



ORACLE

# User provisioning from azureAD to IDCS

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**Inge Os**

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# Documentation Links



<https://docs.microsoft.com/en-us/azure/active-directory/saas-apps/oracle-cloud-infrastructure-console-provisioning-tutorial>

## Required information

The Base IDCS URL, in the format:

`https://idcs-518xxxxxxxxxxxxxxxxxxxxxxxxx728.identity.oraclecloud.com/`

azureAD require two URL's

Identity Identifier:

`<base IDCS URL>/fed`

Reply URL (Assertion Consumer Service URL)

`<base IDCS URL> //fed/v1/sp/sso`

Sign on URL

`https://console.eu-frankfurt-1.oraclecloud.com/`

Includes home region, in this case eu-Frankfurt-1

# Creation of azureAD Enterprise Application from gallery

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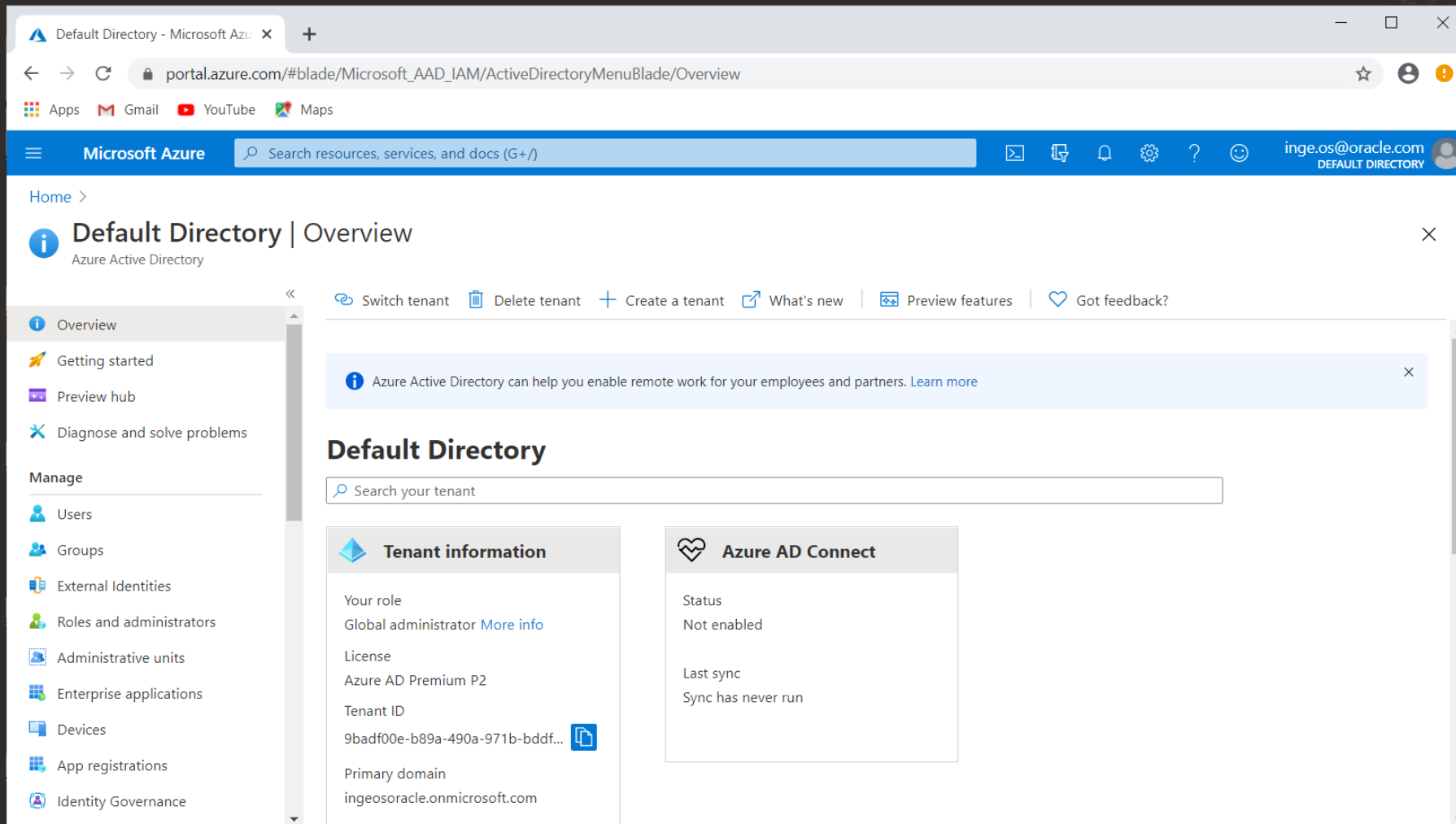
# Initial creation

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The easiest way to integrate Oracle IDCS with azureAD, is to use the Enterprise application from the Enterprise Application Gallery in azureAD

The name is a bit misleading “Oracle Cloud Infrastructure”, is not for direct integration with OCI IDM, but for integration between azureAD and Oracle IDCS

# Choose the desired directory to integrate with



The screenshot displays the Microsoft Azure portal interface for the 'Default Directory' (Azure Active Directory) Overview page. The browser address bar shows the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ActiveDirectoryMenuBlade/Overview`. The page header includes the Microsoft Azure logo, a search bar, and the user profile 'inge.os@oracle.com' with the role 'DEFAULT DIRECTORY'. The left sidebar contains navigation links: Overview, Getting started, Preview hub, Diagnose and solve problems, Manage, Users, Groups, External Identities, Roles and administrators, Administrative units, Enterprise applications, Devices, App registrations, and Identity Governance. The main content area features a 'Default Directory | Overview' header with a close button. Below this is a navigation bar with links: Switch tenant, Delete tenant, Create a tenant, What's new, Preview features, and Got feedback?. A blue information banner states: 'Azure Active Directory can help you enable remote work for your employees and partners. [Learn more](#)'. The main content is divided into two panels: 'Tenant information' and 'Azure AD Connect'. The 'Tenant information' panel lists: Your role (Global administrator [More info](#)), License (Azure AD Premium P2), Tenant ID (9badf00e-b89a-490a-971b-bddf...), and Primary domain (ingeosoracle.onmicrosoft.com). The 'Azure AD Connect' panel shows: Status (Not enabled) and Last sync (Sync has never run).

Default Directory - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ActiveDirectoryMenuBlade/Overview

Microsoft Azure Search resources, services, and docs (G+)

Home > Default Directory | Overview Azure Active Directory

Switch tenant Delete tenant Create a tenant What's new Preview features Got feedback?

Azure Active Directory can help you enable remote work for your employees and partners. [Learn more](#)

## Default Directory

Search your tenant

### Tenant information

Your role  
Global administrator [More info](#)

License  
Azure AD Premium P2

Tenant ID  
9badf00e-b89a-490a-971b-bddf...

Primary domain  
ingeosoracle.onmicrosoft.com

### Azure AD Connect

Status  
Not enabled

Last sync  
Sync has never run



# Select Enterprise applications

Enterprise applications - Microsoft

portal.azure.com/#blade/Microsoft\_AAD\_IAM/StartboardApplicationsMenuBlade/AllApps/menuld/

Apps Gmail YouTube Maps

Microsoft Azure

Search resources, services, and docs (G+)

inge.os@oracle.com  
DEFAULT DIRECTORY

Home > Default Directory > Enterprise applications

Enterprise applications | All applications

Default Directory - Azure Active Directory

Overview

Overview

Diagnose and solve problems

Manage

All applications

Application proxy

User settings

Collections

Security

Conditional Access

Consent and permissions

Activity

Sign-ins

New application

Columns

Preview features

Got feedback?

Try out the new Enterprise Apps search preview! Click to enable the preview. →

Application type

Enterprise Applications

Applications status

Any






Application visibility

Any

Apply

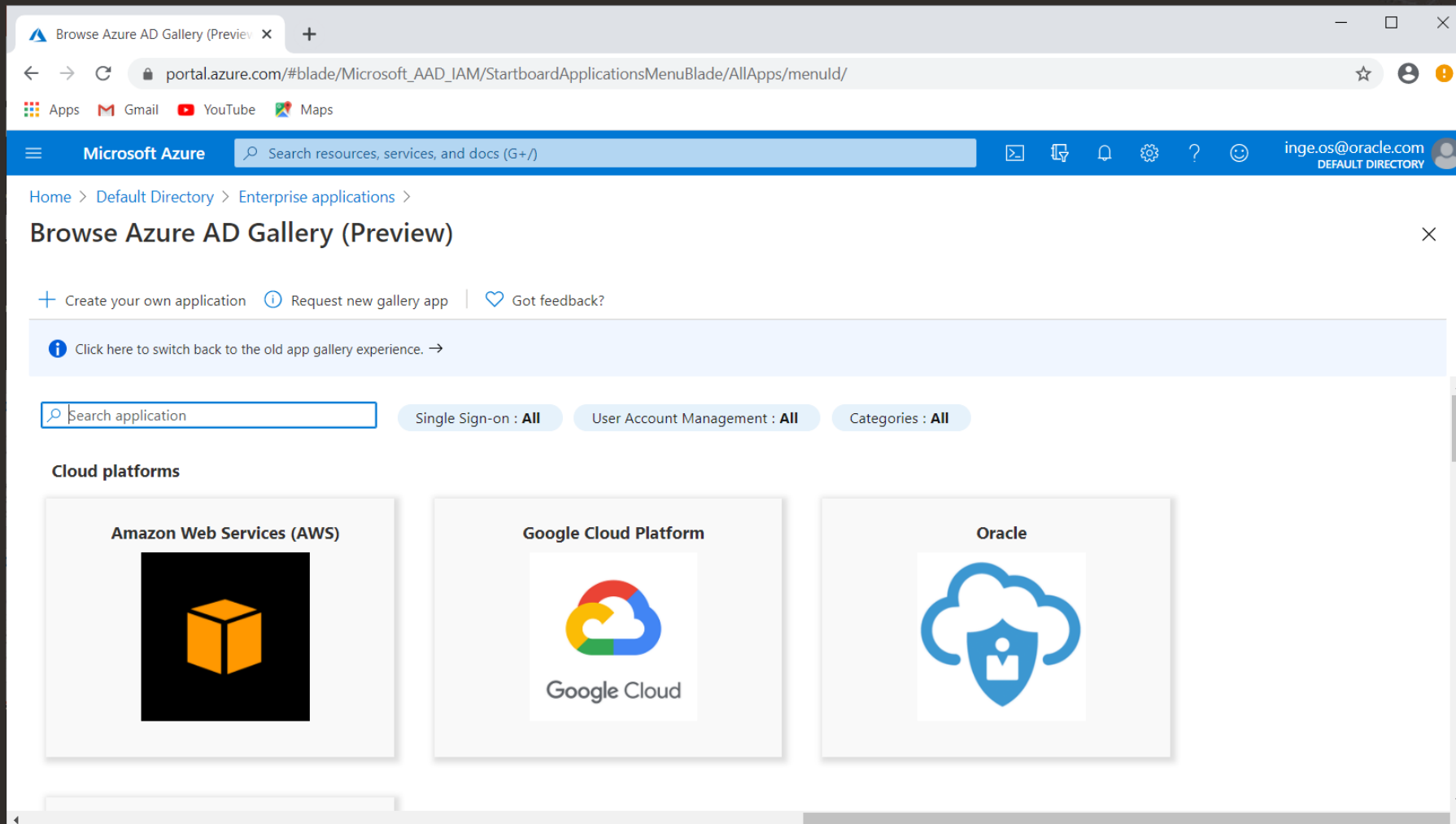
Reset

First 50 shown, to search all of your applications, enter a display name or the application ID.

Name	Homepage URL	Object ID	Application ID
 Office 365 Exchange Online	http://office.microsoft.com/outlook/	32b04168-8921-425d-9b22-873...	00000002-0000-0ff1-ce00-00000...
 Office 365 Management APIs		4aa618ba-64fa-4395-96c2-628c7...	c5393580-f805-4401-95e8-94b7...
 Office 365 SharePoint Online	http://office.microsoft.com/sharepoint/	6fd99538-964b-4993-a371-8bba...	00000003-0000-0ff1-ce00-00000...
 Outlook Groups		c7bd6ca7-dd3f-4371-aecf-4f91f7...	925eb0d0-da50-4604-a19f-bd8d...
 Skype for Business Online		b382bb89-1317-4e97-a6e9-3496...	00000004-0000-0ff1-ce00-00000...

