

# Oracle® Cloud

## Administering Oracle Visual Builder, Gen 1



Release 23.04

F76230-01

February 2023

The Oracle logo, consisting of a solid red square with the word "ORACLE" in white, uppercase, sans-serif font centered within it.

ORACLE®

Oracle Cloud Administering Oracle Visual Builder, Gen 1, Release 23.04

F76230-01

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# 1

## Preface

This guide describes tasks for administrators of Visual Builder.

### Audience

This guide is intended for administrators who will set up and configure the service.

### 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 customers that have purchased support have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

### Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

### Related Resources

For more information, see these Oracle resources:

- Oracle Public Cloud  
<http://cloud.oracle.com>
- About Oracle Visual Builder in *Developing Applications with Oracle Visual Builder*
- [Oracle Cloud Infrastructure Documentation](#)

### Conventions

The following text conventions are used in this document:

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Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

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# 2

## Getting Started

Oracle Visual Builder is a cloud-based software development Platform as a Service (PaaS) and a hosted environment for your application development infrastructure. It provides an open-source standards-based solution to develop, collaborate on, and deploy applications within Oracle Cloud. To use Visual Builder you should be familiar with the tools available for building your applications.



### Note:

It's important that you determine if your instances are Visual Builder or Visual Builder Generation 2, so you know which guide to read for set-up instructions. (Visual Builder Generation 2 refers to Visual Builder running natively on Oracle Cloud Generation 2 infrastructure.) Let's do a quick test: Open the OCI console, then open Developer Services. Scan the list for Visual Builder. If you see it, that means you're running on Gen 2 and you should refer to Get Started with Oracle Visual Builder Generation 2 in *Administering Oracle Visual Builder Generation 2* to create and configure Visual Builder instances instead of this guide. If you don't see it, then this guide is the one you need.

To perform Oracle Visual Builder Gen 1 tasks such as adding user accounts and starting and stopping an instance, you need to have the correct Oracle Cloud service administrator role.

If you *are* a Visual Builder administrator, you still might not have sufficient privileges to perform the tasks described in this section, but you should be familiar with the steps and tools for administering Oracle Cloud services and users.

## Create a Visual Builder Instance

Visual Builder Generation 2 is now available in all regions, so you can no longer provision Visual Builder Gen 1 instances.

To provision a new Oracle Visual Builder instance, see [Create and Set Up Your Visual Builder Generation 2 Instance](#) in *Administering Oracle Visual Builder Generation 2*.

If you are an administrator of a Visual Builder Gen 1 instance:

- You can still manage your existing Visual Builder Gen 1 instances. For more about managing an instance, see [Add Users and Assign Roles](#) and [Administrative Tasks](#) in this guide.
- Your existing Visual Builder Gen 1 instances will be migrated to Visual Builder Gen 2. For more about migrating your instances, see [Migrate Your Instance to Generation 2](#) in this guide.

## Confirm You Have the Required Roles

If you are the user that initially signed up and purchased universal credits for Oracle Cloud, you automatically have the necessary service entitlement roles to manage Oracle Visual Builder instances. Otherwise, the correct roles must be explicitly assigned to your user account to manage Oracle Visual Builder instances.

To manage Oracle Visual Builder instances, ensure that your user account is assigned the required roles and to the required groups.

You must be assigned this role:	To ...
Cloud Account Administrator	Set up Oracle Cloud Infrastructure (OCI) compartments and buckets. If you're not an account administrator, contact the administrator to add you to the <b>OCI Administrators</b> IDCS group.
Identity Domain Administrator or User Administrator	Add users and assign IDCS roles and groups. If you're not an administrator, make sure that your OCI group is assigned a policy like this: <code>Allow group MyGroup to inspect identity-providers in tenancy</code>
AUTONOMOUS_VISUALBUILDER_ENTITLEMENT_ADMINISTRATOR (Oracle Visual Builder entitlement administrator role in IDCS)	Manage the Visual Builder instance. If you're not the account administrator or the IDCS administrator, contact the IDCS admin to assign this IDCS role to you. If you're not assigned this role you won't see the user interface to provision a Visual Builder instance.

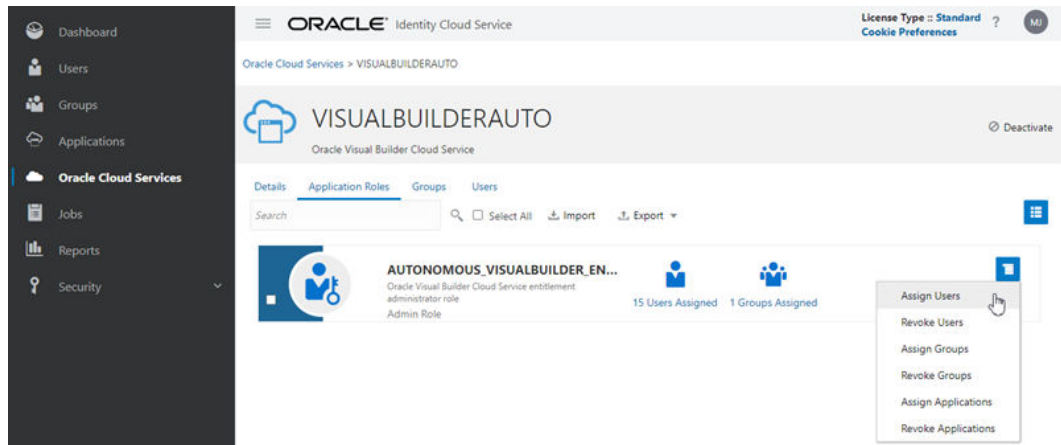
### Assign the entitlement administrator role to a user

If you are not sure you have the correct administrator role, or if you want to assign the correct role to a user, log in to Oracle Identity Cloud Services to manage the service's roles. To do this, you'll need to have the Identity Domain Administrator or User Administrator role assigned to you.

To assign the `AUTONOMOUS_VISUALBUILDER_ENTITLEMENT_ADMINISTRATOR` role to a user.

1. Log in to Oracle Identity Cloud Services.
2. Click **Oracle Cloud Services** in the main navigation.
3. Click **VISUALBUILDERAUTO** in the list of services.
4. Open the Application Roles tab.  
To see a list of users that have already been assigned the role, click **Users Assigned**.
5. To assign the role to a user, choose **Assign Users** in the menu on the right.





6. Select the users you want to assign the role to. Click **OK**.

## Access an Oracle Visual Builder Instance

Here are the steps for accessing an Oracle Visual Builder service instance:


To access a service instance in the Oracle Cloud Infrastructure Console, you must have an Oracle Cloud account. If you don't have an account, you can sign up for a free credit promotion or purchase a subscription. For details about the options, see [Sign Up for the Free Oracle Cloud Promotion](#) and [Buy an Oracle Cloud Subscription](#) in *Oracle Cloud Infrastructure Documentation*.

After you sign up for an account you will receive an email message with details about your Oracle Cloud account and how to access your services. After signing up, it typically takes approximately 30 minutes before your services are available in the Oracle Cloud Infrastructure Console.

1. In a web browser, go to <https://cloud.oracle.com> to sign in to Oracle Cloud.  
If you received a welcome email, use it to identify the URL, your user name, and your temporary password. After signing in, you will be prompted to change your password.  
To view the list of supported browsers, see [https://docs.oracle.com/en-us/iaas/Content/GSG/Tasks/signingin.htm#supported\\_browsers](https://docs.oracle.com/en-us/iaas/Content/GSG/Tasks/signingin.htm#supported_browsers).
2. In **Cloud Account Name**, enter your Oracle Cloud account or tenancy name and click **Next**.
3. On the Single Sign-On (SSO) panel, if required, select your identity provider and click **Continue**.
4. Enter your Oracle Cloud account credentials and click **Sign In**.

### Note:

When signing in, make sure you're using your Oracle Identity Cloud Service (IDCS) account credentials. Your user name will be similar to `oracleidentitycloudservice/exampleemail@example.com`.

5. In the Oracle Cloud Infrastructure Console, also called the OCI console, click the navigation menu  in the top left corner.
6. Open the navigation menu and click **OCI Classic Services**, then click **Visual Builder** in the list of services under Platform Services.

If you don't see **OCI Classic Services** in the navigation menu, confirm that you've been assigned the required role. You can ask your domain administrator to check the role assigned to you in IDCS.

 **Note:**

If you log in through the Oracle Cloud Infrastructure Console using a URL similar to `https://console.us-ashburn-1.oraclecloud.com/`, the navigation menu has changed. You previously selected **Platform Services > Visual Builder** to access your Oracle Visual Builder instances.

7. When you access the Oracle Visual Builder console the first time, you see the Welcome page. Click **Instances**.
8. In the Instances page, you can see a table of your Oracle Visual Builder Gen 1 instances. Click an instance name to open its Visual Builder Instance Details page.

To create accounts for your users and assign them appropriate privileges and roles, see [Add Users and Assign Roles](#).

## Start or Stop an Oracle Visual Builder Instance


You can start or stop an Oracle Visual Builder instance in the Infrastructure Console. Billing is stopped for the duration that the instance is stopped.

To start or stop an Oracle Visual Builder instance:


1. Sign in to the Oracle Cloud Infrastructure Console.

 **Note:**


When signing in, make sure you're using your IDCS account credentials.

2. From the Infrastructure Console, click the navigation menu  in the top left corner, expand **OCI Classic Services**, and then click **Visual Builder** to open the Instances page.
3. Identify the instance to start or stop.

To start an instance:

- a. From the  menu to the right of the instance name, select **Start**.
- b. Click **Yes** when prompted to confirm your selection.

To stop an instance:

- a. From the  menu to the right of the instance name, select **Stop**.

The screenshot shows the Oracle Visual Builder 'Instances' page. At the top, there's a dark blue header with 'Visual Builder' and buttons for 'QuickStarts' and 'Welcome!'. Below the header, there are tabs for 'Instances' (selected) and 'Activity'. A summary bar indicates '1 Instances'. The main area is titled 'Instances' and includes a search bar, a 'Create Instance' button, and a table of instances. One instance is listed with a 'preview' icon, 'Tags', and 'Created On: Jun 12, 2019 12:45:'. A context menu is open over this instance, showing options: 'Open Oracle Visual Builder Cloud Service Home Page', 'Start', 'Stop' (highlighted with a mouse cursor), 'Manage Tags', and 'Delete'. Below the table, there's a link for 'Instance Create and Delete History'.

- b. Click **Yes** when prompted to confirm your selection.

# 3

## Migrate Your Instance to Generation 2

To improve the performance of your Visual Builder applications, Oracle will migrate your Visual Builder instance to Generation 2 of the Oracle Cloud Infrastructure (OCI).



### Note:

Your live apps won't be accessible while your instance is being migrated. You can expect migration to take two hours, so be sure to plan accordingly.

## What Do I Need to Do to Get Ready for Migration?

When you receive a notification that your instance will be migrated, there are a few steps you'll need to perform before the migration.

Once Oracle has chosen a date for migrating your instance, an email will be sent to the Visual Builder administrator. The email notification will also provide alternate migration dates if the initial migration date is not convenient. If you want to change the migration date to one of the alternate dates, you'll need to log a Service Request in My Oracle Support and indicate your preferred date.

The email will also provide details about migrating the Visual Builder instance to Visual Builder Generation 2, including:

- the Oracle Cloud ID (OCID) for the Visual Builder *service* Virtual Cloud Network (VCN), and
- the NAT gateway IP address of the Visual Builder *service* VCN.

This information will also be displayed in a banner in the Visual Builder UI.

You'll need the Visual Builder VCN OCID and/or the NAT gateway IP address to allow your instance to access external services. For details on what these are, see [Overview of VCNs and Subnets](#) and [NAT Gateway](#).



### Note:

If your instance requires access to an Oracle DB service (ATP or DBaaS), you'll also receive an OCID and NAT IP address for the Visual Builder *management* VCN.

Before the migration date, you might need to:

- Notify your application's users that the application will be temporarily unavailable on the migration date. If you have some live apps on your instance, you might want to lock the apps during the migration period.
- Confirm you are subscribed to an OCI region.

To migrate your current VB instance, you need to be subscribed to an OCI region, and this region must be the same as the region where your VB instance is currently running. You use the OCI Console to see your current subscriptions, and to add regions if needed. For details, see [Viewing and Managing Subscriptions](#) in *Managing and Monitoring Oracle Cloud*.

- Add your new instance to service allowlists, if needed.  
If your current VB instance is using an external service, for example, a web service, your new instance will need access to it. To enable access to a web service, you must add your instance to the web service's allowlist. Your current and new instances must be able to access the services during the migration process. If access from the new instance is not set up before the upgrade, the apps won't work when the upgrade process is completed because they won't be able to connect to the services.

You'll need to add access rules for your new instance to each service's allowlist. This might require filing a Service Request with the service's administrator. See [Allow Your Instance to Access Services](#) below for details.

## Allow Your Instance to Access Services

If your Visual Builder instance needs to access an external service, your instance needs to be included in the service's allowlist (formerly a whitelist).

A service typically uses an Access Control List (ACL), called an allowlist, to restrict the networks and services that are allowed to access it. Only users from an IP address or Virtual Cloud Network (VCN) on the allowlist are allowed access to the service. The allowlist restrictions are in addition to the standard authorization mechanisms, such as user credentials, which are always in place.

Any Visual Builder instance that requires access to an external service, such as a REST web service, must be on the external service's allowlist. To get on a web service's allowlist, you'll need to work with the web service's administrator to add an ACL access rule for your VB instance. This may require filing a Service Request with the web service's administrator. You'll typically only need to do this when creating a new VB instance that will require access to a service, or when you plan to start using a new service in a VB instance. A VB instance can be added to an allowlist at any time, even before the instance has been created.

Depending on the location and type of the service your VB instance needs to access, you'll need to provide the service's administrator with:

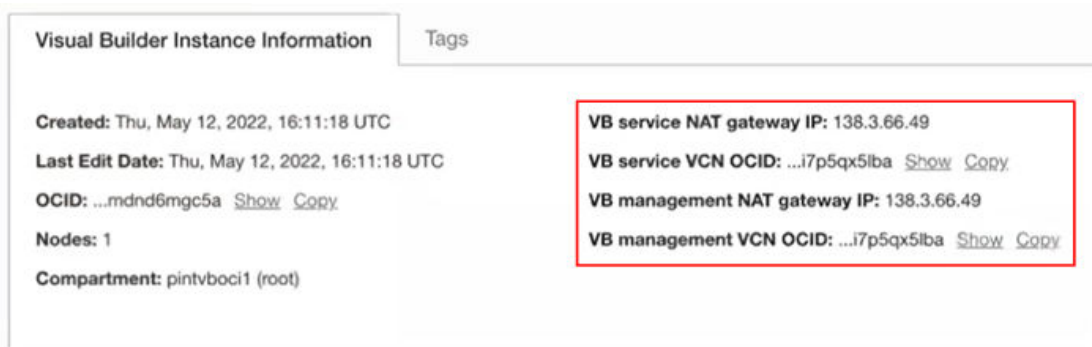
- the Visual Builder *service* VCN,
- the Oracle Cloud ID (OCID) of the Visual Builder service VCN, or
- the NAT gateway IP address of the Visual Builder service VCN.

