

# Oracle® Cloud

## Administering Oracle Visual Builder Generation 2



Release 24.04

F92071-02

April 2024

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 Generation 2, Release 24.04

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# Preface

*Administering Visual Builder Generation 2* describes how to create a Visual Builder instance on Oracle Cloud Infrastructure and set it up for developing web and mobile applications.

## Audience

This document is intended for Oracle Visual Builder administrators who administer and set up the service.

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## 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.
<code>monospace</code>	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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### Videos and Images

Your company can use skins and styles to customize the look of the application, dashboards, reports, and other objects. It is possible that the videos and images included in the product documentation look different than the skins and styles your company uses.

Even if your skins and styles are different than those shown in the videos and images, the product behavior and techniques shown and demonstrated are the same.

# 1

## Get Started with Oracle Visual Builder Generation 2

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.

Visual Builder Generation 2 refers to Visual Builder running natively on Oracle Cloud Generation 2 infrastructure.

### Note:

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

## What is Oracle Visual Builder?

Oracle Visual Builder is an intuitive development experience on top of a development and hosting platform that empowers you to create engaging responsive applications. Focusing on ease of use and a visual development approach, it provides an easy way for you to create applications that are hosted in Oracle's secure and scalable cloud platform.

### **Visual Development Experience**

Visual Builder provides simple but powerful visual development tools to create responsive apps—all without the need to install any additional software. This rich set of visual tools help you quickly design your app by dragging and dropping UI components and customizing their attributes to define behavior. While these tools lend themselves to low-code developers, experienced developers can just as easily access the underlying source code, even extend it using standard HTML5, JavaScript, and CSS techniques for complex needs.

### **Easy Access to Data**

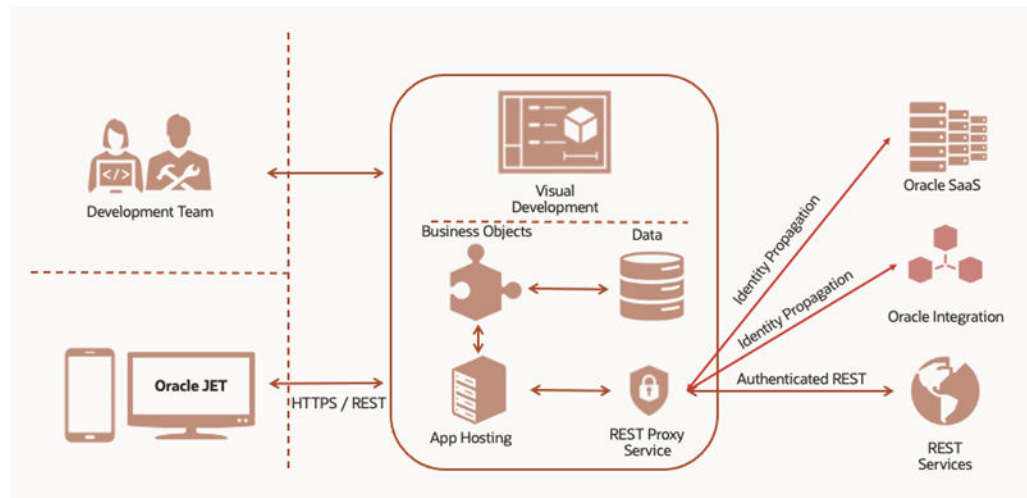
Visual Builder makes it easy to access your app's data through REST-based services. So you can create reusable business objects to implement your app's business logic and store its data, which can then be managed through REST endpoints that Visual Builder generates for you. Or you can pick data objects exposed by Oracle SaaS or Oracle Integration applications in an integrated catalog of REST services. You can also access data from any external REST service with just a few clicks.

### **Development and Hosting Platform**



Visual Builder is a complete development tool as well as a hosting platform, which means you can manage your application's lifecycle right from development to test and final publishing. Version management and data migration are built into an app's lifecycle, making it easy for you to stage and publish your app and manage its data in every phase.

What's more, Visual Builder is a managed service. This means that once you provision a Visual Builder instance, there's very little you need to do beyond developing and publishing your app. Everything the app needs to run successfully (including a web server to host your application and to secure data access) is taken care of. Thus, as a development team, you can take your app from development to stage and publish it in a very short time. Here's a high-level walkthrough of how you'd go about developing an app using Visual Builder:



Your Visual Builder instance (represented by the square in the middle of the image) provides capabilities for your visual application both as a *visual development* tool (at the top) as well as an *app hosting* platform with a built-in web server (indicated by server-side components at the bottom):

- As a visual development tool, Visual Builder provides access to UI components and WYSIWYG interfaces that leverage the open-source Oracle JavaScript Extension Toolkit (JET). This visual environment, known as the Designer, features several visual editors that a development team can use to collaboratively build rich UIs that span multiple devices. It also supports Redwood, the Oracle standard for user experience, that lets you develop apps that provide the same look and feel as apps delivered from Oracle.

Within this environment, you can develop browser-based responsive apps, including progressive web apps, which combine the on-device mobile experience with a web app's ease of distribution—eliminating the need to download updates from app stores.

- As an app hosting platform, Visual Builder provides various capabilities to publish and run your app in the cloud, including an embedded database that stores your app's *business objects*—essentially Oracle tables with business logic exposed through REST APIs—and their *data*.

It also includes a *REST proxy service* to manage access to external REST endpoints. When your app's data comes from REST APIs in Oracle catalogs such as Oracle SaaS or Oracle Integration, the proxy service uses server-side

integration with the Oracle Identity Cloud Service (IDCS) to manage authentication and authorization (by default) through *identity propagation*. When your app's data comes from other REST endpoints, *authenticated REST* mechanisms are used to manage credentials.

Together, these components provide the resources required to host your visual app and manage its data.

When your apps are published, they become available to your users in the cloud, from any desktop or mobile device, with communication to the app's underlying JET components secured over HTTPS and REST.

## How to Begin with Visual Builder Subscriptions

Here's a summary of the key steps to help Oracle Cloud account administrators get started with Visual Builder:

1. Sign up for a free credit promotion or purchase a subscription. See [Request and Manage Free Oracle Cloud Promotions](#) or [Buy an Oracle Cloud Subscription](#) in *Oracle Cloud Infrastructure Documentation*.
2. Sign in to your Cloud Account. See [Signing In to the OCI Console](#).
3. Create accounts for your users and assign them appropriate privileges and roles. See [Managing Users, User Accounts, and Roles](#) in *Managing and Monitoring Oracle Cloud*.

## Availability

Visual Builder Generation 2 is currently available in the regions listed below.

Geography	Region Location	Region Key
APAC	Australia East (Sydney)	SYD
APAC	Australia Southeast (Melbourne)	MEL
APAC	South Korea North (Chuncheon)	YNY
APAC	South Korea Central (Seoul)	ICN
APAC	Japan Central (Osaka)	KIX
APAC	Japan East (Tokyo)	NRT
APAC	India West (Mumbai)	BOM
APAC	India South (Hyderabad)	HYD
APAC	Singapore (Singapore)	SIN
EMEA	Switzerland North (Zurich)	ZRH
EMEA	Germany Central (Frankfurt)	FRA
EMEA	Netherlands Northwest (Amsterdam)	AMS
EMEA	Saudi Arabia West (Jeddah)	JED
EMEA	UAE Central (Abu Dhabi)	AUH
EMEA	UAE East (Dubai)	DXB
EMEA	UK South (London)	LON
EMEA	UK West (Newport)	CWL
EMEA	Israel Central (Jerusalem)	MTZ
EMEA	France Central (Paris)	CDG
EMEA	France South (Marseille)	MRS

Geography	Region Location	Region Key
EMEA	South Africa Central (Johannesburg)	JNB
EMEA	Italy Northwest (Milan)	LIN
EMEA	Spain Central (Madrid)	MAD
EMEA	Serbia Central (Jovanovac)	BEG
EMEA	Sweden Central (Stockholm)	ARN
LAD	Brazil East (Sao Paulo)	GRU
LAD	Brazil Southeast (Vinhedo)	VCP
LAD	Chile Central (Santiago)	SCL
LAD	Mexico Central (Queretaro)	QRO
LAD	Mexico Northeast (Monterey)	MTY
North America	US East (Ashburn)	IAD
North America	US Midwest (Chicago)	ORD
North America	US West (San Jose)	SJC
North America	US West (Phoenix)	PHX
North America	Canada Southeast (Toronto)	YYZ
North America	Canada Southeast (Montreal)	YUL

## Service Limits

When you sign up for Oracle Cloud Infrastructure, a set of service limits is configured for your tenancy. The service limit is the quota or allowance set on a resource. Review the following service limits for Visual Builder Generation 2 resources.

Resource	Service Limit
Visual Builder instance count	200 instances per region

To learn more about service limits, see [Service Limits](#).

## Visual Builder for SaaS

Visual Builder for Oracle SaaS, a streamlined version of Visual Builder, gives you the features and benefits of Visual Builder with a focus on SaaS.

You might see Visual Builder instances in your environment that were provisioned as part of an Oracle Cloud Application that your organization licensed. These specific Visual Builder for SaaS instances come with specific restrictions: Every Visual Builder application you create must use at least one business object or API call from an Oracle Cloud SaaS application, and every process application you create must include at least one business object or API call from an Oracle Cloud SaaS application.

# 2

## Create and Set Up Your Visual Builder Generation 2 Instance

Like other Oracle Cloud services, you must create an instance of Oracle Visual Builder before you can start using it.

You can create Visual Builder Generation 2 instances in any Oracle data region listed in [Availability](#). To create and set up an instance, you must be assigned specific roles.

### 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 create Oracle Visual Builder instances. Otherwise, the correct roles must be explicitly assigned to your user account to create Oracle Visual Builder instances.

Without the necessary roles, instance creation fails.

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

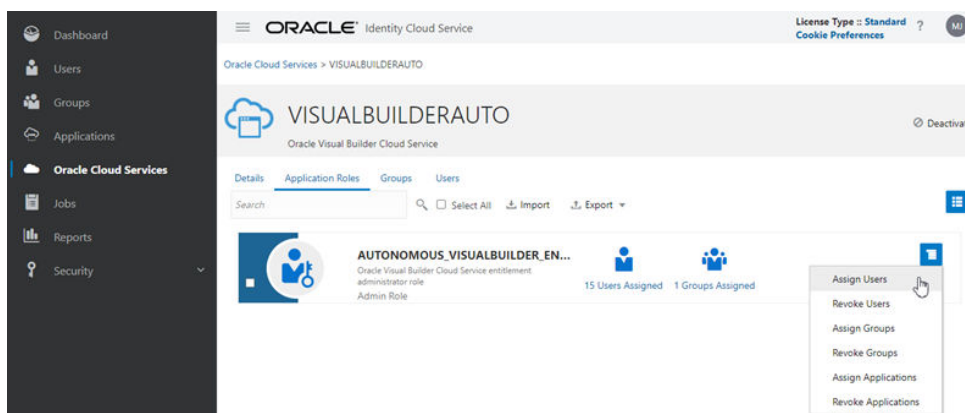
You must be assigned this role:	To ...
Cloud Account Administrator	Set up Oracle Cloud Infrastructure (OCI) compartments and buckets. If you're not an account administrator, contact the administrator to add you to the <b>OCI Administrators</b> IDCS group.
Identity Domain Administrator or User Administrator	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)	Create 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 to provision an instance, 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**.

## Understand Your Responsibilities as an Administrator

This guide is directed to administrators provisioning, creating, and configuring Visual Builder instances and identities on Oracle Cloud Infrastructure.

Provisioning and administering Visual Builder typically involves the following responsibilities. Note that these tasks could be done by the same person (the tenant administrator) or by different people.

Responsibility	See
Create required OCI resources for the Visual Builder instance	<a href="#">Create Required OCI Resources</a>
Create a Visual Builder instance in an OCI compartment	<a href="#">Create the Visual Builder Instance</a>
Add users and groups	<a href="#">About Setting Up Users and Groups</a>
Manage the Visual Builder instance, such as start or stop the instance, or configure a custom endpoint	<a href="#">View and Manage the Visual Builder Instance</a>

## Signing In to the OCI Console

Signing into the OCI Console differs depending on whether or not your cloud account uses identity domains.



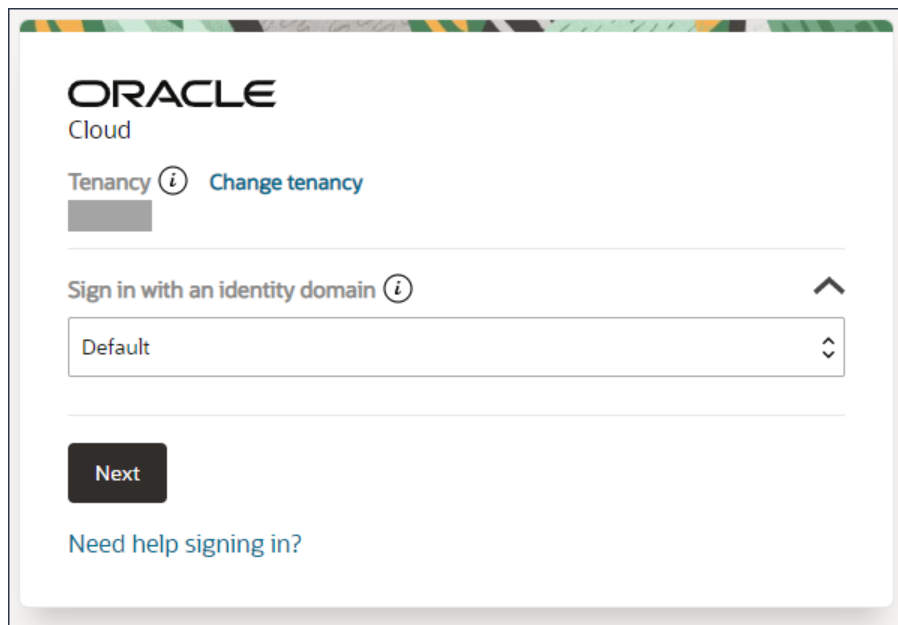
**Note:**

If you are not sure if your cloud account uses identity domains, see [About Setting Up Users and Groups](#).

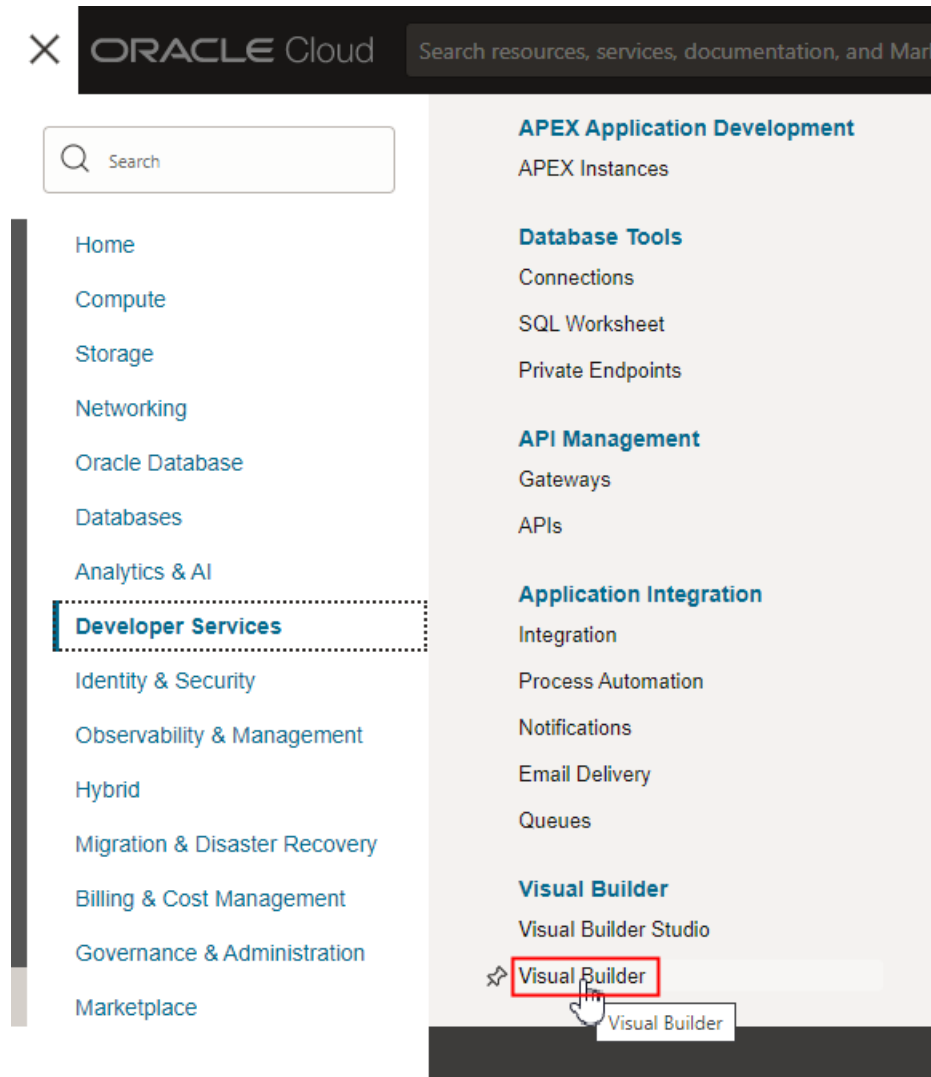
## Signing In to the Console in Cloud Accounts That Use Identity Domains


If your cloud account uses identity domains, you sign in to the OCI Console as a user configured in Oracle Cloud Infrastructure Identity and Access Management (IAM).

1. Go to <http://cloud.oracle.com>.
2. Enter your cloud account name and click **Next**.
3. Select the **default** domain.



4. Enter the user name and password provided in the welcome email, and click **Sign In**. The OCI Console is shown.
5. Explore categories and options in the navigation menu.
  - Open the navigation menu and click **Developer Services**. Under **Visual Builder**, click **Visual Builder**. Use this landing page to access, create, and manage Visual Builder instances.



Click **pin**  to save the selection under the **Pinned** category on the Home page.

- Open the navigation menu and click **Identity & Security**. Under **Identity**, click identity links to create compartments and domains if needed, and to perform tasks related to identity management. See [Setting Up Users and Groups](#).

## Signing In to the Console in Cloud Accounts That Do Not Use Identity Domains

If your cloud account does not use identity domains, you sign in to the OCI Console as a user federated through Oracle Identity Cloud Service. A federated environment enables business partners to integrate in the identity management realm by providing a mechanism for users to share identity information across respective security domains.

1. Go to <http://cloud.oracle.com>.
2. Enter your cloud account name and click **Next**.

Identity options are displayed.

vbauto1 Change tenancy

## Single Sign-On (SSO)

We have detected that your tenancy has been federated to another Identity Provider.

Select your Identity Provider below.

Identity Providers

oracleidentitycloudservice

Continue

## Oracle Cloud Infrastructure Direct Sign-In ⓘ

This login is uncommon for federated accounts. If you have questions, please review the [FAQ](#) or contact your tenancy administrator.

User Name

Password

Sign In

[Forgot Password?](#)

- The *upper* portion displays federated sign in (Visual Builder is federated with IDCS).
- The *lower* portion displays native Identity and Access Management (IAM) options standard to Oracle Cloud Infrastructure.

### Note:

If no federated sign in options are displayed in the upper portion, your tenancy requires manual federation. Sign in as an administrator using native IAM credentials and complete federation, including group mapping. See [Understanding Federation](#) and [Manually Federating Your Tenancy](#).

Under Single Sign-On (SSO) options, note the identity provider selected in the **Identity Providers** field and click **Continue**.

