Oracle APEX Application Development

Getting Started with Oracle APEX in Oracle Cloud

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Oracle APEX Application Development Getting Started with Oracle APEX in Oracle Cloud,

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Preface

This document describes how to create, set up, access, and manage Oracle APEX in Oracle Cloud, including Oracle APEX Application Development (APEX Service) and Oracle APEX in Autonomous Database.

Audience

Getting Started with Oracle APEX Application Development is intended for developers or application administrators who use and manage Oracle APEX in Oracle Cloud, including Oracle APEX Application Development (APEX Service) and Oracle APEX in Autonomous Database.

Documentation Accessibility

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

Access to Oracle Support

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

Diversity and Inclusion

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

Related Resources

For more information, see these Oracle resources:

- Welcome to Oracle Cloud Infrastructure
- Oracle APEX Documentation
- *Using Oracle Database Actions*
- *Using Oracle Autonomous Database Serverless*

Conventions

The following text conventions are used in this document:

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

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What’s New in Oracle APEX in Oracle Cloud

Here's a summary of noteworthy additions and enhancements for Oracle APEX in Oracle Cloud.

April 2025

Changes	Description
Legacy OCPU billing metric for APEX Service	OCPU is a legacy billing metric and is no longer available when provisioning a new Oracle APEX Application Development (APEX Service) instance. OCPU will be retired for APEX Service at some point in the future. Oracle recommends switching from using the OCPU billing metric to the ECPU billing metric. For more information, see Update to ECPU Billing Model for APEX Service.

March 2025

Changes	Description
Oracle APEX release 24.2	Oracle APEX in Oracle Cloud now includes Oracle APEX release 24.2. See: • What's New in Oracle APEX 24.2 • Oracle APEX Release 24.2 on Oracle Help Center • Oracle APEX Release 24.2 books page
Configure Document Generator on Oracle APEX Instance Details Page	The APEX Instance details page now includes a "Configure Document Generator" option to simplify the setup process for the Document Generator pre-built function. This feature allows you to quickly configure your APEX instance to generate documents based on Office templates and JSON data, enabling powerful document automation capabilities directly within your APEX applications. For more information, see About Document Generator.
Publication scope expanded.	The scope of this publication has been expanded to cover developers or application administrators who use and manage Oracle APEX in Oracle Cloud, including Oracle APEX Application Development (APEX Service) and Oracle APEX in Autonomous Database.

Changes	Description
Redwood Preview.	Task instructions now use the Redwood Preview user interface. The **Redwood Preview** switch displays in the status bar at the bottom of the Browser window.

June 2024

Changes	Description
Oracle APEX release 24.1	APEX Service now includes Oracle APEX release 24.1. See: • What's New in Oracle APEX 24.1 • Oracle APEX Release 24.1 on Oracle Help Center • Oracle APEX Release 24.1 books page

May 2024

Changes	Description
Always Free option	The available Database versions for Always Free Oracle APEX Application Development are: Oracle Database 19c or Oracle Database 23ai. See: Always Free Oracle APEX Application Development

January 2024

Changes	Description
ECPU Compute Model	APEX Service offers two compute models when you create a new instance: ECPU and legacy OCPU. OCPU is a legacy billing metric and will be retired for APEX Service at some point in the future. To learn more about updating an instance from the OCPU billing model to the ECPU billing model, see Update to ECPU Billing Model for APEX Service.

November 2023

Changes	Description
Oracle APEX release 23.2	APEX Service now includes Oracle APEX release 23.2. See: • What's New in Oracle APEX 23.2 • Oracle APEX Release 23.2 on Oracle Help Center • Oracle APEX Release 23.1 books page

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Welcome to Oracle APEX in Oracle Cloud

Learn about Oracle APEX in Oracle Cloud.

- About Oracle APEX
  Oracle APEX is a low-code development platform that enables you to build scalable, secure enterprise applications with world-class features that can be deployed anywhere.
- About Oracle APEX Cloud Deployment Options
  Rapidly build and deploy scalable and secure applications in the cloud with the world's most popular enterprise low-code application platform.
- About Oracle Cloud Infrastructure
  Oracle Cloud Infrastructure (OCI) is a set of complementary cloud services that enable you to build and run a wide range of applications and services in a highly available hosted environment.
- Oracle APEX Web Browser Requirements
  Oracle APEX requires a JavaScript-enabled browser and supports the current and prior major releases of Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Edge.
- What's Included in APEX Service
  Learn about the service resources and components included with APEX Service.

About Oracle APEX

Oracle APEX is a low-code development platform that enables you to build scalable, secure enterprise applications with world-class features that can be deployed anywhere.

Oracle APEX provides you with an easy-to-use browser-based environment to load data, manage database objects, develop REST interfaces, and build applications which look and run great on both desktop and mobile devices. You can use APEX to develop a wide variety of solutions: import spreadsheets and develop a single source of truth in minutes, create compelling data visualizations against your existing data, deploy productivity applications to elegantly solve a business need, or build your next mission-critical data management application.

Oracle APEX embraces SQL. Anything you can express with SQL can be easily employed in an APEX application. Oracle APEX also enables low-code development, providing developers with powerful data management and data visualization components that deliver modern, responsive end-user experiences out of the box. Instead of writing code by hand, you are able to use intelligent wizards to guide you through the rapid creation of applications and components.

Oracle APEX provides a preconfigured, fully managed and secured environment to both build and deploy world-class data-centric applications. There are no limits on the number of developers or end users for your applications.

Configuration, patching, monitoring, and upgrading of all Oracle APEX components is fully managed by Oracle, leaving you free to focus on developing your solutions and solving your business problems. Oracle APEX enables your organization to be more agile and develop solutions faster, for less cost, and with greater consistency. You can adapt to changing

requirements with ease, and empower professional developers, citizen developers, and everyone else.

> **See Also:**
>
> Oracle APEX Release 24.2

About Oracle APEX Cloud Deployment Options

Rapidly build and deploy scalable and secure applications in the cloud with the world's most popular enterprise low-code application platform.

APEX may reside in a local self-managed Oracle database or in a hosted environment (such as an Oracle Cloud service). The sign in process differs depending on where APEX resides.

> **See Also:**
>
> Oracle APEX in Oracle Cloud

Oracle APEX Application Development (APEX Service)

Oracle APEX Application Development (APEX Service) is a low-code application development platform that enables developers to quickly build feature-rich, mission-critical apps that are easy to maintain. APEX uses AI to both accelerate app development and provide a richer experience to app users. Only pay for the resources consumed when an app is used.

Key features include:

- Includes a specialized Autonomous Database
- Available Always Free shapes

> **See Also:**
>
> APEX Application Development and What's Included in APEX Service

APEX on Autonomous Database

APEX is installed, enabled, and ready to use in Oracle Autonomous Transaction Processing and Oracle Autonomous Data Warehouse.

Key features include:

- Includes APEX pre-configured and fully managed
- Supports a broad ecosystem of Oracle Database clients
- Available Always Free shapes

> **See Also:**
>
> Autonomous Database.

Oracle Database Cloud Services

There are additional co-managed deployment options for APEX on Oracle Cloud:

- OCI Base Database Service, Exadata Database Service, and Compute VM
- Enables full customer control of APEX and its host environment

About Oracle Cloud Infrastructure

Oracle Cloud Infrastructure (OCI) is a set of complementary cloud services that enable you to build and run a wide range of applications and services in a highly available hosted environment.

Oracle Cloud Infrastructure offers high-performance compute capabilities (such as physical hardware instances) and storage capacity in a flexible overlay virtual network that is securely accessible from your on-premises network.

Use Oracle Infrastructure as a Service (IaaS) offerings to quickly set up the virtual machines, storage, and networking capabilities you need to run just about any kind of workload. Your infrastructure is managed, hosted, and supported by Oracle.

Use Oracle Platform as a Service (PaaS) offerings to provision ready-to-use environments for your enterprise IT and development teams, so they can build and deploy applications based on proven Oracle databases and application servers.

Oracle APEX Web Browser Requirements

Oracle APEX requires a JavaScript-enabled browser and supports the current and prior major releases of Google Chrome, Mozilla Firefox, Apple Safari, and Microsoft Edge.

What's Included in APEX Service

Learn about the service resources and components included with APEX Service.

- Service Resources
  Learn about the service resources (that is, maximum ECPUs and storage) included with APEX Service.
- About Oracle Database Actions
  Oracle Database Actions (SQL Developer Web) is a browser-based application that uses Oracle REST Data Services (ORDS) to provide many of the database development and administration features of desktop-based Oracle SQL Developer.
- About Oracle REST Data Services
  Oracle REST Data Services (ORDS) functions as a communications broker between the Web browser and the Oracle APEX objects in the Oracle database by mapping browser requests into database stored procedure calls.
- About the Autonomous Database Included with APEX Service
  APEX Service includes an optimized version of Oracle Autonomous Transaction Processing.

Service Resources

Learn about the service resources (that is, maximum ECPUs and storage) included with APEX Service.

APEX Service includes the following service resources:

- Maximum ECPUs - 512
- Maximum storage - 393216 GB (384 TB)

> **Note:**
>
> Oracle offers two compute models when you create or clone an instance: **ECPU** and legacy **OCPU**. To learn more about compute models see Compute Models in Autonomous Database in *Using Oracle Autonomous Database Serverless*.

About Oracle Database Actions

Oracle Database Actions (SQL Developer Web) is a browser-based application that uses Oracle REST Data Services (ORDS) to provide many of the database development and administration features of desktop-based Oracle SQL Developer.

> **Note:**
>
> **Oracle Database Actions** was previously named **Oracle SQL Developer Web**

Database Actions provides a web-based interface that enables you to execute queries and scripts, create database objects, load data, build data models, and monitor database performance. Key features include:

- Development:
  - Run SQL statements and scripts in the worksheet
  - Design Data Modeler diagrams using existing objects
  - Work with REST data services
  - Work with JSON data
- Data Tools:
  - Data Load
  - Data Insights
  - Business Models
- Administration:
  - Administration features

> **See Also:**
>
> About Database Actions in *Using Oracle Database Actions*

About Oracle REST Data Services

Oracle REST Data Services (ORDS) functions as a communications broker between the Web browser and the Oracle APEX objects in the Oracle database by mapping browser requests into database stored procedure calls.

Oracle REST Data Services is preconfigured and available for all Oracle APEX instances. With the default ORDS, Oracle performs any required configuration, patching, and maintenance.

Oracle REST Data Services also enables access to Oracle APEX application data using custom REST APIs. Developers can then utilize these APIs from any language environment without installing and maintaining client drivers in the same way they access other external services using the most widely adopted API technology: REST.

> **Note:**
>
> APEX Service supports the creation of custom REST APIs. Direct access of the REST-SQL interface is prohibited.

> **See Also:**
>
> Oracle REST Data Services

About the Autonomous Database Included with APEX Service

APEX Service includes an optimized version of Oracle Autonomous Transaction Processing.

The underlying database included with APEX Service is an adapted version of Oracle Autonomous Transaction Processing. It is suitable for transactional workloads, small- to medium-sized analytic workloads, and mixed workloads that include both transactional and analytic processing

> **See Also:**
>
> Autonomous Database Limitations in APEX Service

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Sign Up for APEX in Oracle Cloud

This section describes how to sign up for APEX in Oracle Cloud.

- Sign up for APEX Service
  Learn about the steps needed to sign up for APEX Service.
- Sign up for Oracle APEX with Autonomous Database
  Learn about Oracle APEX with Autonomous Database.
- Upgrade APEX Service to Oracle Autonomous Transaction Processing
  Easily upgrade APEX Service to Oracle Autonomous Transaction Processing.

Sign up for APEX Service

Learn about the steps needed to sign up for APEX Service.

- Access Oracle Cloud Infrastructure
  Learn about the steps needed to access Oracle Cloud Infrastructure (OCI) in preparation for creating an APEX Service instance.
- Create an APEX Service Instance
  Create an APEX Service instance on the APEX Instances page.
- Set Up a New APEX Service
  Before using a new APEX Service, you must set up your APEX Service instance by completing two tasks: create an initial APEX workspace and create an APEX user account.

Access Oracle Cloud Infrastructure

Learn about the steps needed to access Oracle Cloud Infrastructure (OCI) in preparation for creating an APEX Service instance.

Accessing OCI involves the following steps:

1. **Get an OCI account**. Before you begin using APEX Service, first you must have an OCI account with access to an OCI tenancy. If your organization has a sales agreement with Oracle, then it likely has a pre-existing OCI tenancy you can use. Start by contacting your organization's OCI administrator to request access.

   If you are an individual user starting from scratch or you do not know where to start, consider signing up for Oracle Cloud Free Tier. This provides a free non-expiring OCI tenancy and account, plus a free allocation of Cloud Credits to start with. These credits can be spent on paid OCI services, including APEX Service, during an initial trial period.

   To continue using APEX Service after the trial period is over or the free credits have been depleted (whichever comes first), you must upgrade the account to paying status and purchase additional credits. If you do not upgrade before the trial ends, then your OCI account will transition into a state where it can use only OCI services that have a small Always Free shape available. Note that APEX Service includes a small Always Free shape, which you can read more about at Always Free Oracle APEX Application Development. Oracle recommends you upgrade your account to paying status and purchase additional credits during or after the trial period.

Begin the signup process by reviewing Oracle Cloud Infrastructure Free Tier. To start your signup, go to Oracle Cloud Free Tier and click **Start for free**.

2. **Sign In To the OCI Console**. Navigate to the OCI Console Sign-In Page using a supported web browser. Sign in by entering your cloud account name (also referred to as your *tenancy* name) and then your username and password. Your cloud account name and user name are included in your welcome email.

   See Sign In to the Console in *Oracle Cloud Infrastructure Documentation* for more information.

Create an APEX Service Instance

Create an APEX Service instance on the APEX Instances page.

Upon signing in to OCI, the OCI Console homepage appears. The next step is to use the OCI Console to create an APEX Service instance which also creates an underlying Oracle Autonomous Database.

> **Note:**
>
> Task instructions now use the Redwood Preview user interface. The **Redwood Preview** switch displays in the status bar at the bottom of the Browser window.

To create an APEX Service instance:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** (☰) and select **Developer Services** and then **APEX Instances**.

   > **Tip:**
   >
   > You can narrow the display using the Search and Filter field. For example, if a filter already exists, select it, make a new selection, and click **Apply Filter**.

   The APEX Instances page appears.
3. Click **Create APEX service**.
4. Enter the basic information:
   a. Display name - Specify a user-friendly name to help you easily identify the resource. The display name does not have to be unique.
   b. Database name - Enter the database name. It must consist of letters and numbers only. The maximum length is 30 characters. The same database name cannot be used for multiple Autonomous Databases in the same tenancy in the same region.
   c. Compartment - Choose a compartment within your OCI tenancy. See Managing Compartments.
5. APEX Service configuration:

a. **Always Free** - Enable this switch to sign up for Always Free APEX Service. Always Free resources can be created in both Free Tier and paid accounts. You will never be charged for these resources. See Always Free Oracle APEX Application Development.

b. **Developer** - Enable this switch to sign up for a Developer database instance. A Developer database instance is a low-cost, fixed-shape instance intended for development and testing. Each instance has 4 ECPUs and 20 GB of storage. See Autonomous Database for Developers in *Using Oracle Autonomous Database Serverless*.

