# Oracle® Health Clinical Data Exchange Payer User Guide





Oracle Health Clinical Data Exchange Payer User Guide,

G29373-01

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### **Preface**

This preface contains the following sections:

- Documentation accessibility
- Diversity and Inclusion

# 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.

# **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.



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### Get Started

This topic provides an overview of Oracle Health Clinical Data Exchange and provides steps for getting started.

The Get started section contains the following sections:

#### Introduction

This topic provides an introduction to Oracle Health Clinical Data Exchange and the functionality that it offers.

#### Availability

This topic provides information on the availability of Oracle Health Clinical Data Exchange.

- Oracle Health Clinical Data Exchange Users
   This topic provides information on the intended users of Oracle Health Clinical Data Exchange.
- Activate Your Subscription
   This topic provides information on activating your Oracle Health Clinical Data Exchange subscription.
- Sign In

This topic provides information on signing in to Oracle Health Clinical Data Exchange.

View Your Subscription and Usage
 This topic provides information on viewing your subscription and usage.

### Introduction

This topic provides an introduction to Oracle Health Clinical Data Exchange and the functionality that it offers.

Oracle Health Clinical Data Exchange allows healthcare providers to automate the sharing of patients' medical records with payers for healthcare payment and operations activities. Oracle Health Clinical Data Exchange is built in Oracle Cloud Infrastructure (OCI), and it uses industry-standard communication standards, including FHIR, to securely send and receive electronic health record information.

Oracle Health Clinical Data Exchange delivers the following items:

- Clinical Event Notifications: These notifications include admit and discharge (ADT)
  messages in the form of Health Level Seven Version 2 (HL7 V2) messages.
- Clinical Documents: This data includes HL7 V2 Consolidated Clinical Document
  Architecture (C-CDA) documents that adhere to R2.1 specifications that are aligned with
  the current approved United States Core Data for Interoperability (USCDI) data classes.
  Also, this data includes unstructured documents in the form of Health Level Seven Version
  3 (HL7 V3) C62 documents. These clinical event notifications and clinical data are
  delivered to connected payers in accordance with data access controls configured by the
  providers and the data-retrieval workflows implemented by the payers.

The system allows payers to configure a notification delivery endpoint to receive event notifications, and to allow the retrieval of clinical documents for patients enrolled in payer health plans and for patient encounters that are covered by the payer. Payers can set up a

document query endpoint to retrieve clinical documents using FHIR queries, or use the bulk document retrieval functionality. The bulk document retrieval functionality allows payers to upload a list of patients enrolled in their health plans, and to specify a date range of up to the last three calendar years (not including the current calendar year). The system can then retrieve encounters for each patient and create the corresponding C-CDA documents for each encounter.

Oracle Health Clinical Data Exchange uses a built-in Master Patient Index (MPI) and Record Locator Service (RLS) to match patients and locate their records across all electronic health record (EHR) environments that are connected to the network. Oracle Health Clinical Data Exchange does not create or deliver clinical documents for an encounter if no clinical data is retrieved from the connected EHR environment.

### **Availability**

This topic provides information on the availability of Oracle Health Clinical Data Exchange.

Oracle Health Clinical Data Exchange is available in the US-Chicago-1 Oracle Cloud Infrastructure (OCI) region.

### Oracle Health Clinical Data Exchange Users

This topic provides information on the intended users of Oracle Health Clinical Data Exchange.

Oracle Health Clinical Data Exchange has the following types of users:

- Payers: Payers are organizations or entities that pay for care services administered to
  patients by allhealthcare provider. Commonly, payers are health insurance companies that
  provide health plans for cost-coverage and reimbursements for medical treatment and care
  services.
- Providers: Providers are healthcare organizations (HCOs), such as physician practices or hospitals that provide medical care or treatment to patients.

### **Activate Your Subscription**

This topic provides information on activating your Oracle Health Clinical Data Exchange subscription.

Complete the following high-level steps to use Oracle Health Clinical Data Exchange:

- Add your subscription for Oracle Health Clinical Data Exchange Document Retrieval and Event Notifications Cloud Service to your OCI account or tenancy. After your organization signs an order for this service, your cloud account administrator (as specified in the order) receives an email notification to add the subscription to your OCI account or tenancy.
- 2. Once your subscription is successfully added, access the Oracle Cloud Console and select Oracle Health Clinical Data Exchange in the navigation pane.
- 3. On the Oracle Health Claims, Prior Authorizations, and Payments page, access Oracle Health Clinical Data Exchange.
- 4. View and modify your payer profile.
- 5. Locate the providers in the directory and view the data-sharing information.
- Create endpoints or set up bulk data retrieval to receive data from the applicable providers.



#### Note:

When you add the Oracle Health Clinical Data Exchange - Document Retrieval and Event Notifications Cloud Service subscription to your OCI account or tenancy, access to OCI Always Free resources is automatically enabled in your OCI account or tenancy.