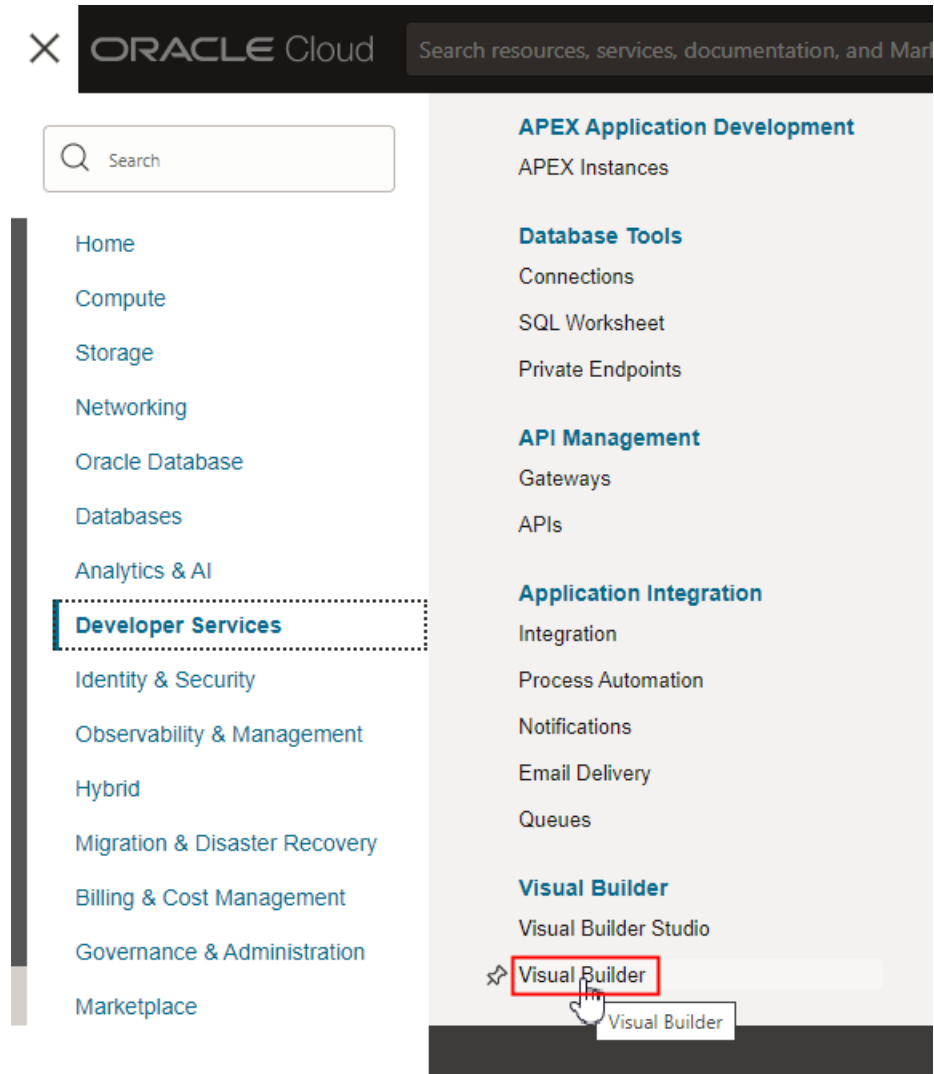
The IDCS sign in screen is shown.


3. Enter the user name and password provided in the welcome email, and click **Sign In**.



The OCI Console is displayed.

4. Explore categories and options in the navigation menu.
  - Open the navigation menu and click **Developer Services**. Under **Visual Builder**, click **Visual Builder**. Use this landing page to access, create, and manage Visual Builder instances.



Click **pin**  to save the selection under the **Pinned** category on the Home page.

- Open the navigation menu and click **Identity & Security**. Under **Identity**, click identity links to to create compartments if needed, and to perform tasks related to identity management. See [Setting Up Users and Groups](#).


## Create Required OCI Resources

Visual Builder instances use the Oracle Cloud Infrastructure (OCI) as their underlying infrastructure. If you're the tenant administrator, create the required OCI resources Visual Builder instances need.

To do this:	See this:
Create a compartment. To create an instance, you must first create a compartment. You can use the <code>root</code> compartment and the tenancy user that was created when the OCI account was created, but it's recommended to create a dedicated compartment to host the Visual Builder instance.	<a href="#">Create a Compartment for Visual Builder</a> If you want someone else to create the compartment and other OCI resources, add the user to the <code>OCI_Admistrators</code> group. See <a href="#">Add an Existing User to the OCI_Admistrators IDCS Group</a> .
Add users who can manage the Visual Builder instance. If you want other non-admin users to create and manage Visual Builder instances, assign them the required OCI policies. Skip this step if you plan to create and manage the instances yourself.	<a href="#">Create Oracle Cloud Infrastructure Groups and Policies</a>
Map a custom endpoint to the Visual Builder instance use it to access the instance instead of the original URL generated in the OCI Console	<a href="#">Create and Configure a Custom Endpoint for Your Visual Builder Instance</a>
Set Visual Builder instance quotas	<a href="#">Set Instance Quotas for a Compartment</a>


## Add an Existing User to the OCI\_Admistrators IDCS Group

If you're a tenant administrator and plan to create the OCI resources yourself, skip this procedure.

1. On the OCI console, in the upper-left corner, click **Navigation Menu** .
2. Select **Identity & Security** and then under **Identity**, select **Federation**.
3. Select the **OracleIdentityCloudService** link to view the default Oracle Identity Cloud Service identity federation.
4. Select **Groups** from the **Resources** options.
5. Click the `OCI_Admistrators` group.
6. Click **Add to IDCS Group**.
7. In the Add User to IDCS Group dialog box, select the user and click **Add**.

## Create a Compartment for Visual Builder

To create a compartment, you must be either a tenant administrator or a user in the `OCI_Admistrators` IDCS group.

1. On the OCI console, in the upper-left corner, click **Navigation Menu** .
2. Select **Identity & Security** and then under **Identity**, select **Compartments**.
3. To create the compartment in the tenancy (root compartment), click **Create Compartment**.
4. In the Create Compartment dialog box, fill in the fields and click **Create Compartment**.  
To learn more about compartments, see [Managing Compartments](#).

## Set Instance Quotas for a Compartment

As you can create multiple Visual Builder instances in a compartment, you should set a limit on number of instances your users can create.

1. Sign in to the OCI Console.
2. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Policies**.
3. Click **Create Policy**.
4. In the Create Policy window, enter a name (for example, instanceCreationQuota) and a description. Under **Policy Builder**, choose **Show manual editor**.
5. Complete the **Policy Statements** field. As an example, to set a quota limit of 10 instances for the compartment named MyCompartment, enter the following statement:

```
Set visualbuilder quota instance-count to <number_of_instances> in
compartment <compartment-name>
```

Here's an example:

```
Set visualbuilder quota instance-count to 10 in compartment
MyVBCompartment
```

Where:

- `visualbuilder`: Is the family name for Visual Builder.
- `instance-count`: Is the quota name.


6. Click **Create**.

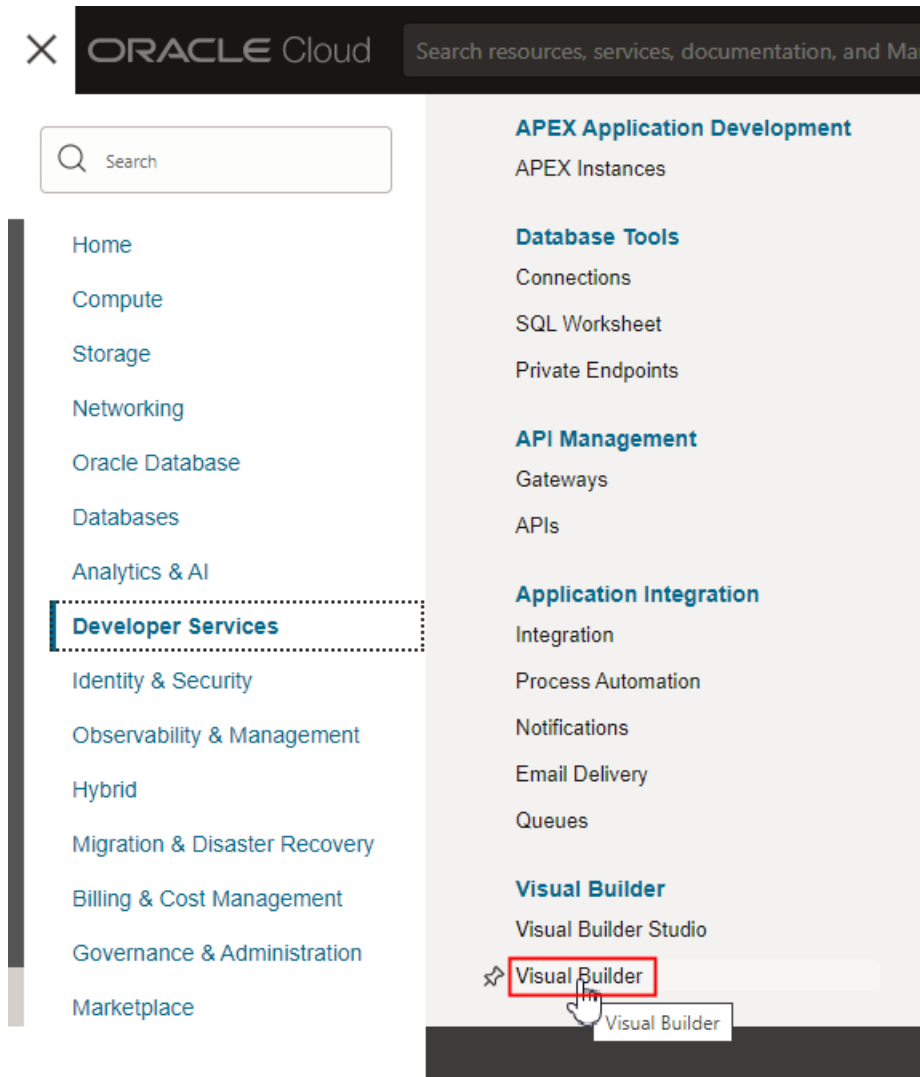
The policy statement is validated and any syntax errors are displayed.

## Create the Visual Builder Instance

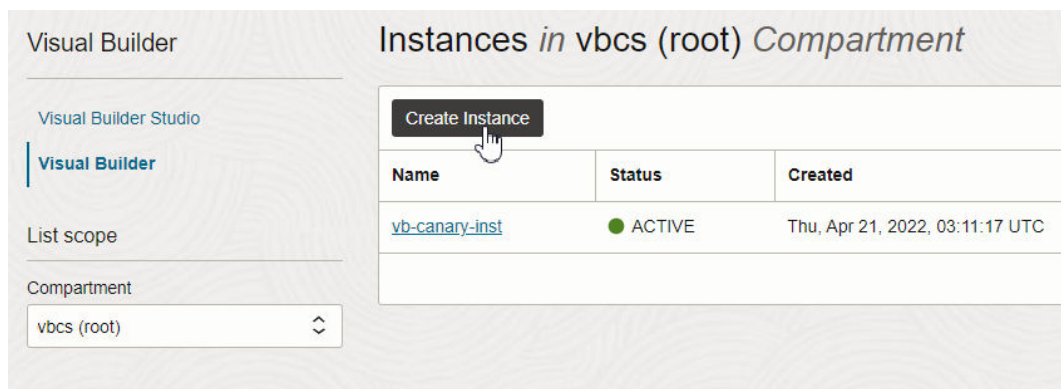
You can create multiple Visual Builder instances in an OCI compartment.

If you've registered a custom hostname for the Visual Builder instance and saved the SSL certificate in an OCI Vault, then get the vault's compartment name, vault's name, and the secret key. You'll need them while creating the instance. If you haven't configured a custom endpoint, you can map it with the Visual Builder instance later.

1. Open the OCI Console.
2. In the upper-left corner, click **Navigation Menu** .
3. Select **Developer Services** and then select **Visual Builder**.



4. On the Visual Builder Instances page, from the **Compartment** drop-down list, select [the compartment you created](#) to host the Visual Builder instance.
5. Click **Create Instance**.



Before you enter the new instance's details, check if you see the **Domain** field. If you do, it indicates that you are signed in as a non-federated user. Sign out and sign in again as a federated user, and restart creating an instance process.

6. In **Name**, enter the Visual Builder instance's name.
7. (Optional) In **Compartment**, select the compartment you created to host the Visual Builder instance. If you've selected the compartment in Step 4, ignore this step.
8. (Optional) Click **Show Advanced Options** to set advanced options.

The screenshot shows the 'Create Instance' form with the following details:

- Name:** vb-canary2
- Consumption Model:** Metered (Universal Credit)
- Compartment:** vbcs (root)
- Nodes:** 1
- Advanced Options:**
  - Custom Endpoint Tab:**
    - Hostname:** (empty field)
    - Compartment:** Choose...
    - Vault:** No Vaults Available
    - Secret:** Select a Compartment and Vault
  - Tags Tab:** (empty)

- a. To map a custom endpoint with the Visual Builder instance, enter the necessary details in the **Custom Endpoint** tab. If you haven't configured a custom endpoint, you can map it with the Visual Builder instance later.
  - i. In **Hostname**, enter the custom hostname. The hostname must be registered on a DNS provider.
  - ii. In **Compartment**, select the OCI compartment that contains your certificate vault.
  - iii. In **Vault**, enter the OCI Vault's name.
  - iv. In **Secret**, select the secret you used to save the SSL certificate.

After you've created the instance, update the custom endpoint DNS record to the original instance hostname. As a best practice, update the CNAME of the DNS record with the hostname of the original instance endpoint.

- b. In **Tags**, enter a key and optional value. Tags enable you to track resources within your tenancy. See [Resource Tags](#).

9. Click **Create Visual Builder Instance**.

The instance's Consumption Model is set automatically, according to the model enabled for the tenancy:

- **Metered (Universal Credits)** is set for Visual Builder instances.
- **Subscription (VB4SaaS)** is set for Visual Builder for SaaS instances.  
For details, see [Visual Builder for SaaS](#).

# 3

## Setting Up Users and Groups

Setting up users and groups for access to Oracle Visual Builder differs depending on whether or not your region has been updated to use identity domains prior to creation of your cloud account.

### Topics:

- [About Setting Up Users and Groups](#)
- [Setting Up Users and Groups in Cloud Accounts That Use Identity Domains](#)
- [Setting Up Users and Groups in Cloud Accounts That Do Not Use Identity Domains](#)
- [Oracle Visual Builder Roles and Privileges](#)

### About Setting Up Users and Groups

Setting up users and groups for access to Oracle Visual Builder differs depending on whether or not your cloud account uses identity domains.

- For a cloud account in a region updated to use identity domains prior to the creation of the cloud account, users and groups are set up in only Oracle Cloud Infrastructure Identity and Access Management (IAM). You do not use Oracle Identity Cloud Service (IDCS) or federation.
- For a cloud account in a region not yet updated to use identity domains prior to the creation of the cloud account, users and groups are set up in IDCS and Oracle Cloud Infrastructure IAM, linked using federation.

To determine whether or not your cloud account uses identity domains, open the Oracle Cloud Infrastructure navigation menu and click **Identity & Security**. Under **Identity**, check for **Domains**:

- If **Domains** is listed, then your cloud account uses identity domains. See [Setting Up Users and Groups in Cloud Accounts That Use Identity Domains](#).
- If **Domains** is not listed, then your cloud account is still configured to link identities in IDCS and Oracle Cloud Infrastructure IAM using federation. In this case, refer to the topics in [Setting Up Users and Groups in Cloud Accounts That Do Not Use Identity Domains](#).

The following table outlines the differences between the two configurations.

Cloud Accounts That Use Identity Domains	Cloud Accounts That Do Not Use Identity Domains
Users and groups are configured in only Oracle Cloud Infrastructure IAM.	Users and groups are configured in Oracle Cloud Infrastructure IAM and IDCS, linked through federation. See <a href="#">Understanding Oracle Visual Builder Federation</a> . <b>Note:</b> Read only users can be assigned to an Oracle Cloud Infrastructure group only and not to an IDCS group.
The Oracle Cloud Infrastructure IAM service provides a single unified console for managing users, groups, dynamic groups, and applications in <i>domains</i> .	Oracle Cloud Infrastructure IAM must be federated with IDCS for your tenancy.
Provides Single Sign-On to more applications using a single set of credentials and a unified authentication process.	Requires separate federated credentials for IDCS.
The Federation page does not list any IDCS entries.	The Federation page lists the primordial IDCS type that is automatically federated as part of the cloud account creation.

## Setting Up Users and Groups in Cloud Accounts That Use Identity Domains

For a cloud account in a region updated to use identity domains prior to the creation of the cloud account, users and groups are set up in only Oracle Cloud Infrastructure (IAM).



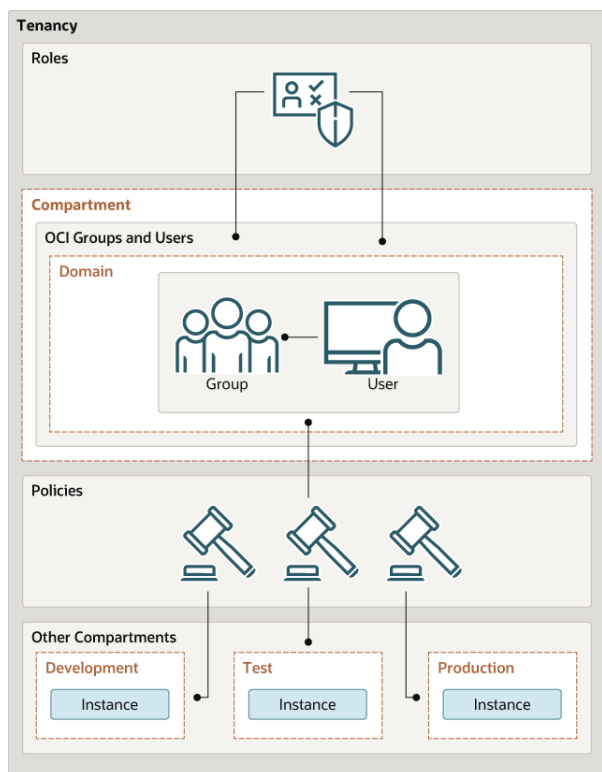
### Note:

This section applies only to cloud accounts that use identity domains. If you are not sure if your cloud account uses identity domains, see [About Setting Up Users and Groups](#).

For more information about Oracle Cloud Infrastructure IAM and the documentation that provides the information you need, see [Documentation to Use for Cloud Identity in Overview of IAM](#) in the Oracle Cloud Infrastructure documentation.

With identity domains, roles are assigned to Oracle Cloud Infrastructure IAM groups within a domain, as illustrated in the following diagram.





## Creating an Identity Domain

Create an identity domain in which to configure users and groups.

In an Oracle Cloud Infrastructure tenancy (cloud account) your environment includes a root (default) compartment and possibly several other compartments, depending on how your environment is configured. To create compartments, see [Create a Compartment for Visual Builder](#). Within each compartment, you can create users and groups. For example, as a best practice:

- In the root (default) compartment, create a default domain for administrators only.
- In another compartment (for example, named **Dev**), create a domain for users and groups in a development environment
- In another compartment (for example, named **Prod**), create a domain for users and groups in a production environment.

You can also create multiple domains in a single compartment.

1. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Domains**. The Domains page is displayed.
2. If not already selected, select the **Compartment** where you want to create the domain.
3. Click **Create domain**.
4. Enter required information in the Create domain page. See [Creating Identity Domains](#) in the Oracle Cloud Infrastructure documentation.

## Creating an Oracle Cloud Infrastructure Group in an Identity Domain

Create a group, such as an instance administrator or read only group, in an identity domain.

1. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Domains**.  
The Domains page is displayed.
2. If not already selected, select the **Compartment** in which the domain where you want to create the group resides.
3. In the **Name** column, click the domain in which you want to create the group for creating and managing instances.  
The domain Overview page is displayed.
4. Click **Groups**.  
The Groups page for the domain is displayed.
5. Click **Create group**.
6. In the Create group screen, assign a name to the group (for example, `oci-visualbuilder-admins`), and enter a description.
7. Click **Create**.

## Creating an Oracle Cloud Infrastructure Policy in an Identity Domain

Create a policy to grant permissions to users in a domain group to work with Oracle Cloud Infrastructure instances within a specified tenancy or compartment.

1. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Policies**.
2. Click **Create Policy**.
3. In the Create Policy window, enter a name (for example, `VisualBuilderGroupPolicy`) and a description.
4. In the **Policy Builder**, select **Show manual editor** and enter the required policy statements.

### Syntax:

- `allow group domain-name/group_name to verb resource-type in compartment compartment-name`
- `allow group domain-name/group_name to verb resource-type in tenancy`

**Example:** `allow group admin/oci-visualbuilder-admins to manage visualbuilder-instances in compartment VBCompartment`

### Note:

If you omit the domain name, the default domain is assumed.

This policy statement allows the `oci-visualbuilder-admins` group in the `admin` domain to manage instance `visualbuilder-instances` in compartment `VBCompartment`.

You can create separate groups for different permissions, such as a group with `read` permission only.

Want to learn more about policies? See [How Policies Work](#) and [Policy Reference](#), or click **Help** in the window.

- When defining policy statements, you can specify either verbs (as used in these steps) or permissions (typically used by power users).
- The `read` and `manage` verbs are most applicable to Visual Builder. The `manage` verb has the most permissions (`create`, `delete`, `edit`, `move`, and `view`).

Verb	Access
<code>read</code>	Includes permission to view Oracle Visual Builder instances and their details.
<code>manage</code>	Includes all permissions for Oracle Visual Builder instances.

5. If you intend to use custom endpoints, add one or more additional policy statements. Otherwise, skip this step.

Add policies that specify the compartment in which vaults and secrets reside and allow the `admin` group to manage secrets in it. See [Create and Configure a Custom Endpoint for Your Visual Builder Instance](#).

Note that you should specify the resource to return in `resource-type`, as described in [Details for the Vault Service](#). Also note that Oracle Visual Builder requires the `read` verb only but `manage` is recommended if the same group will also be administering the secrets (uploading/lifecycle operations).