> **Note:**
>
> Enabling **Always Free** or **Developer** disables some options described in this task.

c. Choose database version - Displays the available database versions.

d. ECPU count - Specify the number of ECPUs for your database. CPU count defaults to 2 ECPUs. ECPUs are based on the number of cores elastically allocated from a pool of compute and storage servers.

e. Compute auto scaling - By default compute auto scaling is enabled which allows the database to use up to three times more CPU and IO resources than specified by the number displayed in the **ECPU count** field on the Oracle Cloud Infrastructure Console. If you do not want to use compute auto scaling then deselect this option.

f. Storage - Specify the storage you wish to make available to your database.

g. Storage unit size - Specify the storage unit size.

   To learn more about auto scaling and storage, see Using Auto Scaling in *Using Oracle Autonomous Database Serverless*.

h. Advanced options - Click **Show advanced options** to view the following:

   - Elastic pool - See Create or Join an Elastic Pool While Provisioning or Cloning an Instance in *Using Oracle Autonomous Database Serverless*.
   - Compute model - Shows the selected compute model. Oracle offers two compute models when you create or clone an instance: **ECPU** and legacy **OCPU**.

     Click **Change compute model** to change the compute model. After you select a different compute model, click **Save**.

     > **Note:**
     >
     > To learn more about compute models see Configure Autonomous Database Built-in Tools in *Using Oracle Autonomous Database Serverless*.

6. Automatic backup retention period in days - Optionally select the automatic backup retention period, in a range from 1 to 60 days. You can restore and recover your database to any point-in-time in this retention period.

   This option is not available with the legacy OCPU compute model.

7. Immutable backup retention - Enable this option to lock the backup retention period, preventing any further changes. Use this retention lock feature as a security measure to protect backups from accidental changes or ransomware.

See About Backup and Recovery on Autonomous Database in *Using Oracle Autonomous Database Serverless*.

8. Administrator credentials creation:
   a. Username - The default username is `ADMIN`. This option is read-only and is not editable.
   b. Password - Enter a password.
   c. Confirm Password - Enter your password again.

   > **Tip:**
   >
   > Make a note of the username, `ADMIN`, and your password. You need these credentials to sign in to the Oracle APEX Administration Services application (Administration Services) and Database Actions.

9. Network access:

   Choose a network access type. Options include:

   - **Secure access from everywhere** - Allows users with database credentials to access the database from the internet.
   - **Secure access from allowed IPs and VCNs only** - Restricts connections to the database according to the access control lists (ACLs) you specify. To add multiple ACLs for your database, click **Add Access Control Rule**.

     See Configure Access Control Lists When You Provision or Clone an Instance in *Using Oracle Autonomous Database Serverless* for more information.
   - **Private endpoint access only** - Assigns a private endpoint, private IP, and hostname to your database. Specifying this option allows traffic only from the VCN you specify; access to the database from all public IPs or VCNs is blocked. This enables you to define security rules, ingress/egress, at the Network Security Group (NSG) level and to control traffic to your database.

     See Configure Private Endpoints in *Using Oracle Autonomous Database Serverless* for more information.

10. (Optional) Contacts for operational notifications and announcements:
    a. Contact Email - Enter a valid email address.
    b. Add customer contact - Click **Add customer contact** to add additional email addresses.

11. (Optional) Advanced options - Expand **Advanced options** to configure the following:
    - Encryption key - By default, **Encrypt using an Oracle-managed key** is selected. Using Oracle-managed keys, Autonomous Database creates and manages the encryption keys that protect your data and Oracle handles rotation of the TDE master key.
      For more information, see Use Customer-Managed Encryption Keys with Keys on Local Tenancy in *Using Oracle Autonomous Database Serverless*.
    - Maintenance - Expand **Maintenance**. By default, **Patch level** is **Regular**. Select **Early** to configure the instance with the early patch level. You cannot change the patch level after you provision an instance.
      See Set Patch Level in *Using Oracle Autonomous Database Serverless*.
    - Management - Expand **Management**. Choose a **Character set** and a **National character** set for your database.

See Choose a Character Set for Autonomous Database in *Using Oracle Autonomous Database Serverless*.

- Tools - Expand **Tools**. View or customize Autonomous Database built-in tools. See Manage Autonomous Database Built-in Tools in *Using Oracle Autonomous Database Serverless*.
- Security attributes - Expand **Security attributes**.
  You can apply Oracle Zero Trust Packet Routing (ZPR) policies to a private endpoint on Autonomous Database. Oracle Zero Trust Packet Routing (ZPR) protects sensitive data from unauthorized access through intent-based security policies that you write for resources that you assign security attributes to.
- Tags - Expand **Tags**.
  Tagging is a metadata system that enables you to organize and track resources within your tenancy. Tags are composed of keys and values which can be attached to resources. To use Tags, select a Namespace and then enter a tag Key and Value.

  See Overview of Tagging in *Oracle Cloud Infrastructure Documentation*.

12. (Optional) **Save as stack** - Save the resource configuration as a stack by clicking **Save as stack**. You can then use the stack to create the resource through the Resource Manager service.

    Enter the following details on the Save as Stack dialog and click **Save**.

    - Name - Enter a name for the stack.
    - Description - Enter a description for this stack.
    - Compartment - Select a compartment where this Stack will reside.
    - Tags - Apply tags to the stack. Select a Namespace and then enter a tag Key and Value.

    For requirements and recommendations for Terraform configurations used with Resource Manager, see Terraform Configurations for Resource Manager. To provision the resources defined in your stack, apply the job. See Creating an Apply Job.
13. Click **Create**.

    The APEX Instances page displays again and the new service appears. When the provisioning process is complete, the service State changes to **Available**.
14. Next, set up your APEX Service instance and create a workspace and APEX user account.

Set Up a New APEX Service

Before using a new APEX Service, you must set up your APEX Service instance by completing two tasks: create an initial APEX workspace and create an APEX user account.

This topic describes how to perform these tasks from the APEX Instance Details page.

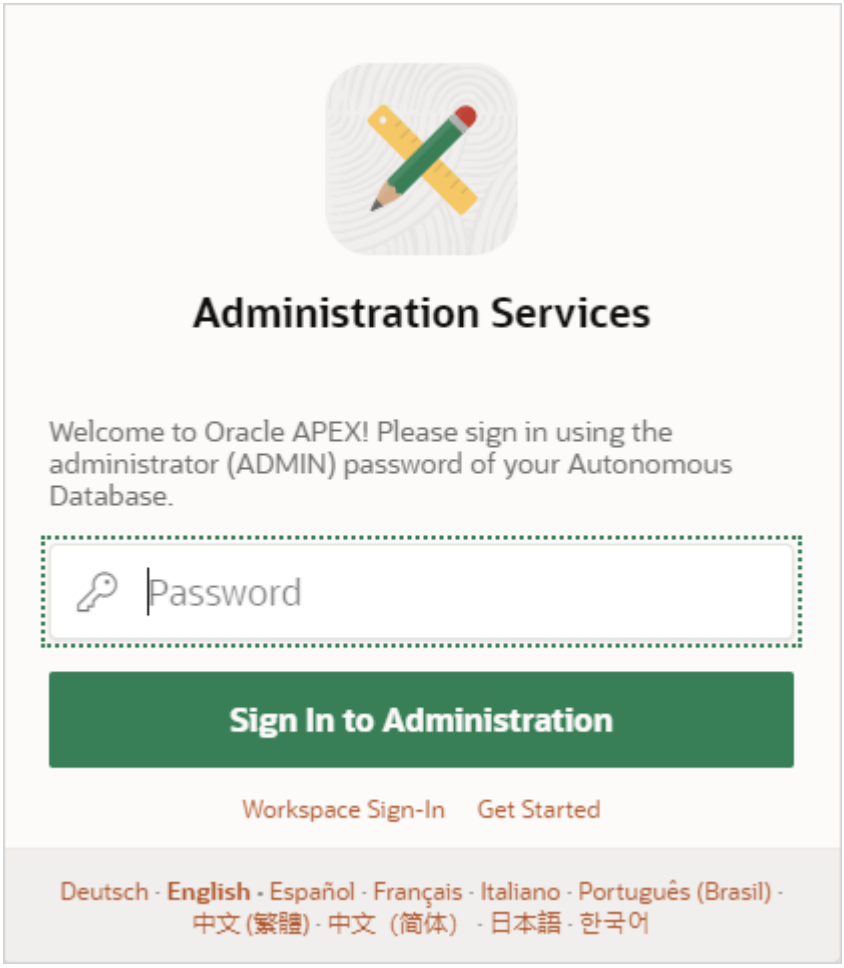
To create an initial APEX workspace and APEX user account:

1. On the APEX Instances page, select your APEX Service.

> **Tip:**
>
> You can also launch APEX from the APEX Instances page. Find your APEX Service instance and click the three dots ⋮ (or Actions menu) and select **Launch APEX**.

2. On the APEX Instance Details, click **Launch APEX**.

   The Administration Services Sign In page appears.



3. On the Administration Services Sign In dialog:
   a. Password - Enter the password your specified when you created your APEX Service.
   b. Click **Sign In to Administration**.

   A Welcome page appears and prompts you to create a workspace.
4. On the Welcome page, click **Create Workspace**.
5. On the Create Workspace:
   a. Specify how to create your workspace. If you are just getting started, choose **New Schema**.

      Options include:

      - **New Schema** - Create a new database schema for your workspace:

- Workspace Name - Enter a name for the workspace. A workspace is a shared work area where multiple developers can build applications.
- Workspace Username - Enter the username of the workspace administrator.
- Workspace Password - Enter a password for the workspace administrator. See Help for details about default password complexity rules.
- Advanced - Optionally expand the **Advanced** region and edit the following:
  - Advanced , Database Password - Enter a password for the workspace database user. See Help for details about default password complexity rules.
  - Advanced , Workspace ID - Leave Workspace ID blank to have the new Workspace ID automatically generated. A Workspace ID must be a positive integer greater than 100000.

- **Existing Schema** - Associate your workspace with an existing database schema:
  - Database User - Select the existing database user for the workspace. Applications will be created against database objects from this schema
  - Workspace Name - Enter a name for the workspace. A workspace is a shared work area where multiple developers can build applications.
  - Workspace Username - Enter the username of the workspace administrator.
  - Workspace Password - Enter a password for the workspace administrator. See Help for details about default password complexity rules.
  - Advanced - Optionally expand the **Advanced** region and edit the following:
    - Workspace ID - Leave Workspace ID blank to have the new Workspace ID automatically generated. A Workspace ID must be a positive integer greater than 100000.

> **Note:**
>
> Make a note of the Workspace Name, Workspace Username, and Workspace Password. You will use these credentials to sign in to your workspace.

b. Click **Create Workspace**.

Administration Services appears. Use Administration Services to perform tasks such as managing user accounts, creating workspaces, monitoring workspace activity, and viewing log files.

You should have received a welcome email from Oracle which includes direct links to APEX Administration Services, APEX Application Development (your workspace), and Database Actions.

6. Sign out of Administration Services:

> **Tip:**
>
> You can skip this step by clicking your workspace name in the message at the top of the page which indicates your workspace has been created.

a. Click the **Account** menu in the header region.

b. Click **Sign out**.

c. Click **Return to Sign in Page**.

7. On the Oracle APEX Sign In page, enter your workspace administrator account credentials:

   a. Workspace - Enter the name of your workspace.

   b. Username - Enter your user name.

   c. Enter your case-sensitive password.

8. Click **Sign In**.

   The Workspace home page appears.

> **See Also:**
>
> Learn About Oracle APEX

Sign up for Oracle APEX with Autonomous Database

Learn about Oracle APEX with Autonomous Database.

Oracle Autonomous Database provides an easy-to-use, fully autonomous database that scales elastically and delivers fast query performance. As a service, Autonomous Database does not require database administration. To learn more, see What is Autonomous Database in *Using Oracle Autonomous Database Serverless*.

To learn more about using Oracle APEX in Autonomous Database, see Creating Applications with Oracle Application Express on Autonomous Database in *Using Oracle Autonomous Database Serverless*.

Upgrade APEX Service to Oracle Autonomous Transaction Processing

Easily upgrade APEX Service to Oracle Autonomous Transaction Processing.

If you want to expand your capabilities to include the full features of Oracle Autonomous Database with APEX, you can easily upgrade an APEX Service instance to a full Oracle Autonomous Transaction Processing instance. You can upgrade from either the APEX Instances Details page or the Autonomous Database Details page.

To upgrade to Oracle Autonomous Transaction Processing:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.

2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.

> **Tip:**
>
> You can narrow the display using the Search and Filter field. For example, if a filter already exists, select it, make a new selection, and click **Apply Filter**.

The APEX Instances page appears.

3. To access the APEX Instance Details page, do one of the following:
   - Click the three dots ⋮ (or Actions menu) and click **View Details**.
   - Click the APEX Service name.

   The APEX Instance Details page appears.
4. You can upgrade in two ways:
   - On the APEX Instance Details page:
     - Under **APEX instance information**, find **Database type** and click **Edit**.
   - Navigate to the Autonomous Database Details page:
     - Under **APEX instance information**, find and click the **Database** *link*.
     - Under **General information**, find **Workload Type** and click **Edit**.
5. Review the information in the dialog and then click **Convert** to proceed with upgrading.

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Access Oracle APEX

Access Oracle APEX components from the OCI Console UI.

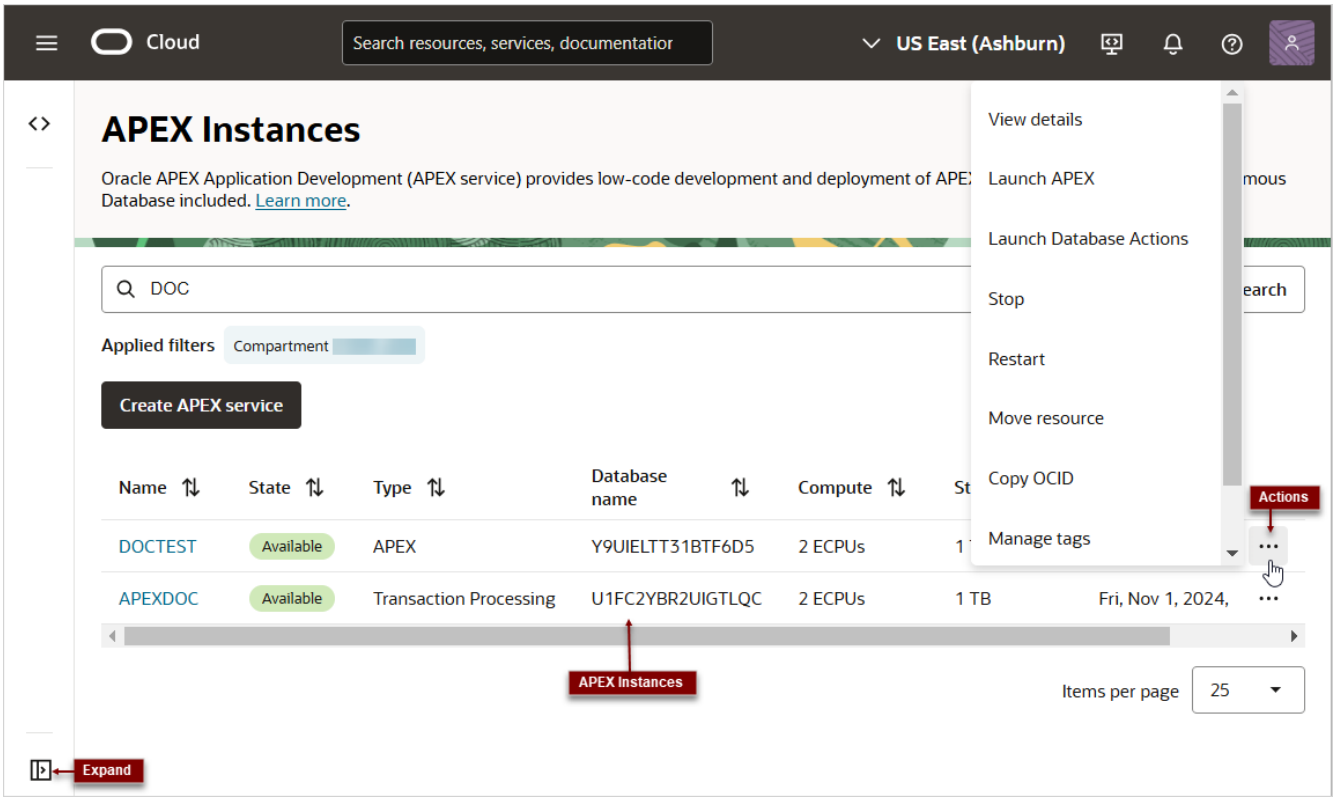
> **Note:**
>
> Task instructions now use the Redwood Preview user interface. The **Redwood Preview** switch displays in the status bar at the bottom of the Browser window.