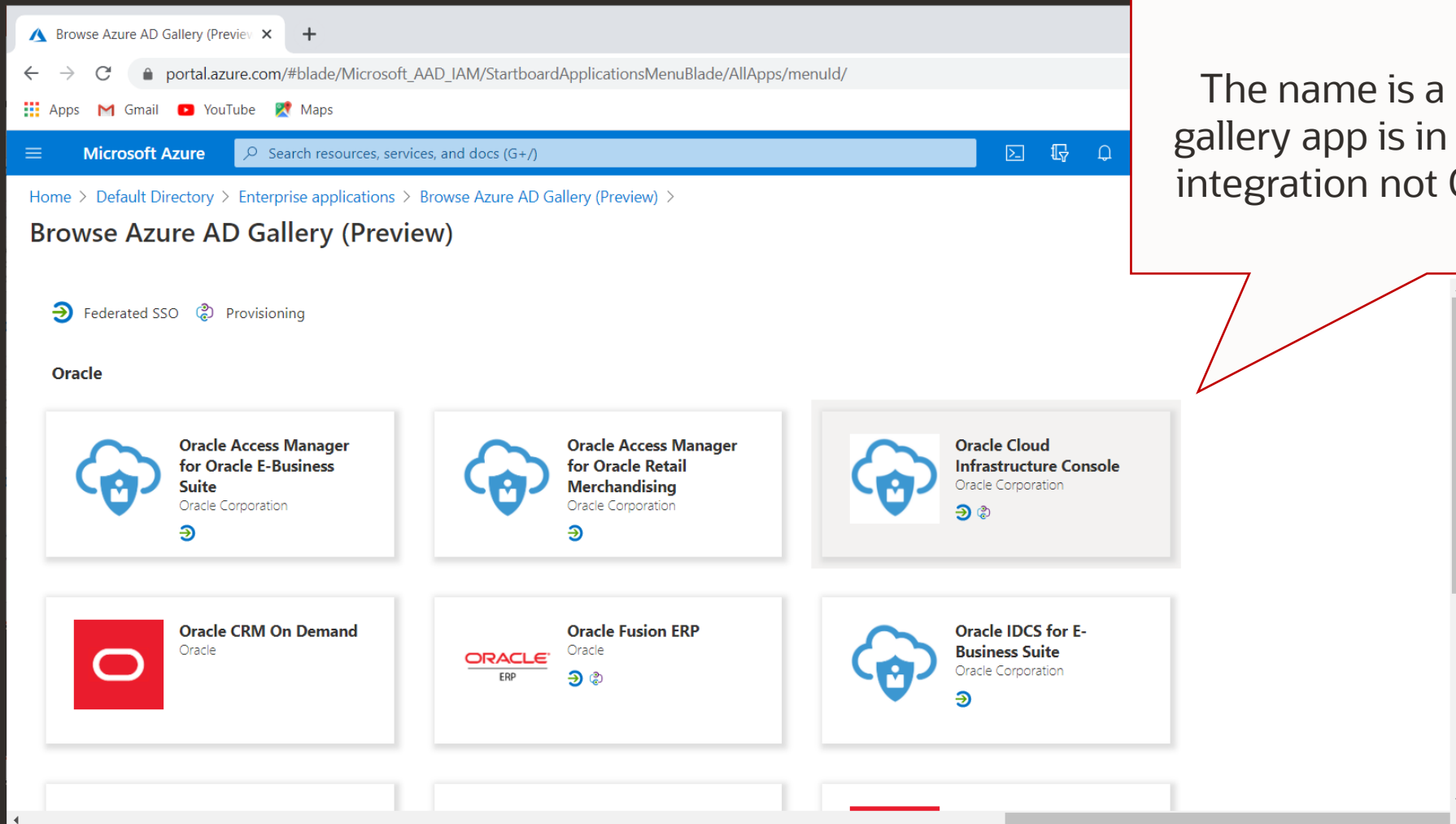


# Choose Oracle or search for Oracle in the search box





# Select Oracle cloud Infrastructure console



The name is a bit confusing. The gallery app is in fact for Oracle IDCS integration not OCI IDM integration

# Click on the tile to gain access to the create panel

The screenshot shows the Microsoft Azure portal interface. The browser address bar displays the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/StartboardApplicationsMenuBlade/AllApps/menuId/`. The page title is "Browse Azure AD Gallery (Preview)". The left sidebar shows the navigation menu with "Home", "Default Directory", "Enterprise applications", and "Browse Azure AD Gallery (Preview)". The main content area displays a grid of application tiles. The "Oracle" category is selected, showing four tiles: "Oracle Access Manager for Oracle E-Business Suite", "Oracle Access Manager for Oracle Retail Merchandising", "Oracle CRM On Demand", and "Oracle Fusion ERP". The "Oracle Cloud Infrastructure Console" tile is highlighted, and its details are shown in a side panel on the right. The details panel includes the Oracle logo, the name "Oracle Cloud Infrastructure Console", the publisher "Oracle Corporation", and the provisioning status "Automatic provisioning supported". It also lists the single sign-on modes: "SAML-based Sign-on" and "Linked Sign-on", and the URL: `https://cloud.oracle.com/en_US/iaas`. A "Create" button is visible at the bottom of the details panel.

Oracle Cloud Infrastructure Console

Logo ⓘ

Name \* ⓘ

Oracle Cloud Infrastructure Console

Publisher ⓘ

Oracle Corporation

Provisioning ⓘ

Automatic provisioning supported

Single Sign-On Mode ⓘ

SAML-based Sign-on  
Linked Sign-on

URL ⓘ

`https://cloud.oracle.com/en_US/iaas`

[Read our step-by-step Oracle Cloud Infrastructure Console integration tutorial](#)

Oracle Cloud Infrastructure combines the benefits of public cloud and on-premises environments (governance, predictability, control) into a single offering.

Create

# Select the Enterprise App after it is created, for bot federation and provisioning

The screenshot shows the Microsoft Azure portal interface for managing Enterprise applications. The breadcrumb navigation indicates the path: Home > Default Directory > Enterprise applications. The page title is "Enterprise applications | All applications".

On the left sidebar, under the "Manage" section, "All applications" is selected. Other options include Application proxy, User settings, Collections, Conditional Access, Consent and permissions, and Sign-ins.

The main content area shows filters for Application type (Enterprise Applications), Applications status (Any), and Application visibility (Any). Below the filters is a search bar with the text "First 50 shown, to search all of your applications, enter a display name or the application ID.".

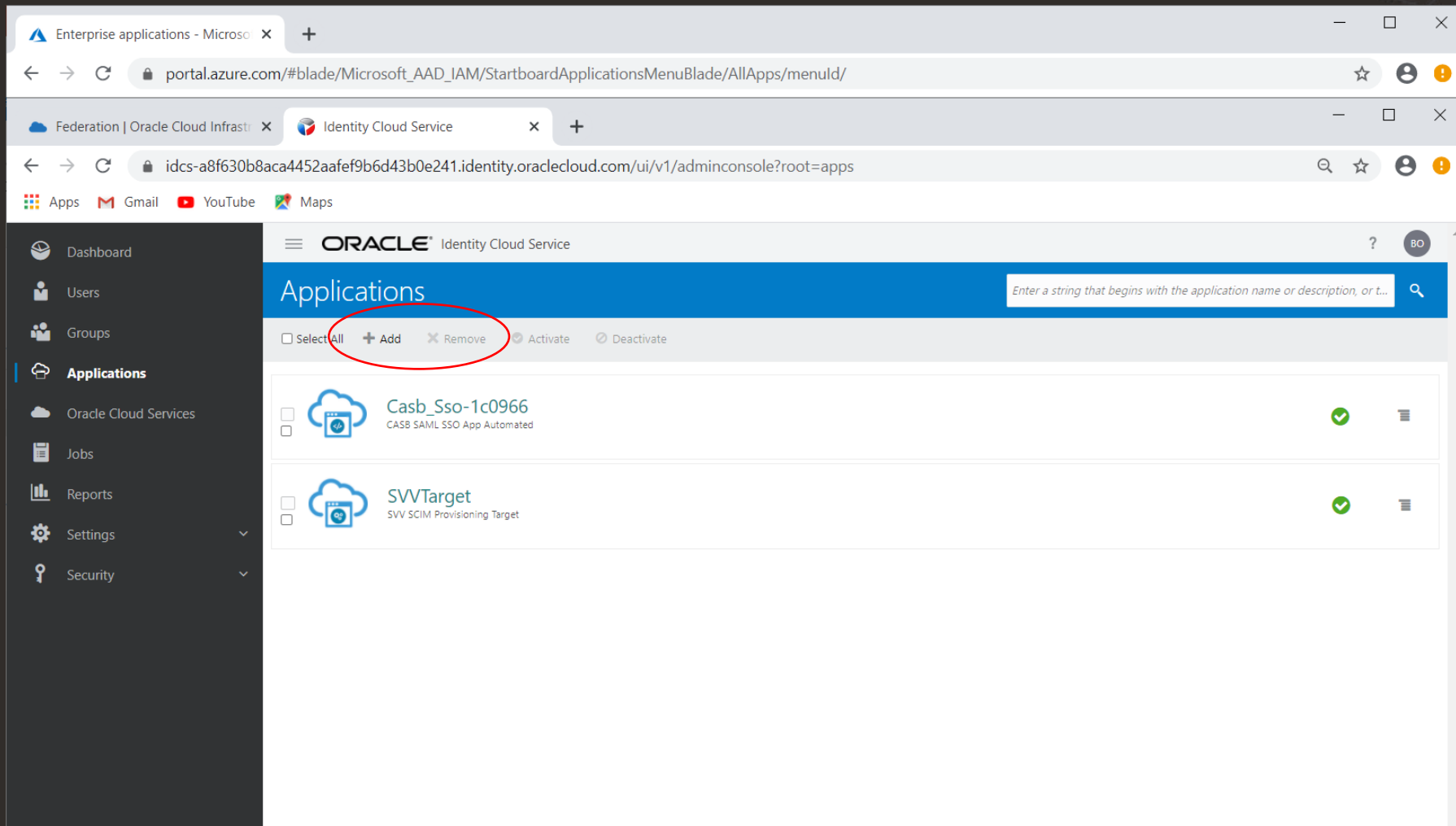
The table below lists the applications:

Name	Homepage URL	Object ID	Application ID
Office 365 Exchange Online	http://office.microsoft.com/outlook/	32b04168-8921-425d-9b22-873...	00000002-0000-0ff1-ce00-00000...
Office 365 Management APIs		4aa618ba-64fa-4395-96c2-628c7...	c5393580-f805-4401-95e8-94b7...
Office 365 SharePoint Online	http://office.microsoft.com/sharepoint/	6fd99538-964b-4993-a371-8bba...	00000003-0000-0ff1-ce00-00000...
Oracle Cloud Infrastructure Console	https://cloud.oracle.com/en_US/iaas	619fd6bd-c551-4030-8516-5ceff...	1576b356-63d5-4eb1-8a19-020...
Outlook Groups		c7bd6ca7-dd3f-4371-aecf-4f91f7...	925eb0d0-da50-4604-a19f-bd8d...
Skype for Business Online		b382bb89-1317-4e97-a6e9-3496...	00000004-0000-0ff1-ce00-00000...

# Creation of Oracle IDCS Confidential Application


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# Add a Confidential application to IDCS, click add




# Select Confidential Applications


Add Application

**App Catalog**


Add an application from the Application Catalog.

**SAML Application**


Create an application that supports SAML for Single Sign On.

**Mobile Application**

Create a mobile/single-page application that uses OAuth 2.0. These applications cannot maintain the confidentiality of their client secret.

**Confidential Application**

Create a web-server/server-side application that uses OAuth 2.0. These apps typically run on a server and can maintain the confidentiality of their client secret.

**Enterprise Application**

Create a web application that is protected by the App Gateway.



# Enter the name

Federation | Oracle Cloud Infrast

Identity Cloud Service

← → ↻

idcs-a8f630b8aca4452aafe9b6d43b0e241.identity.oraclecloud.com/ui/v1/adminconsole?root=apps&app=add-CustomWebAppTemplateId

🔍 ☆ 👤 ⚠

📱 Apps

📧 Gmail

📺 YouTube

📍 Maps

Dashboard

Users

Groups

**Applications**

Oracle Cloud Services

Jobs

Reports

Settings

Security

ORACLE Identity Cloud Service

?

BO

Add Confidential Application

Cancel

1

Details

2

Client

3

Resources

4

Authorization

Next >

App Details


\* Name

IDCS Azure

Enter 125 or fewer characters.