### Sign In

This topic provides information on signing in to Oracle Health Clinical Data Exchange.

You can log into the console for the first time using one of the following methods:

- If you created your own OCI tenancy, log in to your tenancy and set up more administrators if necessary. See Set up an initial administrator model for your Oracle Cloud tenancy for more information.
- If Oracle created your OCI tenancy for you, access the email you received from Oracle and then set up more administrators. See Set up an initial administrator model for your Oracle Cloud tenancy for more information.

If you are logging into the service for the first time, you can access the Oracle Health Clinical Data Exchange by searching, or through a recommendation. After you have logged in and accessed Oracle Health Clinical Data Exchange, you can pin the service, view the service in the Recently Visited section, or a bookmark the service through your browser.

### View Your Subscription and Usage

This topic provides information on viewing your subscription and usage.

Complete the following steps to view your subscription and usage:

- 1. From the Navigation menu, select Billing & Cost Management.
- 2. From the Billing menu, select **Subscriptions**. The Subscriptions page is displayed.
- View the service details and usage metrics for your subscriptions on the Subscriptions page.

For more information on viewing subscriptions and usage information, see Applications Subscriptions.



The Oracle Health Clinical Data Exchange - Document Retrieval and Event Notifications Cloud Service is categorized as a **Metered SaaS** subscription.



# **Prerequisites**

This topic provides information on the prerequisites that you must complete before using Oracle Health Clinical Data Exchange.

Once you log in to Oracle Health Clinical Data Exchange, you need to set up prerequisites.

The Prerequisites section contains the following sections:

#### Define Payer User Policies

This topic provides information on defining payer user policies for Oracle Health Clinical Data Exchange.

#### Set Up Prerequisites

This topic provides information on completing the prerequisites for setting up document query endpoints and notification delivery endpoints.

View Provider Directory and Data-Sharing Information

This section provides information on viewing the Provider Directory and data-sharing information using Oracle Health Clinical Data Exchange.

#### Modify Payer Profile

This topic provides information on modifying payer profiles using Oracle Health Clinical Data Exchange.

#### Confirm Payer Profile Information

This topic provides information on confirming payer profile information using Oracle Health Clinical Data Exchange.

Confirm Data Access

This topic provides information on confirming data access using Oracle Health Clinical Data Exchange.

### **Define Payer User Policies**

This topic provides information on defining payer user policies for Oracle Health Clinical Data Exchange.

To access the Oracle Health Clinical Data Exchange resources, the below policies must be defined for your site. These policies can be defined for specific users or for user groups.

Run the below policy statements to grant user groups access to Oracle Health Clinical Data Exchange resources and to allow users to perform the following tasks:

- View the list of providers in the Oracle network.
- View and update payer profiles for your organization.
- Manage the document query endpoints and notification delivery endpoints.
- View certificate and Certificate Authority (CA) bundles.

Complete the following steps to define the payer user policies:

- 1. Create the applicable user group in your OCI tenancy.
- 2. Add the following identity policies at the tenancy level where xxxxx is the user group name:

 Add the below policy to allow users to read and update payer profiles and directory entries.

Allow group xxxxx to use cdexhub-payer-family in tenancy

 Add the below policy to allow users to read provider data-sharing for clinical event notifications and clinical documents.

Allow group xxxxx to read cdexhub-data-sharing-family in tenancy

 Add the below policy to allow users to tag namespaces for filtering notification delivery and document query endpoints.

Allow group xxxxx to read tag-namespaces in tenancy

- **3.** Add the following identity policies at the compartment level where xxxxx is the user group name and yyyyy is the compartment name:
  - Add the below policy to allow users to view a list all providers in the Oracle Provider Directory.

Allow group xxxxx to read cdexhub-provider-directory-entry in compartment yyyyy

 Add the below policy to allow users to fully manage notification delivery and document query endpoints.

Allow group xxxxx to manage cdexhub-endpoint-family in compartment yyyyy

 Add the below policy to allow users to read certificate, certificate authority bundles, and secrets that are used with notification delivery endpoints in your compartment.

```
Allow group xxxxx to manage certificate-authority-family in compartment yyyyy

ALLOW any-user to read cabundle in TENANCY where ALL

{request.principal.type = 'cdexhubpayer',
 request.principal.compartment.id='yyyyy'}

ALLOW any-user to read secret-bundles in TENANCY where ALL

{request.principal.type = 'cdexhubpayer',
 request.principal.compartment.id='yyyyy'}
```

 Add the below policy to allow users to manage identify domains and client applications.