- About the APEX Instances Page
  Use the APEX Instances page to navigate and manage APEX in the OCI console.
- Access APEX Service
  Access APEX Service components from the OCI Console UI, or by directly signing in. You may also expose apps on a custom domain name by placing an OCI Load Balancer in front of APEX Service.
- Access APEX in Autonomous Database
  Access Oracle APEX components from the OCI Console UI, or by directly signing in to Oracle APEX.
- Access APEX Components
  Access APEX components from the OCI Console UI, or directly from your browser using the links provided in the Welcome email you received when you created your APEX instance.
- Access APEX Using a Vanity URL
  You may expose apps on a custom domain name by placing an OCI Load Balancer in front of APEX.

About the APEX Instances Page

Use the APEX Instances page to navigate and manage APEX in the OCI console.

Narrow the display by entering search terms in the Search and Filter field and pressing **Search** (or **Enter**). To view an overall navigation menu, click **Expand**. In the following example the Search and Filter field contains the search term `DOC`.



Available APEX Instances display in a table which includes the following information:

- Name (links to APEX Instance Details page)
- State (*Database*)
- Type (*Workload Type*)
- Database name
- Compute - ECPU (or OCPU if your service uses OCPUs)
- Storage
- Created (day, date, and time)

Click **Create APEX service** to create a new APEX Service instance. Click the three dots (⋮) to display the Actions menu. The options available on Actions menu differ slightly between Workload Types. The previous image displays the Action menu for the APEX Workload Type (APEX Service) .

Actions Menu for the APEX Workload Type

Actions menu options for the APEX Workload Type (APEX Service) include:

- **View details** - Displays the APEX Instance Details page.
- **Launch APEX** - Displays the Oracle APEX Sign In page. Enter your workspace administrator credentials and click **Sign In**.
- **Launch Database Actions** - Access Oracle Database Actions (formerly Oracle SQL Developer Web). Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database. See About Database Actions in *Using Oracle Database Actions*.

- **Stop** or **Start** - The option that displays depends upon the current state of the APEX Service instance. See Stop APEX Service and Start APEX Service.
- **Restart** - Restart APEX Service by restarting the underlying Autonomous Database instance. See Restart APEX Service.
- **Move resource** - See Move Resource to a Different Compartment.
- **Copy OCID** - Copy the Oracle Cloud Identifier (OCID). Most Oracle Cloud Infrastructure resources have an Oracle-assigned unique ID called an Oracle Cloud Identifier (OCID). It's included as part of the resource's information in both the Console and API. See Oracle Cloud IDs (OCIDs).
- **Manage tags** - Displays the Manage Tags page. Tagging is a metadata system that allows you to organize and track resources within your tenancy. Tags are composed of keys and values that can be attached to resources.
- **Terminate** - Terminate APEX Service by terminating the underlying Autonomous Database instance. See Terminate APEX Service.

Actions Menu for the Transaction Processing Workload Type

Actions menu options for the Transaction Processing Workload Type include:

- **View details** - Displays the APEX Instance Details page.
- **Launch APEX** - Displays the Administration Services Sign In page. Enter your administrator (ADMIN) password and click **Sign In to Administration**.
- **Launch Database Actions** - Displays Oracle Database Actions (formerly Oracle SQL Developer Web). Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database. See About Database Actions in *Using Oracle Database Actions*.
- **View database details** - Displays the Autonomous Details page. See Manage the Service in *Using Oracle Autonomous Database Serverless*.
- **Copy OCID** - Copy the Oracle Cloud Identifier (OCID). Most Oracle Cloud Infrastructure resources have an Oracle-assigned unique ID called an Oracle Cloud Identifier (OCID). It's included as part of the resource's information in both the Console and API. See Oracle Cloud IDs (OCIDs).
- **Manage tags** - Displays the Manage Tags page. Tagging is a metadata system that allows you to organize and track resources within your tenancy. Tags are composed of keys and values that can be attached to resources.

Access APEX Service

Access APEX Service components from the OCI Console UI, or by directly signing in. You may also expose apps on a custom domain name by placing an OCI Load Balancer in front of APEX Service.

- Navigate to the APEX Instances Page
  Navigate to the APEX Instances page to view details about and access APEX Service components.
- About the APEX Instance Details Page
  Use the APEX Instance Details page to view details about your service, sign in to your APEX Service instance, access Database Actions, or stop or restart APEX Service.

Navigate to the APEX Instances Page

Navigate to the APEX Instances page to view details about and access APEX Service components.

> **Tip:**
>
> Before you can access an APEX Service, you must create an APEX Service instance and then create a workspace and workspace administrator account. See Create an APEX Service Instance for more information.

To navigate to the APEX Instances page:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.

   > **Tip:**
   >
   > You can narrow the display using the Search and Filter field. For example, if a filter already exists, select it, make a new selection, and click **Apply Filter**.

   The APEX Instances page appears.
3. Narrow the display by entering search terms in the Search and Filter field and pressing **Search** (or **Enter**).
4. Find your APEX Service instance. Click the three dots ⋮ (or Actions menu) and select one of the following:
   - **View details** - Displays the APEX Instance Details page.
   - **Launch APEX** - Displays the Oracle APEX Sign In page. Enter your workspace administrator credentials and click **Sign In**.

     > **Note:**
     >
     > If you have not yet created a workspace, the Administration Services Sign In page appears. Follow the instructions in Set Up a New APEX Service.
   - **Launch Database Actions** - Access Oracle Database Actions (formerly Oracle SQL Developer Web). Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database. See About Database Actions in *Using Oracle Database Actions*.
   - **Stop** or **Start** - The option that displays depends upon the current state of the APEX Service instance. See Stop APEX Service and Start APEX Service.
   - **Restart** - Restart APEX Service by restarting the underlying Autonomous Database instance. See Restart APEX Service.

- **Move resource** - See Move Resource to a Different Compartment.
- **Copy OCID** - Copy the Oracle Cloud Identifier (OCID). Most Oracle Cloud Infrastructure resources have an Oracle-assigned unique ID called an Oracle Cloud Identifier (OCID). It's included as part of the resource's information in both the Console and API. See Oracle Cloud IDs (OCIDs).
- **Manage tags** - Displays the Manage Tags page. Tagging is a metadata system that allows you to organize and track resources within your tenancy. Tags are composed of keys and values that can be attached to resources.
- **Terminate** - Terminate APEX Service by terminating the underlying Autonomous Database instance. See Terminate APEX Service.

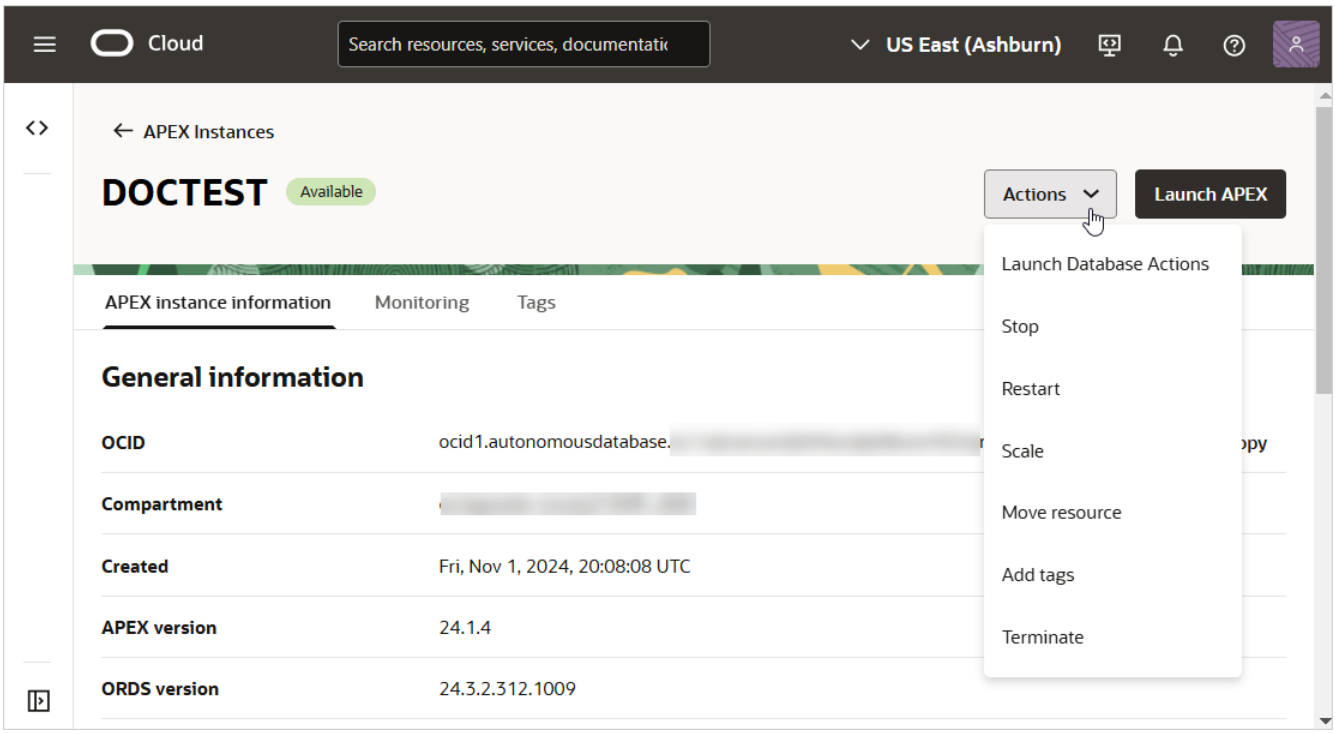
5. To access the APEX Instance Details page, do one of the following:
   - From the Row menu, click **View Details**.
   - Click the APEX Service *Name*.

   The APEX Instance Details page appears.

> **See Also:**
>
> - Quick Start in *Oracle APEX App Builder User's Guide*
> - About Database Actions in *Using Oracle Database Actions*
> - Manage Oracle APEX

About the APEX Instance Details Page

Use the APEX Instance Details page to view details about your service, sign in to your APEX Service instance, access Database Actions, or stop or restart APEX Service.



Controls on the top of the APEX Instance Details page include:

- **Actions** menu:
  - **Launch Database Actions** - Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database. See About Database Actions in *Using Oracle Database Actions*.
  - **Stop** or **Start** - The option that displays depends upon the current state of the APEX Service instance. See Stop APEX Service and Start APEX Service.
  - **Restart** - Restart APEX Service by restarting the underlying Autonomous Database instance. See Restart APEX Service.
  - **Scale** - See About Auto Scaling.
  - **Move Resource** - See Move Resource to a Different Compartment.
  - **Add Tags** - Displays the Add Tags page. Tagging is a metadata system that allows you to organize and track resources within your tenancy. Tags are composed of keys and values that can be attached to resources.
  - **Terminate** - Terminate APEX Service by terminating the underlying Autonomous Database instance. See Terminate APEX Service.
- **Launch APEX** - Displays the Oracle APEX Sign In page. On the Sign In page, enter your workspace administrator credentials and click **Sign In**.

APEX instance information

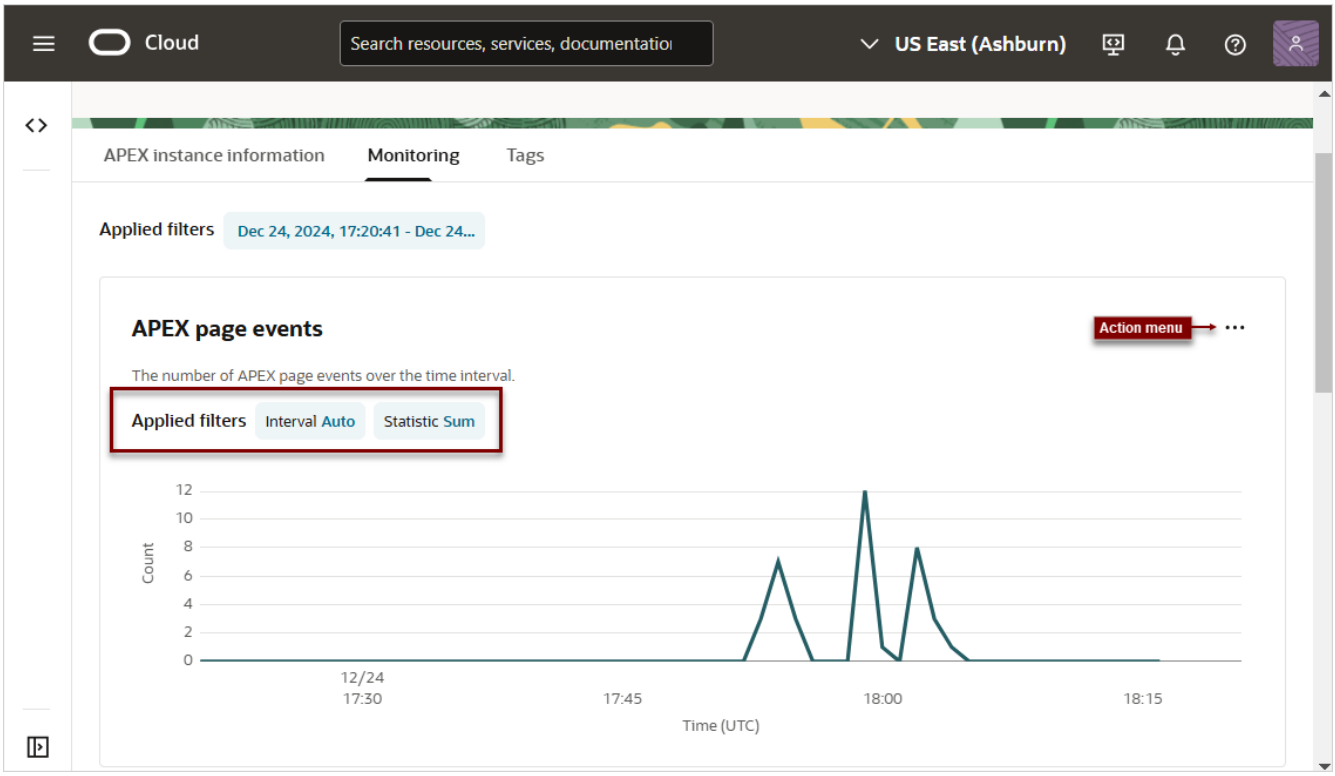
The **APEX instance information** tab displays two regions:

- **General information**:
  - OCID
  - Compartment
  - Created
  - APEX Version
  - ORDS Version
- **Instance Details**:
  - Database *NAME* (link to Autonomous Database details page)
  - Database type: *APEX*
  - Database name
  - Instance type (*Free* or *Paid*)
  - ECPU count (or OCPU if your service uses OCPUs)
  - Storage
  - Storage auto scaling

> **Tip:**
>
> To learn more, see Access APEX Components and Manage Oracle APEX

Monitoring

Click the **Monitoring** tab display the following metrics: **APEX page events**, **Active APEX applications**, and **APEX page load time**.