A VB instance's service VCN, OCID and NAT gateway IP address are determined by the instance's *region*. For example, `iad-vb-isovcn` is the VB service VCN for instances in the Ashburn region. For details on what these are, see [Overview of VCNs and Subnets](#) and [NAT Gateway](#) in the *OCI Documentation*.

 **Note:**

Visual Builder instances that use an Oracle DB service (ATP, DBaaS) will **also** have a VB *management* VCN. The VB management VCN OCID or NAT IP **must also** be added to the service's allowlist. Access from the VB management VCN is required so that schemas related to the VB service can be updated, for example, when patches or updates are applied to the instance.

You can view an instance's VB service NAT gateway IP and VCN OCID in the instance's Visual Builder Instance Information tab in the OCI console. If the instance also has a VB management NAT gateway IP and VCN OCID, they will also be displayed in the tab:



Visual Builder Instance Information    Tags

Created: Thu, May 12, 2022, 16:11:18 UTC  
 Last Edit Date: Thu, May 12, 2022, 16:11:18 UTC  
 OCID: ...mdnd6mgc5a [Show](#) [Copy](#)  
 Nodes: 1  
 Compartment: pintvboci1 (root)

**VB service NAT gateway IP: 138.3.66.49**  
**VB service VCN OCID: ...i7p5qx5lba** [Show](#) [Copy](#)  
**VB management NAT gateway IP: 138.3.66.49**  
**VB management VCN OCID: ...i7p5qx5lba** [Show](#) [Copy](#)

The instance details you need to provide in the Service Request will depend upon the location and type of the service your instance needs to access. In the following table you can see the VB instance details you'll need to provide to allow VB to access the different types of external services.

To access...	You'll need...
A REST web service located in Oracle Service Network (OSN) (such as ORDS)	You'll need to provide: <ul style="list-style-type: none"> <li>the VB <i>service</i> VCN OCID.</li> </ul> The service administrator needs to configure one access rule, to allow access from the VB runtime service VCN.
An autonomous database located in OSN, like ATP	You'll need to provide: <ul style="list-style-type: none"> <li>the VB <i>service</i> VCN OCID, and</li> <li>the VB <i>management</i> VCN OCID</li> </ul> The service administrator needs to configure two access rules, to allow access from the VB runtime service VCN and the VB management VCN.
an external REST web service	You'll need to provide: <ul style="list-style-type: none"> <li>the NAT gateway IP address for the VB <i>service</i> VCN</li> </ul> The service administrator needs to configure one access rule, to allow access from the IP address of the NAT gateway of the VB runtime service.  An access rule configured for the NAT gateway is used when the service is not in the same region and OSN as your instance.

To access...	You'll need...
an external DBaaS database	<p>You'll need to provide:</p> <ul style="list-style-type: none"> <li>the NAT gateway IP address for the VB <i>service</i> VCN</li> <li>the NAT gateway IP address for the VB <i>management</i> VCN</li> </ul> <p>The service administrator needs to configure two access rules, to allow access from the VB runtime service VCN NAT gateway and the VB management VCN NAT gateway.</p> <p>Access rules configured for the NAT gateways are used when the service is not in the same region and OSN as your instance.</p>

## What Do I Do After Migration?

If you're an administrator, you'll receive an email notification when the migration process is complete, with details about your new instance.

After migration, the URL and IDCS settings of your Visual Builder instance will stay the same, but the way you administer your Oracle Visual Builder Generation 2 instances will change.

You'll still access, create, and manage your Visual Builder Generation 2 instances in the OCI Console in the Visual Builder landing page, but you'll open the page from Developer Services in the navigation menu instead of from OCI Classic Services.

To open your Visual Builder landing page after migration:

1. Sign in to Oracle Cloud at <https://cloud.oracle.com> to open the OCI Console. For more about signing in and using the console, see [Get to Know the Console](#).
2. Open the navigation menu and click **Developer Services**. Under **Visual Builder**, click **Visual Builder**.

### Note:

After migration to Generation 2, for a few weeks you'll still be able to access the Visual Builder landing page for your 'old' instances from OCI Classic Services in the navigation menu. However, instances that have been migrated will be marked as stopped.

After migration you can safely remove your 'old' instance from service allowlists by filing a Service Request.

Some of the steps for administering Visual Builder instances are different after they've been migrated to Generation 2. The following documentation can help you get familiar with Oracle Cloud Infrastructure, and how you can administer your Visual Builder Generation 2 instances.

- See [Welcome to Oracle Cloud Infrastructure](#) for an introduction to Oracle Cloud Infrastructure and its features.
- See [Get Started with Oracle Visual Builder Generation 2](#) to learn more about accessing and managing your Oracle Visual Builder Generation 2 instances.

# 4

## Add Users and Assign Roles

User roles define the privileges available to a user and the tasks that the user can perform. You can grant users various roles to enable them to access, administer, and use Oracle Visual Builder.

### Topics:

- [Oracle Visual Builder Roles and Privileges](#)
- [Add Users to a Cloud Account with IDCS](#)
- [Add Users to a Traditional Cloud Account](#)

## Oracle Visual Builder Roles and Privileges

A role includes privileges that allow users to perform various tasks. All Oracle Cloud services have some predefined roles for performing tasks when setting up, administering, managing, and using a service. There are predefined roles for the PaaS layer, the application layer and Oracle Visual Builder.

The PaaS-layer roles govern access to WebLogic Server. The application-layer predefined roles include ServiceAdministrator, ServiceMonitor, ServiceDeveloper, ServiceDeployer, and ServiceUser, but only some of these roles are used and mapped to the predefined roles used in Oracle Visual Builder. To perform tasks in Oracle Visual Builder, the user must be assigned to one of the Oracle Visual Builder predefined roles. Users can hold multiple roles depending on their responsibilities. For example, a user might be granted both the ServiceAdministrator and ServiceMonitor roles, but any privileges granted by the role of ServiceMonitor are ignored in Oracle Visual Builder.

## Predefined Roles in PaaS and Application Layers

The following table describes the predefined roles available in the PaaS layer and the application layer.

Predefined Roles	Description
<b>PaaS-Layer Predefined Roles</b>	Govern access to WebLogic Server
Administrators	A user with the Administrators role can: <ul style="list-style-type: none"><li>• View the server configuration, <i>including</i> the encrypted value of some encrypted attributes</li><li>• Modify the entire server configuration</li><li>• Deploy Enterprise Applications and Web application, EJB, Java EE Connector, and Web Service modules</li><li>• Start, resume, and stop servers</li></ul>



Predefined Roles	Description
Deployers	A user with the Deployers role can: <ul style="list-style-type: none"> <li>View the server configuration, including <i>some</i> encrypted attributes related to deployment activities</li> <li>Change startup and shutdown classes, Web applications, JDBC data pool connections, EJB, Java EE Connector, Web Service, and WebLogic Tuxedo Connector components. If applicable, edit deployment descriptors.</li> <li>Access deployment operations in the Java EE Deployment Implementation (JSR-88)</li> </ul>
Monitors	A user with the Monitors role can: <ul style="list-style-type: none"> <li>View the server configuration, <i>except</i> for encrypted attributes</li> <li>Get read-only access to WebLogic Server Administration Console, WLST, and MBean APIs</li> </ul>
Operators	A user with the Operators role can: <ul style="list-style-type: none"> <li>View the server configuration, <i>except</i> for encrypted attributes</li> <li>Start, resume, and stop servers</li> </ul>
<b>Application-Layer Predefined Roles</b>	Govern access to the various Oracle Visual Builder features:
ServiceAdministrator	A user with the ServiceAdministrator role is a super user who can manage and administer the administrator settings of an Oracle Visual Builder instance.
ServiceMonitor	This role is not used in Oracle Visual Builder
ServiceDeveloper	A user with the ServiceDeveloper role can develop applications in an Oracle Visual Builder instance.
ServiceDeployer	This role is not used in Oracle Visual Builder.
ServiceUser	A user with the ServiceUser role has privileges to utilize only the basic functionality of a feature such as access to the staged and published applications.

## Privileges Available to Roles in Oracle Visual Builder

There are three predefined roles in Oracle Visual Builder, and these roles are mapped to specific application-layer roles. The following table lists Oracle Visual Builder predefined roles and the tasks that users granted those roles can perform.

Oracle Visual Builder Predefined Role	Mapped Role	Tasks Users Can Perform in Oracle Visual Builder
Visual Builder Administrator	ServiceAdministrator	A user with this role can: <ul style="list-style-type: none"> <li>Use the visual design tool</li> <li>Create, manage, and change the owners of applications</li> <li>Create associations with other services</li> <li>Configure security options for applications in an instance</li> <li>Specify error messages for Access Denied pages</li> </ul>
Visual Builder Developer	ServiceDeveloper	A user with this role can: <ul style="list-style-type: none"> <li>Use the visual design tool</li> <li>Create, manage, secure, and publish web and mobile applications</li> <li>Design pages, work with business objects, build and test applications</li> </ul>

Oracle Visual Builder Predefined Role	Mapped Role	Tasks Users Can Perform in Oracle Visual Builder
Visual Builder User	ServiceUser	A user with this role can only access staged and published applications. The default permission is enforced only when the service administrator adjusts security settings for the entire service instance to restrict all access to runtime applications to the users granted this role.

## Roles Required for Git Integration

Oracle Visual Builder can be integrated with Git repositories hosted in Oracle Visual Builder Studio projects. When configuring integration with a Git repository, to access the Git repository the user will need to supply the credentials of a user in IDCS with the DEVELOPER\_USER role for authentication.

If you have configured Single Sign-On (SSO) so that IDCS federates to another identity provider (IdP), the SSO user credentials can't be used to access the Git repository. You'll need to define a new user in IDCS with the DEVELOPER\_USER role and use the new user's credentials when configuring the Git integration.


## Add Users to a Cloud Account with IDCS

If you are using an Oracle Cloud Account with Oracle Identity Cloud Service (IDCS), then you can use Users tab on the Oracle Visual Builder console to access the features of IDCS to manage users and security for your Oracle Cloud services.

### Add Users

After Oracle Visual Builder is provisioned, you need to create the required user accounts in the identity domain of your Oracle Visual Builder instance.

Only a user with the Identity Domain Administrator role or the User Administrator role through delegated administration can create user accounts. When Oracle Visual Builder is provisioned, the Identity Domain Administrator account is created automatically. To add a user account, you need to know the first name, last name, and email address of the user.

1. Sign in to Oracle Cloud.
2. From the Infrastructure Console, click the navigation menu  in the top left corner, expand **Platform Services**, and then click **Visual Builder** to open the Instances page.
3. In the Oracle Visual Builder console, click **Users**.
4. On the User Management page in the Oracle Visual Builder console, click **Identity Console**.
5. On the User Management page in the Oracle Identity Cloud Service console, click **Add**.
6. In the **First Name** and **Last Name** fields of the Add User dialog, enter the user's first and last name.

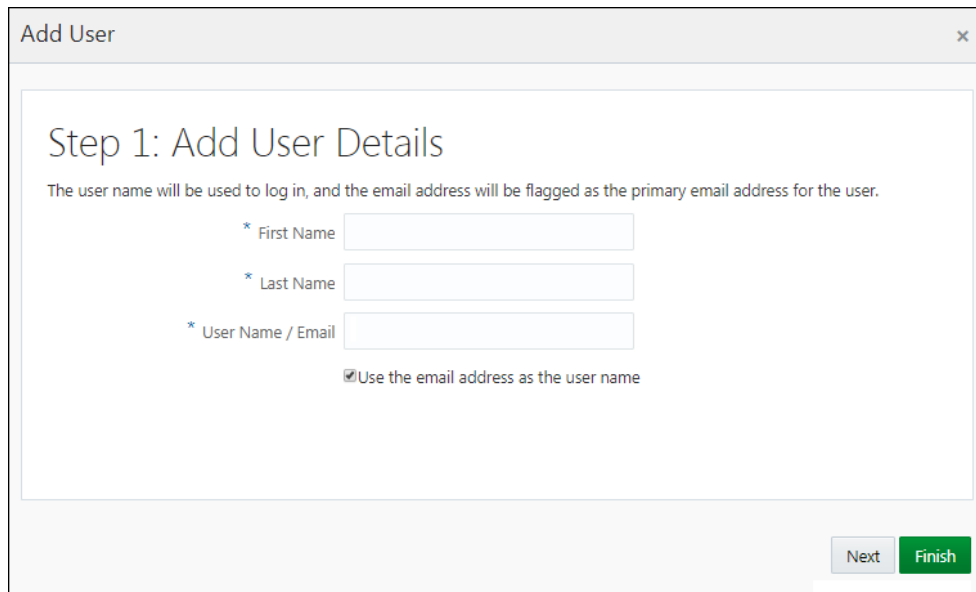
To have the user log in to Oracle Visual Builder with their email address:

- a. Leave the **Use the email address as the user name** check box selected.

- b. In the **User Name/Email** field, enter the email address for the user account.

To have the user log in to Oracle Visual Builder with their user name:

- a. Clear the **Use the email address as the user name** check box.
- b. In the **User Name** field, enter the user name that the user is to use to log in to the Oracle Identity Cloud Service console.
- c. In the **Email** field, enter the email address for the user account.



The screenshot shows a window titled "Add User" with a close button (X) in the top right corner. The main content area is titled "Step 1: Add User Details" and includes a sub-header: "The user name will be used to log in, and the email address will be flagged as the primary email address for the user." Below this are three required input fields: "\* First Name", "\* Last Name", and "\* User Name / Email". A checkbox labeled "Use the email address as the user name" is checked. At the bottom right, there are two buttons: "Next" (disabled) and "Finish" (active).

7. To assign the user account to a group, click **Next**. Otherwise, click **Finish**.
8. In the **Add User** window, select the check box for each group that you want to assign to the user account. Click **Finish**.


After the user account is created, the user receives an email with the sign-in credentials.

For more details about creating and managing users, see *Managing Users with Identity Cloud Service Accounts* in *Managing and Monitoring Oracle Cloud*.