Description

Application Icon



Upload

Application URL

Custom Login URL

Custom Logout URL

Custom Error URL

Linking callback URL



# Select Client Credentials

Federation | Oracle Cloud Infrastr

Identity Cloud Service

←

→

↻

idcs-a8f630b8aca4452aafef9b6d43b0e241.identity.oraclecloud.com/ui/v1/adminconsole?root=apps&app=add-CustomWebAppTemplateId

🔍

☆

👤

🔔

📱 Apps

📧 Gmail

📺 YouTube

📍 Maps

🏠 Dashboard

👤 Users

👥 Groups

📁 Applications

☁️ Oracle Cloud Services

📅 Jobs

📊 Reports

⚙️ Settings

🔑 Security

ORACLE Identity Cloud Service

?

BO

Add Confidential Application

← Back

○

2

3

4

Details

Client

Resources

Authorization

Next >

☒ Configure this application as a client now

☐ Skip for later

Authorization

Allowed Grant Types

☐ Resource Owner

☒ Client Credentials

☐ JWT Assertion

☐ SAML2 Assertion

☐ Refresh Token

☐ Authorization Code

☐ Implicit

☐ Device Code

Allow non-HTTPS URLs

☐

Redirect URL

Logout URL

Post Logout Redirect URL

Security

☐ Trusted Client Certificate

Import

Allowed Operations

☐ Introspect

☐ On behalf Of

Bypass Consent

☐

Token Issuance Policy ⓘ

Authorized Resources

☐ All

☐ Tagged

☒ Specific

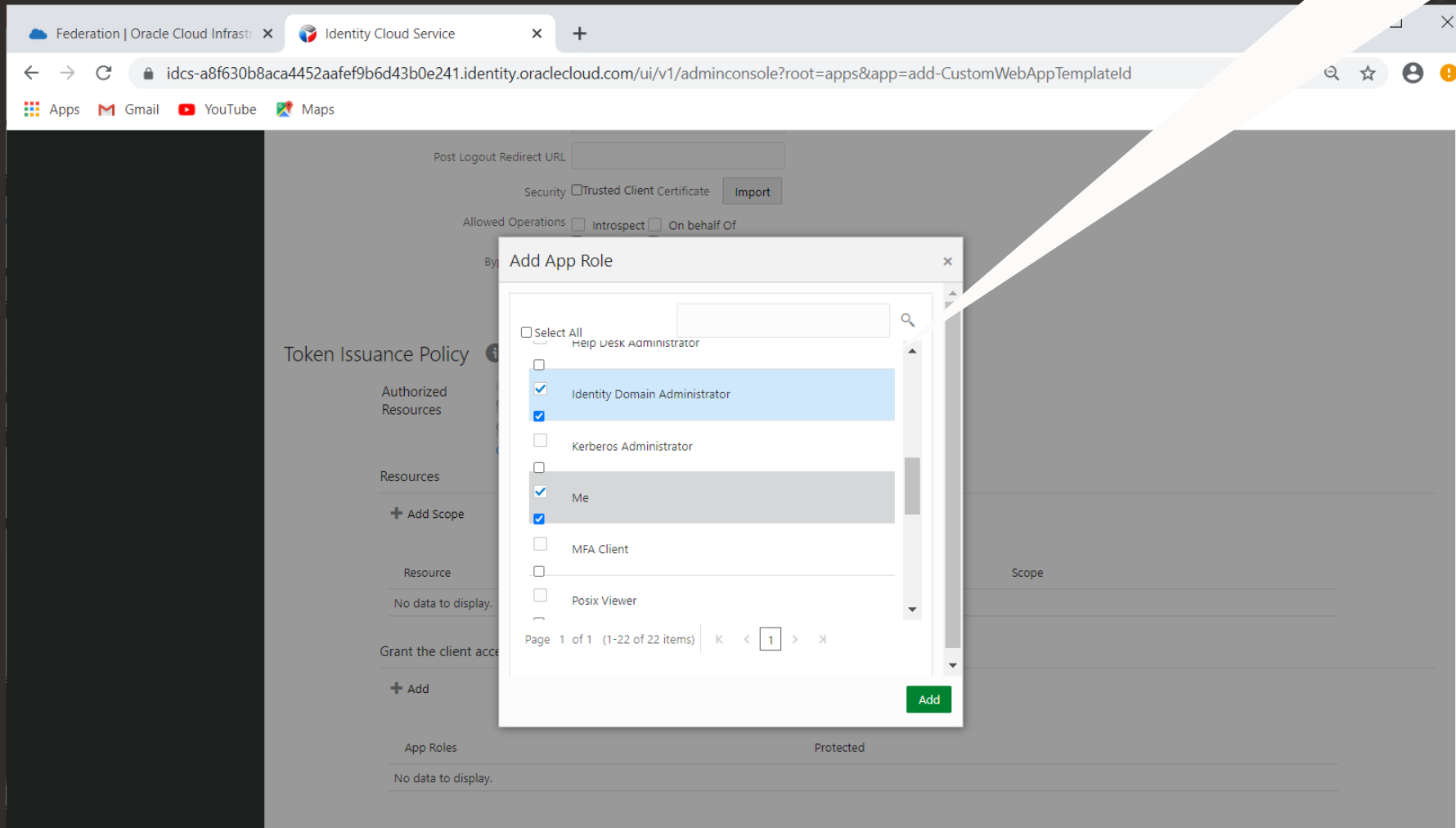
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O

# Add applicable groups

Select Identity Domain Administrator and Me



# Confirm group selection

Federation | Oracle Cloud Infrast

Identity Cloud Service

← → ↺

idcs-a8f630b8aca4452aaef9b6d43b0e241.identity.oraclecloud.com/ui/v1/adminconsole?root=apps&app=add-CustomWebAppTemplateId

🔍 ☆ 👤 ⚠

📱 Apps

📧 Gmail

📺 YouTube

📍 Maps

Security

☐ Trusted Client Certificate

Import

Allowed Operations

☐ Introspect

☐ On behalf Of

Bypass Consent

☐

Token Issuance Policy ⓘ

Authorized Resources

☐ All

☐ Tagged

☒ Specific

Resources

+ Add Scope

Resource	Protected	Scope
No data to display.		

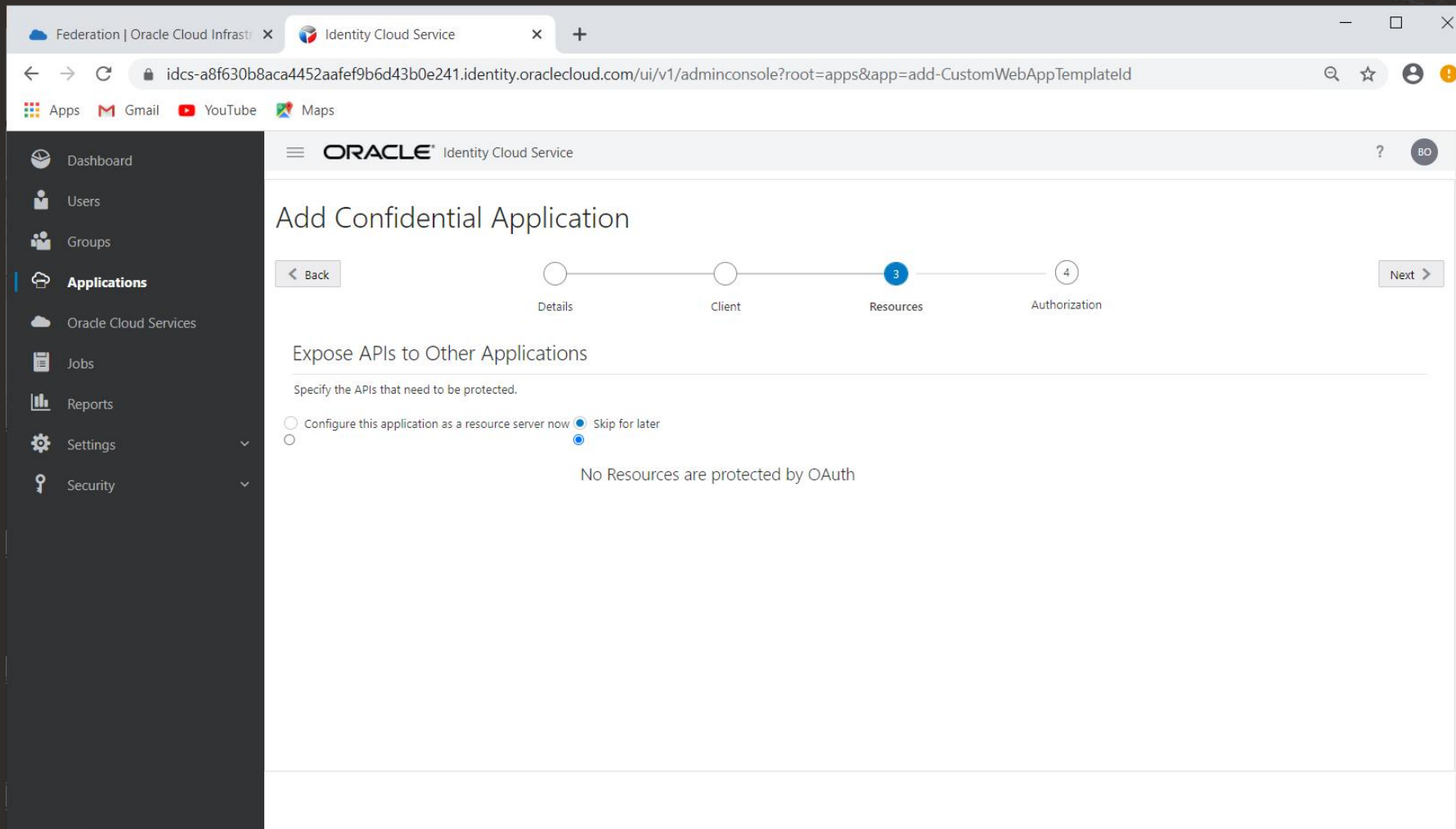
Grant the client access to Identity Cloud Service Admin APIs

+ Add

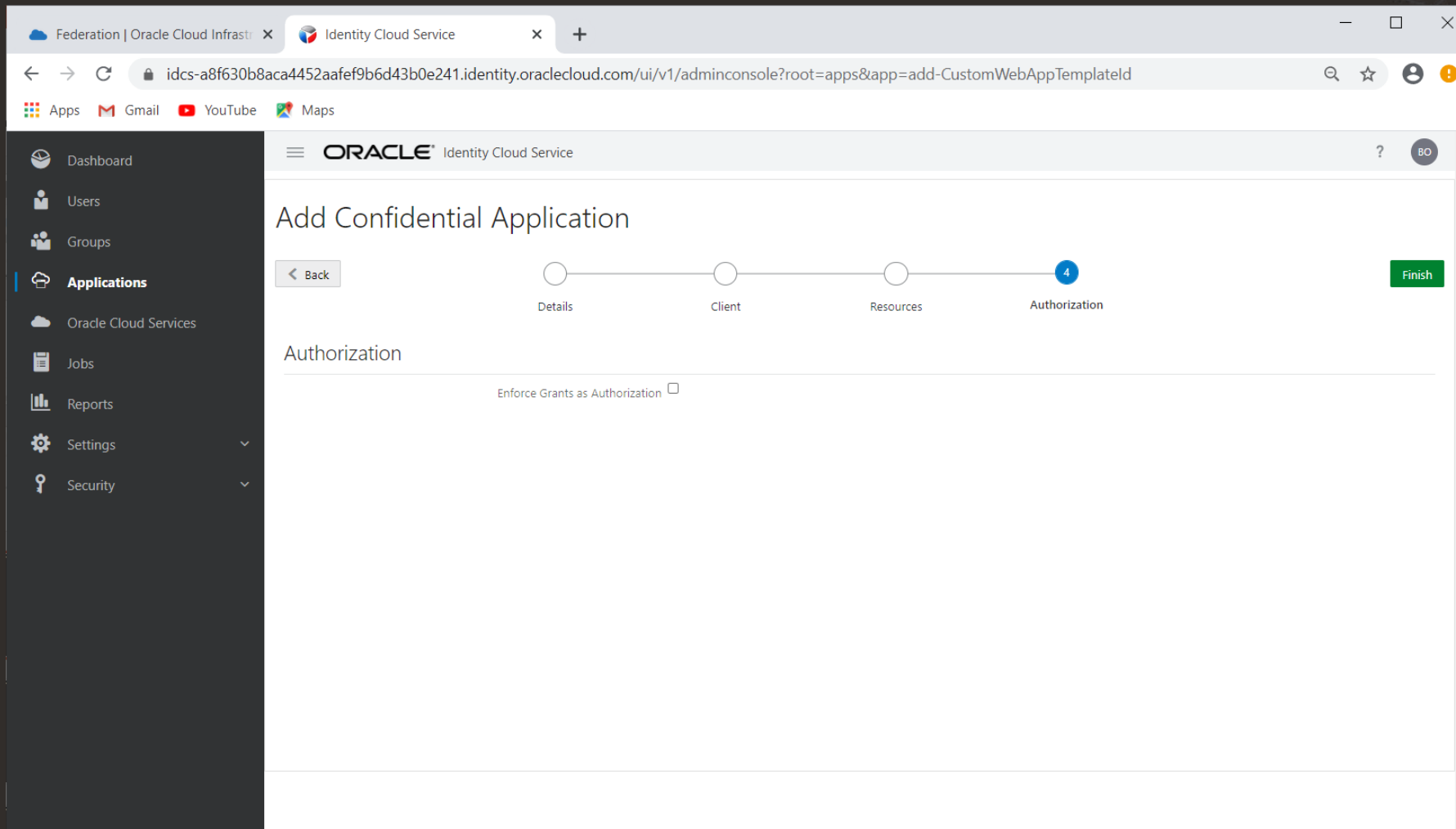
App Roles	Protected	
Identity Domain Administrator	No	×
Me	No	×