Control the display by clicking the following Applied filters: **Interval** and **Statistic**. Click the **Actions** menu to display the following controls:

- **View query in metrics explorer**
- **Copy chart URL**
- **Copy query (MQL)**
- **Create an alarm on this query**
- **Table view**

Access APEX in Autonomous Database

Access Oracle APEX components from the OCI Console UI, or by directly signing in to Oracle APEX.

> **Tip:**
>
> To learn more about using Oracle APEX in Autonomous Database, see Creating Applications with Oracle Application Express on Autonomous Database in *Using Oracle Autonomous Database Serverless*.

> **Note:**
>
> Task instructions now use the Redwood Preview user interface. The **Redwood Preview** switch displays in the status bar at the bottom of the Browser window.

- Navigate to the APEX Instances Page
  Navigate to the APEX Instances page to view details about and access APEX components.
- About the APEX Instance Details Page
  Use the APEX Instance Details page to view details about your service, sign in to your APEX instance, and manage other actions.

Navigate to the APEX Instances Page

Navigate to the APEX Instances page to view details about and access APEX components.

> **Tip:**
>
> Before you can access an APEX instance, you must create an Autonomous Database. See *Using Oracle Autonomous Database Serverless* for more information.

To navigate to the APEX Instances page:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** (☰) and select **Developer Services** and then **APEX Instances**.

   > **Tip:**
   >
   > You can narrow the display using the Search and Filter field. For example, if a filter already exists, select it, make a new selection, and click **Apply Filter**.

   The APEX Instances page appears.
3. Find your APEX instance. Click the three dots ⋮ (or Action menu) and select one of the following:
   - **View details** - Displays the APEX Instance Details page.
   - **Launch APEX** - Displays the Oracle APEX Sign In page. Enter your workspace administrator credentials and click **Sign In**.

     > **Note:**
     >
     > If you have not yet created a workspace, the Administration Services Sign In page appears. Follow the instructions in Set Up a New APEX Service.

   - **Launch Database Actions** - Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database. See About Database Actions in *Using Oracle Database Actions*.
   - **View database details** - Displays the Autonomous Details page. See Manage the Service in *Using Oracle Autonomous Database Serverless*.
   - **Copy OCID** - Copy the Oracle Cloud Identifier (OCID). Most Oracle Cloud Infrastructure resources have an Oracle-assigned unique ID called an Oracle Cloud

Identifier (OCID). It's included as part of the resource's information in both the Console and API. See Oracle Cloud IDs (OCIDs).

- **Manage tags** - Displays the Manage Tags page. Tagging is a metadata system that allows you to organize and track resources within your tenancy. Tags are composed of keys and values that can be attached to resources.

4. To access the APEX Instance Details page, do one of the following:
   - From the Row menu, click **View Details**.
   - Click the APEX *Name*.

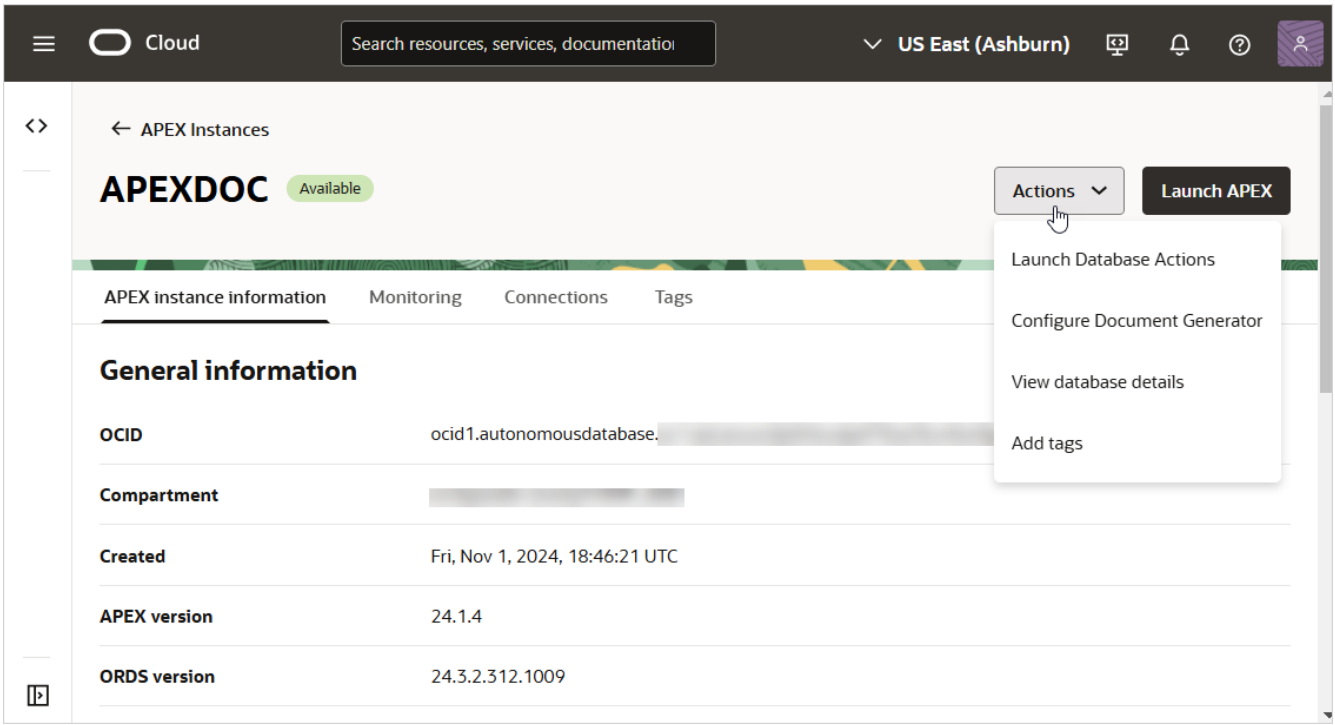
   The APEX Instance Details page appears.

> **See Also:**
>
> - Quick Start in *Oracle APEX App Builder User's Guide*
> - About Database Actions in *Using Oracle Database Actions*
> - Manage Oracle APEX

About the APEX Instance Details Page

Use the APEX Instance Details page to view details about your service, sign in to your APEX instance, and manage other actions.

For Oracle APEX on Autonomous, the APEX Instance Details page displays slightly different information compared to APEX Service.



Controls on the top of the APEX Instance Details page include:

- **Actions**:
  - **Launch Database Actions** - Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database. See About Database Actions in *Using Oracle Database Actions*.
  - **Configure Database Generator** - Configure the Document Generator pre-built function from the APEX Instance Details page. See Configure Document Generator.
  - **View database details** - Displays the Autonomous Details page. See Manage the Service in *Using Oracle Autonomous Database Serverless*.
  - **Add Tags** - Displays the Add Tags page. Tagging is a metadata system that allows you to organize and track resources within your tenancy. Tags are composed of keys and values that can be attached to resources.
- **Launch APEX** - Displays the Oracle APEX Sign In page. Enter your workspace administrator credentials and click **Sign In**.

APEX instance information

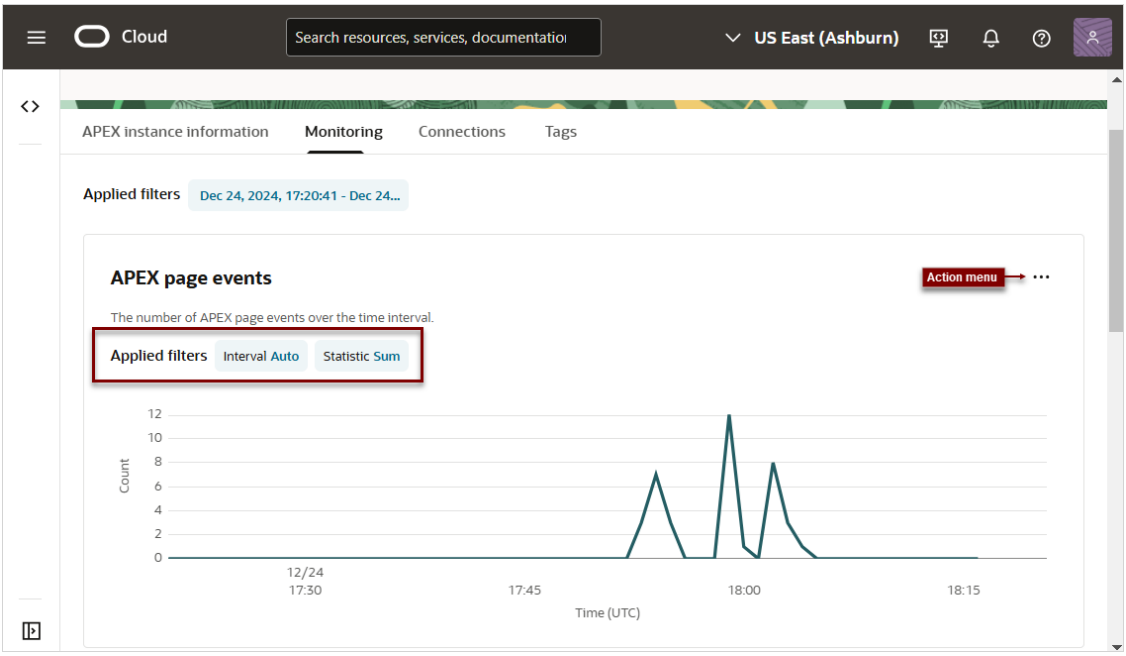
The **APEX instance information** tab displays two regions:

- **General information**:
  - OCID
  - Compartment
  - Created
  - APEX Version
  - ORDS Version
- **Instance Details**:
  - Database *NAME* (link to database details page)
  - Database type: *Transaction Processing*
  - Database name
  - Instance type (*Free* or *Paid*)
  - ECPU count (or OCPU if your service uses OCPUs)
  - Storage
  - Storage auto scaling

> **Tip:**
>
> To learn more, see Access APEX Components and Manage Oracle APEX

Monitoring

The Monitoring region displays in a tab on the APEX Details page.



Control the display by clicking the following Applied filters: **Interval** and **Statistic**. Click **Actions** menu to access the following controls:

- Hide/Show Legend
- View Query in Metrics Explorer
- Copy Chart URL
- Copy Query (MQL)
- Create an Alarm on this Query
- Table View

Connections

Connections enable you to connect Data Transforms to various technologies reachable from your OCI network.

To learn more, see Work with Connections and Supported Connection Types in *Using Oracle Autonomous Database Serverless*.

Access APEX Components

Access APEX components from the OCI Console UI, or directly from your browser using the links provided in the Welcome email you received when you created your APEX instance.

- Sign In To Administration Services
  Sign in to Oracle APEX Administration Services (Administration Services) to perform tasks such as managing user accounts, creating workspaces, monitoring workspace activity, and viewing log files.
- Sign In to a Workspace
  Sign in to the APEX development environment by signing into your workspace using your Oracle APEX workspace administrator account.

- Access Oracle Database Actions
  Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database.

Sign In To Administration Services

Sign in to Oracle APEX Administration Services (Administration Services) to perform tasks such as managing user accounts, creating workspaces, monitoring workspace activity, and viewing log files.

Sign in to Administration Services using the `ADMIN` account and password that was created when your created your service. You can access the Administration Services Sign In page from either the OCI Console UI, or by using the link included in the welcome email you received when you set up your APEX Service.

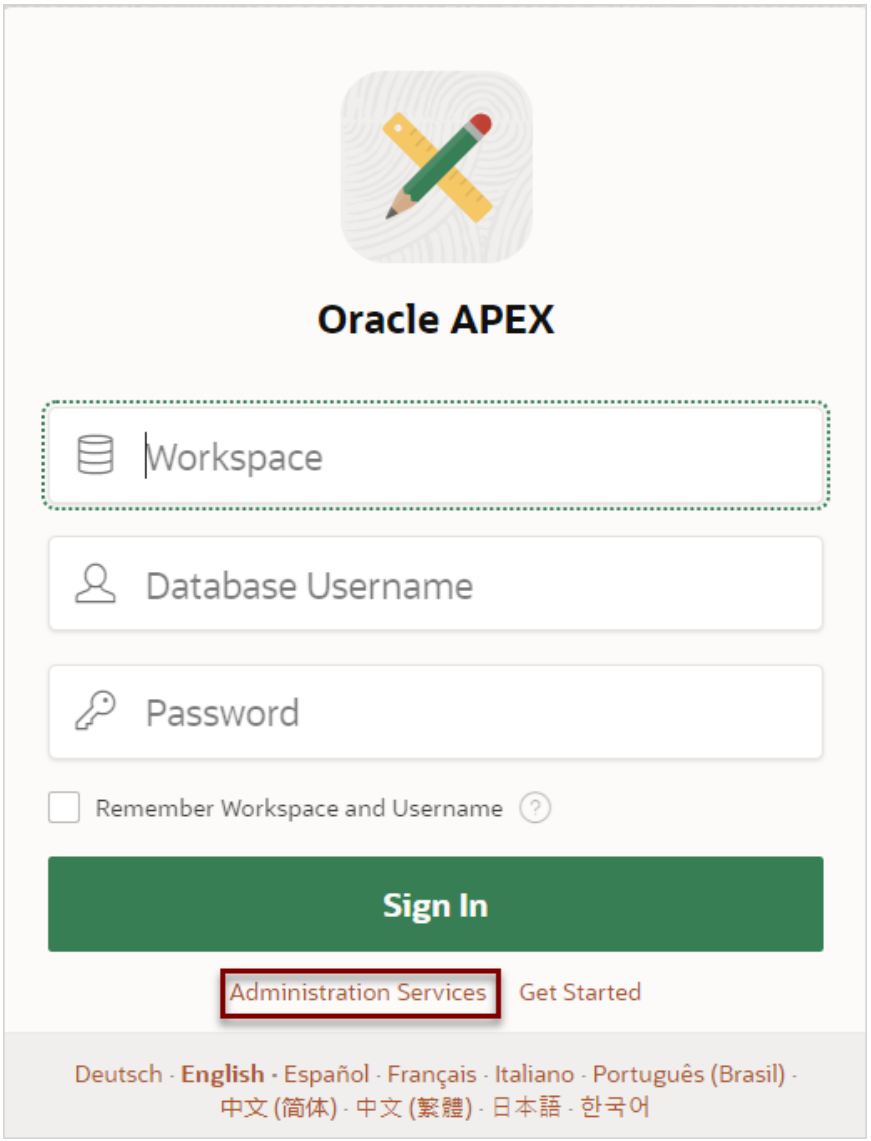
To sign in to Administration Services:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.

   The APEX Instances page appears.
3. Find your APEX instance.
4. Click the three dots (or Actions menu) and select **Launch APEX**.

   The Oracle APEX Sign In page appears.

   > **Note:**
   >
   > If you have not yet created a workspace, the Administration Services Sign In page appears. Follow the instructions in Set Up a New APEX Service.
5. Under the Sign In button, click the **Administration Services** link.