## Assign Roles to Users

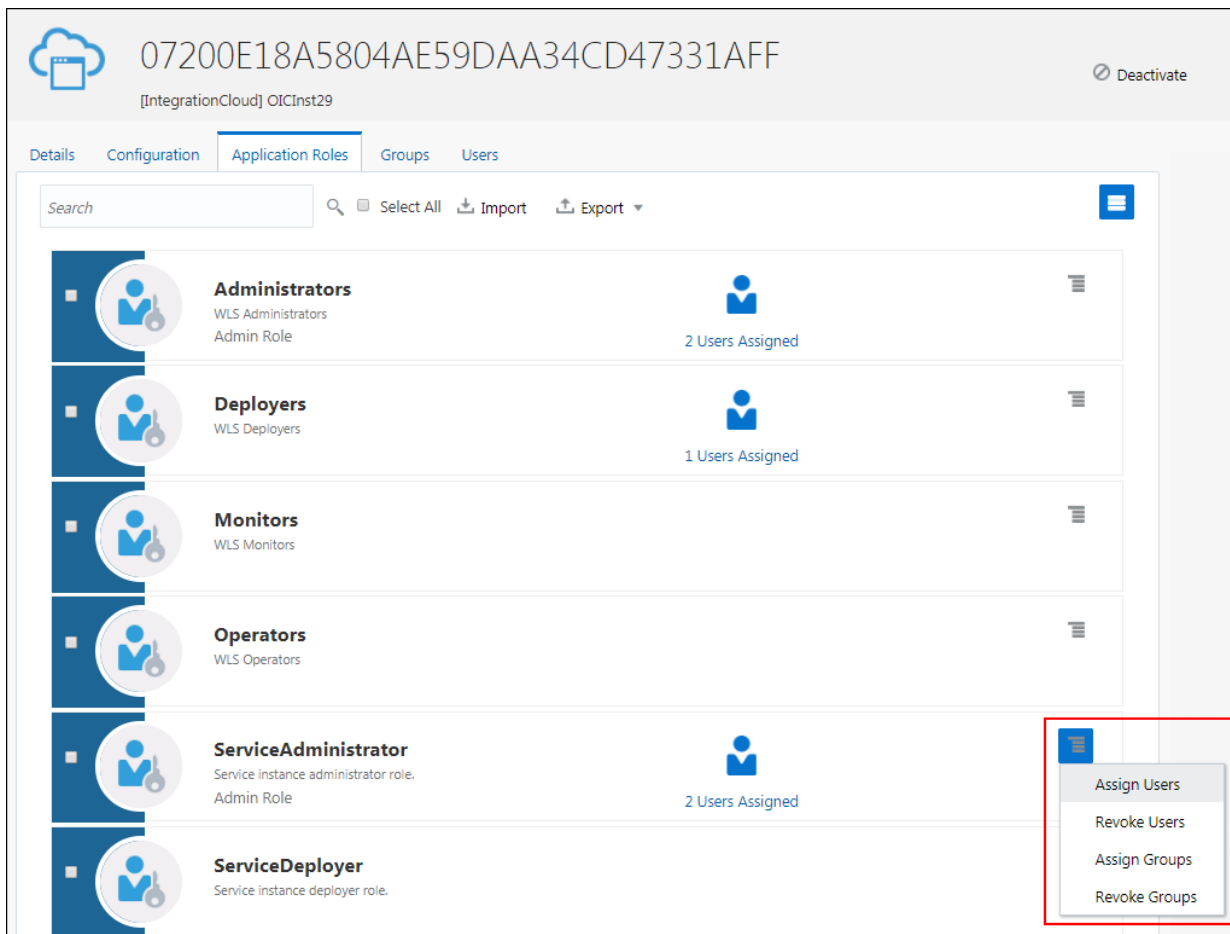
The Identity Domain Administrator must assign roles to users to specify the tasks they can perform in Oracle Visual Builder. A user can have more than one role.

The role assigned to the user determines the privileges and tasks the user can perform in Oracle Visual Builder. See [Oracle Visual Builder Roles and Privileges](#) for a description of the various predefined roles available in Oracle Visual Builder.

1. Sign in to Oracle Cloud.
2. From the Infrastructure Console, click the navigation menu  in the top left corner, expand **Identity**, and then click **Federation**.
3. In the Federation page, click the **Oracle Identity Cloud Service Console** link.

If multiple instances are listed, click the **Oracle Identity Cloud Service Console** link for the console instance you want to open.

4. From the Oracle Identity Cloud Service console, click the navigation menu ☰ in the top left corner, and then click **Applications**.
5. Click the link for your Oracle Visual Builder instance.  
You can use the filter to help you locate your instance. For Oracle Visual Builder instances you might want to search for the name of your instance appended with “vb” (for example, “Testvb”, or “VISUALBUILDERAUTO\_Testvb”).
6. Click the **Application Roles** tab.
7. To grant a role to users:
  - a. Click the menu options icon shown next the role, and select **Assign Users**. If you want to assign the role to a group, you need to select **Assign Groups**.
  - b. Select the check box next to the name of each user that you want to add to the role, and then click **Assign**.



## Add Users to a Traditional Cloud Account

Oracle Traditional Cloud Accounts use traditional Identity and Access Management software to manage users and security, as opposed to Cloud Accounts with IDCS, which use Oracle Identity Cloud Service for these tasks.

Oracle Traditional Cloud Accounts use Oracle Shared Identity Manager (SIM) for identity management and authentication to access Oracle Visual Builder and applications developed with Visual Builder. An identity domain administrator can use the options on the Oracle Visual Builder console to manage users and their roles for Oracle Visual Builder applications and services. Roles assigned to users in SIM are used to determine the following:

- developer access to Oracle Visual Builder
- user access to applications developed in Oracle Visual Builder that implement role-based security
- developer and user access to services exposed in Oracle Visual Builder and visual applications

A developer can set the authentication requirements for an application and create application roles that are mapped to custom roles in SIM. After creating the application roles, the developer can configure role-based security for the pages, components and business objects in the application. Authentication to access a visual application is determined by the roles assigned to users in SIM.

A developer's role in Oracle SaaS determines the content and services in the Oracle SaaS service instance that are available to the Oracle Visual Builder developer. For example, the Oracle Visual Builder services catalog might be empty if the developer is not assigned a role with sufficient privileges. Oracle Visual Builder and other offerings on the Oracle PaaS platform don't use the same identity management stack as Oracle SaaS services, but support for Single Sign-On (SSO) between Oracle PaaS services using Oracle Shared Identity Manager (SIM) and Oracle SaaS services such as Oracle Sales Cloud can be set up when they are in the same data center and identity domain. For SSO to work, Oracle SaaS identities need to be regularly synchronized to the Oracle PaaS SIM user store. Roles and corresponding role assignments can be synchronized in order to support role-based access used in your applications.

The following table briefly describes the steps for adding users, assigning roles, and synchronizing Oracle Sales Cloud and Oracle Visual Builder user accounts and roles.

Task	Description
Add users and assign roles	<p>The <b>identity domain administrator</b> creates user accounts and assigns roles to the users in the instance of Oracle Visual Builder that you access from the Oracle Cloud Infrastructure Classic Console.</p> <p>Users that will develop applications with Oracle Visual Builder must be assigned the role of <b>Visual Builder Developer</b> or <b>Visual Builder Administrator</b>. See Managing Users with Traditional Cloud Accounts in <i>Managing and Monitoring Oracle Cloud</i>.</p> <p>The identity domain administrator also creates the custom roles for authenticating user access to applications and assigns roles to users.</p>
Synchronize user identities and roles between associated services	<p>Oracle Visual Builder service instances associated with Oracle Cloud Applications services use Oracle Cloud Applications user roles for authorizing access to REST services in applications. For Single Sign-On (SSO) between Oracle Visual Builder and Oracle applications such as Sales Cloud, the user accounts must be manually synchronized with the users in Oracle Cloud Applications, and the users assigned custom roles that can be used to secure access to applications.</p> <p>An <b>identity domain administrator</b> can synchronize user identities and roles from Oracle SaaS services to an Oracle PaaS SIM user store. Oracle Sales Cloud can be configured to sync identities and roles once, or automatically sync on a schedule, using the Oracle Enterprise Scheduler Service (ESS).</p> <p>See <a href="#">Integrate an Oracle SaaS application with Oracle PaaS</a> in <i>Oracle Architecture Center</i>.</p>
Create custom roles that mirror the names of Oracle SaaS roles	<p>An <b>identity domain administrator</b> can create custom roles that are used for authenticating users and securing applications. The custom roles can mirror the names of Oracle SaaS user roles. For example, an administrator can create the custom role Sales Manager, one of the default user roles.</p> <p>See Managing Custom Roles in <i>Managing and Monitoring Oracle Cloud</i>.</p>

Task	Description
Assign custom roles to users	<p>After the users and custom roles are created, the <b>identity domain administrator</b> can assign custom roles to users in the instance of Oracle Visual Builder that you access from the Oracle Cloud Infrastructure Classic Console according to the user's Oracle SaaS role. For example, the administrator can assign the custom role Sales Manager to all users assigned that role in Oracle SaaS.</p> <p>The administrator can assign an existing role to multiple users by creating and uploading a CSV file. See <i>Assigning One Role to Many Users in Getting Started with Oracle Cloud Applications</i>.</p>

# 5

## Administrative Tasks

After an Oracle Visual Builder service instance is created, an identity domain administrator assigns one or more users the Visual Builder Administrator role for the service instance. A Visual Builder Administrator can manage and set general options for applications in the service instance.

### Topics

- [Manage Applications in the Service Instance](#)
- [Access Instance Settings](#)
- [Choose Your Instance's Update Window](#)
- [Configure Security Options for Applications](#)
- [Set Page Messages for Access Denied Errors](#)
- [Allow Other Domains Access to Services](#)
- [Inspect Database Usage](#)
- [Switch to Your Own Oracle DB Instance](#)
- [Reset an Expired Password or ATP Wallet for Your Oracle DB Instance](#)
- [Add a Connection to Integration Applications](#)
- [Add a Connection to Oracle Cloud Applications](#)
- [Add a Connection to Process Cloud Service](#)
- [Add a Connection to a Custom Backend](#)
- [Create a Child Backend](#)
- [Manage Self-signed Certificates](#)
- [Manage Your Component Exchange](#)
- [Configure Support for a Custom Domain](#)

## Manage Applications in the Service Instance

An Visual Builder administrator can manage any application in the service instance and does not need to be a team member to see an application on the Home page. Administrators can perform all the tasks of a developer, including adding and removing team members, and opening, staging and publishing applications.

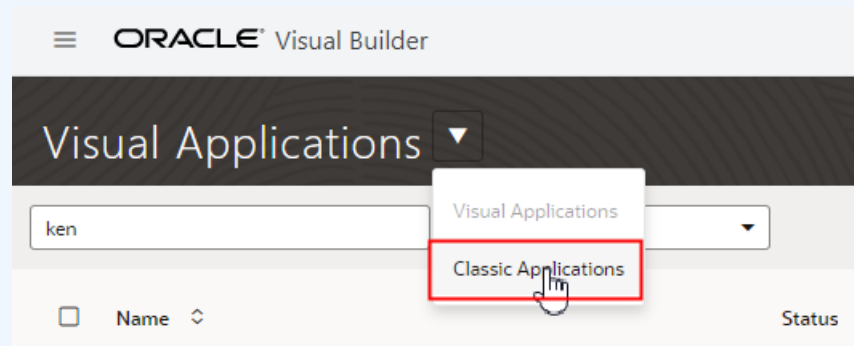
The Home page displays a list of the applications in the service instance. Developers can only see and manage an application when they are a member of the application's team. Administrators can select the **Administered by me** checkbox next to the Status dropdown list if they want the list of applications to include all the applications in the instance, even the applications where they are not a team member. The checkbox is not visible to developers who do not have the role of administrator.



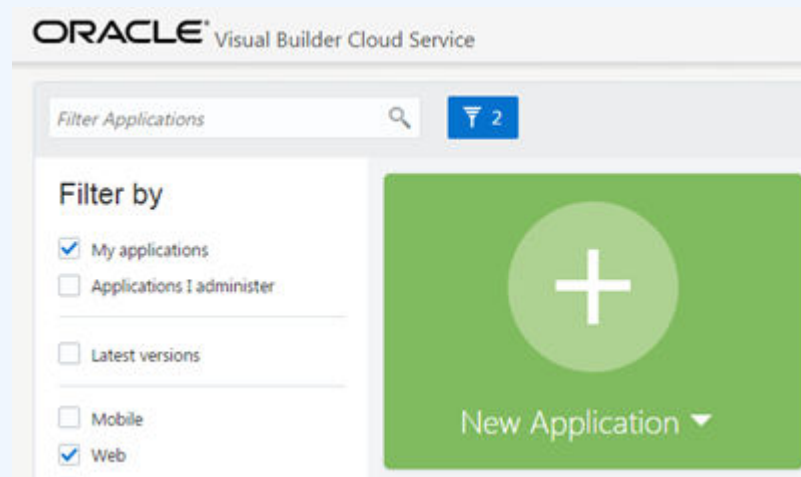


**Note:**

If you have any classic applications (apps that have the older Visual Builder project structure), open the Visual Applications dropdown list in the header and select **Classic Applications**.



On the Home page for classic applications, administrators can select the **Applications I administer** checkbox in the Filter by pane to display the applications where they are not a team member.



## Access Instance Settings

An instance administrator can access the Tenant Settings page for managing the instance's global settings from any Visual Builder page.

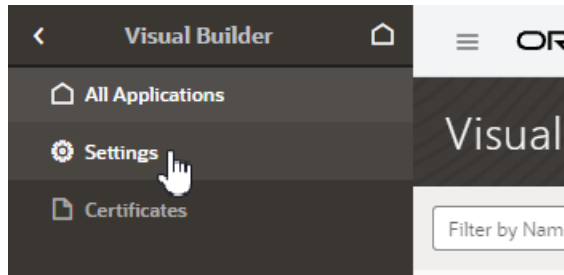
The Tenant Settings page contains three tabs: General, Tenant Database and Services. The General tab has panels for configuring security settings, specifying Access Denied messages, and configuring the Component Exchange details. You use

the Tenant Database tab to switch to an Oracle database and to see how much database space your applications are using. You use the Services tab to add and edit the backend services that are accessible to apps in the tenant.

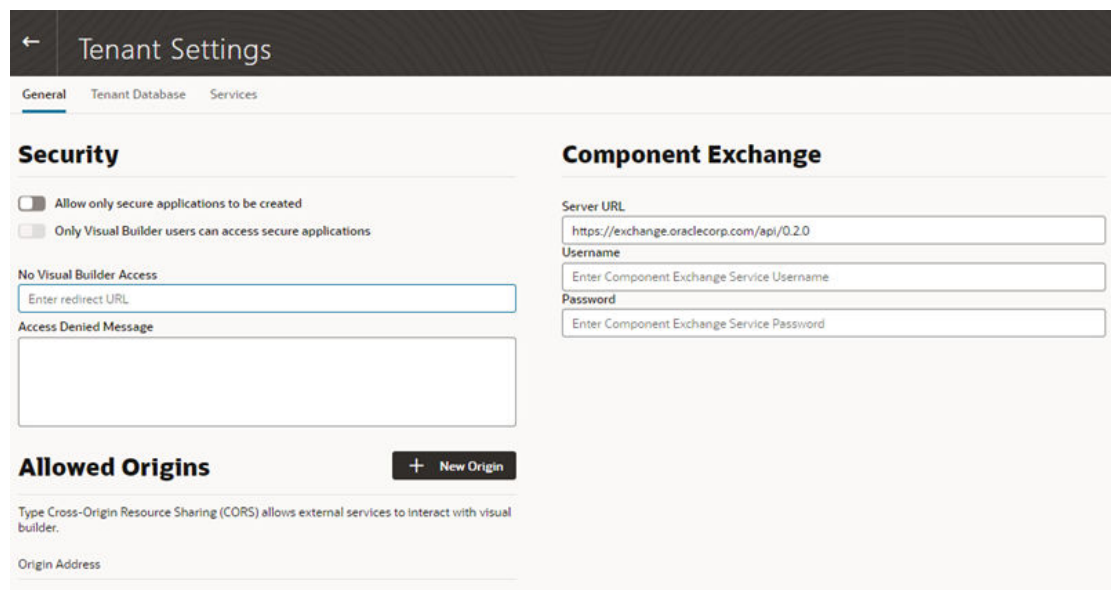
To open an instance's Tenant Settings page:

1. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** ☰.
2. Click **Settings** in the main menu.

If you are developing visual applications, open the main navigation pane on the Home page and select **Settings**.



The settings available for the instance are grouped in the General, Tenant Database and Services tabs on the page.