**Examples:**

- `allow group admin/oci-visualbuilder-admins to manage secrets in compartment SecretsCompartment`
- `allow group admin/oci-visualbuilder-admins to manage vaults in compartment SecretsCompartment`

6. Click **Create**.

The policy statements are validated and syntax errors are displayed.

## Creating a User in an Identity Domain

Create a user to assign to a group in an Oracle Cloud Infrastructure identity domain.

1. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Domains**. The Domains page is displayed.
2. If not already selected, select the **Compartment** in which the domain that contains the group to which you want to add a new user resides.
3. In the **Name** column, click the domain for the group in which you want to create the user. The domain Overview page is displayed.
4. Click **Users**. The Users page for the domain is displayed.

5. Click **Create user**.
6. In the Create user screen, enter the user's first and last name, and their username, then select the one or more groups to which the user should be assigned.
7. Click **Create**.  
The new user is added to the selected group(s) and has permissions assigned to the group by its policy statement.
8. On the user details page that is displayed, you can edit user information as needed, and reset the user's password.
9. Provide new users with the credentials they need to sign in to their cloud account. Upon signing in, they will be prompted to enter a new password.


## Assigning Visual Builder Service Roles to Groups in an Identity Domain

After a Visual Builder instance has been created, assign Oracle Visual Builder service roles to groups of users to allow them to work with the features of the instance.

### **Note:**

It's a best practice to assign Oracle Visual Builder service roles to selected groups rather than individual users.

Oracle Visual Builder provides a standard set of [set of service roles](#), which govern access to features. Depending on the Oracle Visual Builder features your organization uses, you may choose to [create groups](#) named for the service role they are granted. For example, `VisualBuilderServiceAdministrators` for the Oracle Visual Builder ServiceAdministrator role.

1. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Domains**.  
The Domains page is displayed.
2. If not already selected, select the **Compartment** in which the domain that contains the group to which you want to assign Oracle Visual Builder roles resides.
3. In the **Name** column, click the domain for the group to which you want to assign roles.  
The domain Overview page is displayed.
4. In the navigation pane, click **Oracle Cloud Services**.  
The Oracle Cloud Services page is displayed.
5. In the **Name** column, click the Oracle Visual Builder instance for which you want to assign group roles.  
The instance details page is displayed.
6. In the navigation pane, click **Application roles**.
7. In the **Application roles** list, locate the role(s) you want to assign to the group. At the far right, click , and select **Assign groups**.

8. On the Assign groups page, select the group to which to assign the service role, and click **Assign**.

## Setting Up Users and Groups in Cloud Accounts That Do Not Use Identity Domains

For a cloud account in a region not yet updated to use identity domains prior to the creation of the cloud account, users and groups are set up in Oracle Cloud Infrastructure Identity and Access Management (IAM) and Oracle Identity Cloud Service (IDCS).

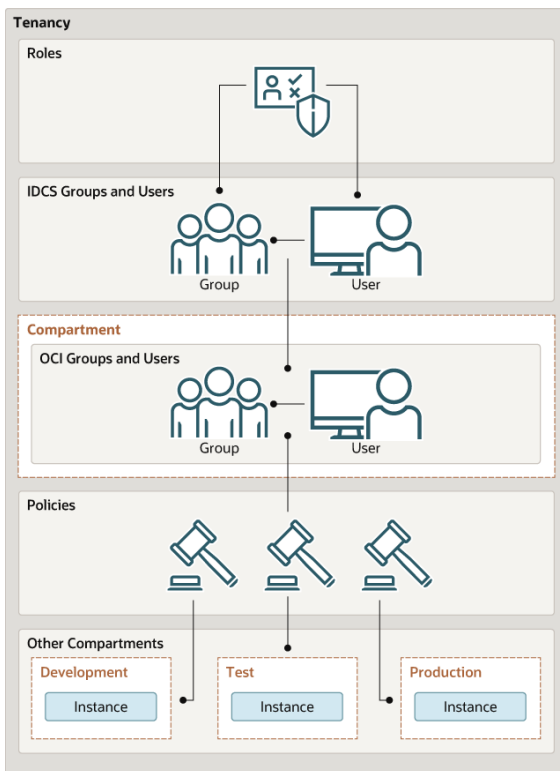


### Note:

This section applies only to cloud accounts that do not use identity domains. If you are not sure if your cloud account uses identity domains, see [About Setting Up Users and Groups](#).

For more information about Oracle Cloud Infrastructure IAM, IDCS, and the documentation that provides the information you need, see *Documentation to Use for Cloud Identity in Overview of Identity and Access Management* in the Oracle Cloud Infrastructure documentation.

Without identity domains, roles are assigned to IDCS groups, then linked to Oracle Cloud Infrastructure IAM groups using federation, as illustrated in the following diagram.



## Understanding Oracle Visual Builder Federation

If your cloud account does not use identity domains, Oracle Cloud Infrastructure Identity and Access Management (IAM) must be federated with Oracle Identity Cloud Service (IDCS) for your tenancy.

User federation refers to linking a user's identity and attributes across multiple identity management systems. Oracle Visual Builder federation means that identities are linked in IDCS and Oracle Cloud Infrastructure Identity and Access Management (IAM).

Oracle Visual Builder uses both IDCS and IAM to manage users and groups:

- Create and manage users in IDCS. By default, most tenancies are federated with IDCS. For more information about Oracle Identity Cloud Service, see [Understanding Administrator Roles in \*Administering Oracle Identity Cloud Service\*](#).
- Manage permissions using policies in Oracle Cloud Infrastructure's IAM service.

For background information on federation with IDCS, see [Federating with Identity Providers](#) and [Federating with Oracle Identity Cloud Service](#).

Whether your tenancy needs federation depends on several factors, such as when your cloud account was created and the Oracle Visual Builder version you're provisioning. Your tenancy may be:


- **Already fully federated:** Nearly all accounts in regions that have not yet been updated to use identity domains fall into this category. You'll follow standard steps to set up users and groups, as described in the topics in this section.
- **Mostly federated:** If you have an older account that was created before 21 December 2018, you may need to complete a final federation step. You'll follow steps to set up users and groups, as described in the topics in this section. At the mapping step ([Mapping the IDCS and OCI Groups](#)), you'll be asked to enter information.
- **Needing federation:** If you're configuring Oracle Visual Builder with a government SKU in a commercial data center, you'll likely need to perform manual federation steps as part of setting up users and groups. See [Manually Federating Your Tenancy](#).


Not sure about your federation? See [Is My Tenancy Federated Between Oracle Cloud Infrastructure IAM and Oracle Cloud Identity Service?](#)

## Create IDCS Groups and Users

To grant access to Visual Builder instances, assign the users a Visual Builder role. You can grant the role individually to each IDCS user, or create an IDCS group of users and assign the role to the group. You can create Oracle Identity Cloud Service groups for later mapping them to Oracle Cloud Infrastructure Identity and Access Management identities.

Before you create users or groups, learn about available [Oracle Visual Builder Roles and Privileges](#).

1. Sign in to the OCI Console.
2. In the upper-left corner, click **Navigation Menu** .

3. Select **Identity & Security** and then under **Identity**, select **Federation**.  
The Federation screen is shown, and includes the identity provider, called OracleIdentityCloudService. This is the default federation between the Oracle Identity Cloud Service stripe and the OCI tenancy in a cloud account.
4. Click **OracleIdentityCloudService**.
5. [Create IDCS users and groups](#), and add users to the groups.
6. Click the Oracle Identity Cloud Service Console link.
7. In the upper-left corner, click **Navigation Menu**  and select **Oracle Cloud Services**.
8. Click the Visual Builder service name.
9. Click the **Application Roles** tab.
10. Click the menu options icon shown next the role, and select **Assign Users**. If you want to assign the role to a group, select **Assign Groups**.
11. Select the check box next to the name of each user or group that you want to add to the role, and then click **OK**.

## Create Oracle Cloud Infrastructure Groups and Policies

To allow other non-admin users to create and manage Visual Builder instances, create an OCI group of non-admin users and assign them the correct OCI policies.

If you're a tenant administrator and plan to create Visual Builder instances yourself, skip this procedure.

1. Sign in to the OCI Console.
2. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Groups**.
3. [Create an OCI group](#).

In the Create Group screen, assign a name to the group that differentiates it from the IDCS group (for example, `oci-visualbuilder-admins`), and enter a description.

4. [Create a policy](#) with one or more of these statements:

**Table 3-1 Syntax for policy statements for a group**

Policy	Syntax
Allow the group to manage (create, delete, edit, move, and view) the Visual Builder instance in a compartment	<pre>Allow group &lt;group_name&gt; to manage visualbuilder-instances in compartment &lt;compartment-name&gt;</pre> <p>Here's an example:</p> <pre>Allow group VBInstanceAdmins to manage visualbuilder-instances in compartment MyVBCompartment</pre>
Allow the group to manage (create, delete, edit, move, and view) all Visual Builder instances of the tenancy	<pre>Allow group &lt;group_name&gt; to manage visualbuilder-instances in tenancy</pre> <p>Here's an example:</p> <pre>Allow group VBInstanceAdmins to manage visualbuilder-instances in tenancy</pre>

**Table 3-1 (Cont.) Syntax for policy statements for a group**

Policy	Syntax
If you intend to use custom endpoints, allow the group to access secrets and vaults of a compartment.	<pre>allow group &lt;group-name&gt; to manage secrets in compartment &lt;secrets- compartment&gt;  allow group &lt;group-name&gt; to manage vaults in compartment &lt;secrets- compartment&gt;</pre> <p>Here's an example:</p> <pre>Allow group VBIInstanceAdmins to manage secrets in compartment MySecretCompartment and Allow group VBIInstanceAdmins to manage vaults in compartment MySecretCompartment</pre>

## Mapping the IDCS and OCI Groups

You can now map your instance administrator group in IAM to your previously created IDCS group. For details, see [Map the IDCS group with the OCI group](#).

1. Open the OCI navigation menu and click **Identity & Security**. Under **Identity**, click **Federation**.
2. On the Federation page, select the **OracleIdentityCloudService** link.
3. From the **Resources** options, choose **Group Mapping**.
4. Click **Edit Mapping**.
5. In the Edit Identity Provider dialog, click **Add Mapping** at the bottom.
  - a. If the following dialog appears prompting you to provide credentials, enter this information from the COMPUTEBAREMETAL IDCS application in your IDCS account. This dialog indicates that your tenancy is mostly federated and requires only this final step. See [Understanding Federation](#). (If you aren't able to locate this information, [file a service request](#) to get help from Oracle Support.)

**Provide Credentials** [help](#) [cancel](#)

Enter the client credentials from your Oracle Identity Cloud Service account.

ORACLE IDENTITY CLOUD SERVICE BASE URL

CLIENT ID

CLIENT SECRET



- b. Click **Continue**.
- 6. Select your IDCS group in the **Identity Provider Group** field and your OCI group in the **OCI Group** field.
- 7. Click **Submit**.

## Adding and Assigning Oracle Cloud Infrastructure Users for Read Only Access

After creating a view only group and adding its policy, add users for read only access to Oracle Visual Builder instances.

- 1. Add an OCI user.
  - a. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Users**.
  - b. Click **Create User**.
  - c. Complete the fields to identify the user.

The screenshot shows the 'Create User' form with the following details:

- NAME:** TestViewer
- DESCRIPTION:** This user has view only access to OIC instances
- EMAIL:** (Empty field)
- TAGS:** Includes a dropdown for TAG NAMESPACE (None) and input fields for TAG KEY and VALUE.
- Buttons:** 'Create' (blue) and '+ Additional Tag' (grey).

- d. Click **Create**.
- 2. Assign the user to the read only group.
  - a. Select **Groups** from the **Identity** options.
  - b. Select the read only group you created (for example, `oci-visualbuilder-viewers`).
  - c. Click **Add User to Group**.

- d. In the Add User to Group dialog, select the user you created and click **Add**.
3. Create the user's password.
  - a. From the **Group Members** table on the Group Details screen, select the user you added.
  - b. Click **Create/Reset Password**. The Create/Reset Password dialog is displayed with a one-time password listed.
  - c. Click **Copy**, then **Close**.
4. Provide read only users the information they need to sign in.
  - a. Copy the password in an email to the user.
  - b. Instruct the read only user to sign in using the **User Name** and **Password** fields.

vbauto1

[Change tenancy](#)

## Single Sign-On (SSO)

We have detected that your tenancy has been federated to another Identity Provider.

Select your Identity Provider below.

Identity Providers



## Oracle Cloud Infrastructure Direct Sign-In ⓘ

This login is uncommon for federated accounts. If you have questions, please review the [FAQ](#) or contact your tenancy administrator.

User Name

Password


[Forgot Password?](#)

- c. Upon signing in, the user will be prompted to enter a new password.
- d. View Visual Builder instances.

Read only users can view Visual Builder instances by selecting **Visual Builder** in the navigation pane.

## Assigning Oracle Visual Builder Service Roles to Groups


After a Visual Builder instance has been created, assign Visual Builder roles to groups of users in Oracle Visual Builder to allow them to work with the features of the Visual Builder instance.



### Note:

It's a best practice to assign Visual Builder service roles to selected groups rather than individual users.

Oracle Visual Builder provides a standard set of [set of service roles](#), which govern access to features. Depending on the Visual Builder features your organization uses, you may choose to [create groups](#) named for the service role they are granted. For example, `VBServiceAdministrators` for administration permissions.

1. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Federation**.
2. On the Federation screen, select the **OracleIdentityCloudService** link to view the default Oracle Identity Cloud Service identity federation.
3. On the Identity Provider Details page, select **Groups** from the **Resources** options.
4. From the table, select an IDCS group to grant the users in the group access.
5. On the Group Details page, click **Manage Service Roles**.
6. On the Manage Service Roles page, locate your Visual Builder service (VISUALBUILDERAUTO). At the far right, click , and select **Manage instance access**.

The Manage Access screen lists instances. Note that you must assign roles for each instance individually.

- Instance names follow this format: `displayname-tenancyid-regionid`
  - Instance URLs follow this format: `https://displayname-tenancyid-regionid.visualbuilder.ocp.oraclecloud.com/ic/home/`
7. From the Manage Access options, select instance roles for the group under one or more specified instances.
  8. Click **Save Instance Settings**, then **Apply Service Role Settings**.

## 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 application layer and for Oracle Visual Builder.

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 the Application Layer

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

Predefined Roles	Description
<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 visual applications</li> <li>• Design pages, work with business objects, build and test applications</li> </ul>
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.

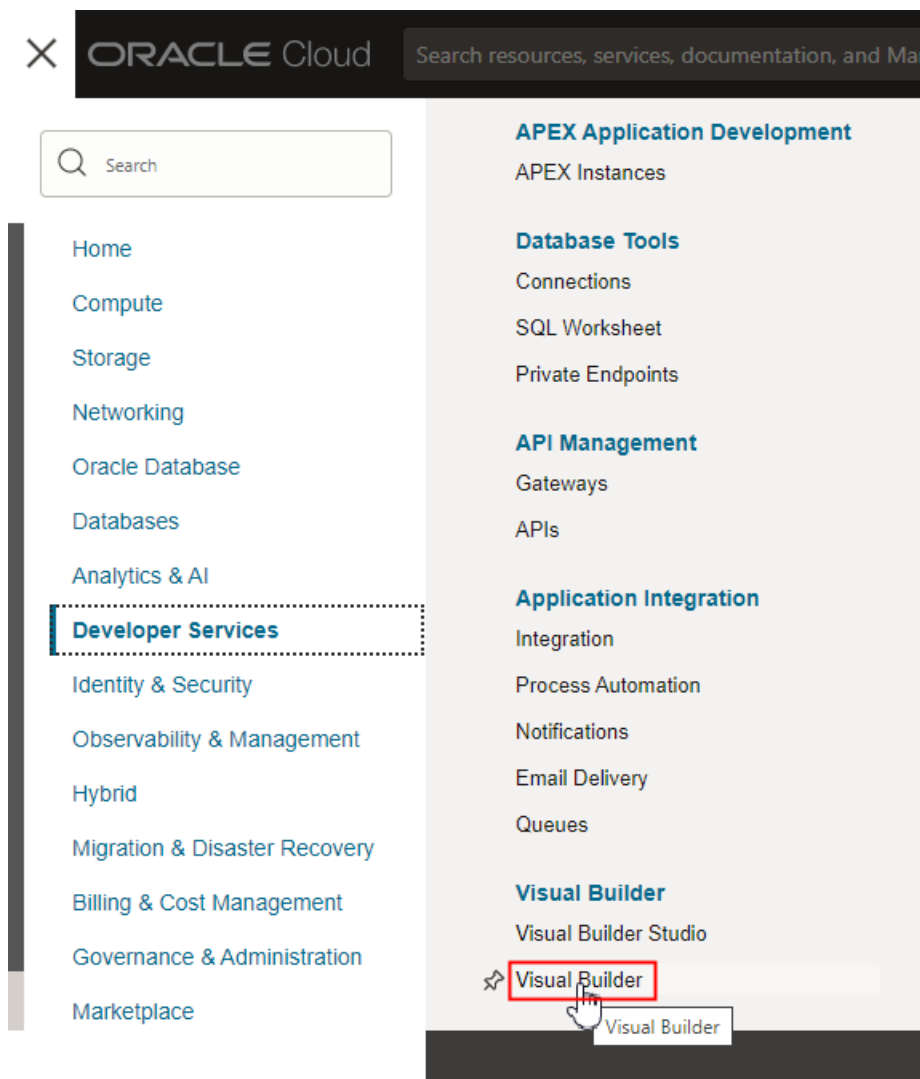
If you have configured Single Sign-On (SSO) so that IDCS federates to another identity provider (IdP), the SSO user credentials can't be used to access the Git repository. You'll need to define a new user in IDCS with the DEVELOPER\_USER role and use the new user's credentials when configuring the Git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

# 4

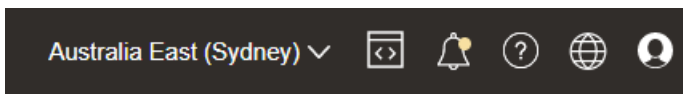
## View and Manage the Visual Builder Instance

After creating the Visual Builder instance, you can view its details and manage it from the OCI Console.

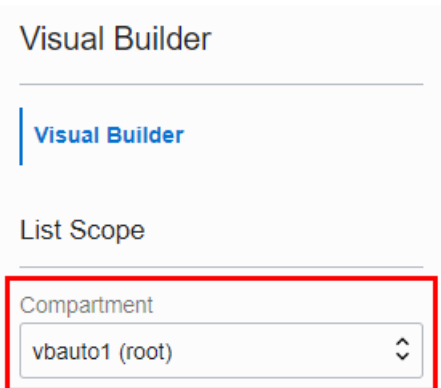
1. Open the OCI Console.
2. In the upper-left corner, click **Navigation Menu** ☰.
3. Select **Developer Services** in the menu, then select **Visual Builder** in the list of services.



If you want to change the region, you can use the dropdown list at the top of the page to select a different region.



- From the **Compartment** drop-down list, select the Visual Builder instance's compartment.



- Click the Visual Builder instance.

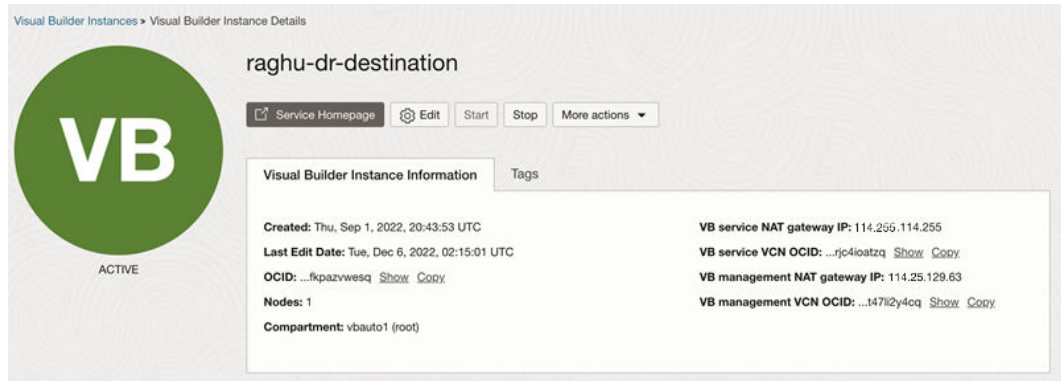
You can perform these actions from the instances page:

To do this ...	Do this:
Open the Visual Builder homepage	Click <b>Service Homepage</b> .
Start or stop an instance	<a href="#">Start or Stop a Visual Builder Instance</a>
Change the node count	<a href="#">Scale a Visual Builder Instance</a>
Configure a custom endpoint with the instance	<a href="#">Map Your Custom Endpoint with Your Visual Builder Instance.</a>
Add or edit tags	<a href="#">Manage Tags</a>
Download activity logs	In the <b>Activities</b> section, click <b>Action</b> ⋮ and select <b>Download Logs</b> .
Download activity error logs	In the <b>Activities</b> section, click <b>Action</b> ⋮ and select <b>Download Errors</b> .
Terminate an instance	<a href="#">Terminate a Visual Builder Instance</a>

## Access Visual Builder from the OCI Console

If you haven't bookmarked the Visual Builder home page in your browser, you can access it from the OCI Console.