> **Tip:**
>
> You can also access the Administration Services Sign In page directly. In a web browser, navigate to the Sign In page using the link you received in your APEX Service welcome email. This link has the following format:
>
> `https://tenant_id-database_name.adb.service_region.oraclecloudapps.com/ords/apex_admin`

6. On the Administration Services Sign In page:
   a. Password - Enter your `ADMIN` account password.
   b. Click **Sign In to Administration**.

Administration Services appears.

> **Tip:**
>
> To learn more about Administration Services, see *Oracle APEX Administration Guide*.

Sign In to a Workspace

Sign in to the APEX development environment by signing into your workspace using your Oracle APEX workspace administrator account.

After you created your APEX Service, a wizard prompted you to create an initial workspace and workspace administrator account. Use your workspace administrator credentials to sign in to your workspace. You can access the Oracle APEX Sign In page from either the OCI Console UI, or by using the link included in the welcome email you received when you set up your APEX Service.

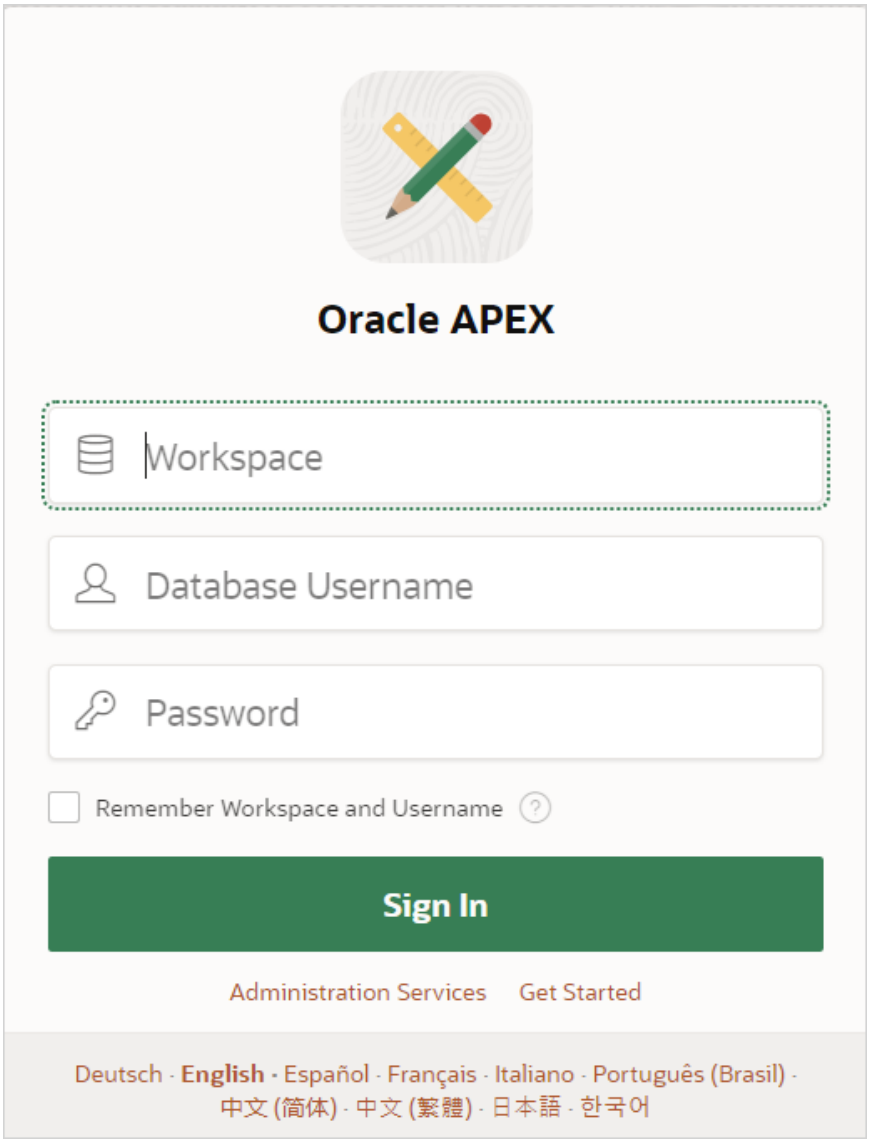
To sign in to your workspace:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** (☰) and select **Developer Services** and then **APEX Instances**.

   The APEX Instances page appears.
3. Find your APEX instance.
4. Click the three dots ⋮ (or Actions menu) and select **Launch APEX**.

   Oracle APEX Sign In page appears.

   > **Tip:**
   >
   > You can also access the Oracle APEX Sign In page using a link. In a web browser, navigate to the Sign In page using the link you received in your APEX Service welcome email. The link has the following format:
   >
   > `https://tenant_id-database_name.adb.service_region.oraclecloudapps.com/ords/apex`
5. On the Oracle APEX Sign In page:
   a. Enter your workspace administrator credentials:
      - Workspace - Enter the name of your workspace.
      - Database Username - Enter your user name.
      - Password - Enter your case-sensitive password.



b. Click **Sign In**.

> **See Also:**
>
> - Understanding the Workspace Home Page in *Oracle APEX App Builder User's Guide*
> - Find Oracle APEX Resources

Access Oracle Database Actions

Oracle Database Actions provides development, data studio, administration and monitoring features for Oracle Autonomous Database.

Access Database Actions from either the OCI Console UI, or by using the link included in the welcome email you received when you set up your service.

To access Database Actions the OCI Console UI:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**..

   The APEX Instances page appears.
3. Find your APEX instance.
4. Click the three dots (or Actions menu) and select **Launch Database Actions**.

> **Tip:**
>
> You can also access Database Actions using a link. In a web browser, navigate using the link you received in your APEX Service welcome email. The link has the following format:
>
> `https://tenant_id-database_name.adb.service_region.oraclecloudapps.com/ords/admin/_sdw/`

> **See Also:**
>
> About Database Actions in *Using Oracle Database Actions*

Access APEX Using a Vanity URL

You may expose apps on a custom domain name by placing an OCI Load Balancer in front of APEX.

By default, you access APEX components as well as your developed APEX apps and REST endpoints using the `oraclecloudapps.com` domain name. You can optionally configure a vanity URL or custom domain name that is easy to remember to help promote your brand identity. Once you acquire a desired domain name and matching SSL certificate from a vendor of your choice, deploy an Oracle Cloud Infrastructure Load Balancer in your Virtual Cloud Network (VCN) using your APEX database as the backend. Your APEX database must be configured with a private endpoint in same VCN.

To learn more, see Introducing Vanity URLs for APEX and ORDS on Oracle Autonomous Database.

5

Manage Oracle APEX

Learn about managing Oracle APEX, including lifecycle operations including stopping, starting, and restarting your service.

> **Tip:**
>
> To learn more about Autonomous Database instance lifecycle operations in see Lifecycle Operations in *Using Oracle Autonomous Database Serverless*.

- Manage APEX Service
  Learn about managing APEX Service, including stopping, starting, and restarting.
- Manage Oracle APEX in Autonomous Database
  Learn about functionality only available in Oracle APEX in Autonomous Database.

Manage APEX Service

Learn about managing APEX Service, including stopping, starting, and restarting.

> **Note:**
>
> Task instructions now use the Redwood Preview user interface. The **Redwood Preview** switch displays in the status bar at the bottom of the Browser window.

- Stop APEX Service
  Stop APEX Service by stopping the underlying Autonomous Database instance.
- Start APEX Service
  Start APEX Service by starting the underlying Autonomous Database instance.
- Restart APEX Service
  Restart APEX Service by restarting the underlying Autonomous Database instance.
- About Auto Scaling
  When you create an Autonomous Database instance, by default compute auto scaling is enabled and storage auto scaling is disabled. You can manage auto scaling from the Oracle Cloud Infrastructure Console to enable or disable compute auto scaling or storage auto scaling.
- Modify CPU Count, Storage Resources, or Auto Scaling
  Scale your Autonomous Database on demand by modifying ECPU count (or OCPU count), storage, or manage auto scaling.
- Terminate APEX Service
  Terminate APEX Service by terminating the underlying Autonomous Database instance.
- Move Resource to a Different Compartment
  Move an APEX Service to a different compartment from either the APEX Instances page or APEX Instance Details page.

- Update to ECPU Billing Model for APEX Service
  Learn about updating an existing APEX Service instance to the ECPU compute model.

Stop APEX Service

Stop APEX Service by stopping the underlying Autonomous Database instance.

You can stop APEX Service from either the APEX Instances Details page or the Autonomous Database Details page.

To stop APEX Service and the underlying Autonomous Database instance:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your APEX Service.

   The APEX Instance Details page appears.
4. You can stop APEX Service in two ways:
   - On the APEX Instance Details page, click **Actions** and select **Stop**.
   - Navigate to the Autonomous Database Details page:
     - Under **APEX instance information**, click the Database *NAME*.
     - On the Autonomous Database details page, click **More actions** and select **Stop**.
5. Click **Stop** to confirm.

> **Note:**
>
> When an Autonomous Database instance is stopped:
>
> - Tools are no longer able to connect to a stopped instance.
> - Autonomous Database in-flight transactions and queries are stopped.
> - APEX Service CPU billing is halted.

Start APEX Service

Start APEX Service by starting the underlying Autonomous Database instance.

You can start APEX Service from either the APEX Instances Details page or the Autonomous Database details page. **Start** only displays for a stopped instance.

To start APEX Service and the underlying Autonomous Database instance:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your APEX Service.

The APEX Instance Details page appears.

4. You can start APEX Service in two ways:
   - On the APEX Instance Details page, click **Actions** and select **Start**.
   - Navigate to the Autonomous Database details page:
     - Under **APEX instance information**, click the Database *NAME*.

       The Autonomous Database details page appears.
     - On the Autonomous Database details page, click **More Actions** and select **Start**.
5. Click **Start** to confirm.

> **Note:**
>
> When an Autonomous Database instance is started, APEX Service CPU billing is initiated, billed by the second with a minimum usage period of one minute.

Restart APEX Service

Restart APEX Service by restarting the underlying Autonomous Database instance.

You can restart APEX Service from either the APEX Instances Details page or the Autonomous Database details page.

To restart APEX Service and the underlying Autonomous Database instance:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.
3. Find and select your APEX Service.

   The APEX Instance Details page appears.
4. You can restart APEX Service in two ways:
   - On the APEX Instance Details page, click **Actions** and select **Restart**.
   - Navigate to the Autonomous Database details page:
     - Under **APEX Instance Information**, click the Database *NAME*.
     - On the Autonomous Database details page, click the **More Actions** and select **Restart**.
5. Click **Restart** to confirm.

> **Note:**
>
> When an Autonomous Database instance is restarted, APEX Service CPU billing is initiated, billed by the second with a minimum usage period of one minute.

About Auto Scaling

When you create an Autonomous Database instance, by default compute auto scaling is enabled and storage auto scaling is disabled. You can manage auto scaling from the Oracle Cloud Infrastructure Console to enable or disable compute auto scaling or storage auto scaling.

With compute auto scaling enabled the database can use up to three times more CPU and IO resources than specified by the number of ECPUs (OCPUs if your database uses OCPUs) as shown in the ECPU count or OCPU count field on the Oracle Cloud Infrastructure Console.

When you create an Autonomous Database instance, by default Storage auto scaling is disabled. When Storage auto scaling is enabled, the Autonomous Database can expand to use up to three times the reserved base storage, as specified by the storage shown in the Storage field on the Oracle Cloud Infrastructure Console. If you need additional storage, the database automatically uses the reserved storage without any manual intervention required.

To learn more, see Use Auto Scaling in *Using Oracle Autonomous Database Serverless*.

> **Tip:**
>
> View historical CPU utilization for a service on the **CPU utilization (%)** chart on the Database Monitor, Overview tab in Database Actions. To learn more, see Database Dashboard Page in *Using Oracle Database Actions*.

Modify CPU Count, Storage Resources, or Auto Scaling

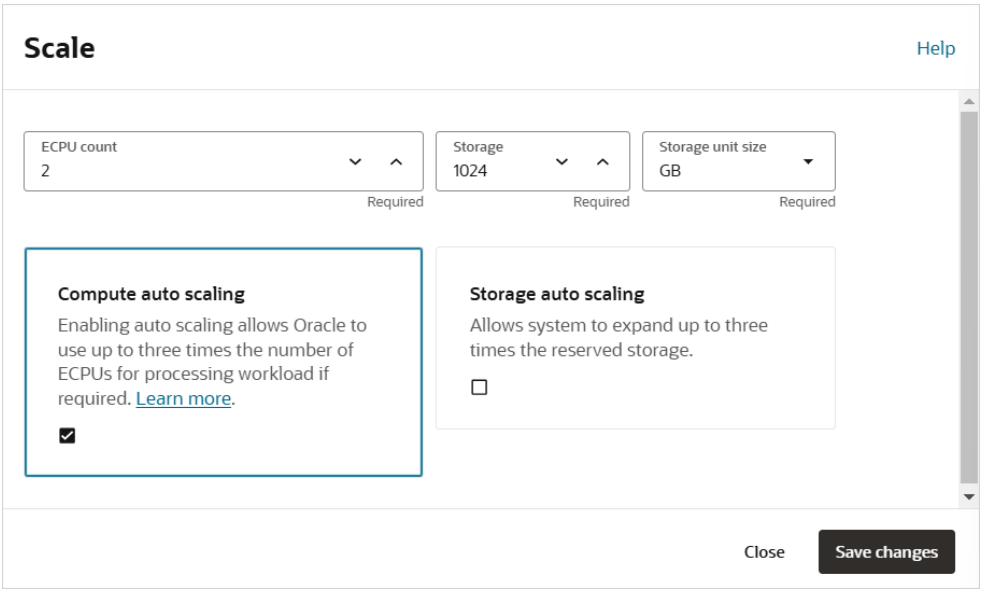
Scale your Autonomous Database on demand by modifying ECPU count (or OCPU count), storage, or manage auto scaling.

To scale your database, modify ECPU count (or OCPU count), storage, or enable/disable auto scaling:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** ( ) and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your APEX Service.

   The APEX Instance Details page appears.
4. You can access the Scale dialog in two ways:
   - On the APEX Instance Details page:
     - On the APEX Instance Details page, click **Actions** and select **Scale**.

       The Scale dialog appears.



  - ECPU count - The number of ECPUs (or OCPUs if your service uses OCPUs) to enable. The default is no change.
  - Storage - Specify the amount of storage you wish to make available to your database. The default is no change.
  - Storage unit size - Specify the storage to allocate in storage size units (**GB** or **TB**).
  - Compute auto scaling - Enabling Compute auto scaling allows the system to use up to three times the number of ECPUs (OCPUs if your database uses OCPUs) for processing workload if required.
  - Storage auto scaling - Allows the system to expand up to three times the reserved storage.
  - Click **Update**.
- Navigate to the Autonomous Database details page:
  - Under **APEX instance information**, click the Database *NAME*.
  - On the Autonomous Database details page, click **More actions** and select **Manage resource allocation**.

    The Manage resource allocation dialog appears.
  - ECPU count - The number of ECPUs (or OCPUs if your service uses OCPUs) to enable. The default is no change.
  - Compute auto scaling - Enabling Compute auto scaling allows the system to use up to three times the number of ECPUs (OCPUs if your database uses OCPUs) for processing workload if required.
  - Storage - Specify the amount of storage you wish to make available to your database. The default is no change.
  - Storage unit size - Specify the storage to allocate in storage size units (**GB** or **TB**).
  - Storage auto scaling - Allows the system to expand up to three times the reserved storage.
  - Allocated storage - Displays the current allocated storage.
  - Shrink - Shrinks storage manually. Use after deletion of a significant amount of data. See Shrink Storage in *Using Oracle Autonomous Database Serverless*.