## Choose Your Instance's Update Window

Functional updates for Visual Builder are provided in two windows, which are typically two weeks apart. You can select when you want an instance updated by selecting either *Window 1* or *Window 2*. We recommend that non-production instances be updated in the first window (*Window 1*) and production instances in the second window (*Window 2*). This allows you to test your applications in your test and development environments before the update is applied to your production environment.

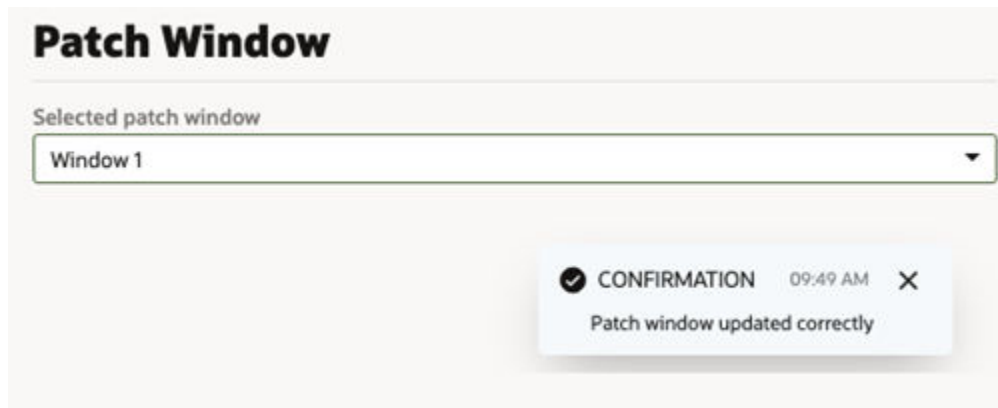
 **Note:**

Oracle automatically sends notifications to the instance's account administrator each time it will be updated, confirming the instance's next update window. Once we send out the notification, it's too late to change your window for that update. If you do make a change, it won't be applied until the following update.

To set the update window option:

1. Open the Visual Builder instance's **Tenant Settings** editor.
2. Select the window option in the Patch Window dropdown list.

There are only two options: `Window 1` and `Window 2`. The default update window is `Window 1`.



If your Visual Builder instance was provisioned as part of Oracle Integration Generation 2, you specify the instance's update window in the Oracle Cloud Infrastructure Console, not the instance's Tenant Settings. See *Choose Your Update Window* in *Provisioning and Administering Oracle Integration 3*.

## Configure Security Options for Applications

Administrators can use the Security panel in the Tenant Settings page to require authentication for all applications in the instance.

When an administrator enables the **Allow only secure applications to be created** option, all published and staged applications in the instance will require user authentication. When the option is enabled, users must be assigned a role by the identity domain administrator and log in to access the applications in the instance. When the option is not enabled, applications can be created that allow access to anonymous users.

When an application has the default security settings, any user with a valid login can access the pages in an application. A developer can modify the default security settings to define the roles that can access applications, pages and components.

When the secure application option is enabled, an administrator can enable the **Only Visual Builder Users can access secure applications** option so that only Visual Builder users (those assigned the default Service User role) can access the staged and published applications in the instance. For example, this allows you to configure security so that users assigned the Visual Builder Developer role can access the designer, but can't access the published application and data because they are not assigned the Visual Builder Service User role.

An administrator can also use IDCS roles when configuring the instance's security so that a user's access is limited to just the secure applications. Users assigned the selected IDCS role would be able to access the applications, but would be prevented from accessing Visual Builder or Oracle Integration resources external to the application, such as other Oracle Integration integrations.

To configure the security options for all applications in the instance:

1. Open the instance's Tenant Settings page.
2. In the **Security** panel, enable **Allow only secure applications to be created**.  
Anonymous users can't access the applications when this secure applications option is enabled.
3. Select the **Only Visual Builder Users can access secure applications** option if you want to allow only Visual Builder users (users assigned the Service User role) access to the applications.

To change the users allowed to access the application to those assigned a specific IDCS role *instead of* those assigned the default Service User role, select the IDCS role in the dropdown list under **Allow access to application to users in role**. This option is only available when both of the other security options are enabled.

General Services

## Security

Allow only secure applications to be created

Only Visual Builder users can access secure applications

Allow access to application to users in role:

Default Service User ▼

No Visual Builder Access

Enter redirect URL

Access Denied Message

4. Specify what users denied access to the secure application will see:
  - a. Enter the URL you want the users redirected to when they can't access the app.
  - b. Enter an Access Denied message that they will see when denied access to a page in the app.

## Assign Roles for Users to Access an Application

Administrators must assign roles to users, so they have the permissions required to access Visual Builder applications.

Privileges associated with a user role determine what tasks users assigned those roles can perform. See [Privileges Available to Roles in Oracle Visual Builder](#).

To assign roles to users:	See this:
For Visual Builder	<a href="#">Assign Roles to Users</a>

If your Visual Builder instance is part of Oracle Integration:

To assign roles to users:	See this:
For Oracle Integration Classic	<a href="#">Add Users, Groups, and Roles for an Existing Instance</a> in <i>Administering Oracle Integration Classic</i>
For Oracle Integration Generation 2	About Setting Up Users and Groups in <i>Provisioning and Administering Oracle Integration 3</i>

## Set Page Messages for Access Denied Errors

Administrators can use the instance's settings page to specify a URL that users are navigated to when they are denied access to an application or page.

Authenticated users might see an Access Denied page or message when they attempt to access an application or page in an application that their user role is not permitted to access. Administrators can set the default page or message that users see when they are denied access to an application or page. Access Denied messages that are set at the application level in the General Settings of an application will override messages set in the instance's settings page. The default Access Denied page and message is used if the message options in this panel are not set.

To specify an Access Denied page or message for applications in the instance:

1. Open the instance's settings page.
2. In the **Security** panel, type a URL that users are directed to when denied access to an application.

The URL that you specify is used as the Access Denied page for all applications in the instance and should be accessible to users who are not logged in.

## No Visual Builder Access

## "Access Denied" Message

 **Note:**

If you are configuring settings for classic applications, the Access Denied settings are set in the **Messages** panel.

3. Type the message that you want users to see when they are denied access to a page.

The message that you enter will be displayed in the Access Denied page for all applications in the instance except for those where a message was set at the application level in the application's General Settings page.

## Allow Other Domains Access to Services

Use the Global Settings page to specify the domains that are permitted to interact with services in your instance.

Cross-Origin Resource Sharing (CORS) is a mechanism that enables you to specify the domains that are allowed to exchange data with applications in your instance. By default, incoming requests from domains not on your instance's list of allowed origins are blocked from accessing application resources.

To add a domain to the list of allowed origins:

1. Open the instance's settings page.
2. In the **Allowed Origins** panel, click **New Origin** and type the URL of the domain that you want to allow. Click **Submit**.

The Allowed Origins panel lists all origins that are permitted to retrieve information from the instance.

Allowed Origins

[+ New Origin](#)

Type Cross-Origin Resource Sharing (CORS) allows external services to interact with visual builder.

## Inspect Database Usage

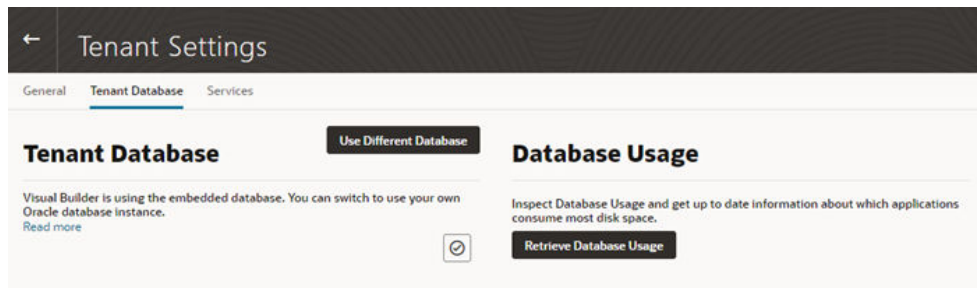
An administrator can view how much space in the tenant's database is being consumed by each of the tenant's applications.

The capacity of the tenant's database is 5GB, so by viewing the database usage you can see how much of the database's capacity remains. If you require more than 5GB of storage, you can [Switch to Your Own Oracle DB Instance](#).

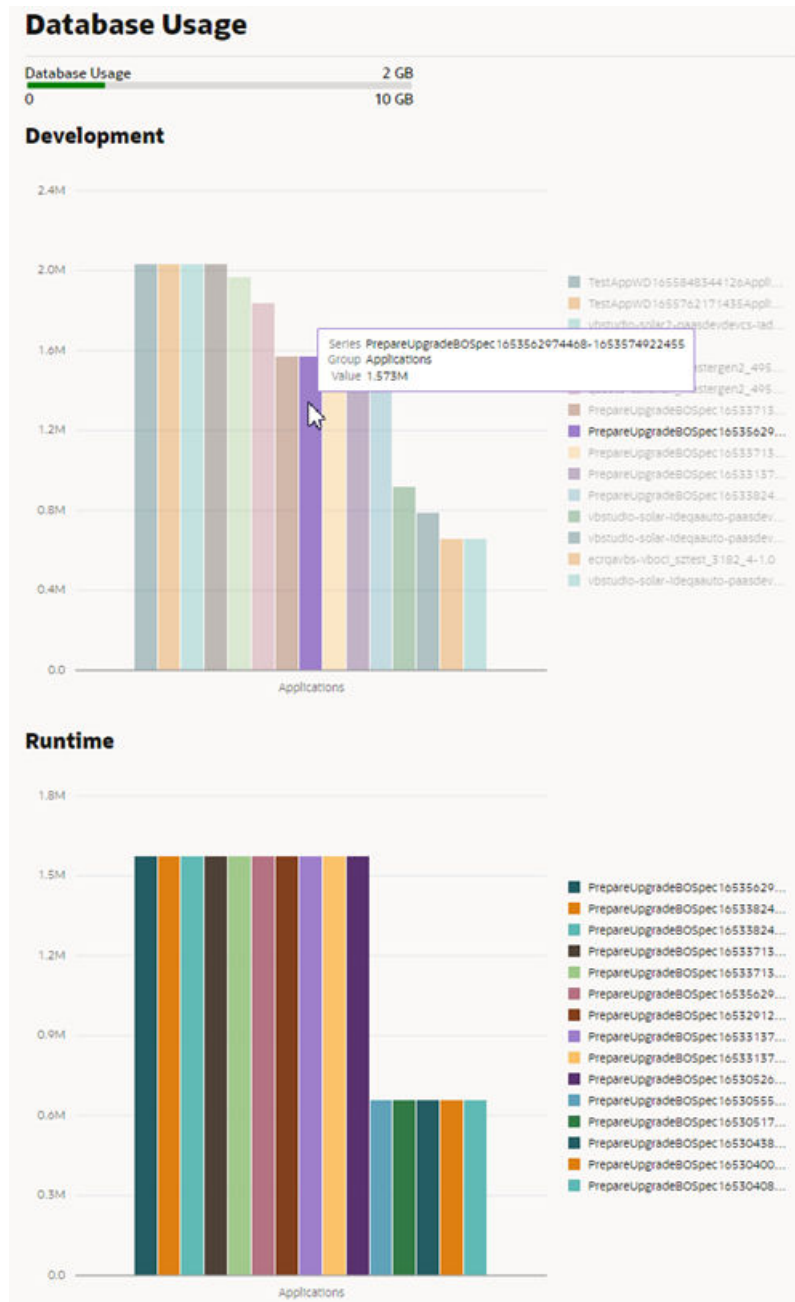
To inspect your instance's database usage:

1. Open the instance's Tenant Settings page, and then open the Tenant Database tab.

The Tenant Database has two panels: Tenant Database and Database Usage.



2. Click **Retrieve Database Usage** in the Database Usage pane.



The Database Usage meter in the panel shows how much of the database's capacity is currently used. The data usage is rendered in two charts:

- The Development chart shows the space used for storing the business objects in each application in the design-time.
- The Runtime chart shows the space used for each of the staged and published apps.

## Switch to Your Own Oracle DB Instance

The database provisioned with your Visual Builder instance is used to store data for your business objects and your app's metadata, but this database has a 5GB limit and you can't access the data in the objects using regular SQL.



If the 5GB limit is insufficient for your tenant schema, you can configure your instance to use an Oracle DB instance that has more space instead of the default database. If you choose to switch to an Oracle DB instance, the database must be publicly accessible. You can connect to an Oracle DBaaS or Autonomous Transaction Processing (ATP) database instance. Using an ATP database will give you more space and direct SQL access to the objects VB creates. You can also use a [Free Forever](#) Oracle ATP, which provides 20GB of storage for free.

To use a different Oracle DB instance, you use a wizard in the Tenant Settings to create a connection to the database instance and export the applications stored in the tenant's current database.

If you decide to use JDBC to connect to your DBaaS instance, you must include the privileges required to enable the ADMIN user to create a tenant schema. The following SQL shows the grants that are needed:

```
CREATE USER [adminuser] IDENTIFIED BY [password];
GRANT CONNECT, RESOURCE, DBA TO [adminuser];

GRANT SELECT ON SYS.DBA_PROFILES TO [adminuser] WITH GRANT OPTION;
GRANT SELECT ON SYS.DBA_USERS TO [adminuser] WITH GRANT OPTION;
GRANT SELECT ON SYS.DBA_DATA_FILES TO [adminuser] WITH GRANT OPTION;
GRANT SELECT ON SYS.DBA_SEGMENTS TO [adminuser] WITH GRANT OPTION;
```

If you decide to use ATP, you'll need to include the `wallet.zip` file in the wizard in addition to the connection info. You might want to create a new ATP ADMIN user with the correct admin privileges. The following SQL statement shows how to create a second ATP ADMIN user in SQL\*Plus or SQL Developer.

```
DROP USER [adminuser] CASCADE;
CREATE USER [adminuser] IDENTIFIED BY [password];
GRANT CREATE USER, ALTER USER, DROP USER, CREATE PROFILE TO
[adminuser] WITH ADMIN OPTION;
GRANT CONNECT TO [adminuser] WITH ADMIN OPTION;
GRANT RESOURCE TO [adminuser] WITH ADMIN OPTION;
GRANT CREATE SEQUENCE, CREATE OPERATOR, CREATE SESSION,ALTER SESSION,
CREATE PROCEDURE, CREATE VIEW, CREATE JOB,CREATE DIMENSION,CREATE
INDEXTYPE,CREATE TYPE,CREATE TRIGGER,CREATE TABLE,CREATE PROFILE TO
[adminuser] WITH ADMIN OPTION;
GRANT UNLIMITED TABLESPACE TO [adminuser] WITH ADMIN OPTION;
GRANT SELECT ON SYS.DBA_PROFILES TO [adminuser] WITH GRANT OPTION;
GRANT SELECT ON SYS.DBA_USERS TO [adminuser] WITH GRANT OPTION;
GRANT SELECT ON SYS.DBA_DATA_FILES TO [adminuser] WITH GRANT OPTION;
GRANT SELECT ON SYS.DBA_SEGMENTS TO [adminuser] WITH GRANT OPTION;
```

 **Note:**

If you get an error `Failed to verify the target database` in the Change Tenant Database dialog when switching the database, it might be because the database is not reachable (Visual Builder cannot reach databases in private subnets), or because you don't have the required privileges.

