation 2*.
Oracle Service Cloud (RightNow) Adapter — Oracle RightNow Cloud August 2017 certification	The Oracle Service Cloud (RightNow) Adapter is certified on the Oracle RightNow Cloud August 2017 release. See Obtaining the Oracle RightNow Cloud WSDL in *Using the Oracle Service Cloud (RightNow) Adapter with Oracle Integration Generation 2*.
Oracle NetSuite Adapter — Support for custom attributes	While invoking the Oracle NetSuite Adapter to create, retrieve, or update any record in the Oracle NetSuite application, you can map values for the custom field types exposed by that particular business object in the mapper. See Oracle NetSuite Adapter Capabilities and Mapping Values for Custom Fields in *Using the Oracle NetSuite Adapter with Oracle Integration Generation 2*.
Enabling or Disabling Tracing on Active Integrations	You can enable or disable tracing on activated integrations without re-activating them. You can perform these actions on individual integrations or globally on all integrations. See Enabling or Disabling Tracing on Active Integrations in *Using Integrations in Oracle Integration Generation 2*.
Diagnostic framework enhancements	Enhancements have been made to the collection of incident diagnostics: • Incident creation enhancements for test connection failure, migration failure, and database threshold levels being reached. • Custom dump creation enhancements inside the incident folders for generated runtime artifacts and diagnostic logs. • Use of diagnostic framework log detection features to include additional error codes during incident creation. • Enhancements in the execution of custom dumps.

Feature	Description
Navigational enhancements in orchestrated integrations and the activation messages of integrations	The following enhancements are provided: • Ability to create and edit connections from within the integration canvas of an orchestrated integration. • Ability to view expanded integration activation messages in the banner of the Integrations page that show the “submit now” URL and Tracking Runs page link for scheduled integrations and the same endpoint trigger URL and Tracking page link for unscheduled integrations. See Activating an Integration and Defining Inbound Triggers and Outbound Invokes in *Using Integrations in Oracle Integration Generation 2*.
Repositioning of stage file actions	You can reposition a stage file action (except for the Read File in Segments operation) in an orchestrated integration. See Creating an Orchestrated Integration in *Using Integrations in Oracle Integration Generation 2*.

New Process Features

Feature	Description
Using integrations in processes	Working with previously created integrations is now even easier in the process editor. You can specify which active integrations, connectors, and web services you want to show in the palette, so developers just drag and drop them and they’re configured for use. See Using Integrations in Processes in *Using Processes in Oracle Integration Generation 2*.
Web form enhancements	The forms editor includes the following enhancements: • **Rich Text Editor control:** Add a rich text editor control into web forms to allow users to enter various types of content, like multimedia, web links, formatted texts, and more. See Configuring Rich Text Editor Controls in *Using Processes in Oracle Integration Generation 2*. • **Outcome management:** You can now specify custom outcomes (such as Approve, Reject, On Hold, and so on) for a form using events. In addition, you can specify conditions to prevent users from submitting a form. See Specifying Custom Outcomes for Forms in *Using Processes in Oracle Integration Generation 2*. • **Localization:** Use the new Translate button in the forms editor to supply localized strings for form controls. In runtime, users can then view a localized version of the form by choosing their preferred language. See Localizing Web Forms in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Dynamic process and connector support in QuickStart Apps	You can now allow users to customize settings related to a dynamic process or connector within a QuickStart App. See Decide What Settings Users Can Customize in *Using Processes in Oracle Integration Generation 2*.

New Integration Insight Features

Applies only to Oracle Integration Classic (user-managed).

Feature	Description
Map milestones to the start or end of Invoke actions in integrations	When you map a milestone to an Invoke action, you can now choose whether the milestone is considered passed on entry or on exit of the Invoke action. This also affects when values are extracted for associated identifiers and indicators. See Mapping a Milestone to an Integration in *Using Integration Insight in Oracle Integration*.
Force model deactivation and deletion	You can now force the deactivation and deletion of models that encounter errors during these actions due to changes to the Integrations instance to which milestones are mapped. See Deactivating a Model and Deleting a Model in *Using Integration Insight in Oracle Integration*.
Create a draft of an activated model in the Integrations feature	A model must be in a **Draft** state before mapping to it. You can now create a draft of an activated model in the Integrations feature as you map to it. See Mapping a Milestone to an Integration in *Using Integration Insight in Oracle Integration*.