- Click **Apply**.

Changing **ECPU count** (OCPU count if your service uses OCPUs), Storage, or enabling or disabling auto scaling options, changes the Lifecycle State to **Scaling in Progress**. After the Lifecycle State changes to **Available** the changes apply immediately.

> **Note:**
>
> If auto scaling is disabled while more CPUs are in use than the specified ECPU count (or OCPU count), then Autonomous Database scales the number in use down to the ECPU count (or OCPU count) number.

> **See Also:**
>
> Use Auto Scaling in *Using Oracle Autonomous Database Serverless*.

Terminate APEX Service

Terminate APEX Service by terminating the underlying Autonomous Database instance.

You can terminate APEX Service from either the APEX Instances Details page or the Autonomous Database Details page:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** (☰) and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your APEX Service.

   The APEX Instance Details page appears.
4. You can terminate APEX Service in two ways:
   - On the APEX Instance Details page:
     - On the APEX Instance Details page, click **Actions** and select **Terminate**.
     - On the Terminate APEX Instance page, enter the APEX instance name to confirm the termination and click **Terminate**.
   - Navigate to the Autonomous Database details page:
     - Under **APEX instance information**, click the Database *NAME*.
     - On the Autonomous Database details page, click **More actions** and select **Terminate**.
     - On the Terminate Autonomous Database page, enter the database name to confirm the termination and click **Terminate Autonomous Database**.

Move Resource to a Different Compartment

Move an APEX Service to a different compartment from either the APEX Instances page or APEX Instance Details page.

Compartments help you organize resources to make it easier to control access to them. Moving an APEX Service instance to another compartment also moves the underlying database resource. See Understanding Compartments for information on using and managing compartments.

> **Note:**
>
> To move a database you must have the right to manage Autonomous Databases in the database's current compartment and in the compartment you are moving it to.
>
> As soon as you move a database to a different compartment, the policies that govern the new compartment apply immediately and affect access to the database. Therefore, your access to the database may change, depending on the policies governing your Oracle Cloud user account's access to resources.

To move an APEX Service to a different compartment:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.
3. You can move a resource to a different compartment in two ways:
   - On the APEX Instances page:
     - Find your APEX Service instance.
     - Click the three dots ⋮ (or Actions menu) and select **Move resource**.
   - On the APEX Instance Details page:
     - On the APEX Instances page, find and select your APEX Service.
     - From **Actions**, select, select **Move resource**.

   The Move resource dialog appears.
4. Choose a new compartment and click **Move resource**.

Update to ECPU Billing Model for APEX Service

Learn about updating an existing APEX Service instance to the ECPU compute model.

APEX Service previously offered two compute models when you create a new instance: ECPU and OCPU. OCPU is a legacy billing metric and is no longer available when provisioning a new instance. OCPU will be retired for APEX Service at some point in the future.

> **Note:**
>
> If you update your instance to the ECPU compute model, you cannot revert back to the OCPU compute model. To learn more, see Compute Models in Autonomous Database and Update to ECPU Billing Model on Autonomous Database in *Using Oracle Autonomous Database Serverless*.

To update from a OCPU billing model to a ECPU billing model:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your APEX Service.

   The APEX Instance Details page appears.
4. Navigate to the Autonomous Database details page:
   a. Under **APEX instance information**, click the Database *NAME*.

      Autonomous Database Details page appears.
   b. Under **Resource allocation**, **OCPU count**, click **Update to ECPU model**.
5. Follow the instructions in Update Billing Model Autonomous Database to ECPU Compute Model in *Using Oracle Autonomous Database Serverless*.

Manage Oracle APEX in Autonomous Database

Learn about functionality only available in Oracle APEX in Autonomous Database.

> **Note:**
>
> To learn more about Autonomous Database instance lifecycle operations, see Lifecycle Operations in *Using Oracle Autonomous Database Serverless*.

- About Document Generator
  Learn about privileges required to configure Document Generator and how to configure Document Generator for an APEX instance.

About Document Generator

Learn about privileges required to configure Document Generator and how to configure Document Generator for an APEX instance.

The Document Generator Function pre-built function enables you to generate documents based on Office templates and JSON data. You can configure the Document Generator Function for APEX from the OCI Console.

For more information about the pre-built function, see Document Generator Function.

- IAM Policies and Oracle Database Privileges
  Learn more about OCI permissions the OCI user requires in order to configure Document Generator.
- Configure Document Generator
  Learn how to configure Document Generator.

IAM Policies and Oracle Database Privileges

Learn more about OCI permissions the OCI user requires in order to configure Document Generator.

Required IAM Policies

To configure Document Generator against an APEX instance, an OCI user requires the following policies:

Policy Statement	Justification
allow group *'<identity_domain_name>'/'<group_name>'* to read autonomous-database-family in compartment *<compartment>*	Required to navigate to the APEX Instance Details page
allow group *'<identity_domain_name>'/'<group_name>'* to manage virtual-network-family in compartment *<compartment>*	Required to create a Database Tools Private Endpoint
allow group *'<identity_domain_name>'/'<group_name>'* to manage vaults in compartment *<compartment>*	Required to create a Vault
allow group *'<identity_domain_name>'/'<group_name>'* to manage keys in compartment *<compartment>*	Required to create a Key
allow group *'<identity_domain_name>'/'<group_name>'* to manage secret-family in compartment *<compartment>*	Required to create Vault Secrets
allow group *'<identity_domain_name>'/'<group_name>'* to manage database-tools-family in compartment *<compartment>*	Required to create Database Tools Connection and Private Endpoint and make use of them
allow group *'<identity_domain_name>'/'<group_name>'* to read function-family in compartment *<compartment>*	Required to select Application, Function, and PbfListing
allow group *'<identity_domain_name>'/'<group_name>'* to read object-family in compartment *<compartment>*	Required to get the Object Storage namespace
allow group *'<identity_domain_name>'/'<group_name>'* to manage policies in compartment *<compartment>*	Required to manage Policies

Oracle Database Privileges

To configure Document Generator against an APEX instance, the user specified in the Database Tools Connection requires the grants in the table below. Note that the `ADMIN` user of an APEX Instance (Autonomous Database Serverless) already has these grants:

Grant Statement	Justification
GRANT CREATE SESSION TO *<user>*	Required to create a session (log in to the database)
GRANT EXECUTE ON DBMS_CLOUD_ADMIN TO *<user>* EXEC DBMS_CLOUD_ADMIN.ENABLE_RESOURCE_PRINCIPAL(username => '*<user>*', grant_option => TRUE)	Required to enable/disable the ADB-S Resource Principal
GRANT APEX_ADMINISTRATOR_ROLE TO *<user>*	Required to execute APEX_INSTANCE_ADMIN.{GET,SET}_PARAMETER
GRANT SELECT ON SYS.DBA_CREDENTIALS TO *<user>* GRANT SELECT ON SYS.DBA_TAB_PRIVS TO *<user>*	Required to obtain the enabled status of the ADB-S Resource Principal

Configure Document Generator

Learn how to configure Document Generator.

An APEX Instance Administrator can configure the Oracle Document Generator pre-built function for Oracle Autonomous Database from the OCI Console.

The workload type must be **Data Warehouse**, **Transactional Processing**, or **JSON Database**. The Document Generator integration is not supported for the **APEX** workload type.

In order to configure Document Generator, you must have a Database Tools connection to an Oracle Autonomous Database. For more information on the Database Tools connection, see Using the Oracle Cloud Infrastructure Console. For more information on OCI permissions, see IAM Policies and Oracle Database Privileges.

To configure Document Generator:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.

   The APEX Instances page appears.
3. From the Row menu, click **View Details**.

   The APEX Instance Details page appears.
4. Click the **Actions** menu and select **Configure Document Generator**.

> **Note:**
>
> The Configure Document Generator option is only displayed for APEX instances where the workload type is **Data Warehouse**, **Transactional Processing**, or **JSON Database**.

In the Configure Document Generator page:

5. Select the Compartment.

6. Select the Connection.

   If you do not have a connection, you must create one manually. For more information on creating a connection, see Using the Oracle Cloud Infrastructure Console in *Oracle Cloud Infrastructure Documentation*. For more information on database privileges required, see IAM Policies and Oracle Database Privileges.

7. Select **Enable Document Generator for the APEX instance** to enable Document Generator for the selected connection.

   By default, **Enable Autonomous Database resource principal for the APEX instance** is selected and cannot be disabled until you disable **Enable Document Generator**.

8. In the **Document generator function** field, select the function you want.

   If the function is not available, you must create one manually. See Configuring the Document Generator Function in *Oracle Cloud Infrastructure Documentation* for more details.

9. Select the **Object storage bucket compartment for document templates and reports**. By default, this is the current compartment.

10. In the **IAM policy creation** section, create a policy group by entering a name in the **Policy name** field.

    > **Tip:**
    >
    > If you do not want to automatically create the policy, select **Do not create an IAM policy**.

11. (Optional) Change the **Policy compartment**.

12. Click **Configure**.

    If the Document Generator is enabled and the IAM policy created successfully, a green **Done** label appears when configuration is complete. If configuration does not complete, an error label appears.

13. Click **Close** to close the screen.

6

Monitor Oracle APEX Performance

Monitor Oracle APEX performance by viewing metrics.

> **Note:**
>
> Task instructions now use the Redwood Preview user interface. The **Redwood Preview** switch displays in the status bar at the bottom of the Browser window.

- Monitor APEX Service Performance
  Monitor APEX Service performance by viewing metrics.
- Monitor Autonomous Database
  Monitor database performance by viewing metrics, logs, and audit trails.

Monitor APEX Service Performance

Monitor APEX Service performance by viewing metrics.

- View Metrics for APEX Service
  Monitor the performance of your APEX Service by viewing metrics on the APEX Instance Details page.

View Metrics for APEX Service

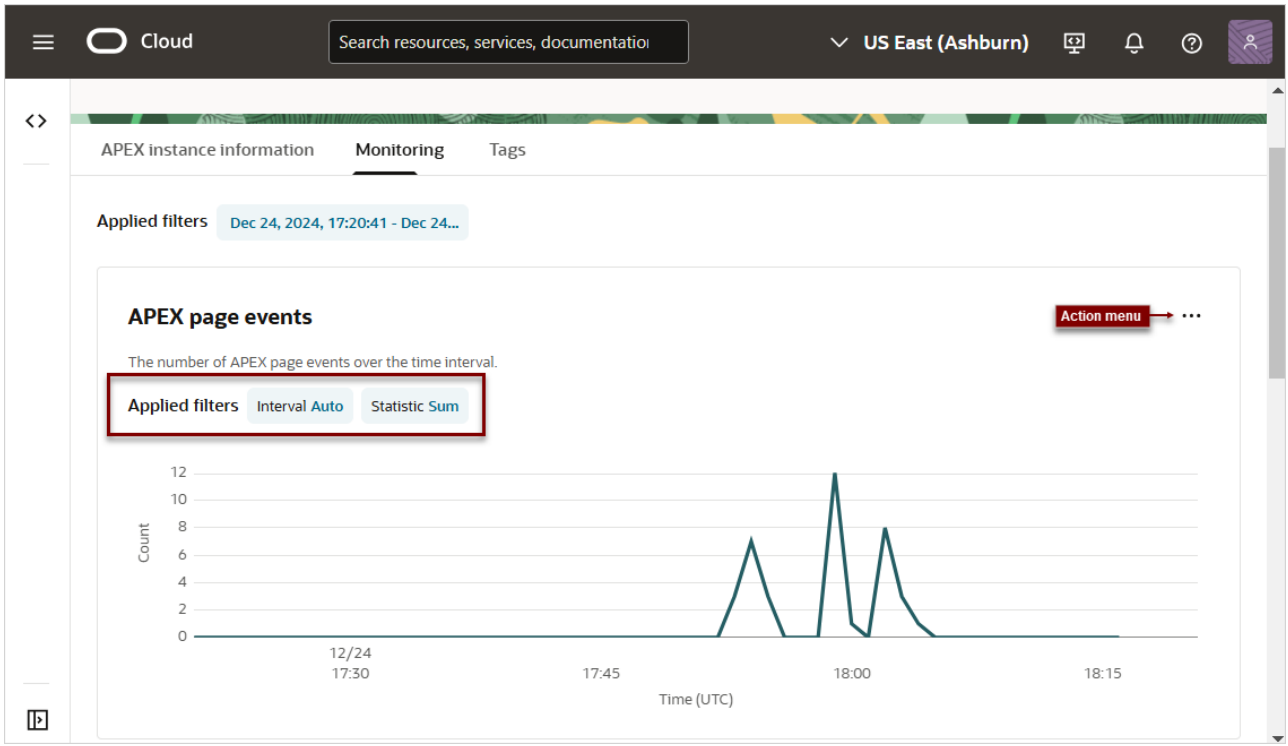
Monitor the performance of your APEX Service by viewing metrics on the APEX Instance Details page.

> **Note:**
>
> To view metrics you must have the required access as specified in an Oracle Cloud Infrastructure policy (whether you're using the Console, the REST API, or another tool). See Securing Monitoring in *Oracle Cloud Infrastructure Documentation*.

To view APEX metrics:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** ( ) and select **Developer Services** and then **APEX Instances**.

   The APEX Instances page appears.
3. Find your APEX Service instance and click the three dots (or Actions menu) and select **View details**.
4. On the APEX Instance Details page, click the **Monitoring** tab.



The following table describes the metrics on the APEX Instance Details page.

> **Note:**
>
> Metrics that are marked with an asterisk (*) require Application Activity Logging be enabled in APEX Administration Services and at the application level. See the Logging attribute in Properties in *Oracle APEX App Builder User's Guide* and Enabling Application Activity Logging in *Oracle APEX Administration Guide*.

Metric	Metric Display Name	Unit	Description	Collection Interval
`APEXPageEvents*`	APEX page events	Count	Displays the number of page events over time. Statistic: Sum Interval = 1 minute	5 minutes
`APEXApps*`	Active APEX applications	Count	Displays the number of active APEX applications over the time interval. Statistic: Sum Interval: 1 hour	5 minutes

Metric	Metric Display Name	Unit	Description	Collection Interval
APEXPageLoadTime*	APEX page load time	Seconds	Average APEX page execution time over the time interval. Statistic: Mean Interval = 1 minute	5 minutes
APEXWorkspaceCount	APEX workspaces	Count	Displays the number of APEX workspaces over the time interval. Statistic = Sum Interval = 1 minute	5 minutes

5. Control the display by clicking the following Applied filters: **Interval** and **Statistic**.
6. Click **Action** menu to access the following controls:
   - **Hide Legend/Show Legend**
   - **View Query in Metrics Explorer**
   - **Copy Chart URL**
   - **Copy Query (MQL)**
   - **Create an Alarm on this Query**
   - **Table View**

> **See Also:**
>
> - Overview of Monitoring and Managing Alarms in *Oracle Cloud Infrastructure Documentation*
> - Viewing Default Metric Charts in *Oracle Cloud Infrastructure Documentation*

Monitor Autonomous Database

Monitor database performance by viewing metrics, logs, and audit trails.

> **Tip:**
>
> You can limit the database instances where you see metrics with dimensions. The available dimensions include: workload type, instance display name, region, and the instance OCID. Use dimensions by selecting values in the Oracle Cloud Infrastructure Console Service Metrics page or by setting dimension values with the API.

- View Metrics for an Autonomous Database Instance
  View metrics for an Autonomous Database instance.