- Open the OCI Console.
- In the upper-left corner, click **Navigation Menu** ☰.
- Select **Developer Services** and then select **Visual Builder**.
- From the **Compartment** drop-down list, select the compartment.
- In the table, click the name of the Visual Builder instance to open its Visual Builder Instance Details page.



The Visual Builder Instance Details page contains buttons to:

- Open the Service Homepage,
- Edit the instance details,
- Start and stop the instance, and
- Display a menu to access more actions.

The Visual Builder Instance Information tab displays information about your instance, including:

- Instance creation and last edit date,
- Instance OCID,
- Number of nodes,
- Compartment,
- NAT gateway IP for the VB service (and VB management, if needed), and
- VCN OCID for the VB service (and VB management, if needed).

6. Click **Service Homepage**.

If prompted, enter your user credentials and click **Sign In**.

You land on the Visual Builder home page. For quick access, bookmark the home page in your browser.

## Start or Stop a Visual Builder Instance

To save your billing cost, you can stop a Visual Builder instance. Billing is stopped for the duration that the instance is stopped and resumes when you start it. In the duration an instance is stopped, your organization's members can't access its applications.



**Note:**

If the instance has more than one node, you'll need to edit the instance's details to set the number of nodes to '1' before you can stop the instance.

1. Open the VB instance's details page.



2. Click **Start** or **Stop** to start or stop an instance.
3. Click **Yes** when prompted to confirm your selection.

## Move a Visual Builder Instance to Another Compartment

You can move a Visual Builder instance to a different compartment. Before you move the instance, remember that moving an instance can potentially change who has access to the instance. Make sure that users who have access to the current Visual Builder instance's compartment can access the instance in the new compartment as well.

1. Open the VB instance's details page.
2. From the **More Actions** drop-down menu, select **Move Resource**.
3. In the Move Resource to a Different Compartment dialog box, select the compartment and click **Move Resource**.

## Editing the Visual Builder Instance

You can edit your Visual Builder instance to scale the number of nodes in your instance and to add (or update) a custom endpoint. You cannot rename an instance.



### Note:

You cannot split a single instance into two parts (for example, into test and development parts). Instead, you must create separate instances for each part.

1. In the **Name** column, click the instance to edit.
2. On the Visual Builder Instance Details page, click **Edit**.

The Edit Visual Builder Instance dialog is displayed. The dialog displays a Nodes field and an Advanced Options pane for adding or updating a custom endpoint. The Advanced Options pane is collapsed by default.

3. Click **Show Advanced Options** to map a custom endpoint.

The Advanced Options pane contains a Custom Endpoint tab with fields for adding or updating a custom endpoint for the instance. The custom hostname you want to map to the instance must already be registered on a DNS provider and its SSL certificate stored as a secret in an OCI Vault. See [Create and Configure a Custom Endpoint for Your Visual Builder Instance](#).

**Edit Visual Builder Instance** [Help](#)

Nodes ⓘ

1

[Hide advanced options](#)

**Custom Endpoint**

Map a custom endpoint with your chosen domain for the instance. The custom hostname you want to use must already be registered on a DNS provider and its SSL certificate stored as a secret in an OCI Vault. [Learn More](#)

Hostname ⓘ

Compartment ⓘ Vault ⓘ Secret ⓘ

vbcs (root) Select a Vault Select a Secret

4. Click **Save Changes**.

## Scale a Visual Builder Instance

To meet your changing workload requirements, increase performance or to reduce your costs, you can increase or decrease the Visual Builder instance's node count. By default, a Visual Builder has one node.

1. Open the Visual Builder instance's details page.
2. Click **Edit**.
3. In the Nodes field, enter the number of nodes. Click **Save Changes**.

## Create and Configure a Custom Endpoint for Your Visual Builder Instance

You can map a custom endpoint to a Visual Builder instance and use it to access the instance instead of the original URL generated in the OCI Console.

You can create a custom hostname with your chosen domain (for example, `mycustom.example.org`) for your Visual Builder instance. Associating a custom endpoint with your Visual Builder instance doesn't affect the original instance URL. You'll be able to access your instance using the custom endpoint URL as well as the original instance URL. These instructions assume you have direct access to a Visual Builder instance. If you are using the instance behind a WAF or an API Gateway, skip the certificate-related instructions provided here (from Step 3 onwards) and follow the WAF or API gateway certificate instructions instead. See [WAF Certificates](#) or [Setting Up Custom Domains and TLS Certificates for API Gateways](#)

1. Choose a custom hostname for your instance and register it at a DNS provider.
2. Obtain an SSL certificate from a certificate authority (CA) for your hostname.
3. In your OCI tenancy, select a compartment and create an OCI Vault to store the certificate. See [Working with Compartments](#), [Overview of Vault](#), and [Create a New Vault](#).

4. Store the certificate as a secret in the OCI Vault. See [Create a New Secret](#).

Use the following certificate format:

```
{
  "key": "-----BEGIN PRIVATE KEY-----\n...\n-----END PRIVATE KEY-----\n",
  "cert": "-----BEGIN CERTIFICATE-----\n...\n-----END CERTIFICATE-----\n",
  "intermediates": [
    "-----BEGIN CERTIFICATE-----\n...\n-----END CERTIFICATE-----\n",
    "-----BEGIN CERTIFICATE-----\n...\n-----END CERTIFICATE-----\n"
  ],
  "passphrase": "<private key password if encrypted key is provided>"
}
```

#### Note:

- To avoid manual errors, you can also convert your PEM certificate into a single line containing "\n", as expected, with the following `awk` commands.

For the leaf certificate:

```
awk -v RS= '{gsub(/\n+/, "\n")}1' <cert_pem_file>
```

For each intermediate/root certificate:

```
awk -v RS= '{gsub(/\n+/, "\n")}1'
<each_intermediate_cert_pem_file>
```

For the private key:

```
awk -v RS= '{gsub(/\n+/, "\n")}1' <private_key_pem_file>
```

- The **latest** version of the secret is used when you associate a custom endpoint with your instance either through the create instance or edit instance operation. For information on secret versions, see [Secret Versions and Rotation States](#).
- If you use a hostname certificate whose certificate authority (CA) is not in the Visual Builder trust store, you must also upload the certificate to your Visual Builder instance; otherwise, an exception is thrown in the scenarios the instance calls itself.

Note the following certificate requirements:

- If the certificate has more than one root/intermediate certificate, each certificate must be specified as a separate element in an `intermediates` array.
- Always ensure that the final root CA is specified as the last element in the array. For example, if there are three intermediate certificates for the leaf certificate, the certificate that issued the leaf certificate should go as the `intermediates[0]` element, the certificate that issued the `intermediates[0]` certificate should go in the `intermediates[1]` element, and the certificate that issued the `intermediates[1]` certificate should go in the `intermediates[2]` element.

- The `passphrase` attribute is optional and does not need to be specified if the private key is not encrypted.
- If using an encrypted private key, the following format is required (PKCS1 is supported):

```
-----BEGIN RSA PRIVATE KEY-----
Proc-Type: 4,ENCRYPTED
-----END RSA PRIVATE KEY-----
```

A JSON file with an encrypted private key looks as follows:

```
{
  "key": "-----BEGIN RSA PRIVATE KEY-----\nProc-Type:
4,ENCRYPTED\n...\n-----END RSA PRIVATE KEY-----",
  ..
  ..
  "passphrase": "<passphrase to decrypt the key>"
}
```

A JSON file with an unencrypted private key looks as follows:

```
{
  "key": "-----BEGIN RSA PRIVATE KEY-----
\nvRXUK08v31bw2rnDLw+vjuX2i8ujHWs\n...\n-----END RSA PRIVATE
KEY-----",
  ..
  ..
}
```

- If your private key is in PKCS8 format, you must convert it to PKCS1 format:

```
openssl rsa -in <input_pkcs8_encrypted_private_key> -out
<converted_encrypted_private_key_file_name> -aes256
```

5. Create an Identity and Access Management (IAM) policy to:
  - a. Allow the Visual Builder service to read the version and contents of the secret.

Here's the policy syntax for a Visual Builder service:

```
allow group <group-name> to read secret-bundle in compartment <secrets-
compartment>
```

Here's an example:

```
allow group VBInstanceAdmins to read secret-bundle in compartment
MySecretCompartment
```

If the VB instance is NOT in a default domain, then you need to include the domain prefix in front of the group name.

Here's an example:

```
Allow group mydomain/VBInstanceAdmins to read secret-bundle in
compartment MySecretCompartment
```

- b. Allow the admin group to access the secret, key, and vault (or create a new secret, key, and vault), while creating or updating a Visual Builder instance with a custom endpoint.

Here's the policy syntax:

```
allow group <group-name> to manage secrets in compartment <secrets-
compartment>
```

```
allow group <group-name> to manage keys in compartment <secrets-
compartment>
```

```
allow group <group-name> to manage vaults in compartment <secrets-
compartment>
```

and here are examples:

```
Allow group VBInstanceAdmins to manage secrets in compartment
MySecretCompartment
```

```
Allow group VBInstanceAdmins to manage keys in compartment
MySecretCompartment
```

```
Allow group VBInstanceAdmins to manage vaults in compartment
MySecretCompartment
```

If the VB instance is NOT in a default domain, then you need to include the domain prefix in front of the group name.

Here are examples:

```
Allow group mydomain/VBInstanceAdmins to manage secrets in
compartment MySecretCompartment
```

```
Allow group mydomain/VBInstanceAdmins to manage keys in compartment
MySecretCompartment
```

```
Allow group mydomain/VBInstanceAdmins to manage vaults in
compartment MySecretCompartment
```

Note that you should specify the resource to return in `<resource-type>`, as described in [Details for the Vault Service](#).

For the policy statement syntax, see [Add Users to Create and Manage Visual Builder Instances](#) above, and [CreatePolicy API Request](#).

6. Create a Visual Builder instance and map the custom endpoint details to it. See [Create the Visual Builder Instance](#) and [Map Your Custom Endpoint with Your Visual Builder Instance](#).
7. Finally, update the custom endpoint DNS record to the original instance hostname. As a best practice, update the CNAME of the DNS record with the hostname of the original instance endpoint.

## Map Your Custom Endpoint with Your Visual Builder Instance

To map a custom endpoint to a Visual Builder instance, get the custom hostname for the Visual Builder instance and the OCI vault's compartment name, vault's name, and the secret key where you've uploaded the SSL certificate.

Before you begin, create a custom hostname and upload its SSL certificate to an OCI Vault, as described in [Create and Configure a Custom Endpoint for Your Visual Builder Instance](#).

1. Open the VB instance's details page.
2. On the Visual Builder Instance Details page, click **Edit**.

The Edit Visual Builder Instance dialog is displayed. The dialog displays a Nodes field and an Advanced Options pane for adding or updating a custom endpoint. The Advanced Options pane is collapsed by default.

3. Click **Show Advanced Options**.

The Advanced Options pane contains a Custom Endpoint tab with fields for adding or updating a custom endpoint for the instance.

The screenshot shows the 'Edit Visual Builder Instance' dialog. At the top, there is a 'Nodes' field containing the number '1'. Below this is a link to 'Hide advanced options'. The 'Custom Endpoint' tab is active, displaying instructions: 'Map a custom endpoint with your chosen domain for the instance. The custom hostname you want to use must already be registered on a DNS provider and its SSL certificate stored as a secret in an OCI Vault. [Learn More](#)'. Below the instructions are three fields: 'Hostname' (a text input field), 'Compartment' (a dropdown menu showing 'vbcs (root)'), 'Vault' (a dropdown menu showing 'Select a Vault'), and 'Secret' (a dropdown menu showing 'Select a Secret'). A 'Help' link is located in the top right corner of the dialog.

4. Supply the custom endpoint details.

Field	Description
Hostname	Enter the custom hostname chosen for the instance. The custom hostname you want to map to the instance must already be registered on a DNS provider and its SSL certificate stored as a secret in an OCI Vault.

Field	Description
<b>Certificate</b>	Provide the location of the hostname's certificate in your OCI tenancy. <ul style="list-style-type: none"> <li>• <b>Compartment:</b> Select the OCI compartment that contains your certificate vault.</li> <li>• <b>Vault:</b> Select the vault that contains the hostname's certificate.</li> <li>• <b>Secret:</b> Select the secret corresponding to the hostname's certificate.</li> </ul>

 **Note:**


You can also update or replace a custom endpoint that was previously associated with the instance. You can modify the hostname as well as the certificate details. However, to update the certificate details, you must have access permissions to the vault containing the required certificate.


After you've mapped the instance, update the custom endpoint DNS record to the original instance hostname. As a best practice, update the CNAME of the DNS record with the hostname of the original instance endpoint.

## Manage Tags

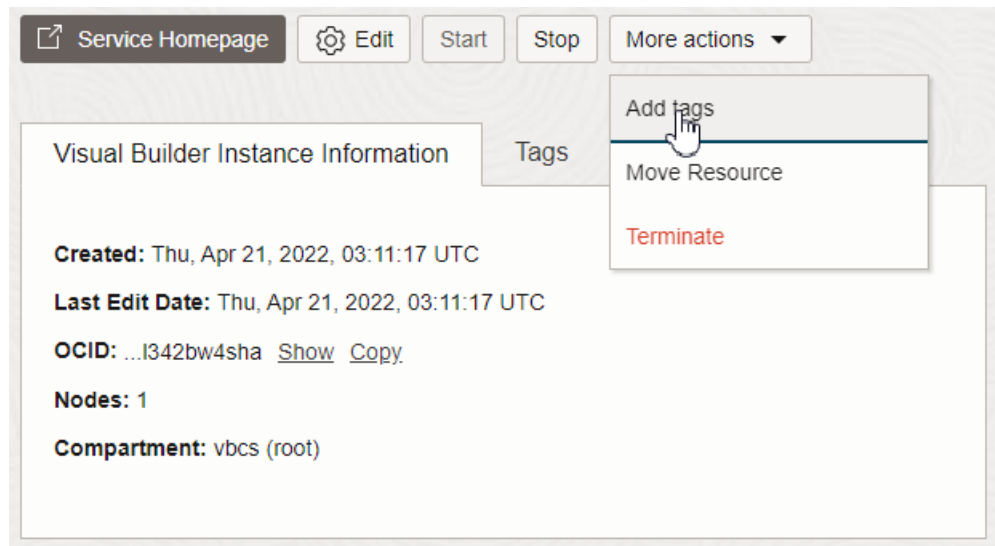
OCI tags enable you to tag your OCI resources, such as your instance, and help you organize resources based on your business needs. You can manage tags from the Instance Details page.

If you're new to OCI tags, see [Tagging Overview](#).

Action	How To
Add a tag	<ol style="list-style-type: none"> <li>1. On the Instance Details page, click <b>Add Tags</b> in the <b>More Actions</b> menu.</li> <li>2. In the Add One Or More Tags To This Resource dialog box, enter the tag's namespace, key, and value.</li> <li>3. Click <b>Add Tags</b>.</li> </ol>
Edit a tag	<ol style="list-style-type: none"> <li>1. On the Instance Details page, click the <b>Tags</b> tab.</li> <li>2. To edit a tag, click its <b>Edit</b>  icon.</li> <li>3. In the Edit Tag dialog box, edit the tag and click <b>Save</b>.</li> </ol>

Action	How To
Remove a tag	<ol style="list-style-type: none"> <li>1. On the Instance Details page, click the <b>Tags</b> tab.</li> <li>2. To edit a tag, click its <b>Edit</b>  icon.</li> <li>3. In the Edit Tag dialog box, click <b>Remove Tag</b>.</li> </ol>

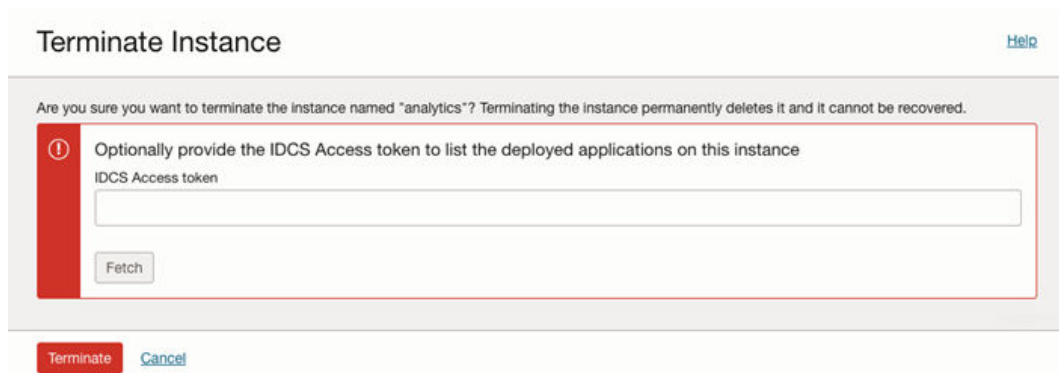
You can see the Add Tags item in the More Actions menu in this image.



## Terminate a Visual Builder Instance

Terminating a Visual Builder instance removes its applications and data. You can't undo the terminate action.

1. Open the Visual Builder instance's details page.
2. From the **More Actions** drop-down menu, select **Terminate** to open the Terminate Instance dialog box.





3. Optional: In the Terminate Instance dialog box, review the instance's published applications.

You'll need to provide an Oracle Identity Cloud Service (IDCS) Access token if you want to review the applications deployed to the instance. For details, see *Generate Tokens for Confidential Applications* in *Administering Oracle Identity Cloud Service*.

- a. In IDCS, open the details page for your instance and click **Generate Access Token**.
  - b. In the Generate Token dialog box, select **Available Scope**, and then click **Download Token** to download a file containing the access token to your local system.
  - c. On your local system, open the downloaded file and copy the access token.
  - d. In the Terminate Instance dialog box in the OCI Console, paste the access token into the IDCS Access token field, and then click **Fetch** to retrieve and display a list of applications deployed to the instance.
  - e. Confirm that you want to permanently delete all the listed applications.  
If there are any applications you don't want to permanently delete, click **Cancel** to close the Terminate Instance dialog box.
4. Click **Terminate** to permanently terminate the instance.

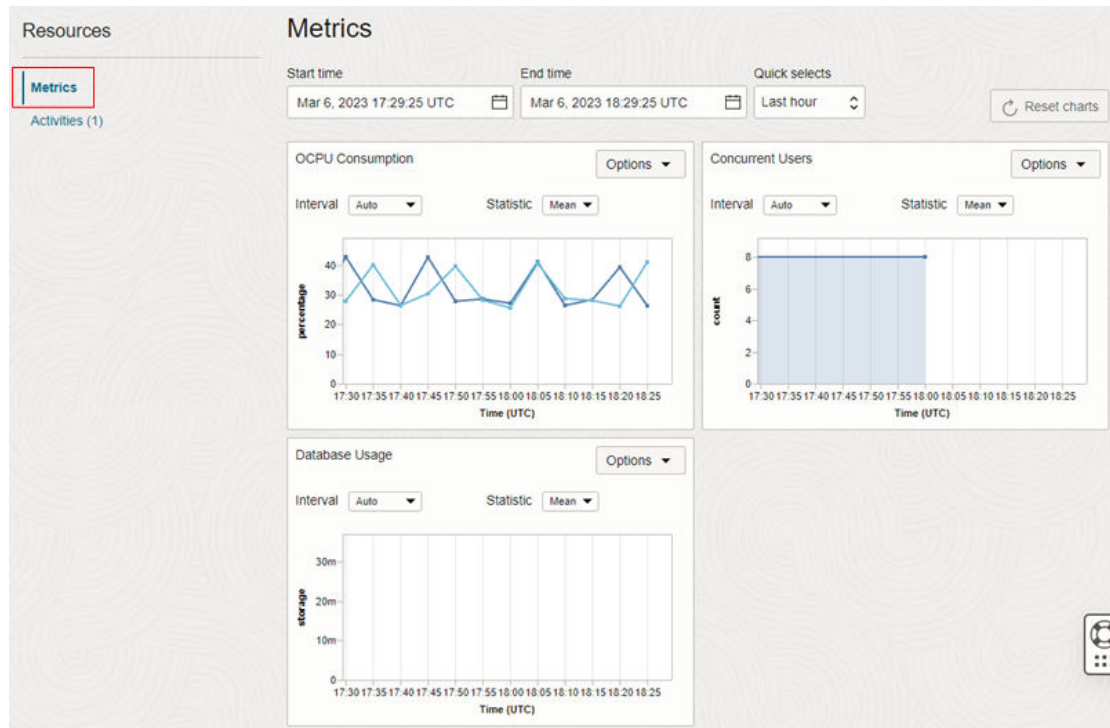
## View Instance Metrics

You can use the Metrics pane in the OCI Console to view data about your instance's resource consumption and the number of logged-in users.