New Oracle Cloud Infrastructure Streaming Service Adapter Features

Applies only to Oracle Integration Classic (user-managed).

Feature	Description
GoldenGate Integration	Oracle GoldenGate is a comprehensive software package for real-time data integration and replication in heterogeneous IT environments. The product set enables high availability solutions, real-time data integration, transactional change data capture, data replication, transformations, and verification between operational and analytical enterprise systems. See Understanding GoldenGate Integration in *User's Guide*.

Feature	Description
New Spatial Patterns	New spatial patterns like Spatial Speed, Geo Code, Interaction Single Stream, Interaction Two Stream, Proximity patters and many more. These patterns provide advanced capabilities like analyzing the speed of a moving object, obtain geo code of a location, and so on See Spatial Patterns in *User's Guide*.
Query Group Stage	A query group stage lets you do aggregations on multiple group bys and multiple windows. It is a collection of groups, where each of the group has its own window. See Working with Query Group Stage in *User's Guide*.

October 2017

New Integration Features

Feature	Description
REST Adapter Enhancements	• REST Adapter API Key-Based Authentication security policy This policy enables you to provide secure access to APIs. The resource owner generates an API key for a given client application with required authorization and then shares this generated API key. The client application is then required to pass this API key with the request for accessing protected resources. See Integrating APIs with API Key-Based Authentication in *Using the REST Adapter with Oracle Integration Generation 2*. • Support for application/octet-stream MIME Attachment (Raw) Payloads Support for Raw binary attachments in payloads has been added. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2*. • Support for simple execution of co-located integrations. Co-located integrations are in the same POD or domain. See REST Adapter Capabilities in *Using the REST Adapter with Oracle Integration Generation 2*. • When you activate an integration with a REST trigger, at the top of the Integrations page an endpoint metadata URL is provided with which you can inspect the shape of the API. This metadata includes additional information about the endpoint description, the endpoint URI and the swagger URI. Integration **Echo (1.0)** was activated successfully. You can access it via http://[illegible].com:7003/ic/api/integration/v1/flows/rest/ECHO/1.0/metadata. • Support is provided for array types while sampling a JSON payload in the JSON translator.

Feature	Description
Invoking co-located SOAP endpoints	Oracle Integration can determine if an outbound SOAP endpoint is invoked by an integration that is local (co-located) or remote to Oracle Integration. Co-located means the integrations are running on the same host instance or in the same domain. If the outbound endpoint is co-located, the endpoint is invoked using an optimized HTTP request using a JSON Web Token (JWT) token for authorization. See SOAP Adapter Concepts in *Using the SOAP Adapter with Oracle Integration Generation 2*.
Oracle Field Service Adapter enhancements	There are several enhancements to the Oracle Field Service Adapter: • When a new custom property is added in Oracle Field Service Cloud, you can view it in the mapper for an existing integration by clicking the Oracle Field Service Adapter in an integration and selecting **Regenerate Artifact**. • New business objects and events have been added for selection to the Operations page and the Events page of the Adapter Endpoint Configuration Wizard. See Oracle Field Service Adapter Capabilities and Adding the Oracle Field Service Cloud Adapter Connection to an Integration in *Using the Oracle Field Service Cloud Adapter with Oracle Integration Generation 2*.