- View Autonomous Database Metrics in a Compartment
  View Autonomous Database metrics in a compartment.
- View Autonomous Database Logs and Audit Trails
  View Autonomous Database logs and audit trails.

> **See Also:**
>
> - View Autonomous Database Metrics in a Compartment to view metrics and to select metric dimensions.
> - Monitor and Manage Performance in *Using Oracle Autonomous Database Serverless*
> - Available Metrics: oci_autonomous_database in *Using Oracle Autonomous Database Serverless* to learn about the available database-centric metrics.

View Metrics for an Autonomous Database Instance

View metrics for an Autonomous Database instance.

> **Note:**
>
> To view metrics you must have the required access as specified in an Oracle Cloud Infrastructure policy (whether you're using the Console, the REST API, or another tool). See Securing Monitoring in *Oracle Cloud Infrastructure Documentation*.

To view metrics for an Autonomous Database.

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your service.
4. Under **Instance details**, find **Database** and click the Database *NAME*.
5. On the Autonomous Database details page, click the **Monitoring** tab.

   A chart displays for each metric.
6. For each chart, select the **Interval** and **Statistic**, or use the default values.

   > **Tip:**
   >
   > To learn about the available database-centric metrics, see Available Metrics: oci_autonomous_database in *Using Oracle Autonomous Database Serverless*.
7. Optionally, to view all the Autonomous Database metrics:
   a. Click **view all database metrics**.
   b. From **Metric namespace**, select **oci_autonomous_database**.

c. To edit **Dimensions**:
   - Next to **Dimensions**, click **Edit**.
   - In the Edit dimensions dialog, for **deploymentType** select **Shared**.
   - Click **Done**.

d. Control the time interval by configuring **Start time**, **End time**, or **Quick Selects**.

8. To create an alarm on a metric, click **Options** and select **Create an Alarm on this Query**.

> **See Also:**
>
> - Overview of Monitoring and Managing Alarms in *Oracle Cloud Infrastructure Documentation*
> - To use the Monitoring API to view metrics, see Monitoring API.

View Autonomous Database Metrics in a Compartment

View Autonomous Database metrics in a compartment.

> **Note:**
>
> To view metrics you must have the required access as specified in an Oracle Cloud Infrastructure policy (whether you're using the Console, the REST API, or another tool). See Getting Started with Policies.

To view Autonomous Database metrics in a compartment:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** (☰) and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your service.
4. Under **Instance details**, find **Database** and click the Database *NAME*.
5. On the Autonomous Database details page, click the **Monitoring** tab.
6. Click **view all database metrics**.
7. On the Service Metrics page:
   a. Compartment - Select your compartment.
   b. Metric namespace - Select **oci_autonomous_database**.
8. If you want to limit the metrics you see, next to **Dimensions** click **Add** (or click **Edit** if you have already added dimensions).
   a. **Dimension Name** field - Select a dimension.
   b. In the **Dimension Value** field - Select a value.
   c. Click **Done**.

9. To create an alarm on a metric, click **Options** and select **Create an Alarm on this Query**.

> **See Also:**
>
> Overview of Monitoring and Managing Alarms in *Oracle Cloud Infrastructure Documentation*

View Autonomous Database Logs and Audit Trails

View Autonomous Database logs and audit trails.

> **Note:**
>
> To view logs and audit trails you must have the required access as specified in an Oracle Cloud Infrastructure policy (whether you're using the Console, the REST API, or another tool). See Getting Started with Policies for information on policies.

To view audit trails and logs for an Autonomous Database instance:

1. Navigate to the OCI Console Sign-In Page and sign in as described in Access Oracle Cloud Infrastructure.
2. Next to the Oracle Cloud logo, click the **Navigation menu** () and select **Developer Services** and then **APEX Instances**.
3. On the APEX Instances page, find and select your service.
4. Under **Instance details**, find **Database** and click the Database *NAME*.
5. On the Autonomous Database details page, scroll down to **Metrics** and click **View audit and logs**.
6. Under Logging,
   - Click **Logs** to view log information.
   - Click **Audit** to view audit information.

> **See Also:**
>
> - Audit Autonomous Database in *Using Oracle Autonomous Database Serverless*
> - Audit Logs in *Oracle Cloud Infrastructure Documentation*

7

Learn About Oracle APEX

After you create an APEX service and create a workspace and workspace administrator account, you can start exploring Oracle APEX.

> **Note:**
>
> The first time you click **Launch APEX**, the Administration Services Sign In page appears. Once you sign in, a wizard walks you through creating a workspace and Workspace administrator account as described in Set Up a New APEX Service. In subsequent sessions, clicking **Launch APEX** displays the Oracle APEX Sign In page. From here you can continue to set up your workspace and create additional workspaces, user accounts, or configure other administration options.

- Understand Oracle APEX Administration
  Access Oracle APEX Administration Services (Administration Services) to perform administration tasks such as managing user accounts, creating workspaces, monitoring workspace activity, and viewing log files.
- Create More Workspaces
  Create additional workspaces in Administration Services on the Manage Workspaces page.
- Create APEX Accounts
  To sign in to your workspace and start building application, you must have an APEX account with either Developer or Workspace Administrator privileges.
- Edit an Existing APEX Account
  Update user attributes, edit account privileges, or change the user account password on the Create/Edit Users page in Administration Services.
- Sign In and Explore Your Workspace
  Once you have created workspaces and APEX user accounts, you can sign in to your workspace and start exploring Oracle APEX.
- About Oracle APEX Upgrades
  APEX Service upgrades work the same as with other Autonomous Database products.
- Find Oracle APEX Resources
  Learn more about where to find Oracle APEX resources.

> **See Also:**
>
> Restrictions and Limitations for Oracle APEX

Understand Oracle APEX Administration

Access Oracle APEX Administration Services (Administration Services) to perform administration tasks such as managing user accounts, creating workspaces, monitoring workspace activity, and viewing log files.

> **Tip:**
>
> To learn more about Oracle APEX administration, see Oracle APEX Administration Services in *Oracle APEX Administration Guide*.

About Instances and Workspaces

Creating an APEX Service creates an Oracle APEX instance which can contain multiple workspaces.

In an Oracle APEX development environment, users users sign in to a shared work area called a workspace. A workspace enables multiple users to work within the same Oracle APEX instance while keeping their objects, data and applications private. This flexible architecture enables a single database instance to manage hundreds of applications.

About APEX User Accounts

You sign in to a workspace using an APEX user account.

Creating a workspace also creates a workspace administrator account. You can create additional APEX users in Administration Services. APEX users are divided into the following roles.

- **End users** do not have access to development or administrative capabilities. End users cannot sign into a workspace and create applications. End users can only run existing applications.
- **Developers** are users who create and edit applications, monitor workspace activity, and view dashboards. Only user accounts with Developer rights can sign into a workspace.
- **Workspace administrators** are users who perform administrator tasks specific to a workspace. A workspace administrator account is created for you when you create a workspace. Workspace administrators have both workspace administrator and developer privileges.
- **Instance administrators** are users who perform administration tasks over the entire APEX instance, such as workspace creation, monitoring activity and viewing log files. The Instance administrator account `ADMIN` is created for you when you create an APEX Service instance. Use the ADMIN administrator account to sign into Administration Services.

Create More Workspaces

Create additional workspaces in Administration Services on the Manage Workspaces page.

To create additional workspaces in Administration Services:

1. Sign in to Administration Services as described in Sign In To Administration Services.
2. On the Administration Services home page, click **Manage Workspaces**.
3. Under Workspace Actions, click **Create Workspace**.

   The Create Workspace Wizard appears.
4. On the Create Workspace:
   a. Specify how to create your workspace. If you are just getting started, choose **New Schema**.

      Options include:

      - **New Schema** - Create a new database schema for your workspace:
        - Workspace Name - Enter a name for the workspace. A workspace is a shared work area where multiple developers can build applications.
        - Workspace Username - Enter the username of the workspace administrator.
        - Workspace Password - Enter a password for the workspace administrator. See Help for details about default password complexity rules.
        - Advanced - Optionally expand the **Advanced** region and edit the following:
          * Advanced , Database Password - Enter a password for the workspace database user. See Help for details about default password complexity rules.
          * Advanced , Workspace ID - Leave Workspace ID blank to have the new Workspace ID automatically generated. A Workspace ID must be a positive integer greater than 100000.
      - **Existing Schema** - Associate your workspace with an existing database schema:
        - Database User - Select the existing database user for the workspace. Applications will be created against database objects from this schema
        - Workspace Name - Enter a name for the workspace. A workspace is a shared work area where multiple developers can build applications.
        - Workspace Username - Enter the username of the workspace administrator.
        - Workspace Password - Enter a password for the workspace administrator. See Help for details about default password complexity rules.
        - Advanced - Optionally expand the **Advanced** region and edit the following:
          * Workspace ID - Leave Workspace ID blank to have the new Workspace ID automatically generated. A Workspace ID must be a positive integer greater than 100000.

> **Note:**
>
> Make a note of the Workspace Name, Workspace Username, and Workspace Password. You will use these credentials to sign into your workspace.

b. Click **Create Workspace**.

Administration Services appears.

> **See Also:**
>
> Managing Existing Workspaces in *Oracle APEX Administration Guide*

Create APEX Accounts

To sign in to your workspace and start building application, you must have an APEX account with either Developer or Workspace Administrator privileges.

When you create a workspace, a workspace administrator account is created for you. The following task describes how to create additional user accounts in Administration Services.

To create new APEX account:

1. Sign in to Administration Services as described in Sign In To Administration Services.
2. Click **Manage Workspaces**.
3. Under Workspace Actions, click **Manage Developers and Users**.

   The Manage Developers and Users page appears.
4. Click **Create User**.

   The Create / Edit User page appears.
5. Under User Attributes:
   a. Username - Enter the username used to sign in to the system.
   b. Email Address - Enter a valid e-mail address.

      The remaining attributes are optional. To learn more about an attribute, see field-level Help.
6. Under Account Privileges:
   a. Workspace - Select the workspace in which to create the user.
   b. Default Schema - Select the default schema for this user.
   c. Accessible Schemas (null for all) - Enter a colon-delimited list of schemas for which this developer has permissions when using the SQL Workshop. The list of schemas you enter here restricts the user to a subset of the full set of schemas provisioned for the workspace and determines what schema names the user sees in SQL Workshop.
   d. To specify workspace administrator privileges:
      - User is an administrator- Select **Yes**.

        Administrator accounts automatically have all developer privileges enabled.

e. To specify developer privileges:
   - User is an administrator- Select **No**.
   - User is a developer - Select **Yes**.
   - App Builder Access - Determines whether a developer has access to App Builder. Use App Builder to create and manage applications and application pages. Select **Yes** or **No**.
   - SQL Workshop Access - Determines whether a developer has access to the SQL Workshop. SQL Workshop provides tools that enable you to view and manage database objects. Select **Yes** or **No**
   - Team Development Access - Determines whether a user has access to the Team Development. Use Team Development to track and manage issues in a conversational fashion. Select **Yes** or **No**.

f. Account Availability - Select **Locked** to prevent the account from being used. Select **Unlocked** to allow the account to be used.

> **Tip:**
>
> To create an End User account, for **User is an administrator** and **User is a developer**, select **No**. End users can only run existing applications.

7. Under Password:
   a. Password - Enter a case-sensitive password.
   b. Confirm Password - Enter the password again.
8. Click **Create User** or **Create and Create Another**.

> **Tip:**
>
> Workspace administrators can also create and edit accounts in Workspace Administration. See Managing Users in a Workspace in *Oracle APEX Administration Guide*.

Edit an Existing APEX Account

Update user attributes, edit account privileges, or change the user account password on the Create/Edit Users page in Administration Services.

To edit an APEX user account:

1. Sign in to Administration Services as described in Sign In To Administration Services.
2. Click **Manage Workspaces**.
3. Under Workspace Actions, click **Manage Developers and Users**.
4. On Manage Developers and Users page, select a user.

   The Create/Edit User page appears.
5. Edit the appropriate User Attributes and Account Privileges.

   To learn more about an attribute, see field-level Help.

6. To reset the account password:
   a. Password - Enter the password.
   b. Confirm Password - Enter the password again.
7. Click **Apply Changes**.

Sign In and Explore Your Workspace

Once you have created workspaces and APEX user accounts, you can sign in to your workspace and start exploring Oracle APEX.

To sign in and explore your workspace:

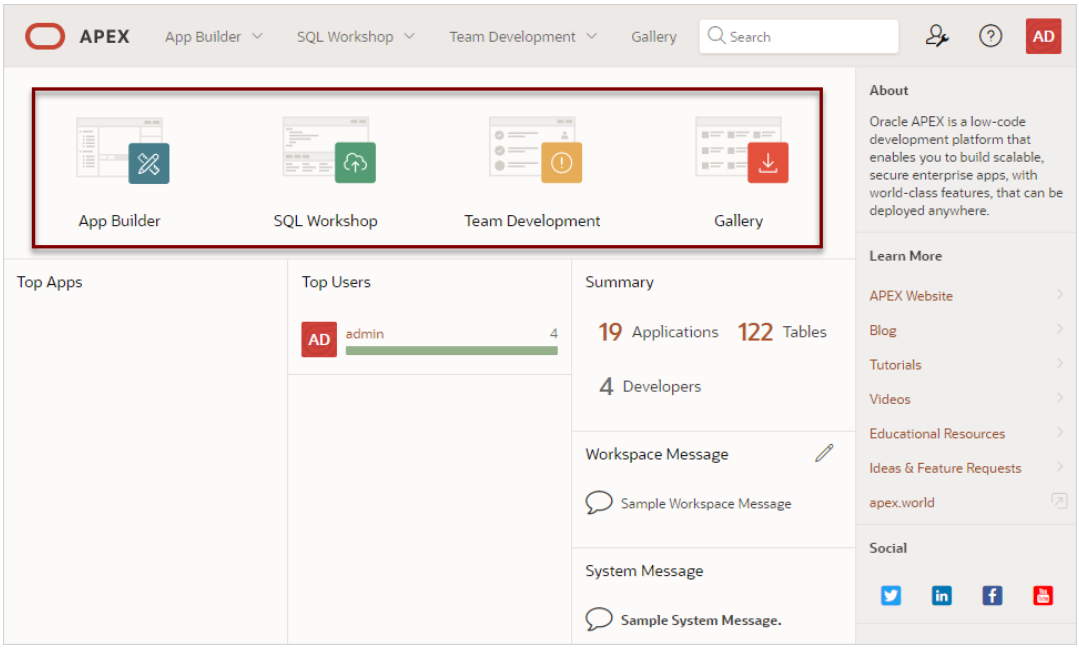
1. Sign in to your workspace as described in Sign In to a Workspace.

   The Workspace home appears.
2. Explore the Workspace home page.