If you see the error, confirm that the ADMIN user (`adminuser`) has the required privileges. You might also need to assign the SYSOPER and SYSDBA roles to the ADMIN user:

```
GRANT SYSOPER, SYSDBA TO [adminuser];
```

You can run the following query to confirm the ADMIN user has the necessary privileges:

```
select * from v$pwfile_users;
```

In the wizard you need to select and export all the applications in your instance that you want to keep. After confirming that your instance is using the new database instance, you must import the exported applications into Visual Builder to save them in the new database instance.

 **Note:**

If you have live applications already on the instance before migration, make sure to backup the data in their business objects using the export options in the Visual Builder data manager. You'll then be able to import that data back into the new apps you'll create from the application archives you export in the wizard.

To switch to a different Oracle DB instance:

1. Open the instance's Tenant Settings page, and then open the Tenant Database tab.
2. Click **Use Different Database** in the Tenant Database panel to open the Change Tenant Database wizard.

In the Change Tenant Database wizard you supply the details for the connection to your Oracle DB instance.


## Change Tenant Database ✕

1 ————— 2

Define Database      Export Applications

Connection Type  
Oracle Autonomous Transaction Processing Cloud Wallet

Upload Wallet

  
Upload a zip file or drag one here

Wallet Password

TNS Name

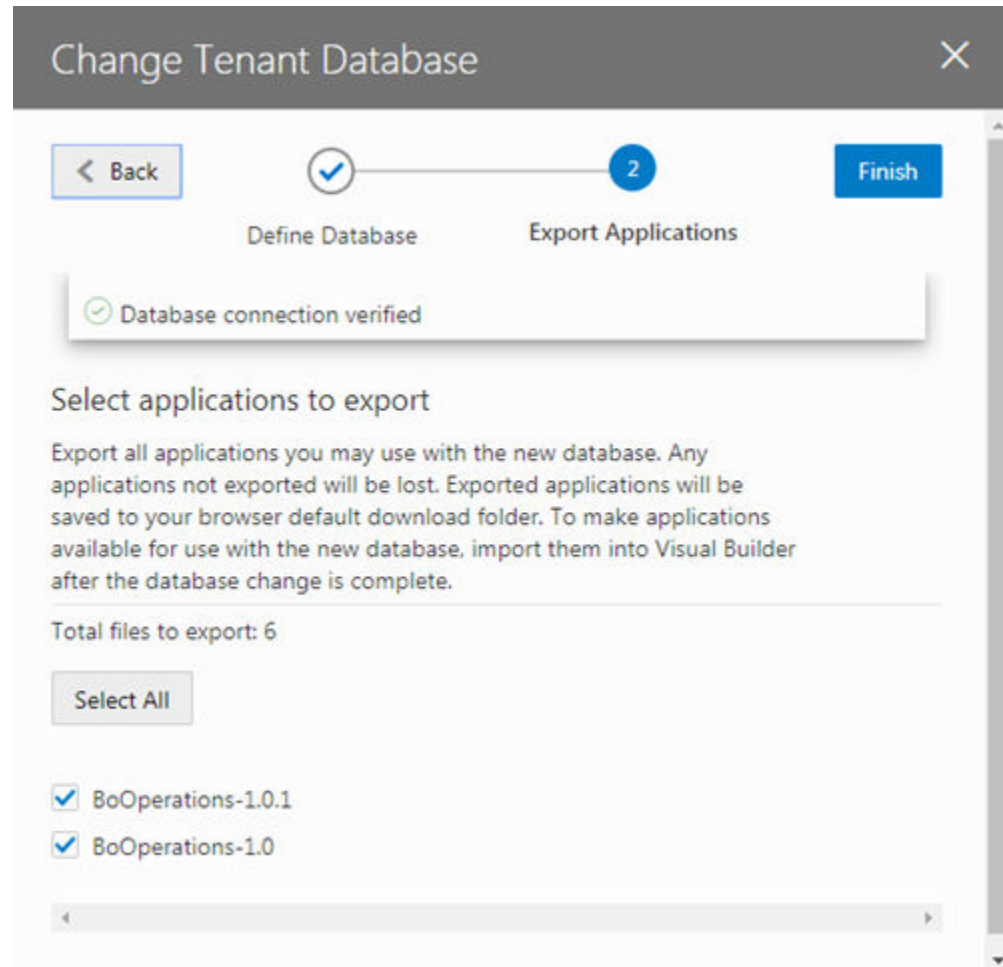
DBA User Name Please make sure the user has DBA privilege

Password The user credential will be used to create schema only, and will not be saved

---

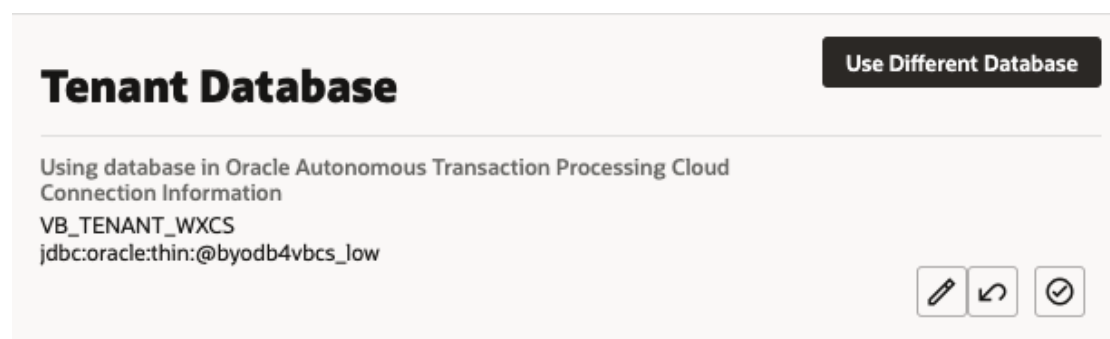
3. Select a Connection Type in the drop-down list.  
You can connect to your Oracle DB instance using either JDBC or an ATP Cloud Wallet.
4. Provide the details for connecting to your database. Click **Next**.  
The details you need to provide will depend upon the type of connection you selected.
5. Select all the applications that you want to export. Click **Finish**.

You must select and export all the applications that you want to keep. Any applications that are not exported will be lost.



When you click Finish, the applications that you selected are downloaded to your local file system. Exported application archives include the details about the application's user roles, and they will be available when you re-import your app into the new database.

After switching the database, the Tenant Database pane displays the connection information for your tenant's database. In the following image you can see that the instance is now using an Autonomous Transaction Processing (ATP) database instance.



 **Note:**

If you decide to revert back to using the embedded database, you can click



in the Tenant Database pane. You'll be prompted to confirm that you want to switch to using the instance's embedded database instead of the current one.

When you revert to using the embedded database, the visual applications in your current database are not transferred automatically. You'll need to export the apps you want to keep before switching the database, and then import them into the embedded database.

Visual Builder automatically manages the schemas and tables it uses for apps and business objects in your new DB, so you don't need to do anything further.

If you would like to access the business objects using SQL, you'll find that VB creates users/schemas with names that start with `VB_` followed by randomly generated strings. By examining the data dictionary you'll be able to find the users that represent specific apps. Note that you'll see separate schemas for dev, stage, and published instances of an app. The schemas for the dev and test instances will be re-created with different names with every new version of the app that you create. If you want to prevent the schema name for a published app from changing, when you publish new versions of the app you should choose the option to not replace the data.

 **Note:**

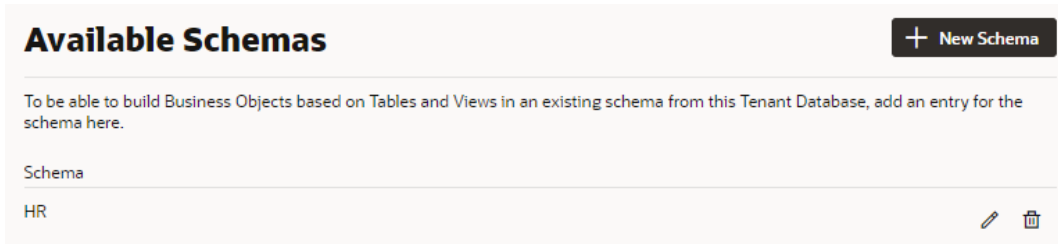
Instead of having Visual Builder create and manage schemas, you can make a schema that already exists in your database available to applications, so developers can create business objects based on existing DB tables and views. In this case, only one schema is used for the app's dev, staged, and published instances. See [Make Schemas in an Oracle DB Instance Available to Applications](#).

## Make Schemas in an Oracle DB Instance Available to Applications

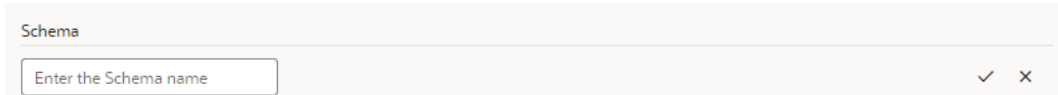
When you connect an Oracle database instance with your Visual Builder instance, application developers can use schemas predefined in the tenant database to create business objects based on existing tables and views for an application. But for developers to access these schemas, you'll first need to make them available to applications.

To make a tenant database's existing schema available to applications:

1. Open the instance's Tenant Settings page.
2. Click **+ New Schema** in the Available Schemas panel.



3. Enter a name for the schema and click the check mark icon.



After the schema is added, you can edit its name or delete it entirely, but remember any changes you make might break applications that use the schema.

Schema that exists in the tenant database and has been added to the list of available schemas will become available for selection in an application's Settings editor (under Schema Selection in the Business Objects tab).

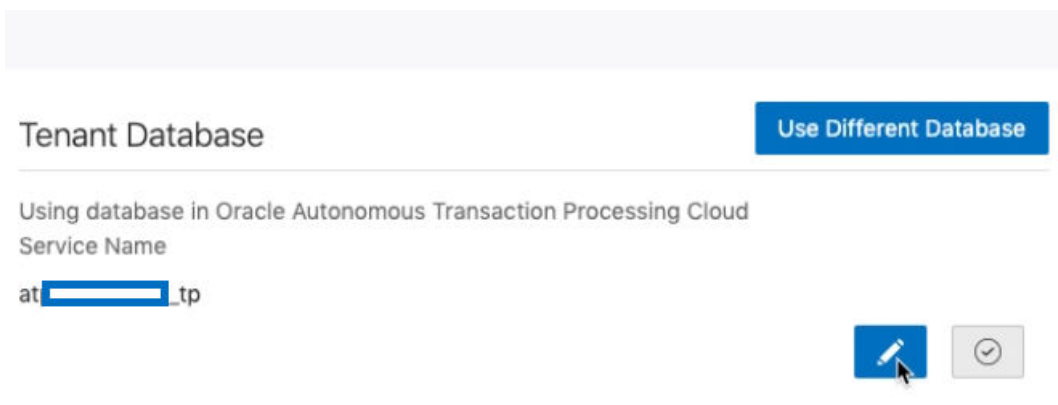
## Reset an Expired Password or ATP Wallet for Your Oracle DB Instance

If you switch to use your own Oracle DB instance and the credentials you use to access the instance expire, you can renew the expired credentials using the Update Tenant Database Connection dialog.

To regenerate the expired values, you need to provide the ADMIN user credentials that you provided when you first switched to your own Oracle DB instance. Visual Builder uses the ADMIN user credentials to generate new Visual Builder tenant credentials to replace the expired credentials. Visual Builder does not store the ADMIN user credentials that you supply.

To reset expired credentials:

1. Open the General tab of the instance's Tenant Settings page.
2. In the Tenant Database field, click the Edit icon to open the Update Tenant Database Connection wizard.



3. In the Update Tenant Database Connection wizard, supply the ADMIN user credentials and ATP wallet that Visual Builder will use to reset the expired credentials, or update the expired wallet for your Oracle DB instance.

Update Tenant Database Connection

Provide admin user credentials below to reset expired tenant schema password or ATP DB wallet.

Upload Wallet

Upload a zip file or drag one here

Wallet Password

DBA User Name Please make sure the user has DBA privileges.

Password The admin credential will be used to create or update schema only, and will not be saved.

Cancel Finish

4. Click **Finish**.

## Add a Connection to Integration Applications

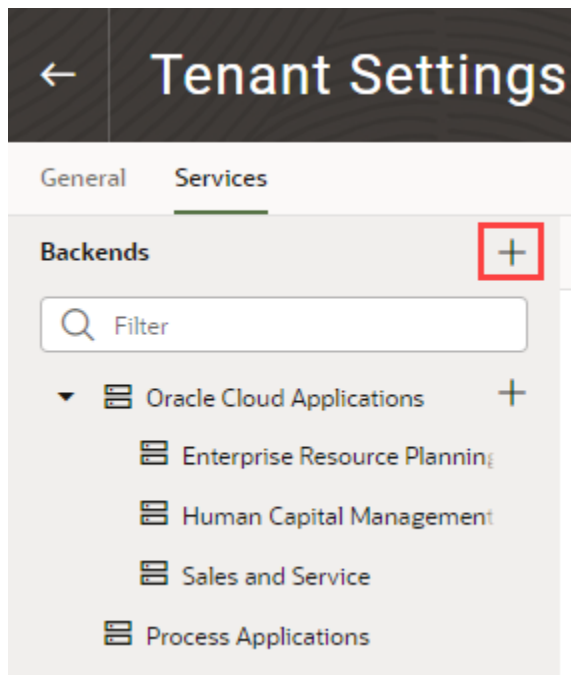
Administrators can use the Services tab in the Tenant Settings page to add a connection to an instance of Oracle Integration as a backend service.

When adding a connection to an instance of Oracle Integration as a backend service, you can use any of the available authentication options in the Create Backend dialog. If using Oracle Cloud Account or Delegate Authentication as the authentication type, the Oracle Integration instance should be co-hosted with Visual Builder. In most cases, this backend service (Oracle Integration) will be preconfigured for your Visual Builder instance.

If you are using multiple Visual Builder instances, for example, development and production instances, you might need to add connections to Oracle Integration in more than one instance.

To add a connection to an Oracle Integration instance:

1. Open the instance's Tenant Settings page.
2. In the Services tab, click **Create Backend** and choose **Integrations** in the Create Backend dialog.



3. In the dialog, type the Server URL of the backend service, configure other settings such as security as needed, and click **Create**.

See About Authentication and Connection Type in *Developing Applications with Oracle Visual Builder*.

## Add a Connection to Oracle Cloud Applications

The list of REST services in the service catalog of a visual application is retrieved from an Oracle Cloud Applications backend service. Specify the instance URL of the Oracle Cloud Applications backend service in the Tenant Settings page.

All visual applications in the tenant will use the Oracle Cloud Applications instance URL specified in Tenant Settings, but a visual application can be configured to use a different Oracle Cloud Applications backend service by specifying a different instance URL in the Backends tab (which you access from the Navigator's Services tab). The tenant-level backend configuration is ignored if you or a visual application developer configures a different Oracle Cloud Applications backend service in a visual application's Backends tab.

The authentication choices available to configure a tenant-level Oracle Cloud Applications backend are:

- Basic Auth: Uses a fixed username and password for authentication.
- Oracle Cloud Account: Needs federation between Oracle Cloud Applications and Visual Builder.
- Delegate Authentication (previously called Propagate Current User Identity): Same as Oracle Cloud Applications. That is, it needs federation between Oracle Cloud Applications and Visual Builder.
- None: This assumes your Oracle Cloud Applications REST API can be called without any authentication, which is not usually the case.