Feature	Description
New functions available in the Expression Builder for integrations	The following functions that were previously available only in the mapper are now available in the Expression Builder. The integration patterns that support these functions are also listed. For orchestrated integrations, you can use these functions in assign, logger, notification, filter, and switch activities. • Advanced functions – `generate-guid` (in orchestrated integrations and template integrations) – `lookup-xml` (in orchestrated integrations and template integrations) – `parseEscapedXML` (in orchestrated integrations only) • Mathematical functions – `square-root` (in orchestrated integrations and template integrations) • String functions – `compare-ignore-case` (in orchestrated integrations and template integrations) – `createDelimitedString` (in orchestrated integrations only) – `format-string` (in orchestrated integrations only) – `getContentAsString` (in orchestrated integrations only) – `get-localized-string` (in orchestrated integrations and template integrations) – `index-within-string` (in orchestrated integrations and template integrations) – `last-index-within-string` (in orchestrated integrations and template integrations) – `left-trim` (in orchestrated integrations and template integrations) – `right-trim` (in orchestrated integrations and template integrations)
Viewing integrations in read-only mode	You can assign the ServiceUser role to users who require read-only access to integrations. A user with this role cannot create, edit, clone, or import integrations. They can download and export integrations. See What Users Can Do in Integrations by Role in *Administering Oracle Integration Classic*.
Logging details about integration execution	If you do not enable tracing, minimal logging details are created in `ics-flow.log` to indicate when the activated integration begins and completes execution (regardless of execution success or failure). You can download the logs on the Dashboard page. See Activating an Integration in *Using Integrations in Oracle Integration Generation 2*.

Feature	Description
Loading the latest integration sample versions	You can upgrade your instance to include the latest sample integration versions. If a sample integration is active or locked, it is not overwritten. See Loading Newer Versions of the Sample Integrations in *Using Integrations in Oracle Integration Generation 2*.
Editing integrations with incomplete connections	You can edit the completed connections, actions, and maps in this type of integration. You cannot edit the endpoints based on incomplete connections. Instead, you must first edit the endpoints for those connections on the Connections page. See Editing an Integration with Incomplete Connections in *Using Integrations in Oracle Integration Generation 2*.
Specifying separate retention times for successful and faulted integration instances	You can view the quiesced, unquiesced, and warning thresholds for your database and the percentage of the database that has been used. If you have the Administrator role, you can also set values for the quiesced threshold, unquiesced threshold, warning threshold, and retention times for successful and faulted instances. You can also perform both automatic and ad-hoc purges of the database. See Purging and Retaining Data in the Database in *Using Integrations in Oracle Integration Generation 2*.
Invoking a process from an integration	You can invoke a process from an orchestrated integration. When you drag the process node into an integration, the Select Process wizard is invoked and prompts you to select an application, process, and operation to invoke. See Creating an Integration that Invokes a Process in *Using Integrations in Oracle Integration Generation 2*.

New Process Features

Feature	Description
Using integrations in processes	Seamlessly incorporate integrations into processes directly from the process editor. Drag and drop an integration element from the palette to the process flow, and select the active integration to call. See Using Integrations in Processes in *Using Processes in Oracle Integration Generation 2*.
New dynamic processes	This release introduces a powerful and flexible new dynamic process editor and runtime experience for modeling and running unstructured processes. Use the dynamic process editor to model unpredictable processes that depend on knowledge worker input or changing conditions. You can even call structured processes from a dynamic process. See Ready to create a dynamic process? and Developing and Using Dynamic Processes in *Using Processes in Oracle Integration Generation 2*.