To view instance metrics during a specific period of time.

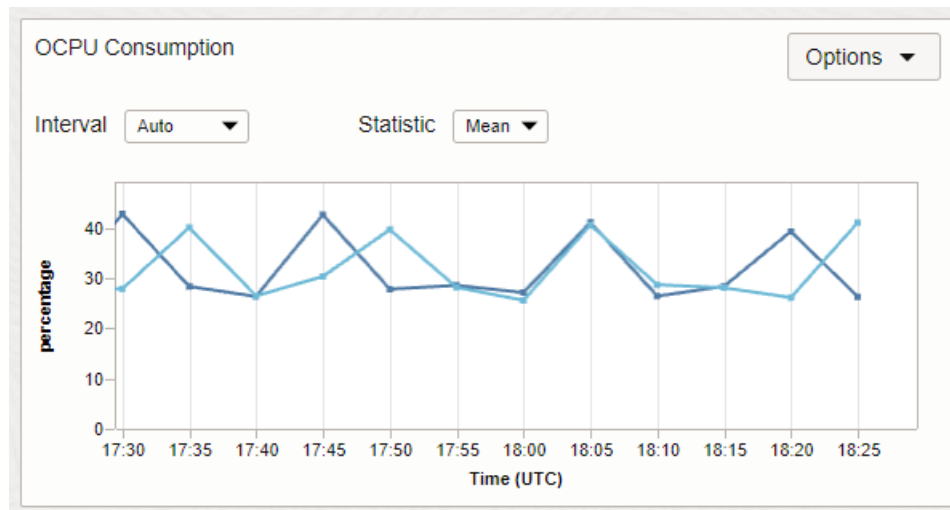
1. Open the Visual Builder Instance Details page of your instance.
2. Click **Metrics** under Resources in the left navigation pane.
3. In the Metrics pane, select the Start Time and End Time of the period you want to examine.  
You can also select a period in the Quick Selects dropdown list.

The Metrics pane contains three charts that display details about your instance: OCPU Consumption, Concurrent Users and Database Usage. Each chart contains Interval and Statistic dropdown menus for modifying how the metrics are displayed. When you hover over a chart, a tooltip is displayed with more detailed metrics.



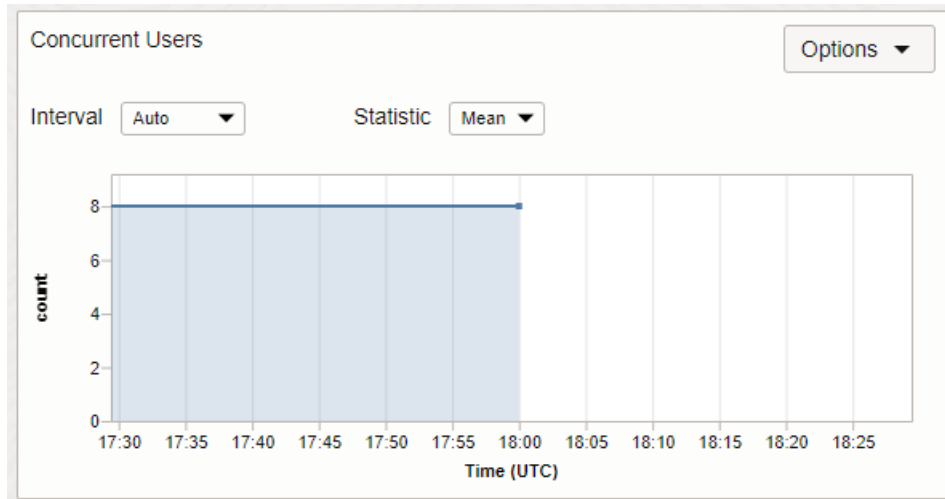
### OCPU Consumption

The OCPU Consumption chart displays the percentage of each of the instance's CPUs that is being used at a given time.



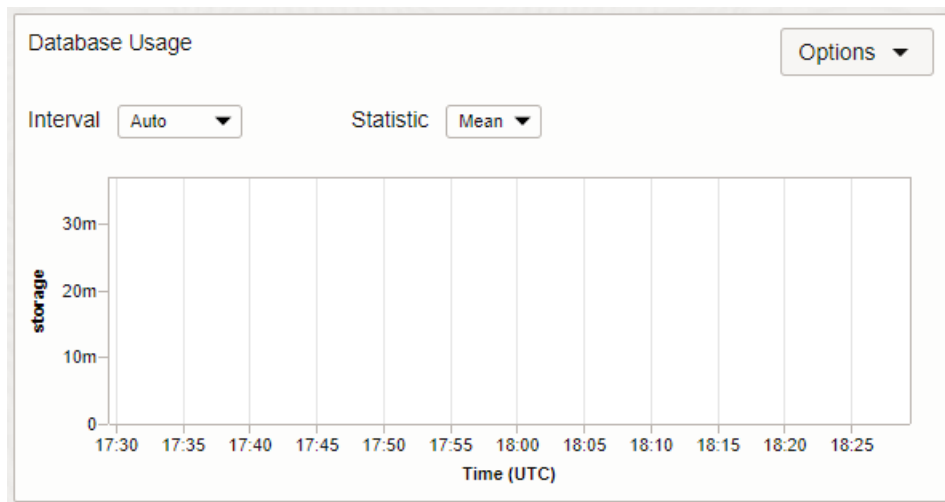
### Concurrent Users

The Concurrent Users chart displays the number of users that are logged in to the instance at a given time.



### Database Usage

The Database Usage chart displays how much data is stored in the database at a given time. To see the usage, you need to define a period of time, either by using the Start Time and End Time fields to select dates, or the Quick Select to select a period (for example, "Last 12 hours").



## View Services Associated With Your Instance

You can use the Associated Services table in the OCI Console to see a list of the services that are attached to your VB instance.

When a VB instance is created by a service other than Visual Builder, for example, if an instance is created by enabling Visual Builder in Oracle Integration Cloud (OIC) service, the service and the VB instance are then "attached" to each other. If a VB instance is attached to a service, the attached service is listed in the Associated Services table in the OCI Console.

To open the Associated Services table:

- Open the Visual Builder Instance Details page, and then click **Associated services** under the Resources menu.

You can open the home page of the attached service using the Service console URL in the table.

Type	OCID	Role	Service console URL
INTEGRATION	...w3uqfvlma <a href="#">Show</a> <a href="#">Copy</a>	Parent	<a href="https://oicg3-vb-inst-axy85fk.ocp.oraclecloud.com">https://oicg3-vb-inst-axy85fk.ocp.oraclecloud.com</a>

Showing 1 item < 1 of 1 >

In some cases, an attachment can be via another service. For example, an Oracle Cloud Application service might trigger an OIC service to create a Visual Builder instance. In this case, the Associated Services table would show this relationship using "parent" and "child" labels: the Oracle Cloud Application service's role would be "Parent", and the OIC service's role would be "Child".

# 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](#)
- [Configure Security Options for Applications](#)
- [Assign Roles for Users to Access an Application](#)
- [Set Page Messages for Access Denied Errors](#)
- [Allow Other Domains Access to Services](#)
- [Allow Your Instance to Access Services](#)
- [Inspect Database Usage](#)
- [Switch to Your Own Oracle DB Instance](#)
- [Make Schemas in an Oracle DB Instance Available to Applications](#)
- [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 Automation](#)
- [Add a Connection to Process Cloud Service](#)
- [Add a Connection to a Custom Backend](#)
- [Edit Authentication for a Backend Service](#)
- [Create a Child Backend](#)
- [Manage Self-signed Certificates](#)
- [Manage Your Component Exchange](#)
- [Configure Support for a Custom Domain](#)

## Manage Applications in the Service Instance

The Oracle Visual Builder Home page helps you manage visual applications created on the current Visual Builder service instance, as well as apps deployed to the instance from a different VB instance or Visual Builder Studio (VB Studio).

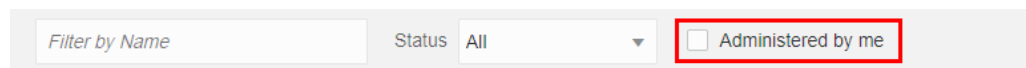
Each row on the Home page represents an application created either on a Visual Builder instance, or on a VB Studio instance that is associated with this Visual Builder instance. The

Origin column on the Home page contains "Visual Builder Studio" if the app was shared or published in Visual Builder Studio:

Name	Status	Origin	Version	Recent activity
kenter-1	{ } Development	Visual Builder	1.0	Yesterday at 6:07:55 PM
vbstudio-vboci_kenter2_30270_181	{ } Development	Visual Builder	1.0	Yesterday at 5:33:45 PM
vbstudio-vboci_kenter2_30270_221	{ } Development	Visual Builder	1.0	Yesterday at 3:57:27 PM
kenter-visapp3	Stage	Visual Builder Studio	vbshare_221 +1	4/18/2023 from kenter2

The first row in the image above represents an application created on this VB instance, which can be managed using the in the right column. The rows below represent applications created on a VB Studio instance, and the only option on the Home page for these is to click in the right column to remove them from the VB instance. To manage an app created in VB Studio, you should open the app's VB Studio project. The VB Studio project provides tools for managing an application's lifecycle that are equivalent to those in the Options menu for applications created on the VB instance. For example, in the project's Builds tab you can configure a build job to set the app's version and then stage it. For more about managing an application's lifecycle in VB Studio, see *Preview, Share, and Deploy Visual Applications in Building Responsive Applications with Visual Builder Studio*.

If you're an administrator, you can manage (which includes deleting) any of the apps shown on the Home page. To see the full list of applications, select the **Administered by me** checkbox next to the Status dropdown list.



If you're a developer, you can manage the apps that you've created in this instance of Visual Builder, or if you're a team member of the app. You can also manage VB Studio apps from the Home page, as long as you've created, shared or published it. You will not see the **Administered by me** checkbox unless you have the role of administrator.

### IDCS Client Applications

Each time a visual application is created on a Visual Builder instance, a companion *client application* is automatically created in IDCS. When you stage or publish the app to a different server governed by the same IDCS instance, another client application is created. This means there may be several client applications for the same visual application running on IDCS for the lifespan of the app.

If you have IDCS administrator privileges, you can see these client apps on the IDCS console, but you should not need to *manage* them in any way. When a visual application is removed from the server, the associated client apps are removed from IDCS. You may need to *interact* with the client apps if you want to set login-related

policies for a Visual Builder service instance—for example, to enable the **Keep me signed in** policy, or to assign the users and groups who can access the application.

When you want to view client applications in the IDCS console, make sure that you are looking at the correct IDCS app for the VB instance. For example, when a VB instance is provisioned with OIC, VB shares the IDCS app of the OIC instance, and the client apps will be listed in that IDCS app. You can look at the URL of the service host name to help determine the correct IDCS app for the instance:

- When the URL contains `<SUB-DOMAIN>.builder.ocp.oraclecloud.com`, the VB instance will have its own IDCS app.
- When the URL contains `<SUB-DOMAIN>.integration.ocp.oraclecloud.com`, it is an OIC instance, and the VB instance will share the OIC instance's IDCS app.

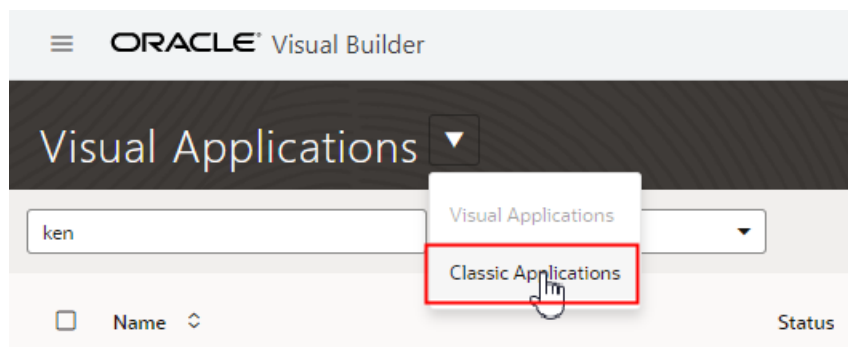
For more, see Typical Workflow for Managing Oracle Identity Cloud Service Applications in *Administering Oracle Identity Cloud Service*.

#### Tip:

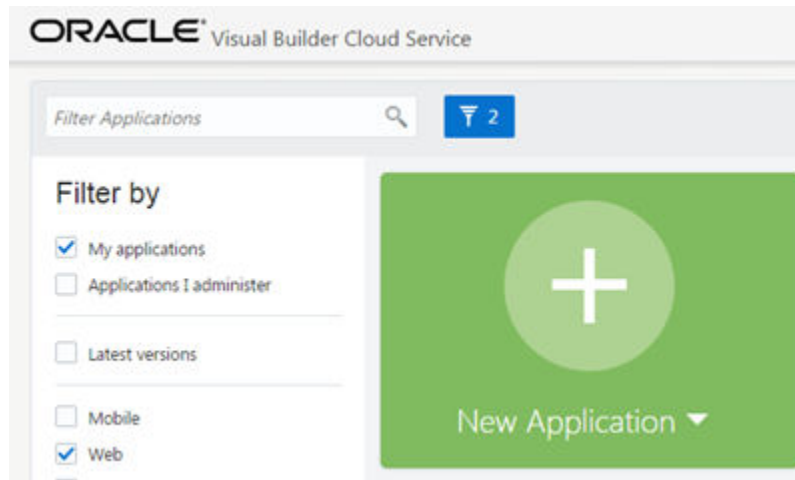
Developers can also view details of client apps created in IDCS for their visual applications and can provide details of the exact client app to help you troubleshoot issues more easily. See *How Do I View Details of Client Apps in IDCS?* in *Developing Applications with Oracle Visual Builder*.

### Visual Builder Classic Applications

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.




## Manage Applications Created on the Instance

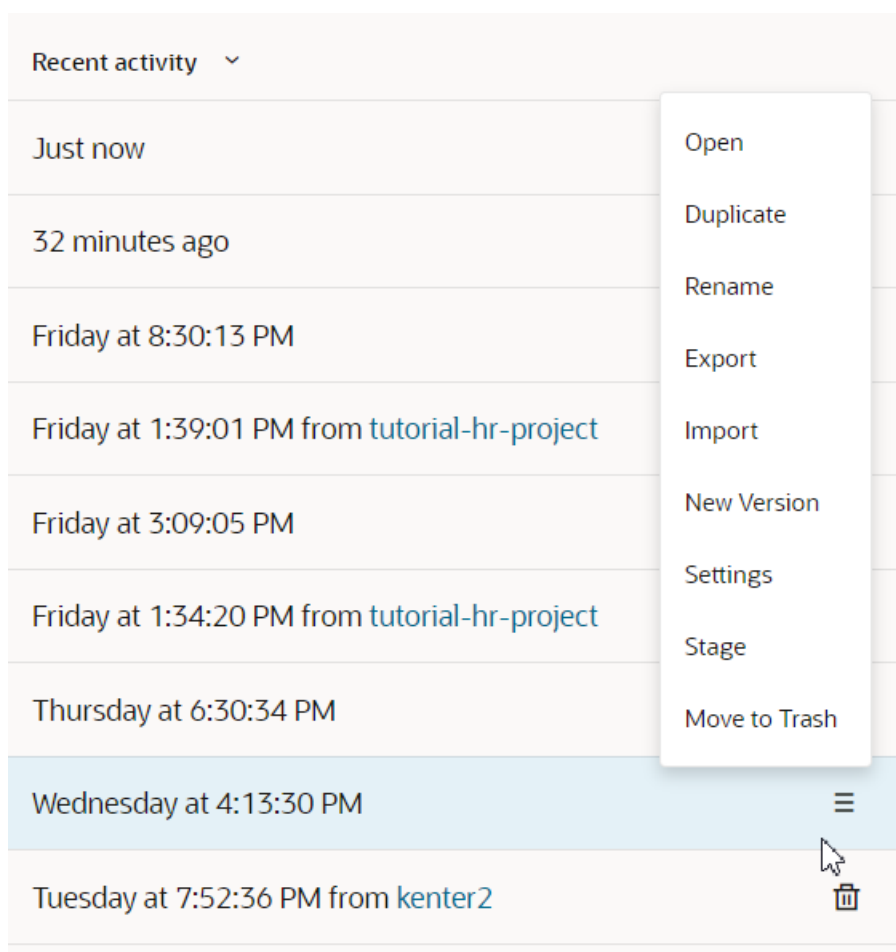
The table of applications on the Home page includes visual applications created on the Visual Builder instance. Each of these applications has an Options menu in the right column that developers and administrators can use to manage it, for example, to add and remove team members, and to open, stage and publish the application.

You can tell which applications were created on the instance by looking for  in the right column. If you see a  button instead of , the application was created on a different instance of Visual Builder or a VB Studio instance. If an application was created on a different instance, you'll need to open the application on the instance where it was created and manage it there.

To manage an application created on the current Visual Builder instance:

- Click  in the right column of the application, and then select a task in the Options menu:





The Options menu displays commands for managing the application (based on the application's status, some commands might be hidden):

Menu Item	Description
Open	Opens the development version of the application
Duplicate	Creates a clone of this version of the application, including the content of the database.
Rename	Opens a dialog box where you can change the name of the application.
Export	Creates a ZIP archive of the application that can be imported as a new application. When exporting the application, you can choose if you want the exported archive to include the data stored in your business objects.
Import	Opens a dialog that you can use to create an application by uploading an application archive (ZIP or OVB) from your local system.
New Version	Creates a new version of the same application. By default the new version is a development version. Version numbers are automatically increased incrementally.


Menu Item	Description
Settings	Opens an editor for configuring the application's settings and viewing the application API URLs. Each application version has a dedicated Settings editor.
Stage	Opens a dialog box where you can specify the database option for the staged application. When an application is staged, a link to the staged version is displayed in the tile.
Publish	Opens a dialog box where you can specify the database option and publish the staged version of your application.
Lock / Unlock	Enables you to lock a live application to prevent any users from using the application. You would usually use this command when you are going to update the live application with a newer version. The Unlock option is displayed only when the live application is locked.
Rollback	Rolls back the live version to the previous live version. This is only available for the current live version, and there must be an older live version of the app.
Move to trash	Deletes the application from the Identity Domain. You have 30 days to recover the application after deleting it. For more, see <i>Delete a Visual Application</i> in <i>Developing Applications with Oracle Visual Builder</i> .

## Manage Applications Created on a VB Studio Instance


When a VB instance is associated with a VB Studio project, visual applications created, shared and published in the VB Studio project are included on the Home page. These applications are visible to administrators, and to the developers who created the applications.

When you create a visual application in VB Studio, you do so in the context of a *workspace*, a completely private area where your app and its assets are stored. While creating your workspace, you are asked to designate an instance of Visual Builder to serve as the target for deployment; you don't deploy visual apps to a VB Studio instance. In addition to serving as a deployment target, the Visual Builder instance you name is also used to support the creation of business objects, as well as the VB Studio Share and Publish actions. That is, if you create a business object in the context of your app, a new app representing the schema for that object is created in the VB instance associated with your workspace. In the image below, the third row shows such a schema-based app; the first row represents an app that was published in VB Studio, and the second row represents the app after the Share action is used in VB Studio.

Name	Status	Origin	Version	Recent activity
PrepareUpgradeServicesSpec368987865835	Live	Visual Builder Studio	1681987996511 - 1	3 minutes ago from dnd-upgradetesting
PrepareUpgradeServicesSpec168987865835	Stage	Visual Builder Studio	vbshare_5	7 minutes ago from dnd-upgradetesting
vbstudio-vboci_kenter2_30270_221	Development	Visual Builder	1.0	Yesterday at 4:17:45 PM
kenter-1	Development	Visual Builder	1.0	Yesterday at 4:13:50 PM
vbstudio-vboci_myvisapp_157049_61	Development	Visual Builder	1.0	Yesterday at 2:05:02 AM
kenter-visapp5	Stage	Visual Builder Studio	vbshare_221 - 1	Tuesday at 7:52:36 PM from kenter2
kenter-visapp5	Stage	Visual Builder Studio	vbshare_181	Tuesday at 7:20:30 PM from kenter2
vbstudio-vboci_myvisapp_157049_121	Development	Visual Builder	1.0	Friday at 4:55:31 PM
fragmentsrepo	Stage	Visual Builder Studio	vbshare_61	4/13/2025 from myvisapp
Workflow_Diagram_Demo_sheryl	Development	Visual Builder	1.0	4/13/2025

You can tell if an application was created on a different VB instance or a VB Studio instance because there will be a  button in the right column, and the only option on the Home page is to remove the application. To perform other tasks, for example, to add members to the team, you need to open the application in the instance where it was created. For apps created in VB Studio, you can use the link in the Recent activity column to open the app's VB Studio project.