# Next, next, finish

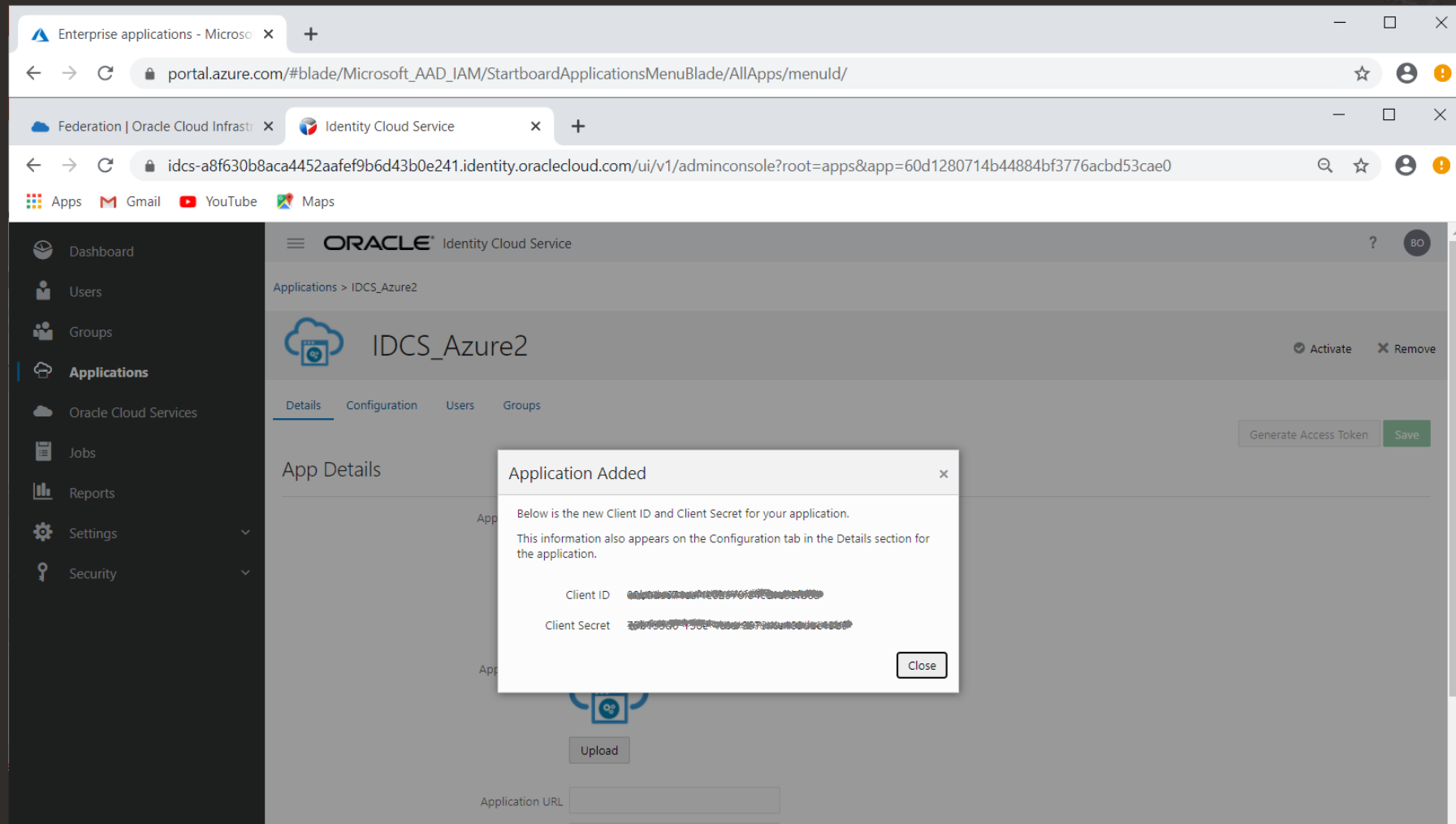


# Next, next, finish





# Record the client ID and client secret



# Provisioning from azureAD as IdP

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# Provisioning aka user synchronization

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AzureAD uses Oracle SCIM REST for provisioning.

The following is required at the Oracle Side:

- Create an Enterprise application on the Oracle side
- Record the clientid and client secret
- Note down the full URL of the IDCS instance

A few concepts

- The azureAD enterprise app might be assigned to an user or group. If assigned to a group, only users that is a member of the group is provisioned
- The provisioning defines a set of scopes, user provisioning scope/filter and group provisioning scope/filter
- Group provisioning is only group membership add/revoke. If the user is revoked from the group to be provisioned the user is not deactivated on the Oracle side
- Only deleted azureAd users or users revoked from the group assigned to the enterprise app is revoked.

Enterprise applications - Microso

portal.azure.com/#blade/Microsoft\_AAD\_IAM/StartboardApplicationsMenuBlade/AllApps/menuId/

Apps Gmail YouTube Maps

Microsoft Azure

Search resources, services, and docs (G+)

inge.os@oracle.com  
DEFAULT DIRECTORY

Home > Default Directory > Enterprise applications

Enterprise applications | All applications

Default Directory - Azure Active Directory

Overview

Overview

Diagnose and solve problems

Manage

All applications

Application proxy

User settings

Collections

Security

Conditional Access

Consent and permissions

Activity

Sign-ins

+ New application

Columns

Preview features

Got feedback?

Try out the new Enterprise Apps search preview! Click to enable the preview. →

Enterprise Applications







Any

Any

Apply

Reset

First 50 shown, to search all of your applications, enter a display name or the application ID.

Name	Homepage URL	Object ID	Application ID
 Office 365 Exchange Online	http://office.microsoft.com/outlook/	32b04168-8921-425d-9b22-873...	00000002-0000-0ff1-ce00-00000...
 Office 365 Management APIs		4aa618ba-64fa-4395-96c2-628c7...	c5393580-f805-4401-95e8-94b7...
 Office 365 SharePoint Online	http://office.microsoft.com/sharepoint/	6fd99538-964b-4993-a371-8bba...	00000003-0000-0ff1-ce00-00000...
 Oracle Cloud Infrastructure Console	https://cloud.oracle.com/en_US/iaas	619fd6bd-c551-4030-8516-5ceff...	1576b356-63d5-4eb1-8a19-020...
 Outlook Groups		c7bd6ca7-dd3f-4371-aecf-4f91f7...	925eb0d0-da50-4604-a19f-bd8d...
 Skype for Business Online		b382bb89-1317-4e97-a6e9-3496...	00000004-0000-0ff1-ce00-00000...



# Select the Oracle OCI Enterprise application

The screenshot shows the Oracle Cloud Infrastructure Console interface. The browser address bar displays the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/Overview/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-43d3-acfd-...`. The Microsoft Azure navigation bar is visible at the top, with the user `inge.os@oracle.com` logged in. The main content area is titled "Oracle Cloud Infrastructure Console | Overview" and "Enterprise Application". A left-hand navigation pane lists various options: Overview, Deployment Plan, Diagnose and solve problems, Manage (Properties, Owners, Roles and administrators (Pre...), Users and groups, Single sign-on, Provisioning, Self-service), and Security (Conditional Access). The main content area displays five numbered steps for setting up the application:

- 1. Assign users and groups**  
Provide specific users and groups access to the applications  
[Assign users and groups](#)
- 2. Set up single sign on**  
Enable users to sign into their application using their Azure AD credentials  
[Get started](#)
- 3. Provision User Accounts**  
Automatically create and delete user accounts in the application  
[Get started](#)
- 4. Conditional Access**  
Secure access to this application with a customizable access policy.  
[Create a policy](#)
- 5. Self service**  
Enable users to request access to the application using their Azure AD credentials  
[Get started](#)

# Add group DEV to the Enterprise application

The screenshot shows the Microsoft Azure portal interface. The browser address bar displays the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/Users/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-43d3-acfd-f7bf...`. The page title is "Oracle Cloud Infrastructure Console | Users and groups". The left sidebar contains a navigation menu with the following items: Overview, Deployment Plan, Diagnose and solve problems, Manage (Properties, Owners, Roles and administrators (Pre...), Users and groups, Single sign-on, Provisioning, Self-service), and Security (Conditional Access, Permissions). The main content area shows a table with columns: Display Name, Object Type, and Role assigned. The table is currently empty, with the text "No application assignments for" visible. A red arrow points from a text box labeled "Add users and groups" to the "Add user" button in the top toolbar.

Microsoft Azure

Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console

Oracle Cloud Infrastructure Console | Users and groups

Enterprise Application

Overview

Deployment Plan

Diagnose and solve problems

Manage

Properties

Owners

Roles and administrators (Pre...

Users and groups

Single sign-on

Provisioning

Self-service

Security

Conditional Access

Permissions

+ Add user Edit Remove Update Credentials Columns Got feedback?

The application will appear on the Access Panel for assigned users. Set 'visible to users?' to no in properties to prevent this. →

First 100 shown, to see all users & groups, enter a display name.

Display Name	Object Type	Role assigned
No application assignments for		

Add users and groups



# Assign applicable group

Add Assignment - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/Users/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-43d3-acfd-f7bf...

Apps Gmail YouTube Maps

Microsoft Azure Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console >

## Add Assignment

Default Directory

Users and groups  
None Selected

Select a role  
User

Assign

# Select group to assign to the Enterprise application

The screenshot shows the Microsoft Azure portal interface. The browser address bar displays the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/Users/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-43d3-acfd-f7bf...`. The page title is "Users and groups - Microsoft Azure". The breadcrumb navigation shows: Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Add Assignment. The "Add Assignment" page is for the "Default Directory". It features a "Users and groups" section with a search bar and a list of users and groups. The "dev" group is selected. The "Selected items" section shows the "dev" group. The "Assign" button is located at the bottom left of the page.

Microsoft Azure

Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Add Assignment

Default Directory

Users and groups

None Selected

Select a role

User

Assign

Users and groups

Search

Chris Craft  
CCraft@ingeosoracle.onmicrosoft.com

Dart Vader  
Dvader@ingeosoracle.onmicrosoft.com

dev  
Selected

Selected items

dev

Remove

Select

Add Assignment - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/Users/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-43d3-acfd-f7bf...

AppsGmailYouTubeMaps

Microsoft AzureSearch resources, services, and docs (G+)

inge.os@oracle.comDEFAULT DIRECTORY

[Home](#) > [Default Directory](#) > [Enterprise applications](#) > [Oracle Cloud Infrastructure Console](#) >

# Add Assignment

Default Directory

When you assign a group to an application, only users directly in the group will have access. The assignment does not cascade to nested groups.

Users and groups

1 group selected.


Select a role

User

Assign

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# The Enterprise application will only be applicable to users assigned to the group

The screenshot displays the Microsoft Azure portal interface. The top navigation bar includes the Microsoft Azure logo, a search bar, and user information for 'inge.os@oracle.com'. The breadcrumb trail indicates the path: Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console. The main heading is 'Oracle Cloud Infrastructure Console | Users and groups'. A left-hand sidebar lists various management options under 'Manage' and 'Security'. The main content area features a toolbar with actions like 'Add user', 'Edit', 'Remove', and 'Update Credentials'. Below this is an information message and a search bar. A table lists the assigned users and groups.