Feature	Description
Web form enhancements	The forms editor includes the following enhancements: • **Filters for LOVs**: You can now specify filters for controls that accept list of values (LOV) as input. Filters provide a way to selectively extract data from a data source (such as payload or an external connector) and display the filtered data as options of the control. See Specifying Filters for Controls in *Using Processes in Oracle Integration Generation 2*. • **Event filters**: You can also define a filter within an event and use the filter data in other controls through event actions and conditions. See Specifying Filters in Events in *Using Processes in Oracle Integration Generation 2*. • **Data first forms using arrays and enums**: The array and enum data types are now mapped to appropriate controls. From the Business Types Palette, you can now use business types that contain these data types to create a web form. See Creating a Web Form Based on a Business Type in *Using Processes in Oracle Integration Generation 2*. • **Number and Money controls**: The increment/decrement buttons are now hidden by default. See Configuring Number Fields and Configuring Currency (Money) Fields in *Using Processes in Oracle Integration Generation 2*. • **Reorder conditions**: You can reorder conditions within an event window. See Specifying Conditions in *Using Processes in Oracle Integration Generation 2*. • **Check if empty**: Use the new operator called `is empty` within an event window to check if a particular property, such as value, of a control is empty or not. See Specifying Conditions in *Using Processes in Oracle Integration Generation 2*. • **Row Count**: While configuring events for a table, use the new Row Count property to add a condition based on number of rows present within the table. See Configuring Tables in *Using Processes in Oracle Integration Generation 2*. • **Calculate the difference between dates**: New interval functions are introduced which you can use to calculate the difference between two dates. See Specifying Functions in *Using Processes in Oracle Integration Generation 2*. • **CSS styling**: New information is available on using cascading style sheets (CSS) to customize the look and feel of web form elements. See Customizing Web Forms Using CSS in *Using Processes in Oracle Integration Generation 2*.

New Integration Insight Features

Applies only to Oracle Integration Classic (user-managed).

Feature	Description
Map integrations to milestones	You can map integrations to Insight model milestones and define extraction criteria for identifiers and indicators in the Integrations feature. See Mapping Milestones to Integrations in *Using Integration Insight in Oracle Integration*.
Oracle JET dashboards	Oracle JET dashboards help you gain insight into your business processes. See Console and Dashboards for a Single Business Process in *Using Integration Insight in Oracle Integration*.

New Oracle Cloud Infrastructure Streaming Service Adapter Features

Applies only to Oracle Integration Classic (user-managed).

Feature	Description
Query Stage	Configures a SQL-like query on the data stream and comprises additional sources for Joins, Filters, Summaries, Group By, Time Windows, and so on. See Application Artifacts in *User's Guide*.
Rule Stage	Applies conditional (IF - THEN) logic to the events in the stream. You can check for specific conditions and assign values to fields based on the results of your checks. See Application Artifacts in *User's Guide*.

New Visual Builder Features

Feature	Description
Simple aggregations	Support for simple aggregations for most chart types has been added to the Page Designer. See Adding a Chart Component to a Page in *Using Oracle Visual Builder - Classic Applications*.
Modeling relationships	The Data Designer has improved support for modeling relationships, including support for creating One to One and Many to Many relationship, and a new visual editor to help you specify cardinality and relationship properties. See Viewing, Creating, and Editing Business Object Relationships in *Using Oracle Visual Builder - Classic Applications*.
Row-level security	Support for row-level security in the Data Designer has been improved to allow more fine-grained security settings and a query builder for creating simple conditions. See Securing Business Objects in *Using Oracle Visual Builder - Classic Applications*.

Feature	Description
Multi-select component	A multiselect component bound to a many-to-many relationship has been added to the Page Designer. See Adding a Multi-select Component to a Page in *Using Oracle Visual Builder - Classic Applications*.
Import applications with Process definitions	Visual Builder applications containing Process definitions can be exported and imported. When importing an application you are prompted to specify an existing Process application that contains all the process definitions required by the application you are importing. You can use this method to move an application from a development to a staging or production environment.

Supported Oracle JET version

Feature	Description
Upgrade to Oracle JET 3.1.0	The Visual Builder designtime and your generated applications now use Oracle JET 3.1.0 libraries and components.

Oracle Integration on Oracle Cloud at Customer

The features available to you in Oracle Integration on Oracle Cloud at Customer exclude the latest features added after May 2018.

Why Don't I See the Latest Changes?

Changes are rolled out to instances over a period of time. You see the changes for a release only after your instance has been updated to the latest release.

About the Minimum Required Version for Each Change

Each table that describes the changes in a given release includes a **Minimum Required Version** column. This column contains the minimum version that your instance must have to use the feature.

Version numbers use the following convention: *YY.MM*. For example, the **23.02** update occurs in February 2023.