To remove an application from the current Visual Builder instance:

1. Locate the row in the table containing the application.
2. Do one of the following:
  - a. Click the  button in the right column.
  - b. Select one or more applications, then click **Move to trash** in the header.
3. Confirm the applications you want to delete by clicking **Move to Trash** in the Move Application to Trash dialog box.

### Move Application to Trash ✕

Applications in Trash can be restored for up to 30 days after being moved there.

Application ID	Status	Team
vbstudio-vboci_kenter2_30270_221-1.0	{ }	0

Cancel
Move to Trash

For details on deleting multiple versions of applications, and live or live locked versions, see [Delete a Visual Application](#).

This table describes the types of applications that will appear on the Home page when developing a visual application in VB Studio.

When you ...	Description
--------------	-------------

Create a workspace for an application	A "container" application for the application's business objects is automatically created on the VB instance. This represents the schema for the business objects used in a visual app's workspace.
---------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

On the Home page:

- The name in the table will often contain the name of the VB Studio instance, the project name and a workspace id.
- The application's Status column contains "{ } Development".
- The application's Origin column contains "Visual Builder" or "Visual Builder Studio".

This image shows two apps, each representing a workspace in a Visual Builder Studio project:

vbstudio-vboci_kenter2_30270_181	{ } Development	Visual Builder	1.0	Monday at 5:33:45 PM
vbstudio-vboci_kenter2_30270_221	{ } Development	Visual Builder	1.0	Monday at 3:57:27 PM

If the application for a workspace is removed on the Home page, it's automatically generated again the next time the workspace is opened.



**Note:**

No client application is created in IDCS for these container applications created for workspaces.

When you ...	Description
Share a visual application	<p>The application is staged on the VB instance, and a client application is created for the app's 'development' app profile and added to the list of applications in the IDCS environment.</p> <p>An application representing the client application is also added to the VB instance Home page table. Though sharing the application might create multiple client apps, the table will only list one application for the shared app. The application name on the Home page is usually the name of the visual application.</p> <p>On the Home page:</p> <ul style="list-style-type: none"> <li>• The application's Status column contains "Stage".</li> <li>• The application's Origin column contains "Visual Builder Studio".</li> <li>• The application's Version column contains "vbshare_".</li> <li>• The application's Recent column contains a link to the application's Project Home page where you can manage the application.</li> </ul> <p>This image shows what two visual application shared from two VB Studio workspaces in a project might look like when viewed on the Home page:</p>

▼ kenter-visapp3	👤 Stage ▼	Visual Builder Studio	vbshare_221 +1	4/18/2023 from kenter2
kenter-visapp3	👤 Stage ▼	Visual Builder Studio	vbshare_181	4/18/2023 from kenter2



**Note:**

If the client application is removed on the Home page or in IDCS, the shared application will not work correctly. If the shared application is no longer needed, you can remove the application.

When you ...	Description
Publish an application	<p>The application is deployed to the VB instance, and a client application for the app's 'stage' (or 'publish') app profile is created and added to the list of applications in the IDCS environment.</p> <p>An application representing the client app is also added to the VB instance Home page table. In the table, the application name will usually be the name of the visual application. This name can be changed in the application's <code>visual-application.json</code> file.</p> <p>On the Home page:</p> <ul style="list-style-type: none"> <li>The application's Status column contains "Stage" or "Live". Older versions will be marked as "Obsolete".</li> <li>The application's Origin column contains "Visual Builder Studio".</li> <li>The application's Recent column contains a link to the application's Project Home page where you can manage the application.</li> </ul> <p>This image shows what an application published from Visual Builder Studio might look like when viewed on the Home page:</p>

<input type="checkbox"/>	NvauseTest0317	{ } Development	Visual Builder Studio	0.4 +3	4/7/2023 from myproject1
<input type="checkbox"/>	NvauseTest0317	🕒 Live	Visual Builder Studio	0.3	4/6/2023 from myproject1
<input type="checkbox"/>	NvauseTest0317	🕒 Obsolete	Visual Builder Studio	0.2	4/6/2023 from myproject1
<input type="checkbox"/>	NvauseTest0317	🕒 Obsolete	Visual Builder Studio	0.1	4/6/2023 from myproject1

### Note:


If the client application of a live or staged app is removed, on the Home page or in IDCS, the application will not work correctly. If the application is no longer needed, you can remove the application.

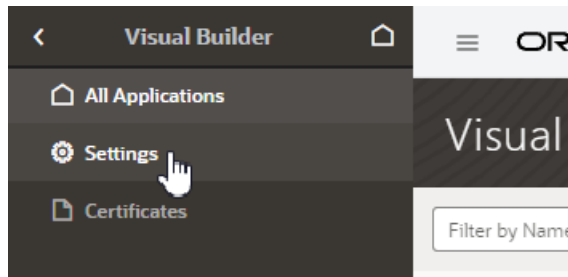
## Access Instance Settings

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

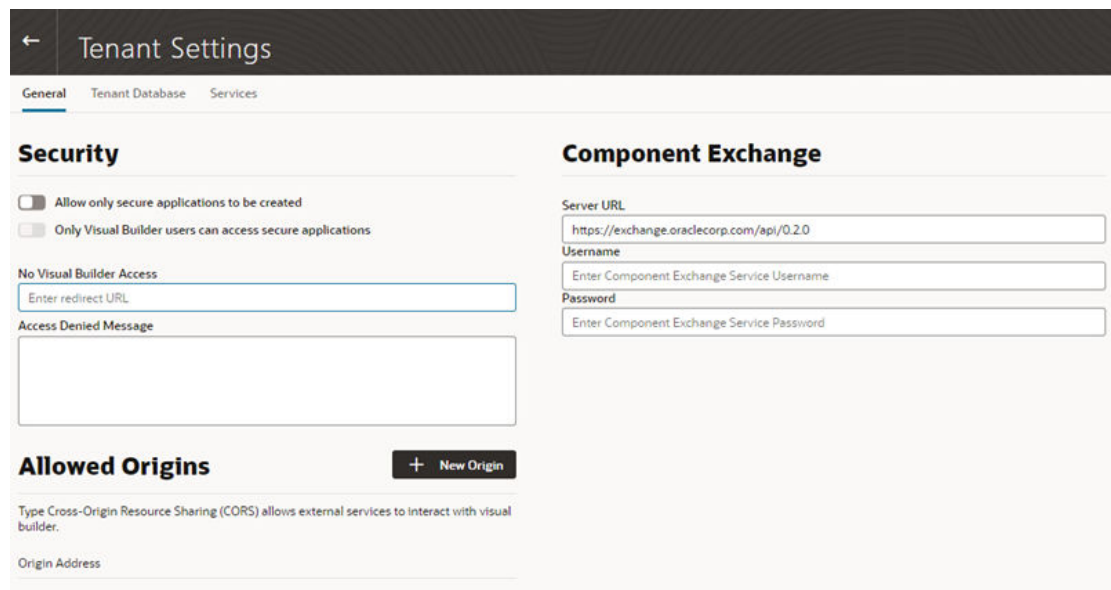
The Tenant Settings page contains three tabs: General, Tenant Database and Services. The General tab has panels for configuring security settings, specifying Access Denied messages, and configuring the Component Exchange details. You use the Tenant Database tab to switch to an Oracle database and to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

1. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** .
2. Click **Settings** in the navigation menu to open Tenant Settings.



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



## 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 log in to access the applications in the instance, even if anonymous access is allowed in the application's settings. 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.

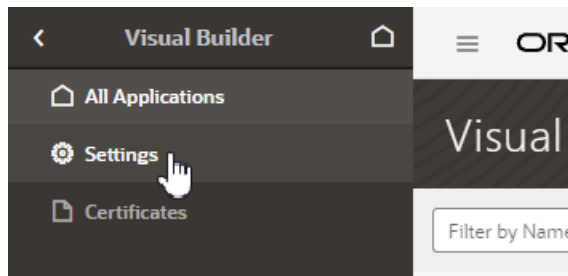
When the secure application option is enabled, an administrator can enable the **Only Visual Builder Users can access secure applications** option so that only Visual Builder users (those assigned the default Service User role) can access the staged and published applications in the instance. For example, 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. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** ☰.
2. Click **Settings** in the navigation menu to open Tenant Settings.



3. 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.
4. 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.



5. 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="#">About Setting Up Users and Groups</a>
If your Visual Builder instance is part of Oracle Integration or Oracle Integration, Generation 2:	
To assign roles to users:	See this:
For Oracle Integration	<a href="#">Add Users, Groups, and Roles for an Existing Instance</a> in <i>Administering Oracle Integration Classic</i>

**To assign roles to users:**

For Oracle Integration, Generation 2

**See this:**

Setting Up Users and Groups in Oracle Integration Generation 2 in *Provisioning and Administering Oracle Integration 3*

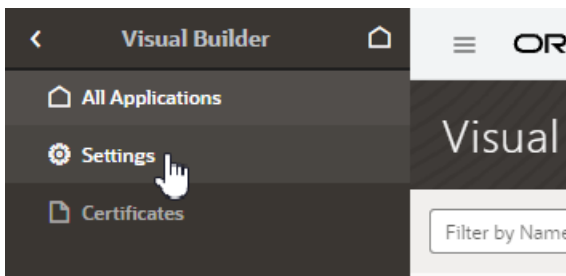
## Set Page Messages for Access Denied Errors

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. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** ☰.
2. Click **Settings** in the navigation menu to open Tenant Settings.



3. 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

Enter redirect URL

#### "Access Denied" Message

 **Note:**

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

4. 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.

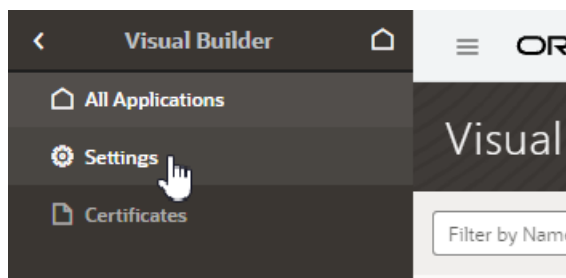
## Allow Other Domains Access to Services

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.

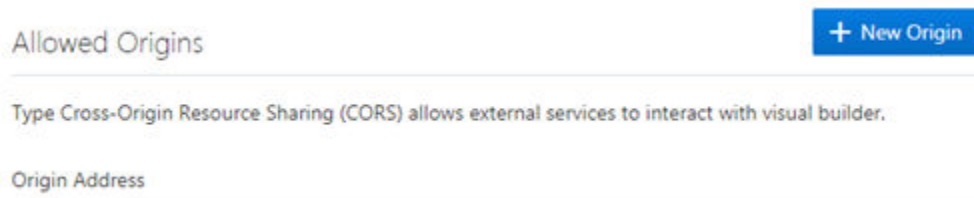
To add a domain to the list of allowed origins:

1. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** .
2. Click **Settings** in the navigation menu to open Tenant Settings.



3. In the **Allowed Origins** panel, click **New Origin** and type the URL of the domain that you want to allow. Click **Submit**.

The URL must be a fully-qualified domain, meaning it must contain `http://` or `https://`, for example, `https://myoracle.cloud.service`. You must explicitly enter each fully-qualified domain that you want to allow. To allow both `http://` and `https://` connections from a domain, you would need to add both domains (`https://myoracle.cloud.service` and `http://myoracle.cloud.service`).



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

## 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:

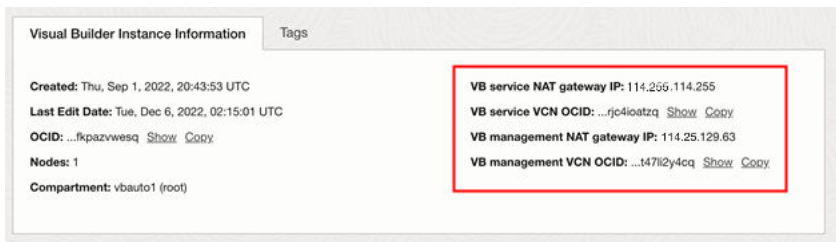
- the Visual Builder service VCN,
- the Oracle Cloud ID (OCID) of the Visual Builder service VCN, or
- the NAT gateway IP address of the Visual Builder service VCN.

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:



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

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>

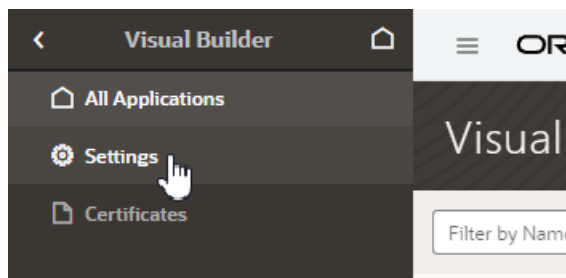
## Inspect Database Usage

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](#).

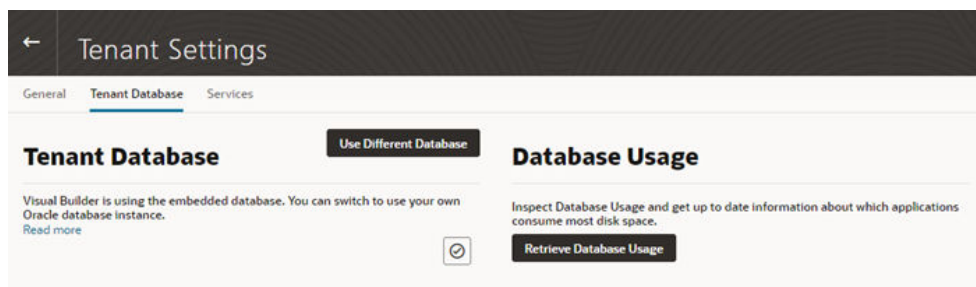
To inspect your instance's database usage:

- In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** ☰.
- Click **Settings** in the navigation menu to open Tenant Settings.

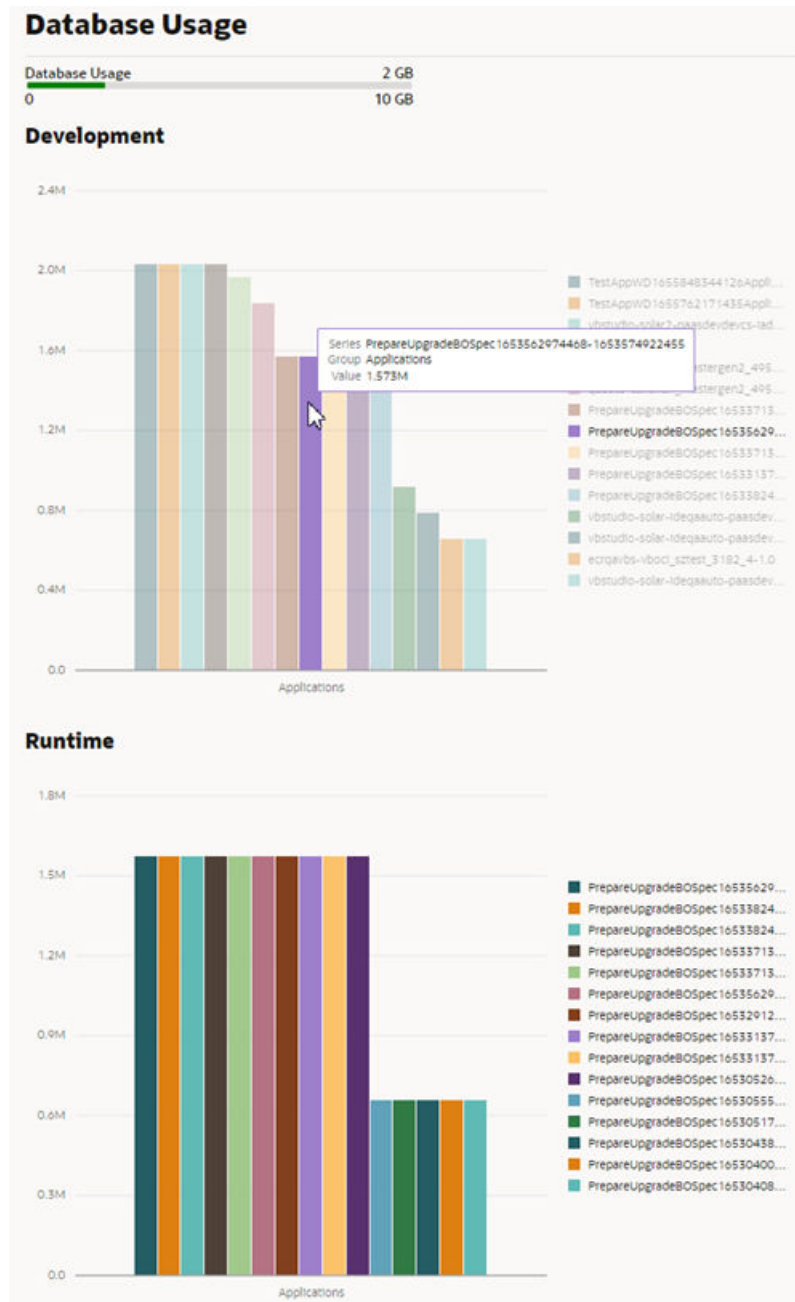


- Open the Tenant Database tab.

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



- 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.

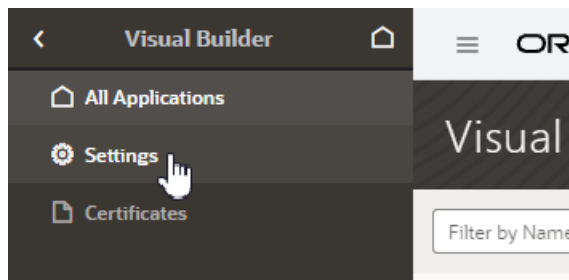
 **Note:**

If you have live applications already on the instance:

- Before switching to a new database, 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.
- Lock the live applications before changing the settings of your instance's database to prevent users from using them during the migration process. You can unlock the applications when the migration process is finished. You lock and unlock live applications in the Application Options menu on the Visual Builder Home page. See *Manage an Application in Developing Applications with Oracle Visual Builder*.

To switch to a different Oracle DB instance:

1. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** .
2. Click **Settings** in the navigation menu to open Tenant Settings.



3. Open the Tenant Database tab.
4. 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

Cancel 1 Define Database 2 Export Applications Next >

Connection Type  
Oracle Autonomous Transaction Processing Cloud Wallet

Upload Wallet  
Upload a zip file or drag one here

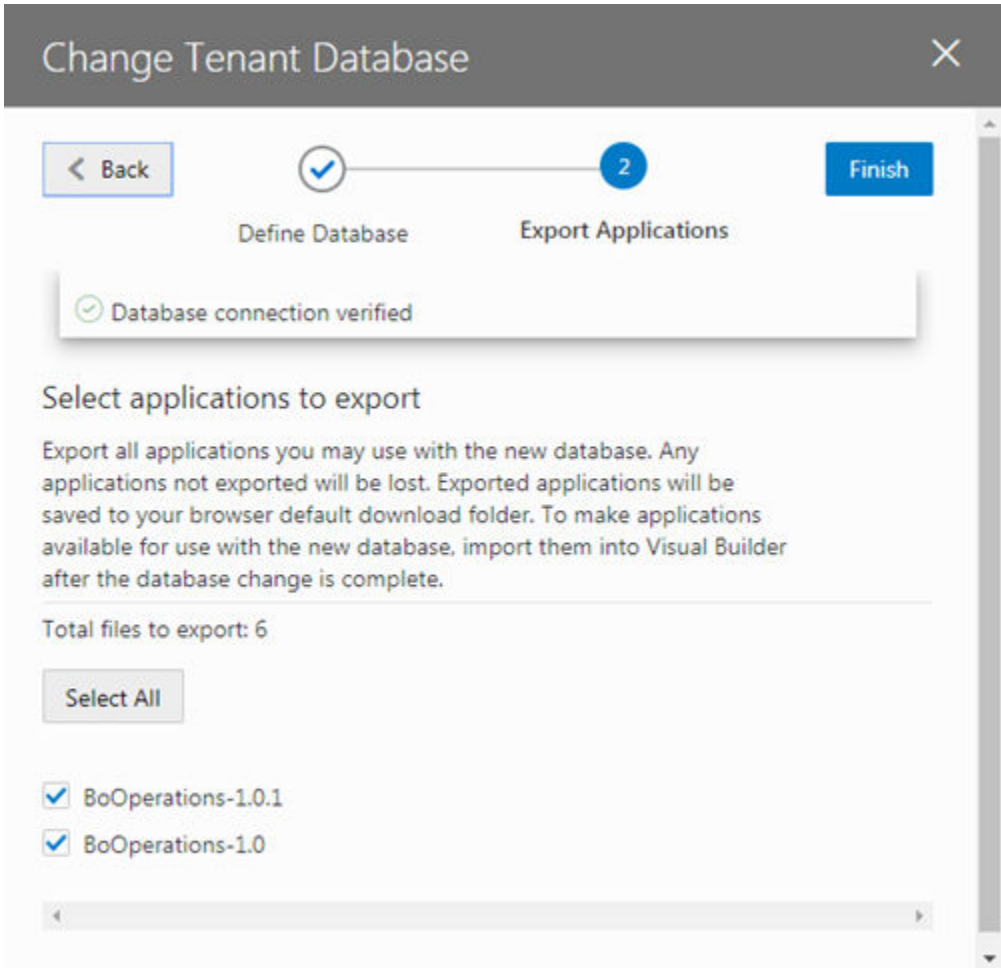
Wallet Password

TNS Name

DBA User Name Please make sure the user has DBA privilege

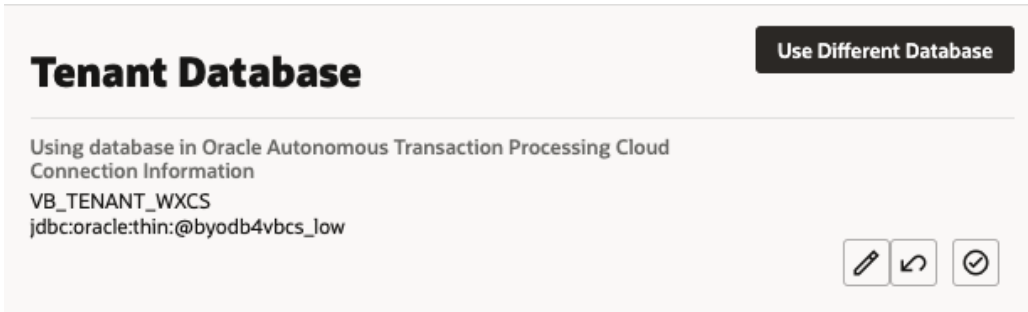
Password The user credential will be used to create schema only, and will not be saved

5. 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.
6. 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.
7. 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 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](#).