Display Name	Object Type	Role assigned
<input type="checkbox"/> DE dev	Group	User



# Select provisioning

The screenshot displays the Microsoft Azure portal interface. The browser address bar shows the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/Overview/appld/1576b356-63d5-4eb1-8a19-020818631905/objectId/619fd6bd-c551-4030-851...`. The page title is "Oracle Cloud Infrastructure Console | Overview". The left sidebar contains a navigation menu with the following items: Overview, Deployment Plan, Diagnose and solve problems, Manage, Properties, Owners, Roles and administrators (Pre...), Users and groups, Single sign-on, Provisioning (highlighted with an orange box), Self-service, Security, Conditional Access, and Permissions. The main content area is titled "Getting Started" and lists five steps: 1. Assign users and groups, 2. Set up single sign on, 3. Provision User Accounts (highlighted with an orange box), 4. Conditional Access, and 5. Self service.

Oracle Cloud Infrastructure Console

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-...

Apps Gmail YouTube Maps

Microsoft Azure Search resources, services, and docs (G+)

inge.os@oracle.com DEFAULT DIRECTORY

Home > Default Directory > Enterprise applications > Browse Azure AD Gallery (Preview) > Browse Azure AD Gallery (Preview) > Oracle Cloud Infrastructure Console

## Oracle Cloud Infrastructure Console | Provisioning

Enterprise Application

- Overview
- Deployment Plan
- Diagnose and solve problems


Manage

- Properties
- Owners
- Roles and administrators (Pre...
- Users and groups
- Single sign-on
- Provisioning
- Self-service

Security

- Conditional Access
- Permissions

Got a second? We would love your feedback on user provisioning. →



Automate identity lifecycle management with Azure Active Directory

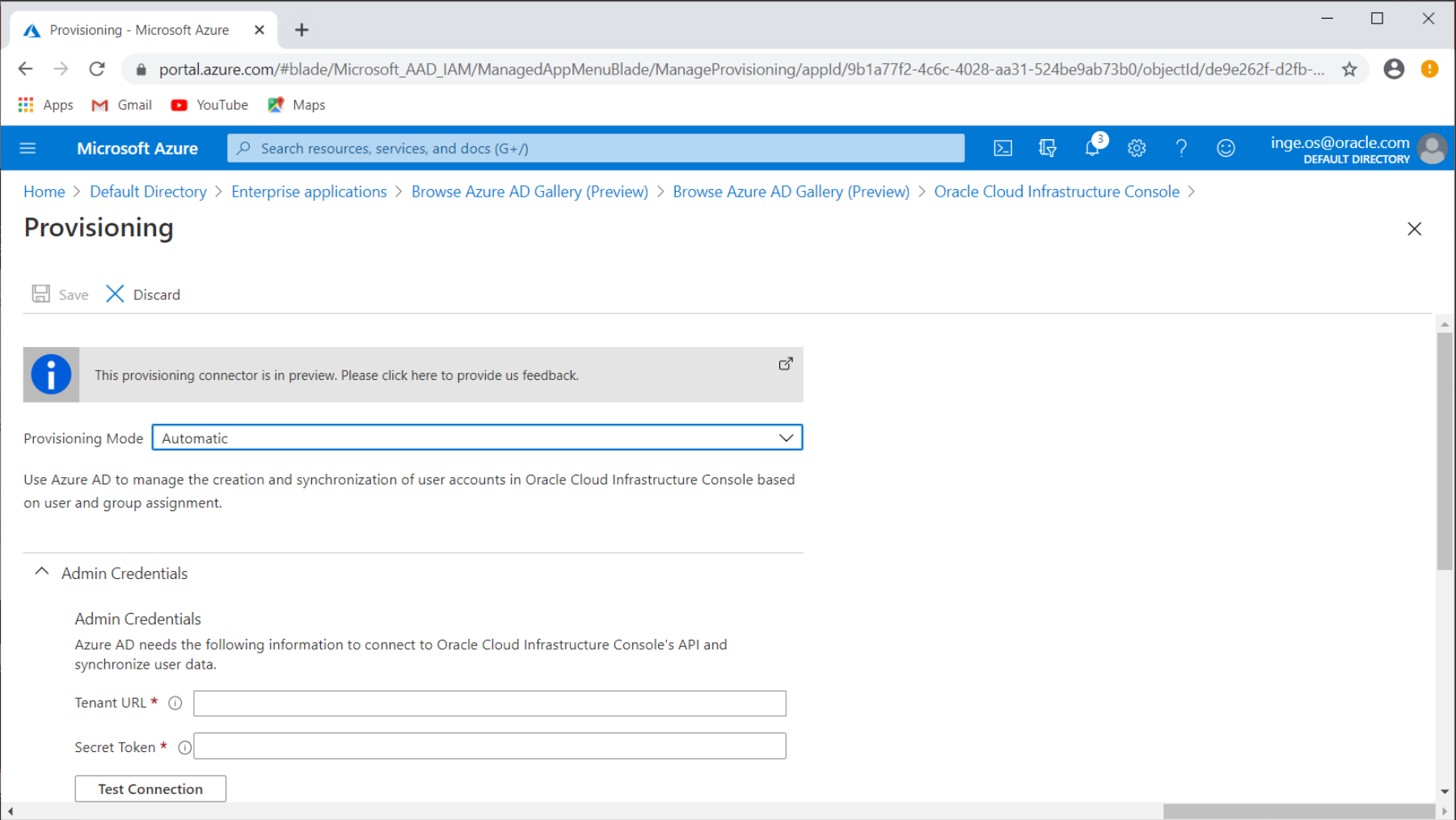
Automatically create, update, and delete accounts when users join, leave, and move within your organization. [Learn more.](#)

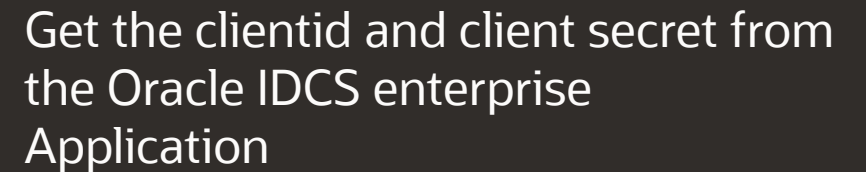
[Get started](#)

[What is provisioning?](#) [Plan an application deployment.](#) [Configure automatic provisioning.](#)



# Choose automatic



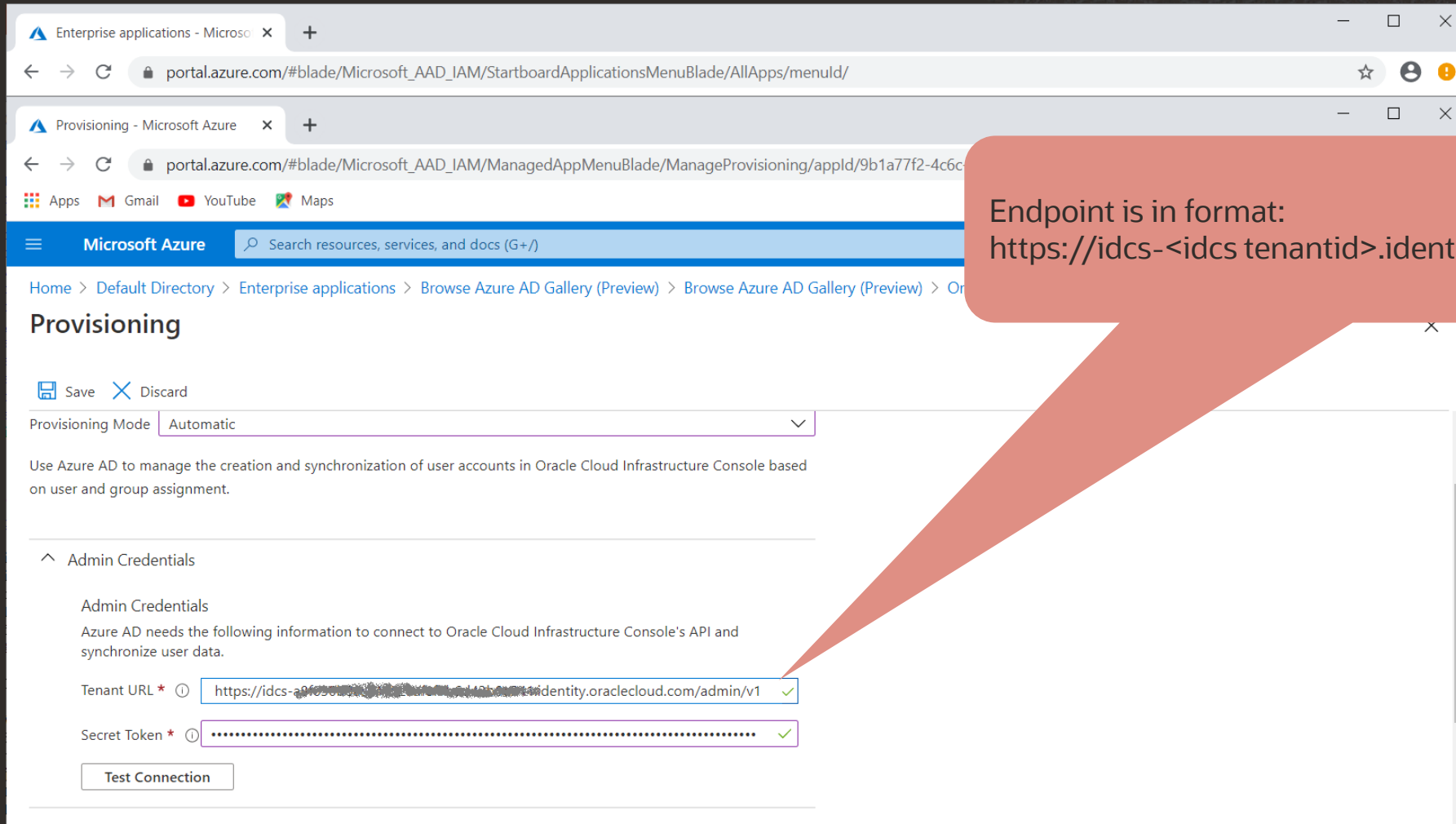


As one string and base 64 encode it  
Simple tool at  
<https://www.base64encode.org/>

\_\_\_\_\_



# Add credentials from previous slide and IDCS endpoint



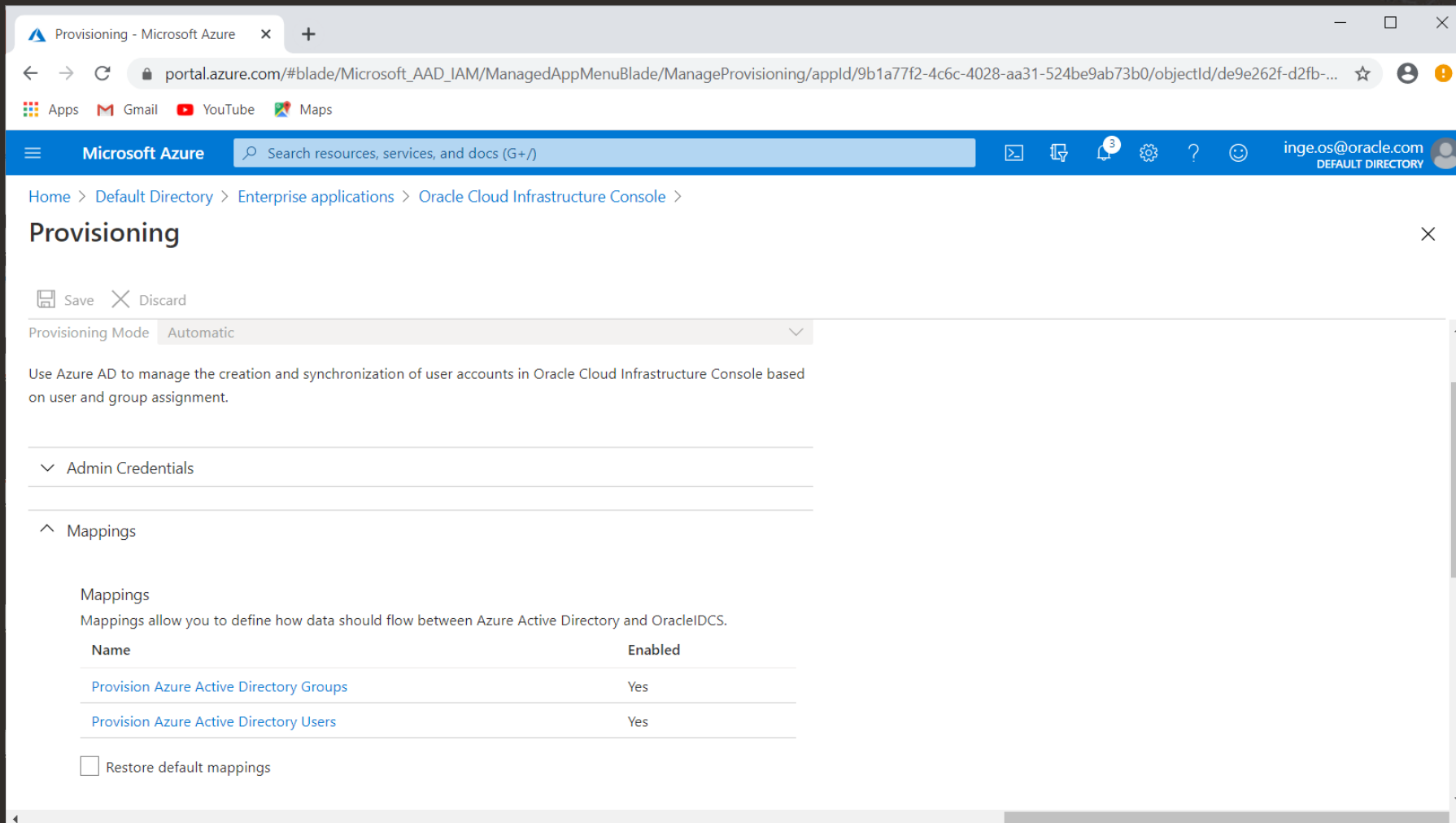
The screenshot shows the 'Provisioning' page in the Microsoft Azure portal. The 'Provisioning Mode' is set to 'Automatic'. Under the 'Admin Credentials' section, the 'Tenant URL' is configured with the IDCS endpoint, and the 'Secret Token' is masked with dots. A 'Test Connection' button is visible at the bottom of the form.