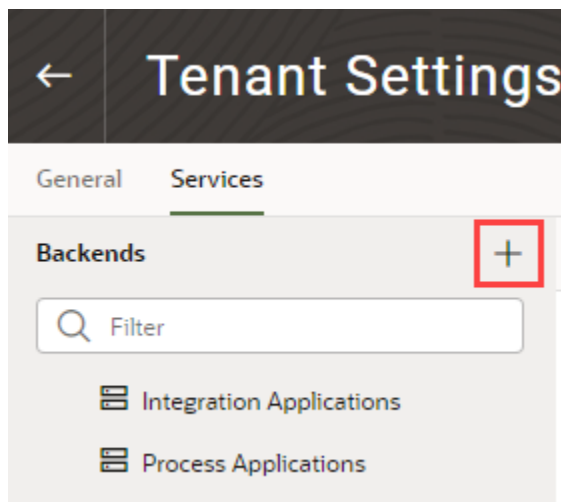


See About Authentication and Connection Type in *Developing Applications with Oracle Visual Builder*.

If the necessary prerequisites for setting a tenant-level Oracle Cloud Applications backend service are not available, then a visual application developer can set up a backend service at the visual application level where more options are available. Another option is for you (the service administrator) to configure the Oracle Cloud Applications backend with `None` and let the visual application developer override the authentication setting at the visual application level.

To specify an Oracle Cloud Applications service for the tenant:

1. Open the instance's Tenant Settings page.
2. In the Services tab, click **Create Backend**, then choose **Oracle Cloud Applications** in the Create Backend dialog.



When specifying the URL in the Tenant Settings, you (the service administrator) only need to provide the instance URL of the Oracle Cloud Applications backend service to retrieve the list of services.

3. In the dialog, type the Server URL of the backend service, and configure other settings, such as security, as needed.
4. (Optional) After you configure settings for the backend, add headers to the backend.

Backend headers that you add will be applicable for any service connection to this backend, irrespective of the server or application profile that is used.

5. Click **Create**.

Visual Builder automatically discovers the `interfaceCatalogs` endpoint of the Oracle Cloud Applications backend, which retrieves the list of services and their metadata. This endpoint is typically in the form:

```
https://<My Oracle Cloud Applications Instance URL >/helpPortalApi/  
otherResources/latest/interfaceCatalogs
```

This endpoint is publicly accessible without any authentication.

If there is a problem creating the connection, verify the instance URL of the Oracle Cloud Applications instance.

## Add a Connection to Process Cloud Service

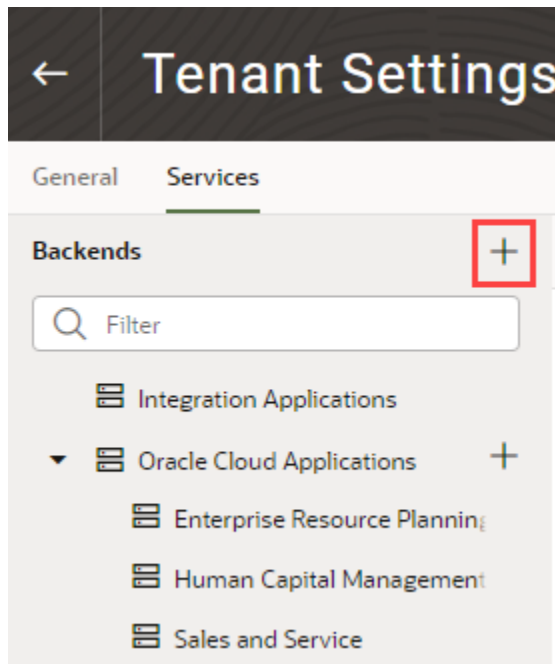
Administrators can use the instance's Tenant Settings page to add a connection to an instance of Oracle Process Cloud Service as a backend service.

To add a connection to an instance of Oracle Process Cloud Service as a backend service, the instance of Oracle Process Cloud Service should be co-hosted with Visual Builder because the authentication types that Visual Builder supports for this configuration is Oracle Cloud Account or Propagate Current User Identity. In most cases, this backend service (Oracle Process Cloud Service) will be preconfigured for your Visual Builder instance.

If you are using multiple Visual Builder instances, for example, development and production instances, you might need to add connections to Oracle Process Cloud Service in more than one instance.

To add a connection to an Oracle Process Cloud Service instance:

1. Open the instance's Tenant Settings page.
2. In the Services tab, click **Create Backend** and choose **Process** in the Create Backend dialog.



3. In the dialog, type the Server URL of the backend service, configure other settings, such as security, as needed, and click **Create**.

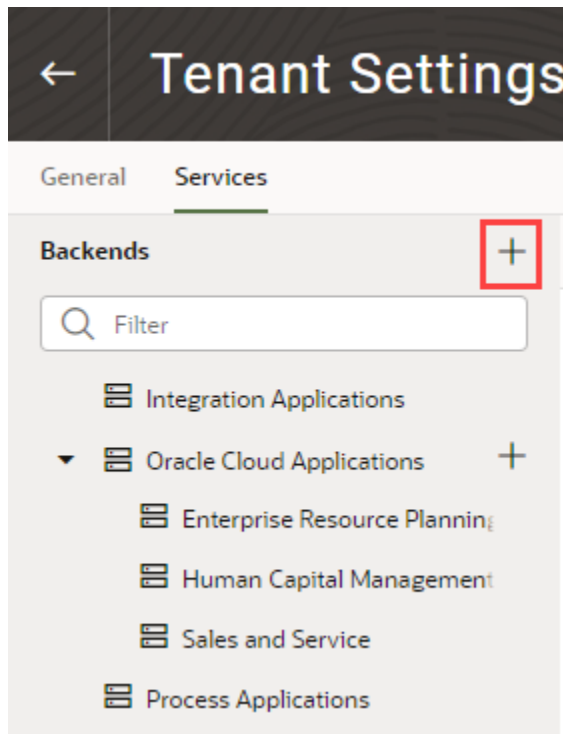
## Add a Connection to a Custom Backend

You can create your own backend to map to a custom server other than the Oracle Integration, Process, and Oracle Cloud Applications backend services. You can create a

custom backend with a free-form URL, or create a custom ADF backend when you know the Describe URL that points to an ADF Describe service.

To add a connection to a custom backend:

1. Open the instance's Tenant Settings page.
2. In the Services tab, click **Create Backend**.



3. In the Create Backend wizard, select the type of backend you want to create:
  - To create a backend with a free-form URL, click **Custom**.
  - To create a backend with the Describe URL of an ADF service, click **Custom ADF Describe**. Use this option only when your custom ADF Describe endpoint does not have any child backends.
4. In the Name field, enter a name and description for the custom backend.
5. Add headers to the backend. Backend headers that you add will be applicable for any service connection to this backend, irrespective of the server or application profile that is used.
6. Click **Next**.
7. Enter the instance URL for the custom backend, configure other settings, such as security, and click **Create**.

## Create a Child Backend

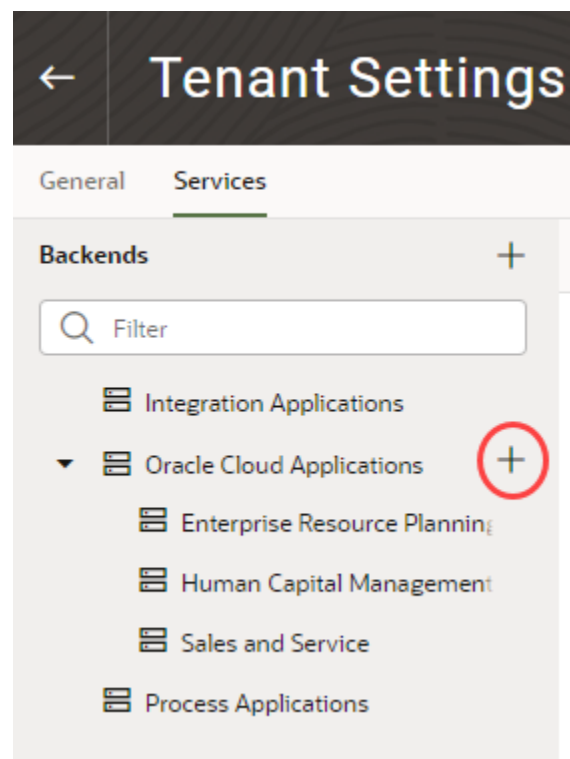
You can create child backends to extend the functionality provided by the top-level Oracle Cloud Applications or custom backend registered to your Visual Builder instance.

Let's say your instance's Oracle Cloud Applications backend connects to an Oracle Cloud Applications instance that provides access to these service catalogs: Enterprise Resource Planning Supply Chain, Sales and Service, and Human Capital Management. Now if you want to access another catalog (say, Search), you can create a child backend to access the search service.



A child backend inherits the parent backend's definition, which you can override as required. Its server URL is derived from the top-level backend, with `vb-catalog://backends/` as the base URL. Continuing the Oracle Cloud Applications example, the Sales and Service child backend adds to the top-level Oracle Cloud Applications backend and has `vb-catalog://backends/fa/crmRestApi/resources` as its server URL.

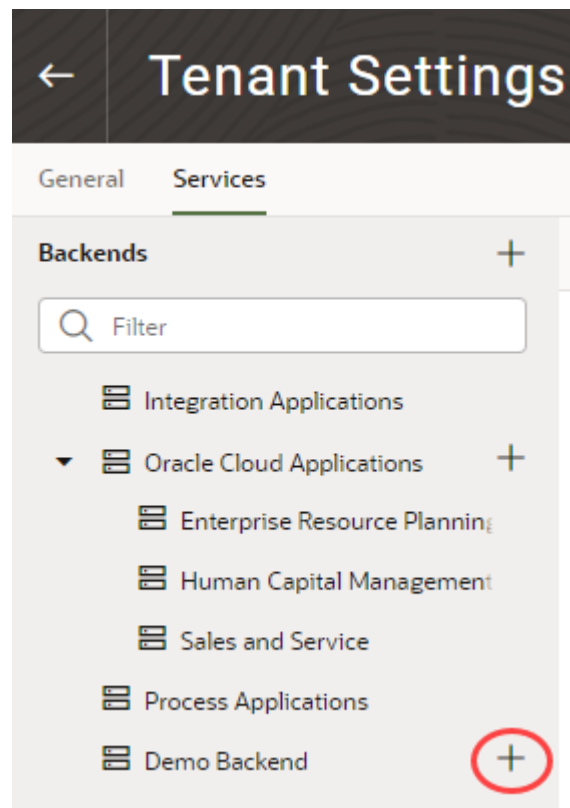
Child backends can be created only for the Oracle Cloud Applications backend and custom backends that use a OpenAPI/Swagger service specification.

- To create a child backend for the Oracle Cloud Applications backend:
  1. Open the instance's Tenant Settings page.
  2. In the Services tab, click the + sign for the top-level Oracle Cloud Applications backend:



3. Select **Custom ADF Describe** to create a backend with an ADF Describe URL. For backends not having a Describe URL, select **Custom**.
4. Enter a name and description for the child backend. Optionally, add static headers.

5. Click **Next**.
  6. Enter the instance URL for the child backend (for example, `vb-catalog://backends/fa/applcoreApi/search/`). The child backend's URL will usually start with `vb-catalog://backends/oracle-cloud-app-BackendId`.
-  **Tip:**  
To see the complete URL that the backend resolves to, click the **Detach** icon ().
7. Enter other settings, such as security and headers.
  8. Click **Create**.
- To create a child backend for a top-level custom backend:
    1. Open the instance's Tenant Settings page.
    2. In the Services tab, click the + sign for a top-level custom backend:



3. Enter a name and description for the child backend. Optionally, add static headers.
4. Click **Next**.

5. Enter the instance URL for the child backend (for example, `vb-catalog://backends/demo/newdemo`). You can click the **Detach** icon to see the complete URL that the backend resolves to.
6. Enter other settings, such as security and headers.
7. Click **Create**.

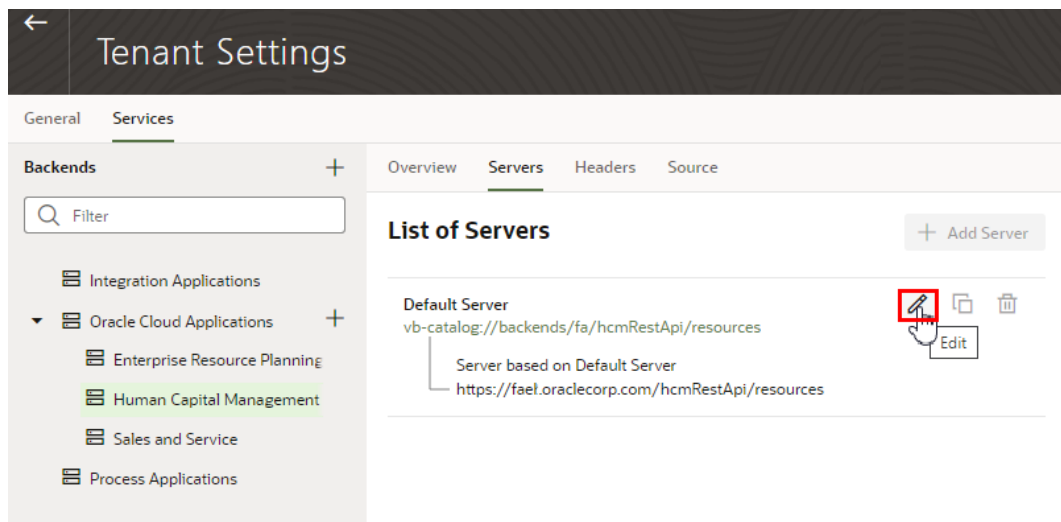
## Edit Authentication for a Backend Service

Administrators can use the Services tab in the Tenant Settings page to edit the authentication and connection settings for the backend services available in the tenancy. Once a backend service is added, you can edit its details. In the case of child backends, you can also override the settings inherited from the backend service, for example, to allow connections to the child HCM backend to use basic authentication instead of using the Oracle Cloud Account authentication for logged-in users set at its parent backend.

For a description of the authentication options, see *About Authentication and Connection Type* in *Developing Applications with Oracle Visual Builder*.

To edit the connection details for a backend service:

1. Open the instance's Tenant Settings page.
2. In the Services tab, select the backend you want to edit.
3. Open the Servers tab of your backend, and then click **Edit**.