## Switch From One ATP Database to Another


It's not possible to switch from one ATP database to another directly, so you'll first need to switch from your ATP database back to the embedded database. You can then use the Change Tenant Database wizard to switch from the embedded database to the new ATP database.

1. In Visual Builder, export each of your visual applications and save them to your local system.  
For details, see [Export a Visual Application](#).
2. Revert to the embedded database.
  - a. Open the instance's Tenant Settings page, and then open the Tenant Database tab.
  - b. Click  in the Tenant Database pane to revert to the embedded database.

## Tenant Database

Use Different Database

Using database in Oracle Autonomous Transaction Processing Cloud  
Connection Information  
VB\_TENANT\_WXCS  
jdbc:oracle:thin:@byodb4vbcs\_low



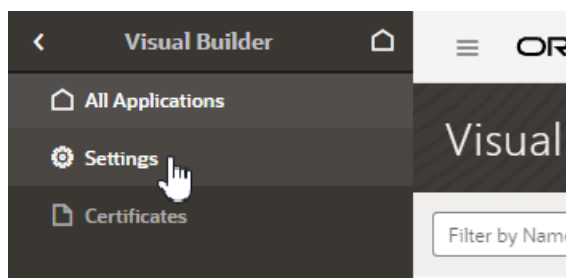
- c. When prompted, confirm that you want to switch to the embedded database.
3. Switch to the new ATP database.  
Follow the steps in [Switch to Your Own Oracle DB Instance](#) above to switch from the embedded database to your new ATP database.
4. Import the applications you saved to your local system into the new ATP database.

## 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. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** ☰.
2. Click **Settings** in the navigation menu to open Tenant Settings.




3. Click **+ New Schema** in the Available Schemas panel.

### Available Schemas

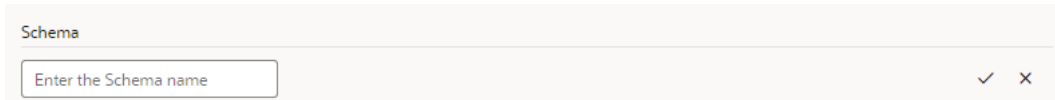
+ New Schema

To be able to build Business Objects based on Tables and Views in an existing schema from this Tenant Database, add an entry for the schema here.

Schema
HR



4. 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).

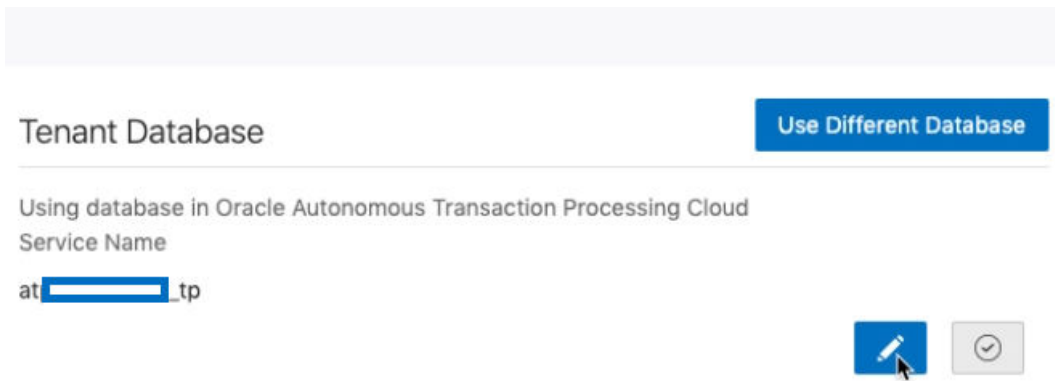
## Reset an Expired Password or ATP Wallet for Your Oracle DB Instance

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

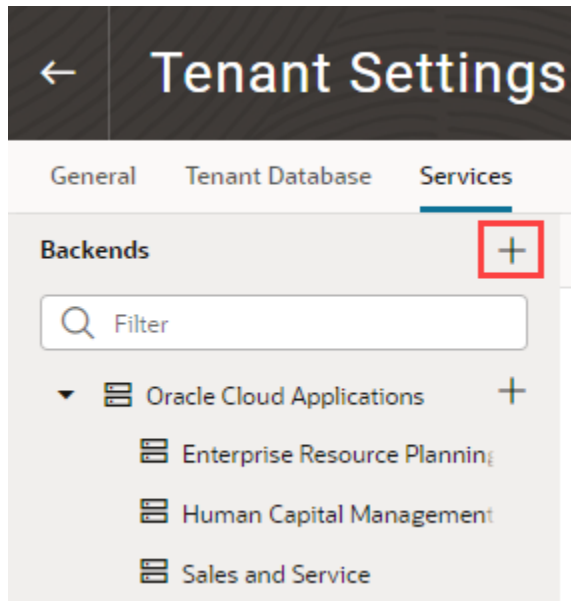
Administrators can use the Services tab in the Tenant Settings page to add a connection to an instance of Oracle Integration as a backend service.

If you are using multiple 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:

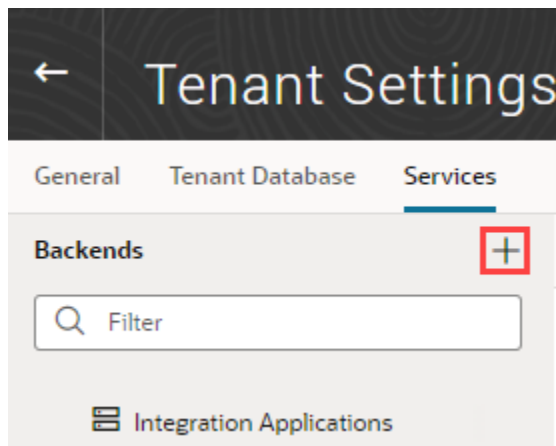
- Basic Auth: Uses a fixed username and password for authentication.
- Oracle Cloud Account: Needs federation between Oracle Cloud Applications and Visual Builder.
- Delegate Authentication (previously called Propagate Current User Identity): Same as Oracle Cloud Applications. That is, it needs federation 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.

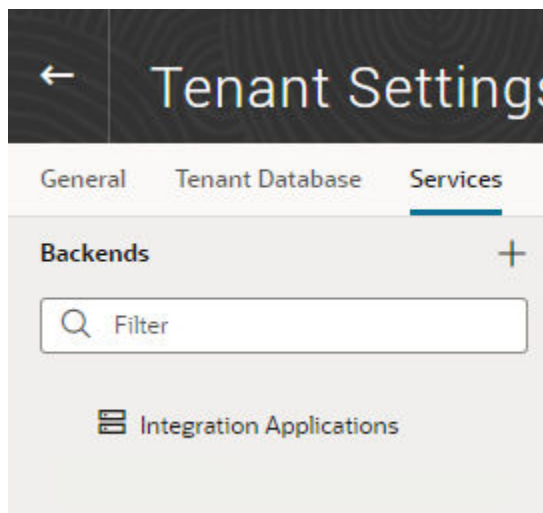
## Add a Connection to Process Automation

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

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

To add a connection to an OCI Process Automation instance:

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



3. Enter the URL of the instance, configure other settings, such as security, as needed, and click **Create**.

## 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.

 **Note:**

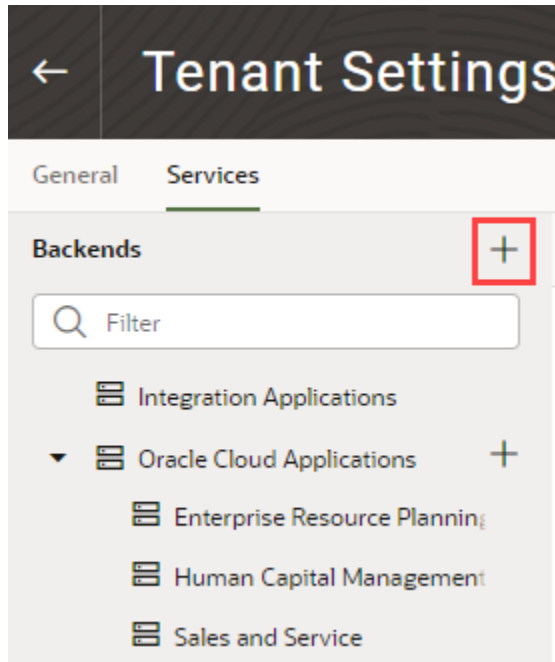
Oracle Process Cloud Service, which is included in the Enterprise edition of Oracle Integration Gen 2, is now deprecated; for details, see [Deprecated Features](#).

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.



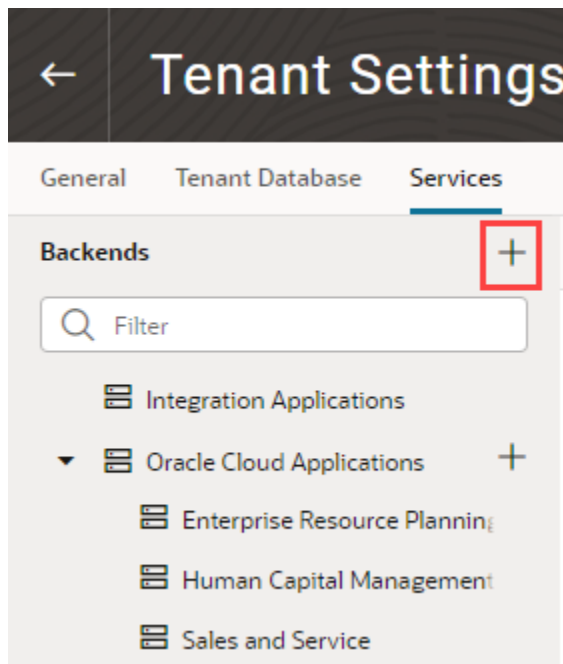
3. In the dialog, type the Server URL of the backend service, configure other settings, such as security, as needed, and click **Create**.

## 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

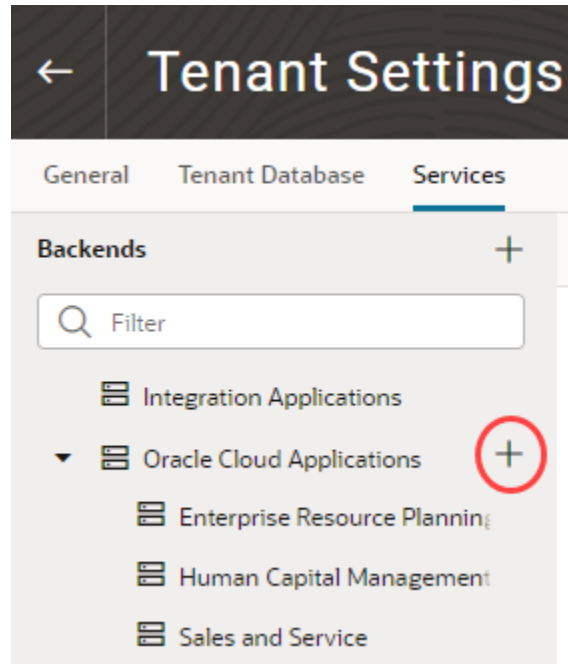
You can create child backends to extend the functionality provided by the top-level Oracle Cloud Applications or custom backend registered to your Visual Builder instance.

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:



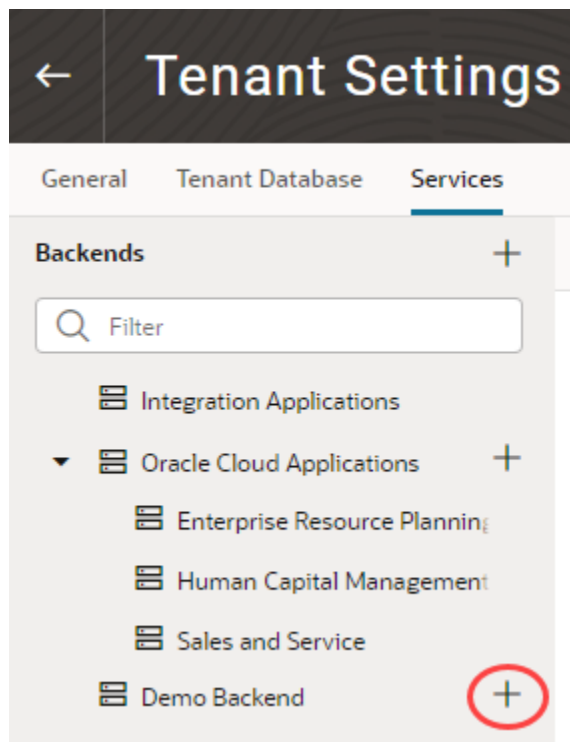
3. Select **Custom ADF Describe** to create a backend with an ADF Describe URL. For backends not having a Describe URL, select **Custom**.
4. Enter a name and description for the child backend. Optionally, add static headers.
5. Click **Next**.
6. Enter the instance URL for the child backend (for example,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

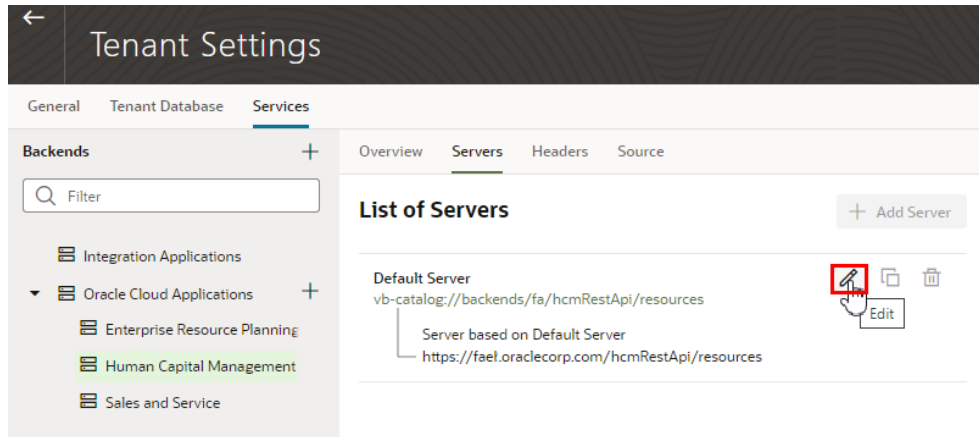
Administrators can use the Services tab in the Tenant Settings page to edit the authentication and connection settings for the backend services available in the tenancy. Once a backend service is added, you can edit its details. In the case of child backends, you can also override the settings inherited 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*.

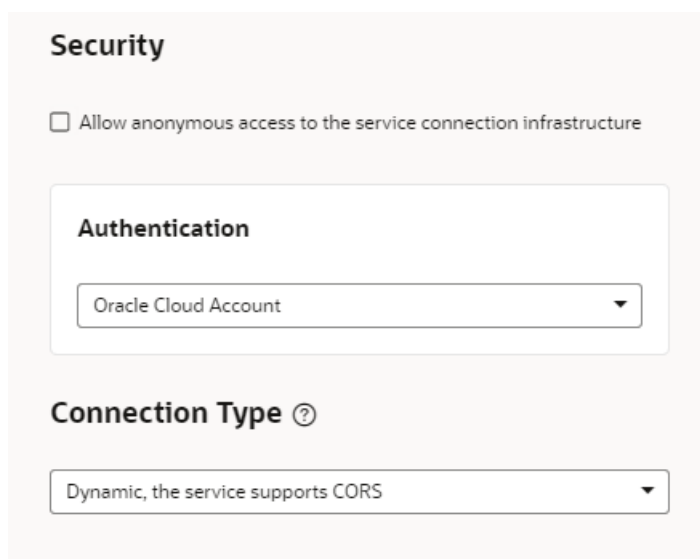
To edit the connection details for a backend service:

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.



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.



**Edit Server** [Close]

**Server Identification**

Instance URL ⓘ  
vb-catalog//backends/ta/hcmRestApi/resources

Description Keep it short so you can identify the server easily  
Default Server

**Server Variables**

URI Template expressions entered in the URL field will be listed here.

**Headers**

**Custom Headers**  
+ Add Header

**Secure Headers**  
+ Add Header

**Security** Inherited from Backend

Allow anonymous access to the service connection infrastructure

**Authentication for Logged-In Users**  
Authentication: Oracle Cloud Account  
Override security

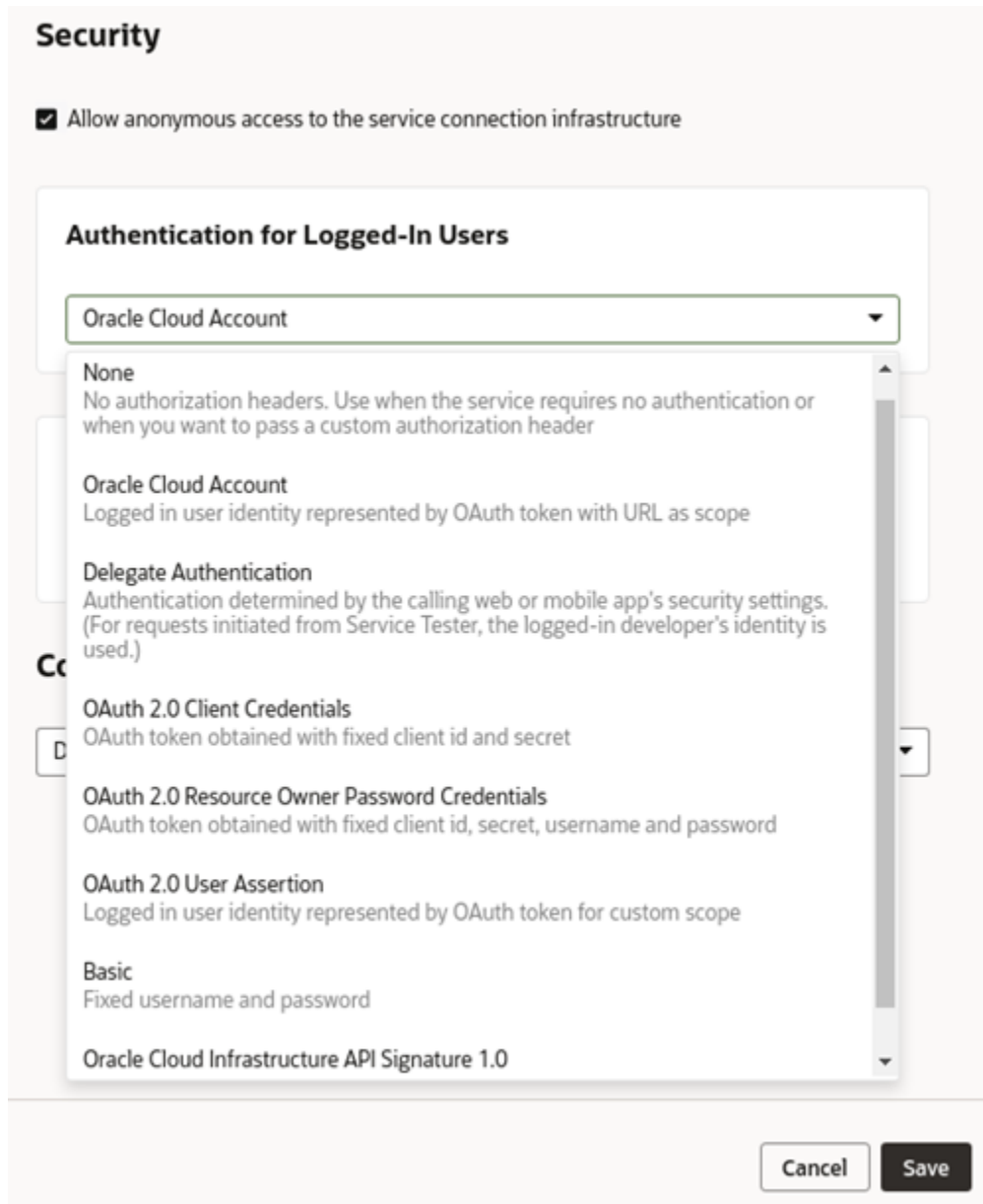
**Connection Type** ⓘ Inherited from Backend

Always use proxy, irrespective of CORS support  
Override Connection Type

Cancel Save

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.