Endpoint is in format:  
`https://idcs-<idcs tenantid>.identity.oraclecloud.com/admin/v1`

# Test and progress when success

The screenshot displays the Microsoft Azure Provisioning interface in a web browser. The browser's address bar shows the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-...`. The page title is "Provisioning - Microsoft Azure". The breadcrumb navigation path is: Home > Default Directory > Enterprise applications > Browse Azure AD Gallery (Preview) > Browse Azure AD Gallery (Preview) > Oracle Cloud Infras. The main heading is "Provisioning". Below the heading are "Save" and "Discard" buttons. The "Admin Credentials" section is expanded, showing the "Admin Credentials" sub-section. It states: "Azure AD needs the following information to connect to Oracle Cloud Infrastructure Console's API and synchronize user data." The "Tenant URL" field contains `https://idcs-a9b1a77f2-4c6c-4028-aa31-524be9ab73b0.identity.oraclecloud.com/admin/v1` and has a green checkmark. The "Secret Token" field contains a masked token and also has a green checkmark. A "Test Connection" button is located below these fields. A notification box in the top right corner displays a green checkmark and the text: "Testing connection to Oracle Cloud Infrast... 4:20 PM. The supplied credentials are authorized to enable provisioning." The "Mappings" and "Settings" sections are collapsed. The "Status" section at the bottom indicates: "Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status."

# Leave default mapping as is, if required add groups, the users shall be added “as members of” in the group scope definition



The screenshot shows the Microsoft Azure Provisioning console. The breadcrumb navigation is: Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning. The 'Provisioning' page has a 'Save' button and a 'Discard' button. The 'Provisioning Mode' is set to 'Automatic'. A description states: 'Use Azure AD to manage the creation and synchronization of user accounts in Oracle Cloud Infrastructure Console based on user and group assignment.' There are two expandable sections: 'Admin Credentials' and 'Mappings'. The 'Mappings' section is expanded, showing a table of mappings. The table has two columns: 'Name' and 'Enabled'. There are two rows: 'Provision Azure Active Directory Groups' and 'Provision Azure Active Directory Users', both with 'Enabled' status set to 'Yes'. At the bottom of the 'Mappings' section, there is a checkbox labeled 'Restore default mappings' which is currently unchecked.

Provisioning - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-...

Microsoft Azure Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning

Save Discard

Provisioning Mode Automatic

Use Azure AD to manage the creation and synchronization of user accounts in Oracle Cloud Infrastructure Console based on user and group assignment.

Admin Credentials

Mappings

Mappings

Mappings allow you to define how data should flow between Azure Active Directory and OracleIDCS.

Name	Enabled
Provision Azure Active Directory Groups	Yes
Provision Azure Active Directory Users	Yes

☐ Restore default mappings



# Enable provisioning, and save

Attribute Mapping - Microsoft Az x

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-...

Apps Gmail YouTube Maps

Microsoft Azure Search resources, services, and docs (G+)

inge.os@oracle.com  
DEFAULT DIRECTORY

Home > Oracle Cloud Infrastructure Console > Provisioning >

## Attribute Mapping

Save Discard

Name  
Provision Azure Active Directory Groups

Enabled  
☒ Yes ☐ No

Source Object (Azure Active Directory)  
Group

Source Object Scope  
All records

Target Object (OracleIDCS)  
urn:ietf:params:scim:schemas:core:2.0:Group

Target Object Actions  
☒ Create  
☒ Update  
☒ Delete

# Enable provisioning status display, and save

The screenshot shows the Microsoft Azure Provisioning console. The browser address bar displays the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-...`. The page title is "Provisioning - Microsoft Azure". The navigation bar includes the Microsoft Azure logo, a search bar, and the user profile "inge.os@oracle.com" with the role "DEFAULT DIRECTORY".

The main content area is titled "Provisioning" and includes a "Save" button and a "Discard" button. Below this is a "Settings" section with a "Status" subsection. The "Status" section contains the text "Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status." and a "Provisioning Status" toggle switch set to "Off". There is also a checkbox for "Clear current state and restart synchronization".

The "Current Status" section shows "Incremental cycle off/paused" and a "Refresh" button. A progress bar indicates "0% complete". Below this is a link to "View Audit Logs".

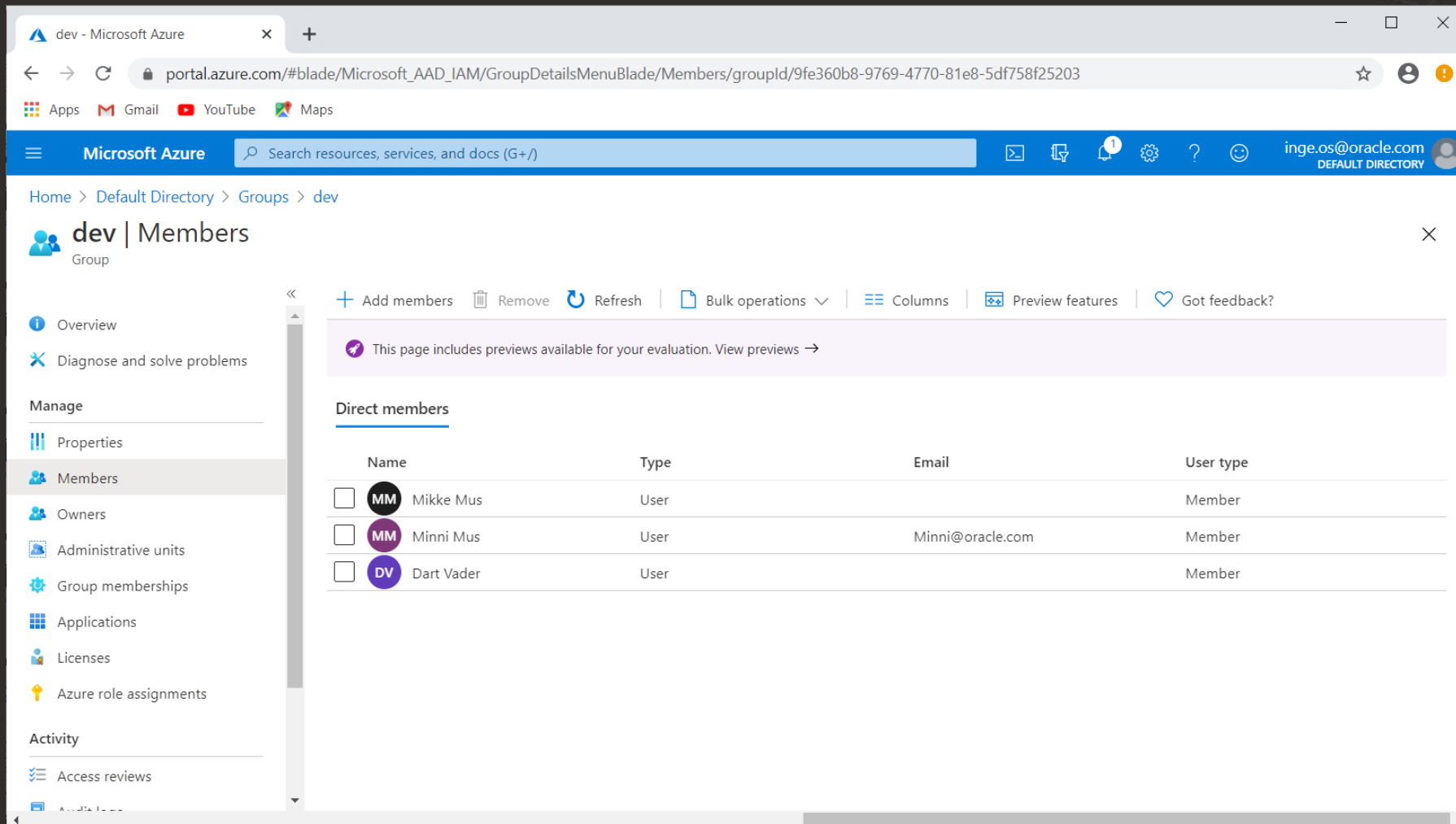
The "Statistics to date" section includes a link to "View provisioning details" and the following information:

- Last completed cycle: Not Available
- Duration: Not Available
- Steady state achieved: 1/1/1, 12:43:00 AM
- Provisioning interval: 40 minutes

# Click start provisioning, when ready

The screenshot shows the Oracle Cloud Infrastructure Console's Provisioning page for an Enterprise Application. The browser address bar shows the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/9b1a77f2-4c6c-4028-aa31-524be9ab73b0/objectId/de9e262f-d2fb-...`. The page header includes the Microsoft Azure logo, a search bar, and the user profile `inge.os@oracle.com` with the role `DEFAULT DIRECTORY`. The breadcrumb trail is: `Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console`. The main heading is **Oracle Cloud Infrastructure Console | Provisioning** for the `Enterprise Application`. A left-hand navigation pane lists various sections: Overview, Deployment Plan, Diagnose and solve problems, Manage (Properties, Owners, Roles and administrators, Users and groups, Single sign-on, Provisioning, Self-service), and Security (Conditional Access). The Provisioning section is currently selected. The main content area features a toolbar with buttons: `Start provisioning` (highlighted with a blue play icon), `Stop provisioning` (with a square icon), `Restart provisioning` (with a circular arrow icon), `Edit provisioning` (with a pencil icon), `Provision on demand` (with a person icon), and `Refresh` (with a circular arrow icon). Below the toolbar is a light blue informational banner: `Got a second? We would love your feedback on user provisioning. →`. The page is divided into two columns. The left column, titled **Current cycle status**, displays the message `Incremental cycle stopped.` and a progress bar at `0% complete`. Below this is a link to `View provisioning logs`. The right column, titled **Statistics to date**, contains expandable sections: `View provisioning details` (expanded) showing **Completed:** `Duration:` Not available, `Steady state achieved:` Not available, and `Provisioning interval:` 40 minutes; and `View technical information` (collapsed). At the bottom of the main content area is a **Manage provisioning** section with a link to `Update credentials`.

# Verify members of group to be provisioned.



The screenshot shows the Microsoft Azure portal interface. The browser address bar displays the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/GroupDetailsMenuBlade/Members/groupId/9fe360b8-9769-4770-81e8-5df758f25203`. The page title is "dev | Members" under the "Default Directory" group. The left sidebar shows the "Members" tab selected. The main content area displays a table of direct members.