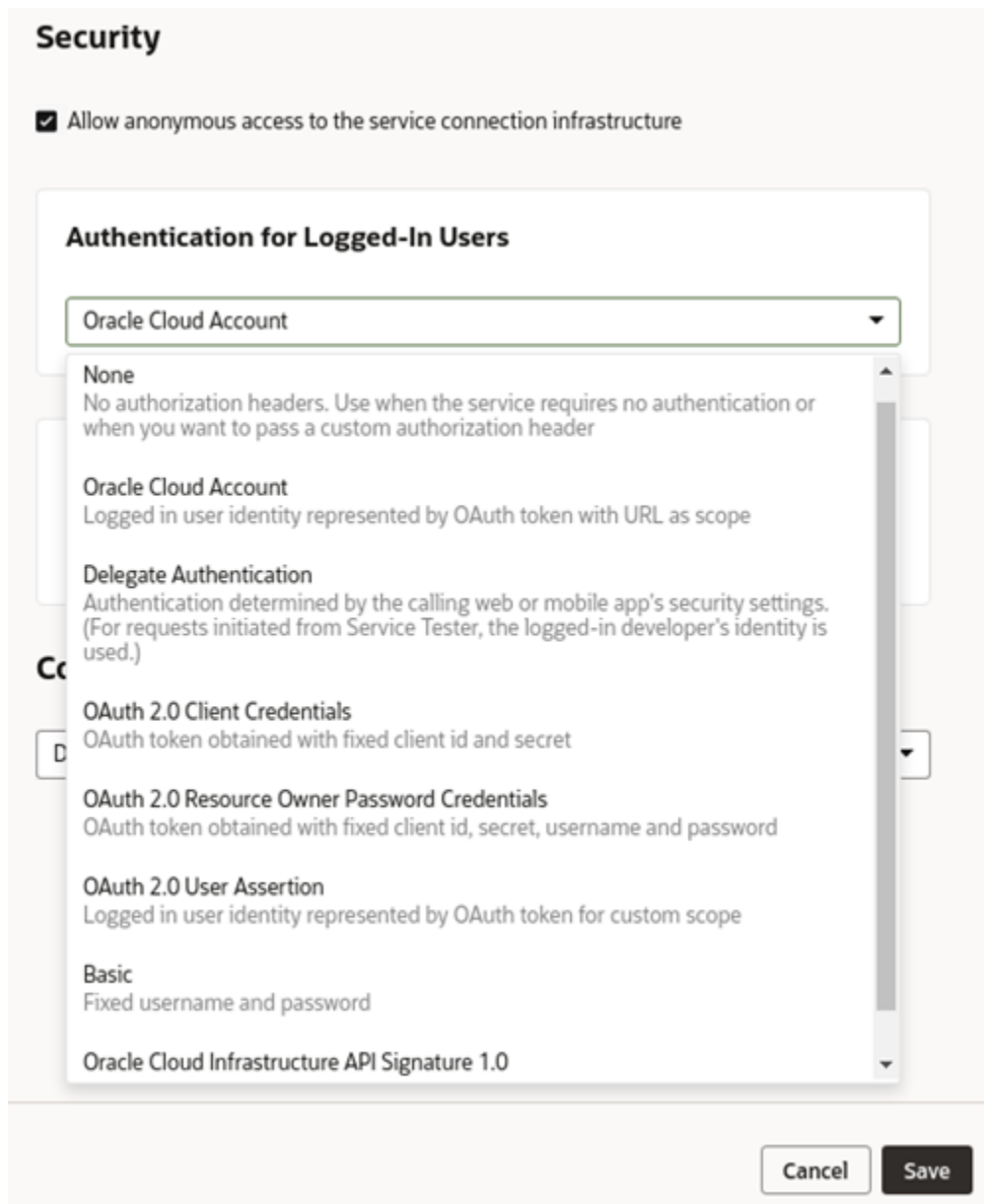
4. In the Edit Server dialog box, edit the settings in the Security and Connection Type panes.

The screenshot shows a 'Security' configuration pane. At the top, there is a checkbox labeled 'Allow anonymous access to the service connection infrastructure' which is currently unchecked. Below this is a section titled 'Authentication' containing a dropdown menu with 'Oracle Cloud Account' selected. Underneath is a section titled 'Connection Type' with a help icon, containing a dropdown menu with 'Dynamic, the service supports CORS' selected.

In the case of a child backend, the authentication and connection type details for your backend service are inherited from the parent service, so you'll need to override the settings. If you want to revert your changes for a child backend, you can click **Return to inherited** to restore the default inherited setting.

The 'Edit Server' dialog box is shown with several sections. On the left, 'Server Identification' includes an 'Instance URL' field with the value 'vb-catalog://backends/ta/hcmRestApi/resources' and a 'Description' field with 'Default Server'. Below are 'Server Variables' and 'Headers' sections, each with an 'Add Header' button. On the right, the 'Security' section is marked 'Inherited from Backend' and contains an unchecked checkbox for 'Allow anonymous access to the service connection infrastructure'. Below it is the 'Authentication for Logged-In Users' section, showing 'Authentication: Oracle Cloud Account' and an 'Override security' button. The 'Connection Type' section is also marked 'Inherited from Backend' and contains the text 'Always use proxy, irrespective of CORS support' and an 'Override Connection Type' button. At the bottom right, there are 'Cancel' and 'Save' buttons.

5. In the Security pane, select an authentication type in the dropdown list.  
If you are editing a child backend, you'll click **Override security** in the Security pane, and then select an authentication type in the dropdown list.



6. In the Connection Type pane, select a connection type in the dropdown list.  
In the case of a child backend, click **Override Connection Type** and then select the connection type.
7. Click **Save**.

## Manage Self-signed Certificates

Administrators can use the Certificates page to upload and manage the self-signed certificates used by the instance to enable inbound and outbound SSL communications to a service's REST APIs

When creating connections to REST services that use self-signed certificates, you might need to add an API's certificate to your Visual Builder instance to validate SSL connections to



that service. You can use the Certificates page to upload and remove certificate files (.pem) for services. Uploading a service's certificate file to the keystore will allow all applications in the instance to communicate with that service. The Certificates page displays a list of certificates that have been added. You can click the Delete button in a row to remove the certificate.

 **Note:**

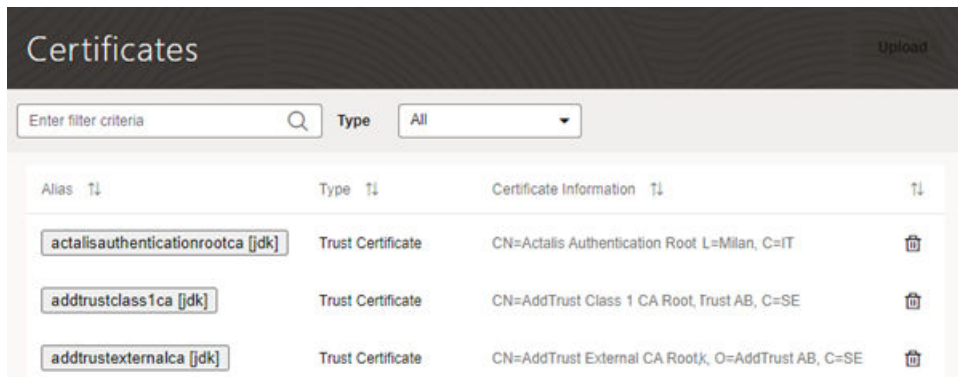
Your staged or published apps might stop working if they use service connections with self-signed certificates and the certificates have expired. Any certificates issued after 2020-09-01T00:00:00.00Z will automatically expire 398 days after they have been issued. If your apps use certificates issued before 2020-09-01T00:00:00.00Z, the certificates will not expire, but you should update them with a newer certificate.




To avoid disruptions, you should plan regular updates to refresh the self-signed certificates before they expire (for example, every 6 months). It's not recommended to use self-signed certificates in production apps.

To upload a self-signed certificate:

1. Open the Visual Builder main menu and click **Certificates**.

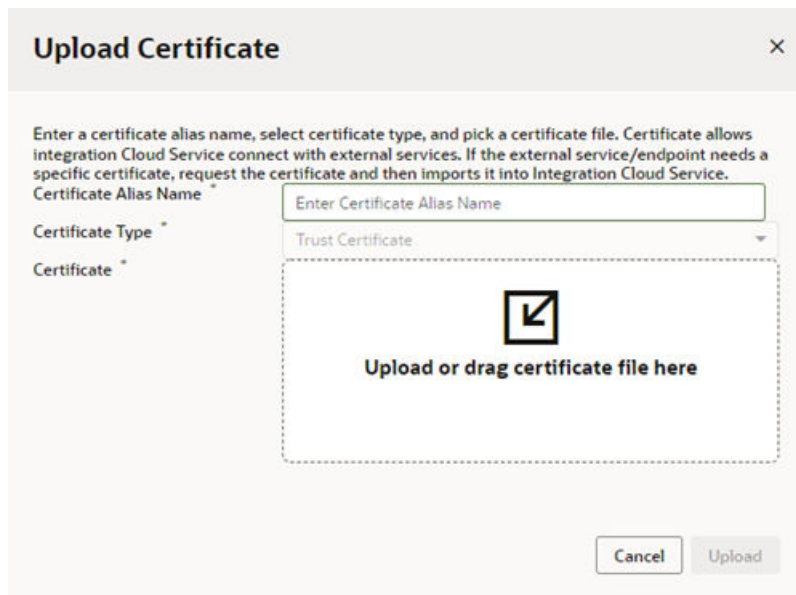
The Certificates page displays a list of the certificates already uploaded to the instance.



Alias	Type	Certificate Information	
actalisauthenticationrootca [jdk]	Trust Certificate	CN=Actalis Authentication Root L=Milan, C=IT	
addtrustclass1ca [jdk]	Trust Certificate	CN=AddTrust Class 1 CA Root, Trust AB, C=SE	
addtrustexternalca [jdk]	Trust Certificate	CN=AddTrust External CA Rootk, O=AddTrust AB, C=SE	

2. Click **Upload** to open the Upload Certificate dialog box.

You use the Upload Certificate dialog box to create an alias for the certificate and upload the service's certificate file from your local system.




**Upload Certificate** ×

Enter a certificate alias name, select certificate type, and pick a certificate file. Certificate allows integration Cloud Service connect with external services. If the external service/endpoint needs a specific certificate, request the certificate and then imports it into Integration Cloud Service.

Certificate Alias Name \*

Certificate Type \*

Certificate \* 

  
**Upload or drag certificate file here**

3. Type the alias in the Certificate Alias Name field.  
The alias is used to identify the certificate in the table in the Certificates page. The Certificate Type dropdown list is read-only because only Trust Certificates are supported.
4. Drag the certificate file from your local system into the upload target area, or click the upload target area to browse your local system.
5. Click **Upload** to add the certificate to the service keystore.

## Manage Your Component Exchange

If your team develops custom components for visual applications and want the components to be available to all users in the Visual Builder Components tab, you'll need to first set up a component exchange. This chapter tells you how to set up the Component Exchange in Visual Builder.

### What is a Component Exchange?

A component exchange is a repository of custom components available in VB Studio. You can use these components in your visual applications, such as web components and application templates. Many of the components provided by Oracle can be installed from a component exchange.

To integrate a component exchange with a instance, you provide the exchange's URL and credentials in the Tenant Settings. The exchange can be a private exchange in a VB Studio project or one of the exchanges maintained by Oracle.

If your organization develops or uses proprietary components, these components can be published to a private exchange hosted by a VB Studio project. For example, if you have a web component designed to be used in applications in your tenant, you can set up your own exchange and use it to distribute the component to developers in the tenant. Additionally, components provided by Oracle are automatically available from all private component exchanges.

Oracle maintains two component exchanges containing components validated by Oracle that are publicly available to all developers. If you don't have a private exchange but you want to give developers access to these Oracle components, you can add one of the following exchanges maintained by Oracle. If your instance is in the US, use the following details.

Field	Value
URL	<a href="https://devinstance4wd8us2-wd4devcs8us2.uscom-central-1.oraclecloud.com/profile/devinstance4wd8us2-wd4devcs8us2/s/devinstance4wd8us2-wd4devcs8us2_compcatalog_3461/compcatalog/0.2.0">https://devinstance4wd8us2-wd4devcs8us2.uscom-central-1.oraclecloud.com/profile/devinstance4wd8us2-wd4devcs8us2/s/devinstance4wd8us2-wd4devcs8us2_compcatalog_3461/compcatalog/0.2.0</a>
Username	comp.catalog
Password	bXwphh6RMFjn#g

If your instance is in Europe, use the following details.

Field	Value
URL	<a href="https://devinstance4wd8em2-wd4devcs8em2.eucom-north-1.oraclecloud.com/profile/devinstance4wd8em2-wd4devcs8em2/s/devinstance4wd8em2-wd4devcs8em2_compcatalog_1681/compcatalog/0.2.0">https://devinstance4wd8em2-wd4devcs8em2.eucom-north-1.oraclecloud.com/profile/devinstance4wd8em2-wd4devcs8em2/s/devinstance4wd8em2-wd4devcs8em2_compcatalog_1681/compcatalog/0.2.0</a>
Username	comp.catalog
Password	!!MWtu4jsQ56wM

## About Component Exchanges Hosted in VB Studio Projects

A VB Studio project can host a secure component exchange to store and distribute components only available to developers in the instance.

Each VB Studio project includes the component exchange 'compcatalog', which is the service used to access components stored in the project. The compcatalog service is provisioned by default with each project. Any project can be used to host an exchange if storage is enabled for the VB Studio instance. Component developers can use the service's APIs to publish components to the exchange.

To integrate a private exchange in a VB Studio project with a Visual Builder instance, an administrator specifies the URL for the project's compcatalog service and the credentials for a user that can access the project. The credentials used to connect to the exchange must be an owner or member of the VB Studio project hosting the exchange. All developers in the tenant use these credentials to connect to the exchange to get the components and application templates they want to use in their projects.

The URL for the project's compcatalog service has the following form: `https://<hostname>/<org_id>/s/<project_id>/compcatalog/0.2.0/`

In the URL, "compcatalog" is the exchange service and "0.2.0" is the API version of the service.

To determine the URL for the compcatalog service, you need to know the following details about the VB Studio project:

- `<hostname>`. This is the VB Studio server where the project is hosted.
- `<org_id>`. This is the organization (tenant) name.

- `<project_id>`. This is a project identifier unique to the tenant. This is not the same as the project display name entered by the project owner and is not displayed in the VB Studio UI.

If you do not know the `<project_id>` for the project hosting the exchange, you can get it from the Git or Maven configuration, or by using the VB Studio Projects API. The following table describes how to get the `<project_id>`.

Method	Steps
From a Git or Maven configuration	<ol style="list-style-type: none"> <li>1. In VB Studio, open the project and locate the Repositories tab on the project's Home Page.</li> <li>2. Expand the the Git or Maven section and copy the repository URL.</li> </ol> <p>The Git repository URL will be similar to the following: <code>https://{user_id}@{hostname}/{org_id}/s/my-org_testproject_5/scm/my-repo.git</code></p> <p>The Maven repository URL will be similar to the following: <code>http://{hostname}/{org_id}/s/my-org_testproject_5/maven/</code></p> <p>In these examples, "my-org_testproject_5" is the project identifier. In this case, the URL for the 'compcatalog' service will be similar to <code>https://{hostname}/my-org/s/my-org_testproject_5/compcatalog/0.2.0/</code></p>
Using VB Studio Projects API	<p>If you know the name of the project sharing your exchange instance, you can get the project metadata using a REST call to the VB Studio API.</p> <p>For example, you can use cURL to send a REST call similar to the following:</p> <pre>curl -X GET -u '{username}:{password}'https://{hostname}/{org_id}/api/v2/projects/info/name:TestProject</pre> <p>The return should be similar to the following:</p> <pre>[   {     "organization":"my-org",     "identifier":"my-org_testproject_5",     "name":"TestProject",     "urlId":"testproject",     "description":null,     "accessibility":"PRIVATE",     "template":false,     "state":"READY",     "locked":false,     "relation":     {"membership":"OWNER","favorite":false}   } ]</pre> <p>In this example, the identifier property in the return is the project identifier that is needed for the "compcatalog" service URL.</p>

## Add a Connection to a Component Exchange

When an instance is integrated with a component exchange, all developers using the instance can access and install components stored there.