   The center of the Workspace home page features the following large icons:

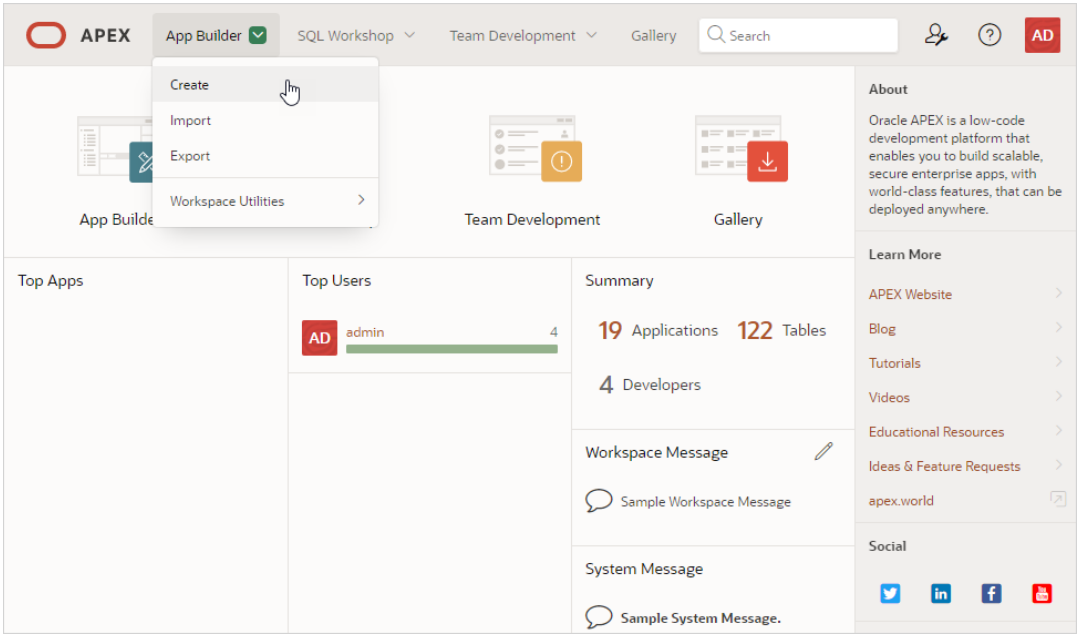
   - **App Builder** - Create an application, composed of a set of HTML pages, based on database objects.
   - **SQL Workshop** - Access tools for viewing and managing database objects.
   - **Team Development** - Track and manage issues in a conversational fashion. You can create templates to provide users with starter text for issues and comments. You can apply labels and label groups, assign issue owners, and set milestones.
   - **Gallery** - The Gallery enables you to access to Starter Apps, Sample Apps, and Custom Apps.

     Starter Apps are functional apps that provide stand-alone point-solutions, designed to meet simple requirements that do not require a large and unnecessarily complex solution. You can use these apps "out of the box" or extend them with your own custom functionality. *Sample Apps* highlight specific functionality and are intended to serve as a developer guide on how to make use of a particular feature. *Custom Apps* are custom applications that can be installed on your workspace if made available by your Instance Administrator.



3. Review the menu bar at the top of the page.

   A menu bar displays at the top of the page. This menu bar displays on most App Builder pages. Click a menu to access an alternate navigation path to different components or functions within App Builder, SQL Workshop, Team Development, or Gallery. The illustration that follows shows the **App Builder** menu.



To learn more about the controls on the Workspace home page, see Quick Start in *Oracle APEX App Builder User's Guide*.

About Oracle APEX Upgrades

APEX Service upgrades work the same as with other Autonomous Database products.

Once an upgrade becomes available, there is a 45-day window during which you can apply the upgrade at a day and time you choose. If you take no action, Oracle applies the upgrade automatically. For paid service instances, you can elect to get a longer 90-day time window instead of 45 days.

To learn more about deferring or applying Oracle APEX upgrades, see Control Oracle APEX Upgrades in *Using Oracle Autonomous Database Serverless*.

Find Oracle APEX Resources

Learn more about where to find Oracle APEX resources.

Available Oracle APEX resources include:

- *Oracle APEX Release Notes* - Contains important information not included in the Oracle APEX documentation.
- *Oracle APEX App Builder User's Guide* - Functions as a comprehensive, task-based reference on using the Oracle APEX development environment to build applications.
- *Oracle APEX Administration Guide* - Describes how to perform administration tasks such as managing workspaces and user accounts as well perform other workspace, application, and instance configuration tasks.
- *Oracle APEX SQL Workshop Guide* - Describes how to use SQL Workshop and other utilities to view and manage database objects, load and unload data from an Oracle database, generate DDL, view object reports, and restore dropped database objects.
- *Oracle APEX End User's Guide* - Explains common Oracle APEX end user tasks.
- *Oracle APEX API Reference* - Describes the Application Programming Interfaces, referred to as APIs, available when programming in the Oracle APEX environment.
- *Oracle APEX JavaScript API Reference* - Describes the JavaScript APIs available to Oracle APEX applications. You can use these functions to provide client-side functionality, such as showing and hiding page elements, or making Ajax (Asynchronous JavaScript and XML) requests.
- apex.world- Visit an online forum to post a question and collaborate with experts in the area of Oracle APEX.

To view all Oracle APEX publications, see the Oracle APEX Release 24.2 books page. To view all resources, see Oracle APEX Release 24.2.

A

Restrictions and Limitations for Oracle APEX

This section lists restrictions and limitations of Oracle APEX when running in the Oracle Autonomous Database Serverless configured for all workload types, including Oracle APEX Application Development (APEX Service).

- Oracle APEX Limitations on Autonomous Database
  This section summarizes restrictions and limitations of Oracle APEX included in Oracle Autonomous Database and APEX Service.
- Autonomous Database Limitations in APEX Service
  This section summarizes key restrictions and limitations of Autonomous Database in APEX Service.

Oracle APEX Limitations on Autonomous Database

This section summarizes restrictions and limitations of Oracle APEX included in Oracle Autonomous Database and APEX Service.

> **Tip:**
>
> This section does not apply to co-managed databases (for example, OCI Base Database Service) and Oracle Autonomous Database on Dedicated Exadata Infrastructure.

In a fully managed environment (such as Oracle Autonomous Database Serverless), certain limitations are required to protect the security and performance of your Oracle APEX environment.

- Administration Services - The following Oracle APEX Administration Services configuration options are disabled, or have been predefined by Oracle and cannot be altered.
  - Manage Instance, Feature Configuration:
    - Monitoring - Web Service Activity Logging, Enable Application Tracing
  - Manage Instance, Security, Security Settings:
    - Security - Unhandled Errors
    - Authentication Control:
      - HTTP Protocol - Require Outbound HTTPS
      - General - Single Sign-On Logout URL
  - Manage Instance, Manage Logs and Files:
    - SQL Workshop Log
    - Page View Activity Log
    - Developer Activity Log
    - External Click Counting Log

        - Login Access Log
        - Web Service Activity Log
        - REST Synchronization Log
        - Automation Log
    - Manage Instance, Instance Settings - Storage - All tablespace settings
    - Manage Instance, Workspace Purge Settings
    - Manage Workspaces, Existing Workspaces, Edit Workspace Information:
        - Login Control
        - Session Timeout
        - Workspace Isolation
- Only the following `APEX_INSTANCE_ADMIN` procedures and functions are supported:
    - `ADD_AUTHORIZED_URL`
    - `ADD_SCHEMA`
    - `ADD_WORKSPACE`
    - `CREATE_CLOUD_CREDENTIAL`
    - `CREATE_OR_UPDATE_ADMIN_USER`
    - `DISABLE_WORKSPACE`
    - `ENABLE_WORKSPACE`
    - `FREE_WORKSPACE_APP_IDS`
    - `GET_AUTHORIZED_URLS`
    - `GET_PARAMETER`
    - `GET_SCHEMAS`
    - `GRANT_EXTENSION_WORKSPACE`
    - `REMOVE_APPLICATION`
    - `REMOVE_AUTHORIZED_URL`
    - `REMOVE_SAVED_REPORTS`
    - `REMOVE_SAVED_REPORT`
    - `REMOVE_SCHEMA`
    - `REMOVE_SUBSCRIPTION`
    - `REMOVE_WORKSPACE`
    - `RESERVE_WORKSPACE_APP_IDS`
    - `REVOKE_EXTENSION_WORKSPACE`
    - `SET_LOG_SWITCH_INTERVAL`
    - `SET_PARAMETER`
    - `UNLOCK_USER`
    - `VALIDATE_EMAIL_CONFIG`

See APEX_INSTANCE_ADMIN in *Oracle APEX API Reference*.

- The following application authentication schemes are supported with limitations:
  - LDAP Directory, including `APEX_LDAP` API: With the same restrictions that apply to the `DBMS_LDAP` package.

    See PL/SQL Packages Notes for Autonomous Database in *Using Oracle Autonomous Database Serverless*.
  - SAML Sign-In: Only when using a customer managed ORDS.

    See About Customer Managed Oracle REST Data Services on Autonomous Database in *Using Oracle Autonomous Database Serverless*.
- Disabled options in SQL Workshop:

  The ability to create and manage database links in Object Browser is disabled. To create a database link, use the `DBMS_CLOUD_ADMIN.CREATE_DATABASE_LINK` PL/SQL API.

  See Use Database Links Autonomous Database in *Using Oracle Autonomous Database Serverless*.
- Runtime environment:

  Oracle APEX is only available as a Full Development environment. Converting into a Runtime environment, which minimizes the installed software footprint and removes UI components such as App Builder and Administration Services, is not supported.

  See About the Differences Between Runtime and Full Development Environments in *Oracle APEX App Builder User's Guide* to learn more.

Autonomous Database Limitations in APEX Service

This section summarizes key restrictions and limitations of Autonomous Database in APEX Service.

APEX Service includes an optimized version of Oracle Autonomous Transaction Processing.

- **Restrictions of the Autonomous Database included with APEX Service**:
  - No support for Oracle Database clients. Inbound Oracle Net Services (SQL*Net) connectivity is not available.
  - No ability to store database client connections (SQL*Net) in Connections service.
  - Deployment of the customer managed Oracle REST Data Services is not supported.
  - Full and metadata instance (database) cloning is supported, but refreshable clones are not.
  - Oracle Machine Learning (OML) Zeppelin notebook not included.
  - No support for registering as an Oracle DataSafe endpoint. If you upgrade from Always Free Oracle Autonomous Transaction Processing to APEX Service, and the Oracle Autonomous Transaction Processing instance was registered as a DataSafe endpoint previously, then the user is required to de-register as part of the upgrade process.
  - No ability to set up Autonomous Data Guard standbys.
  - Directly accessing the pre-configured REST-SQL endpoint (with URL ending in `/sql`) is prohibited.
  - Graph Studio not included.

  - No support for putting the database in read-only mode.
  - No support for MongoDB compatible APIs.
  - No support for Data Transforms under Data Studio.
- **Service packaging and licensing capabilities**:
  - No BYOL license type
  - No Dedicated Infrastructure version
  - Not included in Oracle Cloud@Customer offerings

To access the capabilities described in the previous list, upgrade APEX Service to Oracle Autonomous Transaction Processing.

B

Always Free Oracle APEX Application Development

This section describes configuration differences, restrictions, and additional details for Always Free Oracle APEX Application Development (Always Free APEX Service).

You have the option to create a limited number of Always Free APEX Services that do not consume cloud credits. Always Free APEX Service can be created in Oracle Cloud Infrastructure accounts that are in a trial period, have paying status, or are always free. This section describes configuration differences, restrictions, and additional details for Always Free APEX Service.

Sign Up with Oracle Cloud Free Tier

These are the services you can use for an unlimited time:

- Two free services based on Oracle Autonomous database.
- Two Oracle Cloud Infrastructure Compute VMs; Block, Object, and Archive Storage; Load Balancer and data egress; Monitoring and Notifications.

See Oracle Cloud Free Tier to start for free.

Resource Restrictions for Always Free APEX Service

- The Always Free option provides databases that have CPU and storage included and you are never billed for an Always Free APEX Service instance until the instance is upgraded to a paid Autonomous Database.
- Maximum of approximately 20 GB Exadata storage per database (you may see more than this).
- Maximum of 30 simultaneous database sessions.
- Maximum of 2 Always Free Autonomous Database instances per Oracle Cloud Infrastructure tenancy. The Always Free Autonomous Database workload types are: Data Warehouse, Transaction Processing, JSON Database, and APEX Service. If you create 2 Always Free instances, they can be the same or different Autonomous Database workload types.
- The HTTP interface for Always Free APEX Service is rate limited to restrict the number of simultaneous service users. Approximately 3-6 simultaneous users can be supported across all of the APEX, Oracle REST Data Services, and Database Actions running on your Always Free Autonomous Databases. Additional simultaneous users beyond that may result in users encountering HTTP errors such as HTTP status code 429. Note this restriction is specific to the Always Free version of Always Free APEX Service.

  This HTTP interface rate limit applies only for the Always Free version of APEX Service.

> **Note:**
>
> - Always Free APEX Service cannot be scaled manually or automatically beyond the fixed resource restrictions described above.
> - The Maximum of 30 simultaneous database sessions limit for Always Free allows you to work with Always Free APEX Service; however, if your usage includes many simultaneous users then you can exceed these limits, resulting in errors. To avoid such errors, obtain more resources by upgrading to paid service. See Upgrade APEX Service to Oracle Autonomous Transaction Processing.
> - Always Free APEX Service cannot be provisioned as a private endpoint and cannot reside within a Virtual Cloud Network (VCN). For information on private access and private endpoints, see Configure Network Access with Private Endpoints in *Using Oracle Autonomous Database Serverless*.

Supported Oracle Database Version

The available Database versions for Always Free Oracle APEX Application Development are: Oracle Database 19c or Oracle Database 23ai.

Regional Availability for Always Free APEX Service

- Always Free APEX Service is available worldwide in most Oracle Cloud Infrastructure data regions. See Data Regions Services available in all cloud regions for more details on where Always Free databases are supported.
- When you sign up for Oracle Cloud Infrastructure, Oracle creates a tenancy and designates a home data region for the tenancy that you specify. You can create an instance of Always Free APEX Service only in this home data region. You cannot create an instance in other data regions that you later subscribe the tenancy to. See The Home Region for more information.

> **Note:**
>
> Oracle Autonomous Database 23ai Free is available in the following regions: Ashburn, Phoenix, Frankfurt, and London. To take advantage of new APEX capabilities available with Oracle Database 23ai (for example, Server-side JavaScript), your tenancy must have a home region of one of those regions, and you must provision your APEX Service in your home region.

Backup Functionality and Always Free APEX Service

- Always Free APEX Service includes the ability to backup applications within a workspace as described in Managing Application Backups in *Oracle APEX App Builder User's Guide*.
- Always Free APEX Service does not support full backups to your Oracle Cloud Infrastructure object storage.
- Always Free APEX Service does not support restoring from full database backups.

See Backing Up and Restoring Autonomous Database in *Using Oracle Autonomous Database Serverless*for more information.

Inactivity Monitoring and Database Stoppage

If your Always Free APEX Service is persistently inactive, this is detected and handled as follows:

- After being inactive for 7 days, the instance will automatically stop, preserving its stored data. Inactivity measurements leading up to 7 days are based on database connections. Successfully making a HTTPS connection resets these measurements to zero.
- An instance that is automatically or manually stopped and stays inactive for 90 days cumulatively may be reclaimed and permanently deleted. Inactivity measurements leading up to 90 days are based on the instance being inactive or in the stopped state. Starting a stopped instance resets these measurements to zero.

  Start Always Free APEX Service by clicking the **Start** button on the Oracle Cloud Infrastructure console. Start a stopped Always Free APEX Service instance before 90 days to avoid losing access to its data.

  When you start Always Free APEX Service from the stopped state, you need to wait about 5 minutes before attempting to connect to an APEX application or to an Oracle REST Data Services (ORDS) endpoint. If you attempt to connect before the background APEX and ORDS startup completes, then you may see HTTP error messages.
- In Always Free APEX Service the Oracle Cloud Infrastructure console shows banner alerts prior to automatic stop and permanent delete operations occurring. If you subscribe to Oracle Cloud Infrastructure Alerts and Notifications, you also will receive email notifications.