Name	Type	Email	User type
<input type="checkbox"/> Mikke Mus	User		Member
<input type="checkbox"/> Minni Mus	User	Minni@oracle.com	Member
<input type="checkbox"/> Dart Vader	User		Member

The group is the one initially assigned to the Enterprise application

# Status of initial run.

The screenshot shows the Microsoft Azure Provisioning console. The breadcrumb navigation is: Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning. The page title is "Provisioning". There are buttons for "Save" and "Discard". Below are expandable sections for "Admin Credentials", "Mappings", and "Settings". The "Status" section indicates that provisioning is started and stopped, and the provisioning status is currently "On". There is a checkbox for "Clear current state and restart synchronization". The "Current Status" section shows "Incremental cycle completed" with a "Refresh" button. A green progress bar indicates "100% complete". The "Statistics to date" section shows 3 users and 1 group. At the bottom, there are buttons for "View provisioning details", "View technical information", and "View Audit Logs".

Provisioning - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0

Microsoft Azure

Search resources, services, and docs (G+/I)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning

Save Discard

Admin Credentials

Mappings

Settings

Status

Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status.

Provisioning Status On Off

☐ Clear current state and restart synchronization

Current Status

Incremental cycle completed

Click refresh to get the latest status Refresh

100% complete

Users 3 Groups 1

Statistics to date

Us... 3

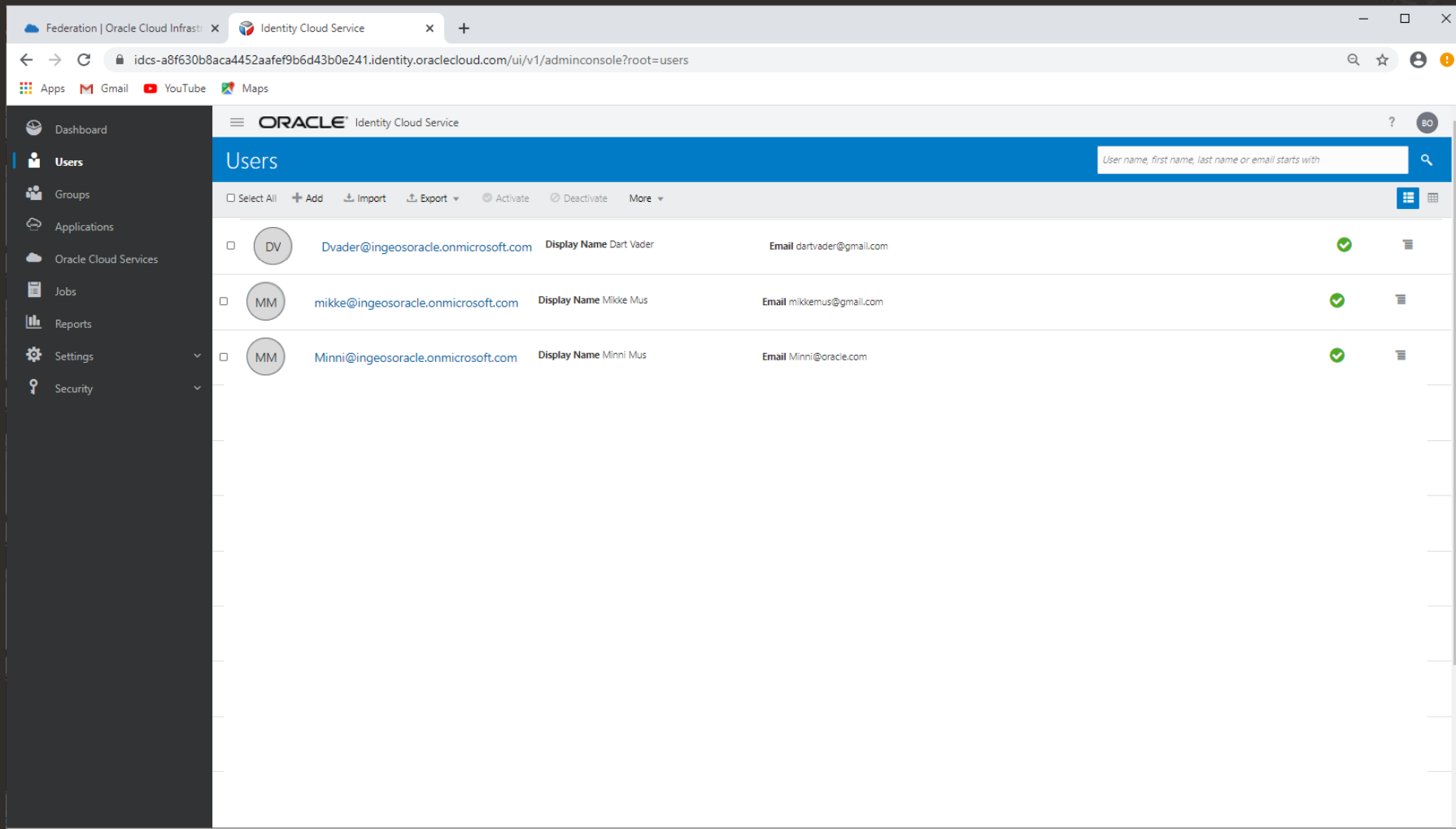
Gr... 1

View provisioning details

View technical information

View Audit Logs

# Verify that users has been provisioned



The screenshot displays the Oracle Identity Cloud Service (IDCS) Users page. The left sidebar contains navigation links for Dashboard, Users, Groups, Applications, Oracle Cloud Services, Jobs, Reports, Settings, and Security. The main content area shows a list of users with the following details:

Select	Avatar	Username	Display Name	Email	Status	Actions
<input type="checkbox"/>	DV	Dvader@ingeosoracle.onmicrosoft.com	Dart Vader	dartvader@gmail.com	✓	⋮
<input type="checkbox"/>	MM	mikke@ingeosoracle.onmicrosoft.com	Mikke Mus	mikkemus@gmail.com	✓	⋮
<input type="checkbox"/>	MM	Minni@ingeosoracle.onmicrosoft.com	Minni Mus	Minni@oracle.com	✓	⋮



# Remove one user (Dart Vader) and add one new (Chris Craft)

dev - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/GroupDetailsMenuBlade/Members/groupId/9fe360b8-9769-4770-81e8-5df758f25203

Apps Gmail YouTube Maps

Microsoft Azure

Search resources, services, and docs (G+/)

inge.os@oracle.com  
DEFAULT DIRECTORY

Home > Default Directory > Groups > dev

dev | Members  
Group

Overview

Diagnose and solve problems

Manage

Properties

Members

Owners

Administrative units

Group memberships

Applications

Licenses

Azure role assignments

Activity

Access reviews

Audit logs

Bulk operation results

Troubleshooting + Support

New support request

+ Add members

Remove

Refresh

Bulk operations

Columns

Preview features

Got feedback?

This page includes previews available for your evaluation. View previews →

Direct members

	Name	Type	Email	User type
<input type="checkbox"/>	Mikke Mus	User	mikkemus@gmail.com	Member
<input type="checkbox"/>	Minni Mus	User	Minni@oracle.com	Member
<input type="checkbox"/>	Chris Craft	User		Member



# Wait for next run. Runs every 40 min.

The screenshot shows the Microsoft Azure Provisioning console. The page title is "Provisioning" and it includes a breadcrumb trail: Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console. The main content area shows the provisioning status, which is currently "On". A toggle switch is present to turn it "Off". Below the status, there is a checkbox labeled "Clear current state and restart synchronization". The "Current Status" section indicates that the "Incremental cycle completed" and provides a "Refresh" button. A progress bar shows "100% complete". The "Statistics to date" section displays the number of users (3) and groups (1). The "View provisioning details" section shows the last completed cycle on 10/30/2020 at 10:37:09 AM, with a duration of 1 second. The "View technical information" section is also visible.

Provisioning - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/applId/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0

Microsoft Azure

Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console >

## Provisioning

Save Discard

Settings

Status

Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status.

Provisioning Status ☒ On ☐ Off

☐ Clear current state and restart synchronization

**Current Status**

Incremental cycle completed [Refresh](#)

Click refresh to get the latest status

100% complete

Users 3 Groups 1

[View Audit Logs](#)

**Statistics to date**

Us... 3

Gr... 1

View provisioning details

Last completed cycle: 10/30/2020, 10:37:09 AM

Duration: 1 sec

Steady state achieved: 10/30/2020, 10:37:09 AM

Provisioning interval: 40 minutes

View technical information

# One user failed

The screenshot shows the Microsoft Azure Provisioning console. The page title is "Provisioning - Microsoft Azure". The breadcrumb navigation is "Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning". The page has a "Save" button and a "Discard" button. The "Admin Credentials" section is expanded. The "Mappings" section is expanded. The "Settings" section is expanded. The "Status" section shows "Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status." The "Provisioning Status" is "On". There is a checkbox for "Clear current state and restart synchronization". The "Current Status" section shows "Incremental cycle completed" and a "Refresh" button. A progress bar indicates "100% complete". The "Statistics to date" section shows "Us... 2" and "Gr... 1". There are links for "View provisioning details" and "View technical information". A warning message at the bottom says "1 Error is being retried, view Audit logs".

Provisioning - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0

Microsoft Azure

Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning

Save Discard

Admin Credentials

Mappings

Settings

Status

Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status.

Provisioning Status On Off

☐ Clear current state and restart synchronization

Current Status

Incremental cycle completed

Click refresh to get the latest status Refresh

100% complete

Statistics to date

Us... 2

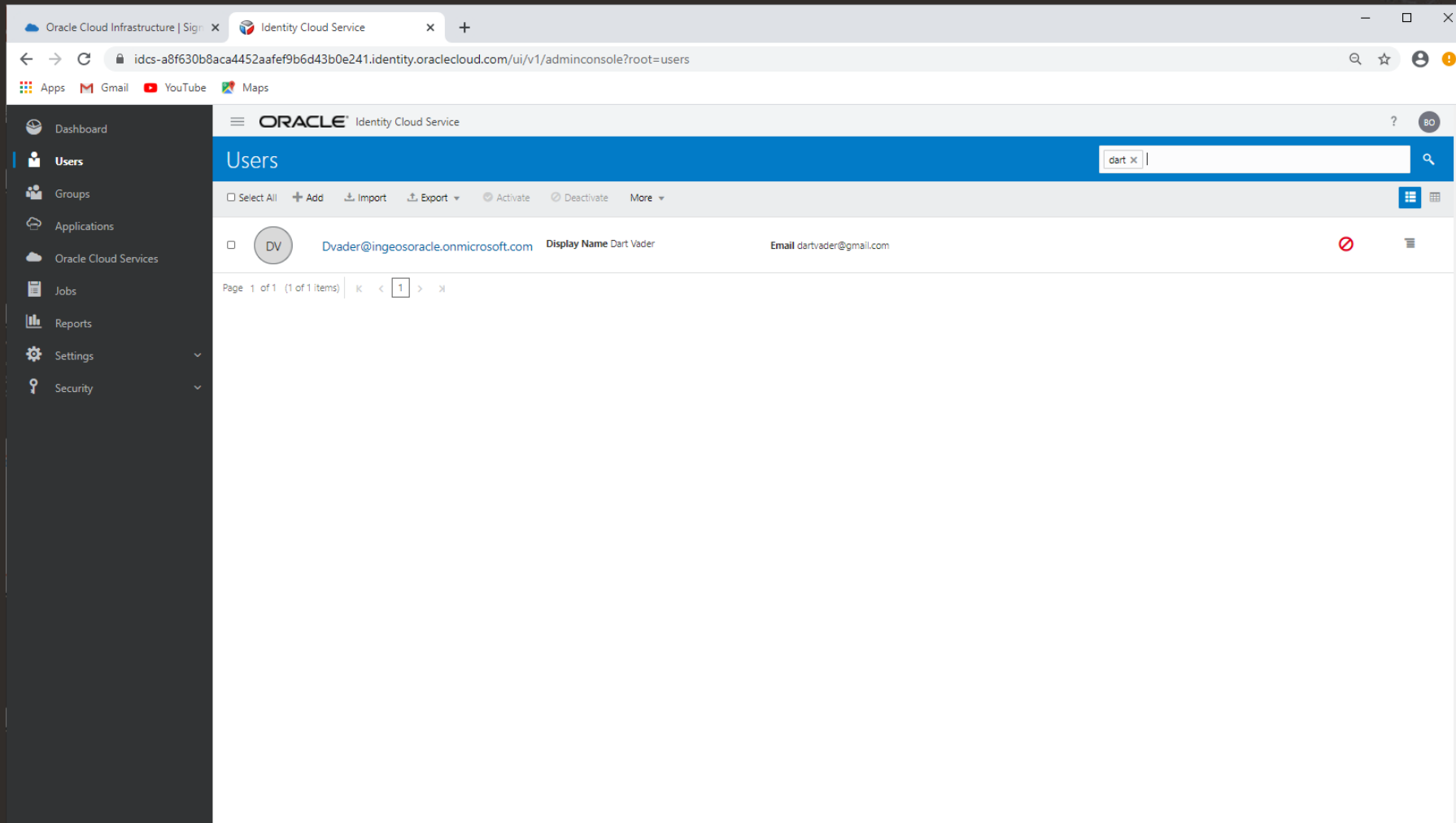
Gr... 1

View provisioning details

View technical information

1 Error is being retried, view Audit logs

# Verify that the user removed from the group is disabled



# Simple Diagnosis

---

## Diagnoses by running ondemand provisioning

---

The email attribute is mandatory on the Oracle IDCS side. If this attribute is blank in azureAD, the provisioning will fail

Diagnose can be turned on in IDCS, it is valid for 15 minutes. Each provisioning run on azureAD is every 40 min, so the diagnose needs to be turned on to hit a provisioning windows

Alternatively, on demand provisioning directly displays the REST payload returned from oracle IDCS when a HTTP code higher than 200 is returned.