After an exchange is added to the instance, all developers can use the Components tab in the Navigator to install and manage the components from the exchange that they want to use in their applications. When creating an application in the Create Application wizard, developers can also select any of the application templates that have been published to the exchange.

To add a connection to the Component Exchange:

1. Open the instance's Tenant Settings page.
2. In the Component Exchange panel, enter the URL and credentials for the component exchange.

### Component Exchange

Server URL

Username

Password

If you are adding a connection to a private component exchange, it is recommended that the credentials you provide are for an administrator who is a member of the VB Studio project hosting the exchange or the project owner.

## Configure Support for a Custom Domain

If you want your customers to see a different URL than the one generated by Visual Builder, you can map a custom domain to your instance.

A custom domain is a customer-provided hostname and domain (FQDN) created by adding a subdomain to your domain. After configuring your instance to use a custom domain, app users accessing the app using the custom domain will not see the typical Oracle domain (for example, myvbinstance-accountname.builder.ocp.oraclecloud.com) in the URL, but instead would see something like mycustom.example.org.

 **Note:**

For the custom domain to work, you must set the custom domain in the visual application's Settings editor and publish the app. See *Specify a Custom App URL in Developing Applications with Oracle Visual Builder*.

After configuring a custom domain:

- Users can access a single web app by typing just the custom domain URL in the browser, for example, `mycustom.example.org`. The app is loaded from the custom domain root ("/"), and no additional path information or query parameters are required in the URL.
- `http` can be redirected to `https`, so if a user types "mycustom.example.com", this will resolve to `https://mycustom.example.com`, and load the default web app.
- For applications that contain business objects, the Business Object REST API can also use the custom domain configuration.
- Developers can access the Designer in Visual Builder using a custom domain.
- If you create and stage an application from a custom domain (`https://mycustom.example.com/ic/builder/designer`), you'll be automatically redirected to the custom domain (`https://mycustom.example.com/ic/builder/rt/appid/version/...`) when you open the app using a URL that isn't the application's custom domain (for example, your instance's URL `https://servicename.oraclecloud.com/ic/builder/rt/appid/version/...`).

Multiple custom domains can be configured for an instance, but each custom domain must be mapped to a different visual application. For example, if the visual application `myvisualapp1` is mapped to the subdomain `mysubdomain1`, if you want to map `mysubdomain2` to an application it must be mapped to a different visual application (`myvisualapp2`).

Custom domains are also subject to other limitations:

- A custom domain can only access a published app. It will not work for apps that are only staged.
- If you publish a different web app in your visual application, it immediately becomes the default app for the custom domain, and the previous web app will no longer be available at the custom domain.
- A custom domain can only be used to access one live app (in the visual application configured for the root URL). You can access other live apps in the same instance only by using the full Oracle Cloud URL or by creating and configuring a different custom domain and visual application.
- If a visual application contains more than one web app, only one of them can be accessed using the custom domain. It's not possible to specify which app in a visual application will be available at the custom domain because the domain is configured in the Settings for the visual application, not for individual web apps. If you are going to use a custom domain, it is recommended that the visual application only contain one web app to ensure that the correct app is loaded.
- Mobile and PWA apps are not supported at this time. Custom domains can only be used for web apps.

To configure a custom domain for your instance:

- You must be the registered owner of the domain and have access to its SSL certificate bundle information.
- You must have an Oracle Visual Builder instance.

 **Note:**

Custom domains are also supported on Oracle Integration instances, but only if you're on Generation 2.

Depending on whether you're on Oracle Integration Generation 2, Visual Builder, Visual Builder Generation 2, or a Visual Builder instance that was provisioned as part of a SaaS order, the process for enabling custom URLs varies. To enable a custom domain:

- For a Visual Builder Generation 2 instance, use the instructions in [Create and Configure a Custom Endpoint for Your Visual Builder Instance](#) in *Administering Oracle Visual Builder Generation 2*.
- For a Visual Builder instance that is not Generation 2, but where you have access to the OCI Console, you'll need to:
  - [Create a WAF Policy in the OCI Console](#) for your OCI account;
  - [Create and Configure a Subdomain and Configure SSL in the WAF Policy](#); and
  - Log a service request with Oracle Support.
- For a Visual Builder instance provisioned as part of a SaaS order, you might not have access to the OCI Console for configuring WAF. In this case, you'll need to use the instructions in [Create Custom Domain for Visual Builder Instance Provisioned as Part of a SaaS Order](#).
- For a Visual Builder in Oracle Integration Generation 2 instance, use the instructions in [Configure a Custom Endpoint for an Instance](#) in *Provisioning and Administering Oracle Integration and Oracle Integration for SaaS, Generation 2*.

## Create a WAF Policy in the OCI Console

To create a custom domain for your Visual Builder instance, you'll need to create and configure an Oracle Cloud Infrastructure Web Application Firewall (WAF) policy for your OCI account in the OCI Console.

 **Note:**

If you do not have access to the OCI Console, you'll need to use the instructions in [Create Custom Domain for Visual Builder Instance Provisioned as Part of a SaaS Order](#).

To create the WAF policy:

1. Sign in to the Oracle Cloud Infrastructure Console and open **WAF Policies** under **Security**.

2. Select the compartment you want the WAF policy to be created in and click **Create WAF Policy**.
3. Enter the details for the policy in the Create WAF Policy dialog box.

**Create WAF Policy** [help](#) [cancel](#)

**POLICY NAME** ⓘ

mycustom\_\_example\_\_com\_\_waf

**Domains**

**PRIMARY DOMAIN** ⓘ

mycustom.example.com

**ADDITIONAL DOMAINS** ⓘ

×

+ Additional Domain

**WAF Origin**

**ORIGIN NAME**

mycustom\_\_vb\_\_waf\_\_origin

Must be a unique identifier.

**URI** ⓘ

myvbcsinstance-example.builder.ocp.oraclecloud.com

IPv4 address or FQDN.

[Show Advanced Origin Options](#)

In the Create WAF Policy dialog box you need to enter a policy name, primary domain, WAF origin name and URI.

- Policy Name: provide a name for the WAF policy (for example, mycustom\_example\_com\_waf\_policy)
- Primary Domain: the customer's chosen DNS name (for example, mycustom.example.com)
- Additional Domains: (empty, or additional (sub)domains)
- Origin Name: provide a name for the primary origin (for example, mycustom\_vb\_waf\_origin)



- URI: the URI of the Visual Builder service (for example, `myvbcsinstance-example.builder.ocp.oraclecloud.com`)

 **Note:**

If you would like to have more than one custom domain pointing to different applications on the same Visual Builder instance (for example, `mysubdomain1.example.com` pointing to `myvisualapp1`, and `mysubdomain2.example.com` pointing to `myvisualapp2`), you can configure this in a single WAF policy by adding additional (sub)domains in the Domains section of the WAF policy dialog box.

4. Click **Create WAF Policy**.

After you click Create WAF Policy, it might take several minutes to create the policy. The CNAME target is displayed after the policy is created.

5. Note the **CNAME Target** for the WAF policy.

At the top of the WAF policy view you'll see a message with the name. You'll need this CNAME when you configure your domain's DNS record at your DNS provider to map the subdomain to your instance. The CNAME Target will look similar to this:

```
mycustom-example-com.b.waas.oci.oraclecloud.net
```

You still need to upload the SSL certificate for your domain to your WAF policy so you can enable HTTPS. You can get the SSL certificate when you configure your domain's DNS record.

## Create and Configure a Subdomain and Configure SSL in the WAF Policy

To use a custom domain for your app you'll need to use your domain provider's tools to create a subdomain that points to the WAF CNAME target for your instance that was generated for you after you created the WAF policy.

 **Note:**

If you do not have access to the OCI Console to create the WAF policy, you'll need to use the instructions in [Create Custom Domain for Visual Builder Instance Provisioned as Part of a SaaS Order](#).

Using the tools for administering your domain, you will need to edit your domain's DNS record to create or identify the subdomain and map it to the WAF CNAME of your Visual Builder instance. Your WAF CNAME will look similar to `mycustom-example-com.b.waas.oci.oraclecloud.net`. If you are unsure about how to create a subdomain and CNAME entry with your domain provider, please check with your organization's network administrator.



Keep the **HTTP to HTTPS Redirect** option enabled.

8. Click **Save**.

It will take some time for the configuration change for the SSL certificate to complete.

9. Log a Service Request through your Oracle Support representative to request that your Visual Builder instance be configured to handle requests for your custom subdomain.

When you file the service request you will need to provide the following information:

- your IDCS GUID
- name of your Oracle Visual Builder or Oracle Integration instance
- domain/subdomain created in the DNS CNAME record and mapped to the WAF policy (for example, `mycustom.example.com`)

After these setup steps have been completed by you and Oracle, you can map your visual application to the custom domain.

## Create Custom Domain for Visual Builder Instance Provisioned as Part of a SaaS Order

If your Visual Builder instance was provisioned as part of a SaaS order, you may not have access to the OCI Console for configuring WAF. In this case, you'll need to use your domain provider's tools to create a subdomain that points to your instance, and then log a Service Request with Oracle Support to configure the instance backend, and include the SSL certificate and associated private key for the subdomain with the service request.

 **Note:**

Instances provisioned as part of a SaaS order will contain `-ODCSVBCS-` as part of the instance's URL. Contact your service administrator if you're not sure.

To create and configure a subdomain for your instance:

1. Open the tool of your domain provider for creating a subdomain.
2. Create the subdomain and edit its CNAME record to point to your Visual Builder instance URL.
3. Confirm there is a valid SSL certificate that applies to the subdomain.

Oracle will need to maintain the certificate bundle on Oracle servers, so you might want to consider an SSL certificate specifically for the subdomain rather than a wildcard SSL cert (`*.example.com`). The certificate might be provided by your domain provider or through a valid certifying authority (for example, Comodo, DigiCert).

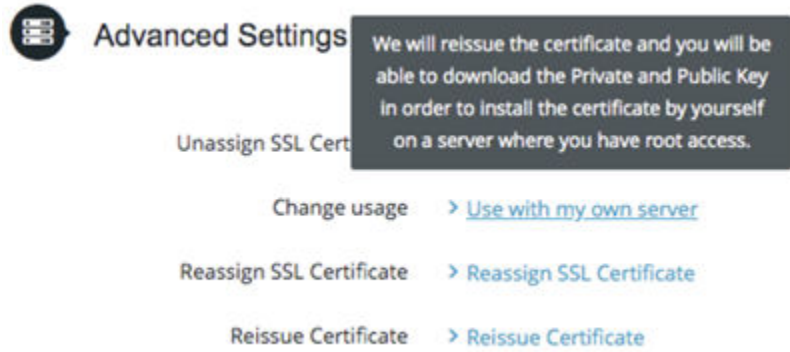
4. Extract or export the bundle containing the certificate and private key.

```

1 -----BEGIN CERTIFICATE-----
2 MIIFmDCCBICgAwIBAgIQDXLVKy7ER03E02Yf+ZP1bzANBqkqhkIG9w0BAQsFAD8u
3 MQswCQYDVQQGEwJVUzEVMBMGA1UEChMMRGlnaUNlcnQgSW5jMRkwFwYDVQQLExB3
4 d3cuZGlnaWNlcnQuY29tMS0wKwYDVQDEYRFbNyeXB0aW9uIEVZJ3J5d2h1cmUg
5 RFYgVExTTENBIC0pRzEwfhcNMTkwMDA2MDAwMDAwWhcNMjA0MjE0MTIwMDAwWjAb
-----BEGIN RSA PRIVATE KEY-----
1 MIIEogIBAAKCAQEAIoQVX8bD+8gixnFXVY6sAuuR9SaYk10zP+wV30yFGCABKfe
2 8J3yYzRatfIEQNSrtbh4SI8j3DfHGkQCRtrm6JFt00Uvy5TQwGuTPerbjvmvIbHI
3 YostvMLZ+1nIorEBk6d3mzi3ZpCa2XrIZN/WqCIo9u9/MxtXn0VTSoAEaC7k0bm1
4 ouLwHBW7svv84CwhVongIECDR+eLzxY0jY/heiV1KH+P0mr1eiifhjY+UMwPkb
5

```

Depending on your domain provider, you may need to indicate that you want to use the certificate on your own server in order to download the bundle.



- Log a Service Request through your Oracle Support representative to request that your Visual Builder instance be configured to handle requests for your custom subdomain. When you file the service request you will need to provide the following information:
  - The URL of your instance.
  - The details of the CNAME record showing the subdomain and the Visual Builder instance it points to.
  - Certificate and Private key files (.cer and .key)

Once setup is complete you can map your visual application to the custom domain.

# 6

## Troubleshooting

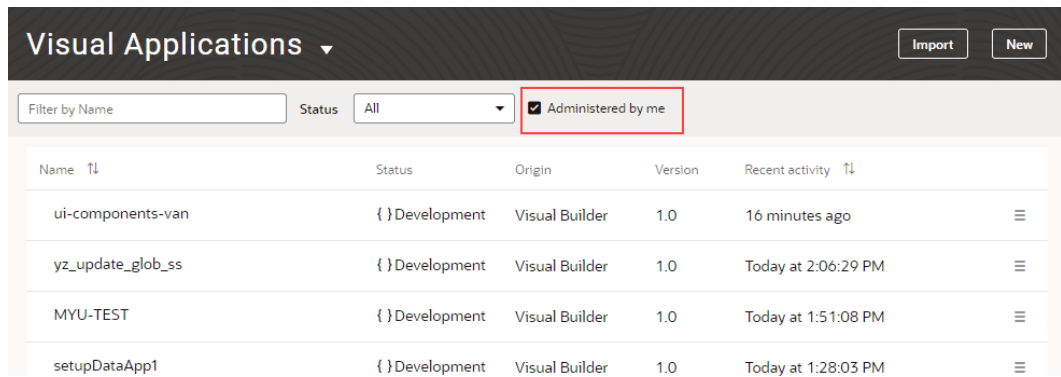
These topics cover some common issues and how to address them.

### Why Can't I See the Projects I Administer?

You can view a list of applications for projects that you administer, even if you aren't added as a team member to the application.

To view applications as an Administrator, you need Administrator privileges. See [Confirm You Have the Required Roles](#).

1. Create a visual application in the Visual Builder instance.  
This can be an application that you use just for test purposes.
2. Enable the **Administered by me** option above the applications list.



The screenshot shows the 'Visual Applications' interface. At the top, there is a header with 'Visual Applications' and a dropdown arrow, and two buttons: 'Import' and 'New'. Below the header, there is a search bar labeled 'Filter by Name', a 'Status' dropdown menu set to 'All', and a checkbox labeled 'Administered by me' which is checked and highlighted with a red box. Below this is a table with the following columns: Name, Status, Origin, Version, and Recent activity. The table contains four rows of application data.

Name	Status	Origin	Version	Recent activity
ui-components-van	{ }Development	Visual Builder	1.0	16 minutes ago
yz_update_glob_ss	{ }Development	Visual Builder	1.0	Today at 2:06:29 PM
MYU-TEST	{ }Development	Visual Builder	1.0	Today at 1:51:08 PM
setupDataApp1	{ }Development	Visual Builder	1.0	Today at 1:28:03 PM

The applications administered by you are displayed. For more information, see [Manage Applications in the Service Instance](#).