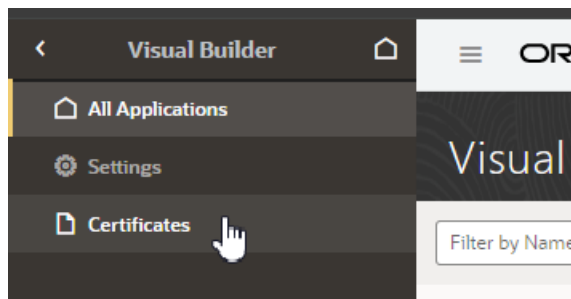
 **Note:**

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.

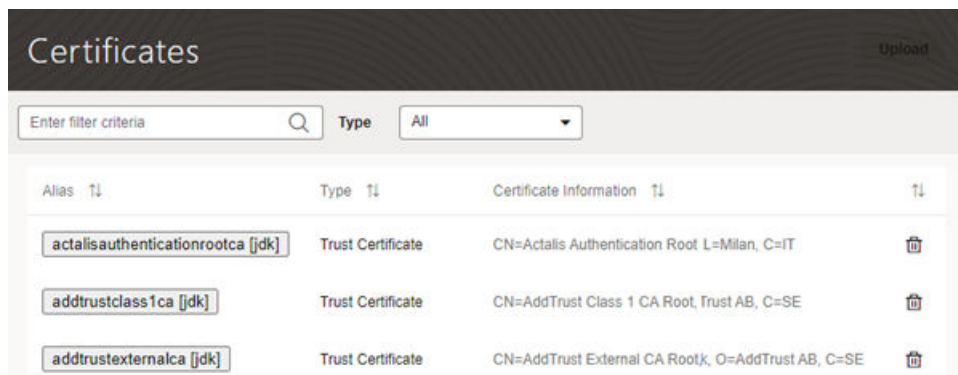
To avoid disruptions, you should plan regular updates to refresh the self-signed certificates before they expire (for example, every 6 months). It's not recommended to use self-signed certificates in production apps.




To upload a self-signed certificate:

1. In the upper-left corner of the Visual Builder title bar, click **Navigation Menu** .
2. Click **Certificates** in the navigation menu to open the Certificates page.



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

A screenshot of the Certificates page. At the top right is an 'Upload' button. Below it is a search bar with the text 'Enter filter criteria' and a search icon, and a 'Type' dropdown menu set to 'All'. The main content is a table with columns: 'Alias', 'Type', 'Certificate Information', and a delete icon. The table contains three rows of certificate information.

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	

3. 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 \* 

**Drag and Drop**  
Upload or drag certificate file here

4. 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.
5. Drag the certificate file from your local system into the upload target area, or click the upload target area to browse your local system.
6. 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

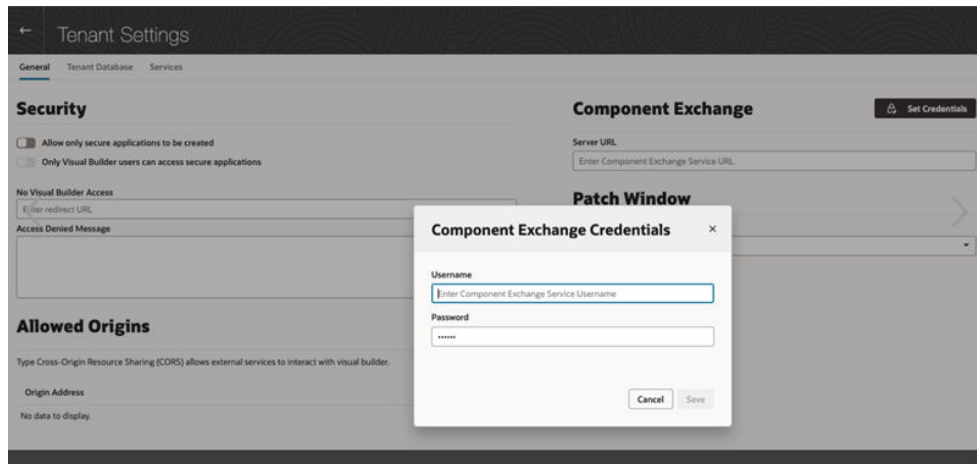
## Add a Connection to a Component Exchange

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 for the component exchange, then click **Set Credentials**.
3. In the Component Exchange Credentials dialog box, enter the username and password for the user whose credentials will be used to authenticate access to the Component Exchange. Click **Save**.



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`.

To use a custom domain:

- Configure the custom URL for your Visual Builder Generation 2 instance, using the instructions in [Create and Configure a Custom Endpoint for Your Visual Builder Instance](#).

### Note:

You'll need to log a service request with Oracle Support if you want to create more than one custom domain for a Visual Builder Generation 2 instance.

- 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*.

 **Note:**

Custom URLs are supported on Oracle Visual Builder instances, as well as on Oracle Integration instances (but only if you're on Generation 2). Depending on whether you're on Oracle Integration Generation 2, Visual Builder, 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](#).
- For a Visual Builder instance, where you have access to the OCI Console, you'll need to use the instructions in [Configure Support for a Custom Domain in Administering Oracle Visual Builder in Oracle Integration 3](#).
- 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 in Administering Oracle Visual Builder in Oracle Integration 3](#).
- 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](#).

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/...`).

Custom domains are also subject to some limitations:

- A custom domain can be used to access a published app only when the app is designed and staged from a custom domain. In this case, a custom domain can also be used to access a staged app.
- If the custom domain is set in the application's Settings editor, after the app is published it can only be accessed from the custom domain root (for example, `https://mycustom.example.com`).

- 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.



# 6

## Reference

Reference topics for Oracle Visual Builder.

### Topics:

- [IAM Policy Details for Visual Builder](#)
- [Manually Federating Your Tenancy](#)

## IAM Policy Details for Visual Builder

This topic covers details for writing policies to control access to Visual Builder.



### Note:

Use the following resources for more information on how IAM policies work and how to create them. To make sure you're using the correct resources, you'll need to know if you're using IAM with an Identity Domain or without an Identity Domain. If you're not sure if you're using an Identity Domain, see [About Setting Up Users and Groups](#).

If you're using IAM with an Identity Domain:

- [Setting Up Users and Groups in Cloud Accounts That Use Identity Domains](#)
- [Getting Started with Policies](#)
- [How Policies Work](#)

If you're using IAM without an Identity Domain:

- [Setting Up Users and Groups in Cloud Accounts That Do Not Use Identity Domains](#)
- [Getting Started with Policies](#)
- [How Policies Work](#)

### Resource Types

These are the resources available for Visual Builder:

- `visualbuilder-instance`

### Supported Variables

The `visualbuilder-instance` resource type can use the following variables.

Supported Variables	Variable	Variable Type	Description
<b>Required Variables Supplied by the Service for Every Request</b>	target.compartment.id	ENTITY	The OCID of the primary resource for the request.
	request.operation	STRING	The operation id (for example 'GetUser') for the request.
	target.resource.kind	STRING	The resource kind name of the primary resource for the request.
<b>Automatic Variables Supplied by the SDK for Every Request</b>	request.user.id	ENTITY	For user-initiated requests. The OCID of the calling user.
	request.groups.id	LIST(ENTITY)	For user-initiated requests. The OCIDs of the groups of request.user.id.
	target.compartment.name	STRING	The name of the compartment specified in target.compartment.id.
	target.tenant.id	ENTITY	The OCID of the target tenant id.
<b>Additional Variables for Visual Builder</b>	target.visualbuilderinstance.id	ENTITY	The OCID of the Visual Builder instance that was created.

### Details for Verb + Resource-Type Combinations

The following table shows the permissions and API operations covered by each verb. The level of access is cumulative as you go from inspect > read > use > manage.

Verb	Permissions	APIs Fully Covered	APIs Partially Covered
<b>INSPECT</b>	<ul style="list-style-type: none"> <li>VISUALBUILDER_INSTANCE_INSPECT</li> </ul>	<ul style="list-style-type: none"> <li>ListVbInstances</li> <li>ListWorkRequests</li> </ul>	None
<b>READ</b>	<ul style="list-style-type: none"> <li>Inherits from INSPECT: <ul style="list-style-type: none"> <li>VISUALBUILDER_INSTANCE_INSPECT</li> </ul> </li> <li>VISUALBUILDER_INSTANCE_READ</li> </ul>	<ul style="list-style-type: none"> <li>GetVbInstance</li> <li>GetWorkRequest</li> </ul>	None
<b>USE</b>	<ul style="list-style-type: none"> <li>Inherits from READ: <ul style="list-style-type: none"> <li>VISUALBUILDER_INSTANCE_INSPECT</li> <li>VISUALBUILDER_INSTANCE_READ</li> </ul> </li> <li>VISUALBUILDER_INSTANCE_UPDATE</li> </ul>	<ul style="list-style-type: none"> <li>UpdateVbInstance</li> <li>StartVbInstance</li> <li>StopVbInstance</li> </ul>	None

Verb	Permissions	APIs Fully Covered	APIs Partially Covered
<b>MANAGE</b>	<ul style="list-style-type: none"> <li>• Inherits from USE:               <ul style="list-style-type: none"> <li>– VISUALBUILDER_INSTANCE_INSPECT</li> <li>– VISUALBUILDER_INSTANCE_READ</li> <li>– VISUALBUILDER_INSTANCE_UPDATE</li> </ul> </li> <li>• VISUALBUILDER_INSTANCE_CREATE</li> <li>• VISUALBUILDER_INSTANCE_DELETE</li> <li>• VISUALBUILDER_INSTANCE_MOVE</li> </ul>	<ul style="list-style-type: none"> <li>• CreateVbInstance</li> <li>• DeleteVbInstance</li> <li>• ChangeVbInstanceCompartment</li> </ul>	None

### Permissions Required for Each API Operation

API Operation	Permissions Required to Use the Operation
ListVbInstances	VISUALBUILDER_INSTANCE_INSPECT
GetVbInstance	VISUALBUILDER_INSTANCE_READ
CreateVbInstance	VISUALBUILDER_INSTANCE_CREATE
DeleteVbInstance	VISUALBUILDER_INSTANCE_DELETE
UpdateVbInstance	VISUALBUILDER_INSTANCE_UPDATE
StartVbInstance	VISUALBUILDER_INSTANCE_UPDATE
StopVbInstance	VISUALBUILDER_INSTANCE_UPDATE
ListWorkRequests	VISUALBUILDER_INSTANCE_INSPECT
GetWorkRequest	VISUALBUILDER_INSTANCE_READ
ChangeVbInstanceCompartment	VISUALBUILDER_INSTANCE_MOVE

## Manually Federating Your Tenancy

In certain cases, your tenancy may need user federation between Oracle Cloud Infrastructure's IAM and Oracle Identity Cloud Service (IDCS).

This section applies only to cloud accounts that do not use identity domains. See [About Setting Up Users and Groups](#)



#### Note:

Follow the steps in this section ONLY if your tenancy is not manually federated. See [Is My Tenancy Federated Between Oracle Cloud Infrastructure IAM and Oracle Cloud Identity Service?](#)

The following section also provides For additional instructions for manually federating with IDCS, see [Federating with Oracle Identity Cloud Service](#) in the Oracle Cloud Infrastructure documentation. The *Instructions for Federating with Oracle Identity Cloud Service* section lists four main steps. However, step 1 differs for Visual Builder: Instead of accessing client ID/secret information from a COMPUTEBAREMETAL IDCS application, you'll create an IDCS application to generate this information for federation, as described here.

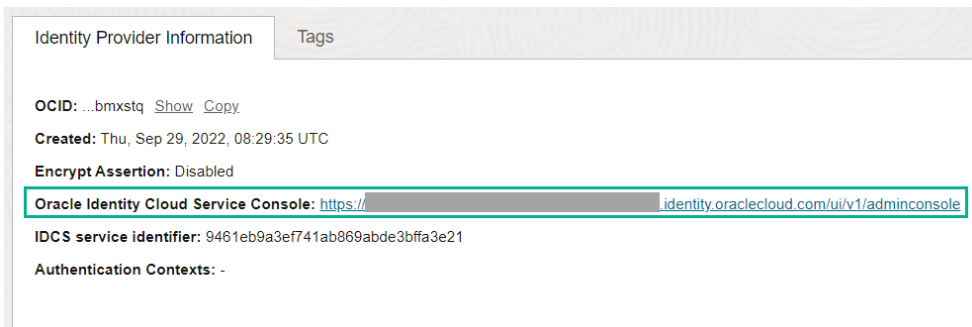
## Is My Tenancy Federated Between Oracle Cloud Infrastructure IAM and Oracle Cloud Identity Service?

Oracle Visual Builder requires that Oracle Cloud Infrastructure Identity and Access Management (IAM) be federated with Oracle Identity Cloud Service (IDCS) for your tenancy.

1. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Federation**.
2. On the Federation page, look for an **Oracle Identity Cloud Service** link.

The Federation screen is shown. Its **Identity Provider Information** tab identifies the default federation configured between the Oracle Identity Cloud Service stripe and the Oracle Cloud Infrastructure tenancy in a cloud account. Note that this screen may show more than the default identity provider.

If you see a console link, your instance is federated. If it's not, perform the steps in [Manually Federating Your Tenancy](#).



## Getting Required Information from Oracle Identity Cloud Service

Follow these steps to create and configure an Oracle Identity Cloud Service application, activate the application, and create an IDCS administrator group.



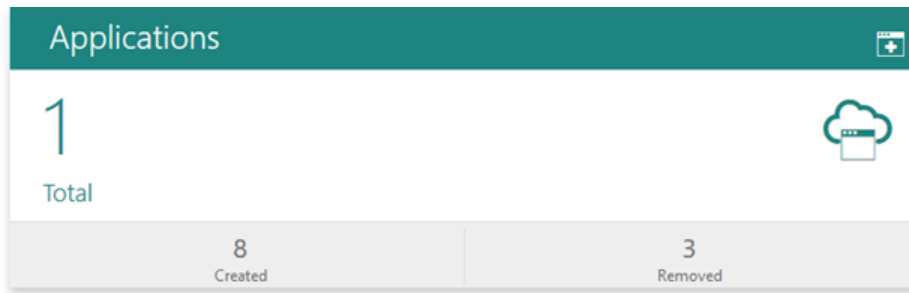
### Note:

Follow the steps in this section only if manual federation is needed.

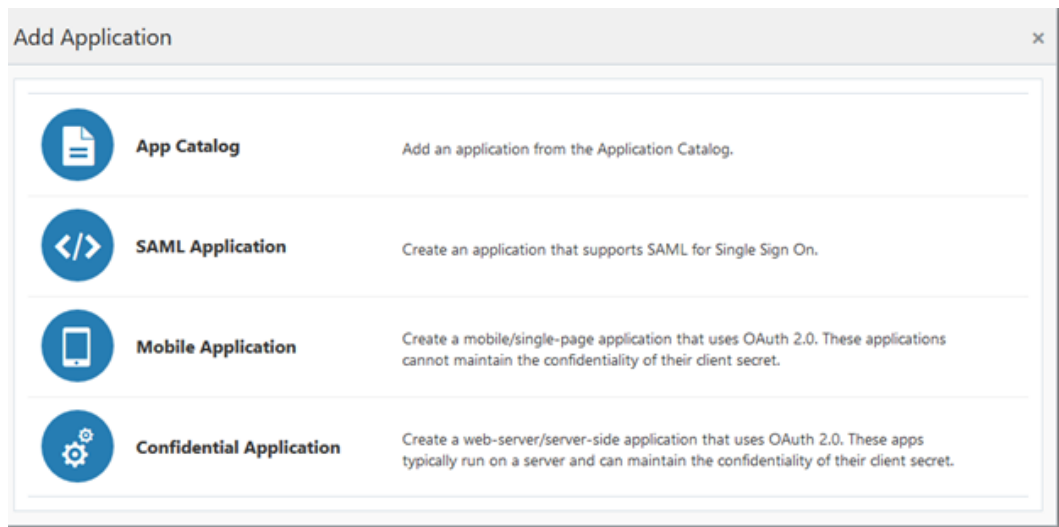
1. Sign in to Oracle Identity Cloud Service with admin privileges. You must be viewing the admin console.

Use the link, username, and password provided in your account welcome email.

2. Select **Applications**.

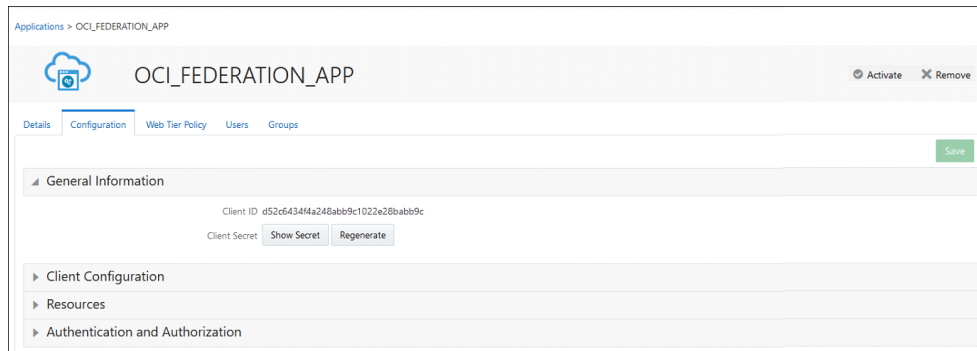


3. Click **Add**.
4. Select **Confidential Application**.



The Add Confidential Application page is displayed.

5. In the **Name** field under **App Details**, enter a name (such as `Oracle Cloud Infrastructure Federation`). Click **Next**.  
Client options are displayed.
6. Under **Authorization**, select **Client Credentials**.
7. Under **Token Issuance Policy**, click **+Add** by App Roles. Select **Identity Domain Administrator**. Click **Next**.
8. Click **Next** to skip the **Resources** options.
9. Click **Next** to skip the **Web Tier Policy** options.
10. Click **Finish**.



The application's **Client Id** and **Secret** are displayed.

11. Copy the **Client Id** and **Secret** for use later (in [Adding Oracle Identity Cloud Service as an Identity Provider](#)). Close the window.
12. Activate the app by selecting **Activate** in the upper right corner.
13. Create an IDCS group for administrators. Make sure the federated user you plan to test federation with is part of that group.
  - a. Select **Groups** from the **Resources** options.
  - b. Click **Create IDCS Group**.
  - c. Enter a name (for example, `idcs-visualbuilder-admins`).
  - d. Click **Create**.
14. Copy the IDCS base url (`https://<account>.identity.oraclecloud.com`) for use next in [Adding Oracle Identity Cloud Service as an Identity Provider](#).

## Adding Oracle Identity Cloud Service as an Identity Provider

If your tenancy needs user federation between Oracle Cloud Infrastructure's IAM and Oracle Identity Cloud Service (IDCS), complete steps in the console by adding Oracle Identity Cloud Service as an identity provider.

### Note:

Follow the steps in this section only if manual federation is needed. You'll need the information you generated in the steps in [Getting Required Information from Oracle Identity Cloud Service](#).

1. Sign in to the Oracle Cloud Infrastructure Console as an IAM user (use the options on the right side).
2. Open the navigation menu and click **Identity & Security**. Under **Identity**, click **Federation**.
3. Click **Add Identity Provider** and enter data as below. Click **Continue**.
  - a. **Name:** Enter a name, such as `oracleidentitycloudservice`.
  - b. **Description:** Enter a description, such as `Federated IDCS stripe`.
  - c. **Oracle Identity Cloud Service Base URL:** Enter the URL you noted earlier.

- d. **Client ID:** Enter the application's ID you noted earlier.
  - e. **Client Secret:** Enter the client secret you noted earlier.
  - f. Click **Continue**.
4. When prompted, map your IDCS group to the OCI administrators group.  
Select your IDCS group in the **Identity Provider Group** field and your Oracle Cloud Infrastructure group in the **OCI Group** field.
5. Sign out and sign back in as one of your federated users. On the Federation page, verify that the Oracle Identity Cloud Service link is now shown. See [Is My Tenancy Federated Between Oracle Cloud Infrastructure IAM and Oracle Cloud Identity Service?](#)