# One user provisioned failed

The screenshot shows the Microsoft Azure Provisioning console. The page title is "Provisioning - Microsoft Azure". The breadcrumb navigation is "Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning". The page has a "Save" button and a "Discard" button. The "Admin Credentials" section is expanded. The "Mappings" section is expanded. The "Settings" section is expanded. The "Status" section shows "Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status." The "Provisioning Status" is "On". There is a checkbox for "Clear current state and restart synchronization". The "Current Status" section shows "Incremental cycle completed" and a "Refresh" button. A progress bar shows "100% complete". The "Statistics to date" section shows "Us... 2" and "Gr... 1". There are links for "View provisioning details" and "View technical information". A warning message at the bottom says "1 Error is being retried, view Audit logs".

Provisioning - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0

Microsoft Azure

Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console > Provisioning

Save Discard

Admin Credentials

Mappings

Settings

Status

Start and stop provisioning to Oracle Cloud Infrastructure Console, and view provisioning status.

Provisioning Status On Off

☐ Clear current state and restart synchronization

Current Status

Incremental cycle completed

Click refresh to get the latest status Refresh

100% complete

Statistics to date

Us... 2

Gr... 1

View provisioning details

View technical information

1 Error is being retried, view Audit logs

# Review the audit log, and note the failing user

Provisioning Logs - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0

Microsoft Azure

Search resources, services, and docs (G+)

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console >

### Provisioning Logs

Refresh | Columns | Got feedback?

Identity Name or ID | Date: Last 24 hours | Show dates as: Local | Status: All | Action: All | Application contains a2859605-633e-4f5e-8448-6e5f9625d3d0 | Add filters

Date	Identity	Action	Source System	Target System	Status
10/30/2020, 11:17:19 AM	Display Name Chris Craft Source ID 7cce1046-4f4d-4a2b-a81d-20a333	Create	Azure Active Directory	OracleIDCS	Failure
10/30/2020, 11:16:42 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751 Target ID 9a0951c86d794150b94b7baea798	Update	Azure Active Directory	OracleIDCS	Success
10/30/2020, 11:16:42 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751	Skipped	Azure Active Directory	OracleIDCS	Skipped
10/30/2020, 11:16:42 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751 Target ID 9a0951c86d794150b94b7baea798	Skipped	Azure Active Directory	OracleIDCS	Skipped
10/30/2020, 11:16:42 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751	Skipped	Azure Active Directory	OracleIDCS	Skipped
10/30/2020, 11:16:42 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751	Skipped	Azure Active Directory	OracleIDCS	Skipped
10/30/2020, 11:16:41 AM	Display Name Chris Craft Source ID 7cce1046-4f4d-4a2b-a81d-20a333	Create	Azure Active Directory	OracleIDCS	Failure
10/30/2020, 11:16:41 AM	Display Name Dart Vader Source ID 7b641dbb-4a49-4ce6-bde7-c3246 Target ID 4735720c203d4f0dbc026f15d2423	Disable	Azure Active Directory	OracleIDCS	Success
10/30/2020, 10:36:31 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751 Target ID 9a0951c86d794150b94b7baea798	Update	Azure Active Directory	OracleIDCS	Success
10/30/2020, 10:36:31 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751 Target ID 9a0951c86d794150b94b7baea798	Update	Azure Active Directory	OracleIDCS	Success
10/30/2020, 10:36:31 AM	Display Name dev Source ID 9fe360b8-9769-4770-81e8-5df751	Update	Azure Active Directory	OracleIDCS	Success

Details

# The enterprise app offers provisioning on demand

The screenshot shows the Oracle Cloud Infrastructure Console's provisioning interface for an enterprise application. The browser address bar indicates the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0`. The page title is "Oracle Cloud Infrastructure Console | Provisioning".

The left sidebar contains a navigation menu with the following sections:

- Overview
  - Deployment Plan
  - Diagnose and solve problems
- Manage
  - Properties
  - Owners
  - Roles and administrators (Pre...)
  - Users and groups
  - Single sign-on
  - Provisioning**
  - Self-service
- Security
  - Conditional Access
  - Permissions
  - Token encryption
- Activity
  - Sign-ins
  - Usage & insights (Preview)
  - Audit logs

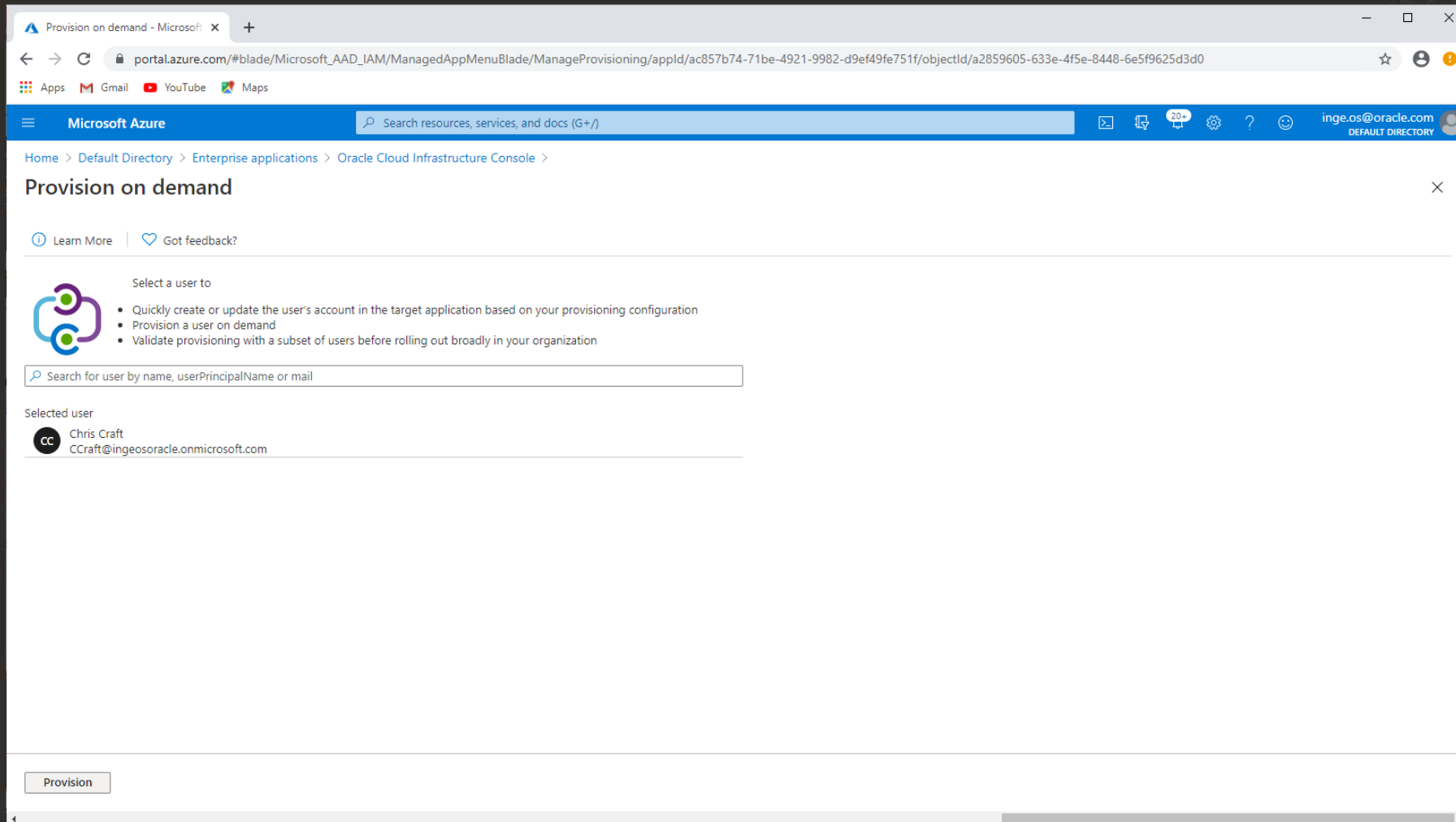
The main content area features a toolbar with the following actions: Start provisioning, Stop provisioning, Restart provisioning, Edit provisioning, Provision on demand (highlighted), and Refresh. Below the toolbar is a message: "Got a second? We would love your feedback on user provisioning. →".

The main content area is divided into two columns:

- Current cycle status:** Shows "Incremental cycle completed." with a green progress bar at "100% complete". Below this, it displays "Users: 2" and "Groups: 1". A warning message states "1 errors are being retried."
- Statistics to date:** Includes links for "View provisioning details" and "View technical information".

At the bottom, there is a "Manage provisioning" section with links for "Update credentials", "Edit attribute mappings", "Add scoping filters", and "Provision on demand". A "View provisioning logs" link is also present.

# Search for and select the failing user



The screenshot shows the Microsoft Azure portal interface for the 'Provision on demand' feature. The browser address bar shows the URL: `portal.azure.com/#blade/Microsoft_AAD_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0`. The page title is 'Provision on demand'. Below the title, there are links for 'Learn More' and 'Got feedback?'. A section titled 'Select a user to' contains a list of bullet points: 'Quickly create or update the user's account in the target application based on your provisioning configuration', 'Provision a user on demand', and 'Validate provisioning with a subset of users before rolling out broadly in your organization'. Below this list is a search input field with the placeholder text 'Search for user by name, userPrincipalName or mail'. Under the search field, the 'Selected user' section displays a user profile for 'Chris Craft' with the email address 'CCraft@ingeosoracle.onmicrosoft.com'. At the bottom left of the page, there is a 'Provision' button.

# The JSON output from the failed SCIM request is immediately displayed

Export details - Microsoft Azure

portal.azure.com/#blade/Microsoft\_AAD\_IAM/ManagedAppMenuBlade/ManageProvisioning/appld/ac857b74-71be-4921-9982-d9ef49fe751f/objectId/a2859605-633e-4f5e-8448-6e5f9625d3d0

Apps Gmail YouTube Maps

Microsoft Azure

Search resources, services, and docs (G+)

inge.os@oracle.com

DEFAULT DIRECTORY

Home > Default Directory > Enterprise applications > Oracle Cloud Infrastructure Console >

Provision on demand

Learn More

Technical details

Got feedback?

Import user

Successfully imported user

View details

Determine if user is in scope

User is in scope

View details

Match user between source and target system

Successfully matched user

View details

Perform action

Failed to create user in target system

View details

Retry

Provision another user

Export details

Failed to create User 'CCraft@ingeosoracle.onmicrosoft.com' in OracleIDCS

Error code

SystemForCrossDomainIdentityManagementServiceIncompatible

Error message

Status Code: BadRequest

Message: Processing of the HTTP request resulted in an exception. Please see the HTTP response returned by the 'Response' property of this exception for details.

Web Response:

{  
 "schemas": [  
 "urn:ietf:params:scim:api:messages:2.0:Error",  
 "urn:ietf:params:scim:api:oracle:ids:extension:messages:Error"  
 ],  
 "detail": "The primary email must be specified.",  
 "status": "400",  
 "urn:ietf:params:scim:api:oracle:ids:extension:messages:Error": {  
 "messageId": "error.identity.user.primaryEmailNotSpecified"  
 }  
}

Target attribute name	Target attribute value
active	True
displayName	Chris Craft
userName	CCraft@ingeosoracle.onmicrosoft.com
name.givenName	Chris
name.familyName	Craft

In this example we see that the provisioning failed due to missing email attribute





# ORACLE