Sometimes the version number includes a patch number, too. For example, **23.02.1** for a patch that was applied after the 23.02 release. Patches typically include bug fixes and security improvements.

Changes Without a Minimum Version

Some changes don't have a minimum required version. These changes are generally available to everyone, regardless of whether your instance has been updated to the latest release.

Determine Your Version

Updates are delivered to regions on a rolling schedule. You can determine whether the latest update has been applied by checking the version in the About dialog box.

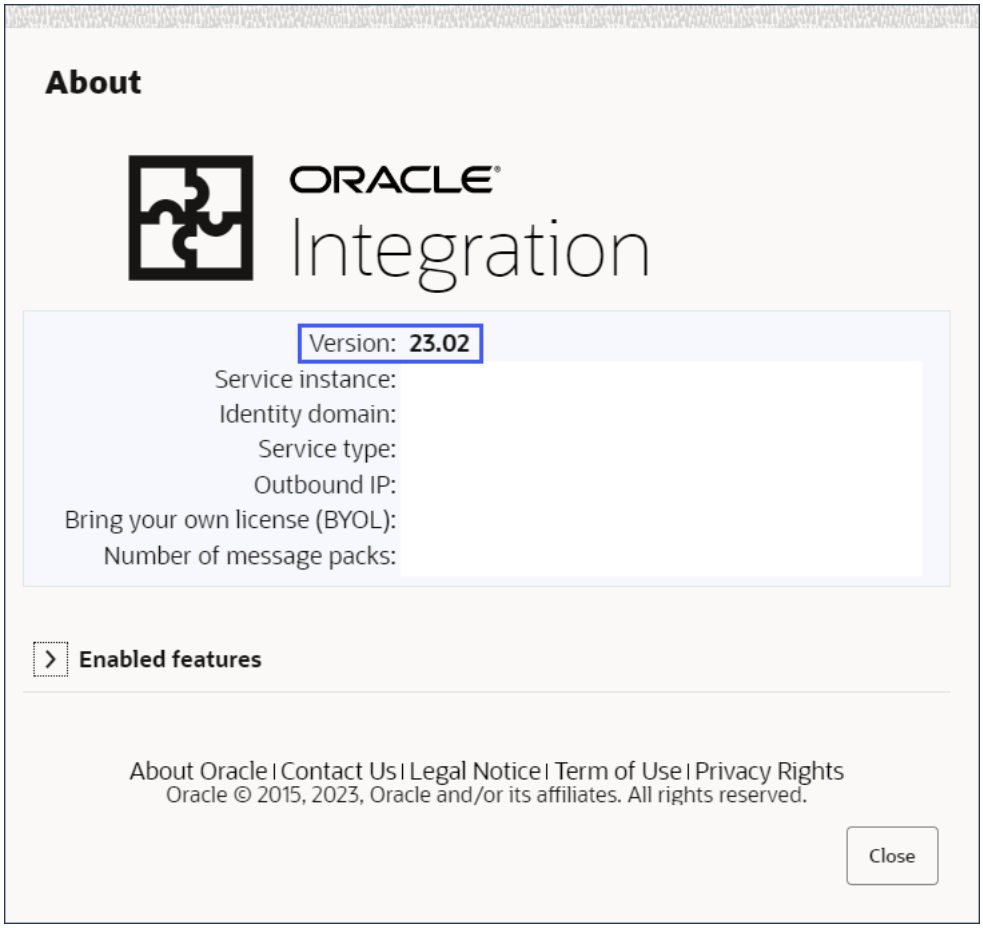
> **Note:**
>
> Oracle Process Automation and Visual Builder have separate version numbers. You can follow these steps within either service to determine its version.

To determine whether an update has been applied to your instance:

1. In the top pane, click your initials, and then select **About**.

   The About dialog appears.

2. Check the number next to **Version**.



Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

Oracle Cloud *What's New for Oracle Integration Generation 2*,
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This document highlights the latest updates to Oracle Integration Generation 2.