Allow group xxxxx to manage domains in compartment yyyyy



 Add the below policy to allow users to read metrics for notification delivery and document query endpoints in their compartment.

```
Allow group xxxxx to use metrics in compartment yyyyy
```

4. Add the below identity policy at the compartment level to allow users to access Object Storage for bulk document retrieval where zzzzz is the bulk data export bucket in Object Storage.

```
ALLOW any-user to {BUCKET_INSPECT, BUCKET_READ, OBJECT_WRITE} in TENANCY where ALL { request.principal.type = 'cdexhubpayer', request.principal.compartment.id=target.compartment.id, target.bucket.name='zzzzz', any {request.permission='BUCKET_INSPECT', request.permission='BUCKET_READ', request.permission='OBJECT_WRITE'} }
```

### Set Up Prerequisites

This topic provides information on completing the prerequisites for setting up document query endpoints and notification delivery endpoints.

The Set Up Prerequisites section contains the following sections:

- Create a Confidential Application
   This topic provides information on creating a confidential application for Oracle Health Clinical Data Exchange.
- Create a CA Bundle for mTLS
   This topic provides information on creating a CA bundle for Mutual Transport Layer Security (mTLS).
- Create a Secret in Vault
   This topic provides information on creating a secret using Vault.

### Create a Confidential Application

This topic provides information on creating a confidential application for Oracle Health Clinical Data Exchange.

In the context of Oracle Identity Cloud Service (IDCS), a client application is an external application that interacts with OCI resources that use APIs. These applications are registered with IDCS, where they are assigned a client ID and client secret that they use to authenticate and make authorized API calls. This functionality is essential for integrating third-party applications with OCI services in a secure manner. Typically, the application uses OAuth 2.0 protocol to obtain tokens for making requests.

See Adding a Confidential Application for more information.

Use a confidential web server or server-side application that uses OAuth 2.0. OAuth 2.0 is a security protocol that allows you to use existing log-in credentials to log in to secure applications. For example, you can use third-party log-in information to access an application that does not provide its own log-in information. Multiple users can access confidential applications, which are hosted on a secure and protected server that can protect the OAuth client ID and client secret.

See OAuth Working Group Specifications on the OAuth website for more information.

Complete the following steps to create a client application using the Identity service in your OCI tenancy:

- 1. Enter the client application name.
- 2. Enter a description of the application.
- Select Enforce grants as authorization if you want to restrict access to the application to users who have been granted access.
- 4. Complete the following steps to add scopes for servers that contain the confidential application for which you need to enable OAuth:
  - Add the urn:opc:idm:role.system/Patient.read scope for querying patient application programming interfaces (APIs).
  - Add the urn:opc:idm:role.system/DocumentReference.read scope for querying document APIs.
  - c. Add the urn:opc:idm:role.system/Binary.read scope for guerying binary APIs.
- Select Next.
- 6. Review the information and select **Create resources**. The system creates the resources.

### Create a CA Bundle for mTLS

This topic provides information on creating a CA bundle for Mutual Transport Layer Security (mTLS).

Before creating document query endpoints or notification delivery endpoints using Oracle Health Clinical Data Exchange, you must create a CA bundle for mTLS using the Certificates service in your OCI tenancy.

See Creating a CA Bundle for more information.

### Create a Secret in Vault

This topic provides information on creating a secret using Vault.

Before creating notification delivery endpoints configured with OAuth 2.0 and mTLS in Oracle Health Clinical Data Exchange, you must create a secret using the Vault service in your OCI tenancy. This secret is intended to store your client secret that is generated when creating your confidential application.

See Creating a Secret for more information.

### View Provider Directory and Data-Sharing Information

This section provides information on viewing the Provider Directory and data-sharing information using Oracle Health Clinical Data Exchange.

The Provider Directory displays a list of all providers whose EHR environments are onboarded to Oracle Health Clinical Data Exchange.

Complete the following steps to view the provider directory:

- With Oracle Health Clinical Data Exchange open, select View Provider Directory.
   Alternatively, select Provider Directory from the Oracle Health Clinical Data Exchange navigation pane. The provider directory page is displayed.
- 2. View the following information on the provider list:



- Name: The name of the provider organization.
- **Geographic State:** The geographic state where the provider is located.
- Data Sharing: The provider's data-sharing status (that is, Enabled or Disabled).
- 3. To view the ADT data concepts and the data-sharing settings establish by the provider, complete the following steps:
  - a. Select the provider name on the provider list, or select **View details** on the rollup menu. The Provider Details page is displayed.
  - **b.** In the Provider Details section, you can view additional information about the provider, such as the provider's OCID, tax ID, and fax number.
  - c. In the Clinical event notifications section, you can view the clinical event notifications that are enabled for the provider. You can also view details related to those notifications, such as the data-sharing criteria, access status, and the date of the most recent update.
  - d. In the Clinical document concepts section, you can view the clinical data concepts that are enabled for the provider. You can also view details related to those concepts, such as the data-sharing criteria, access status, and the date of the most recent update.

### **Modify Payer Profile**

This topic provides information on modifying payer profiles using Oracle Health Clinical Data Exchange.

- With Oracle Health Clinical Data Exchange open, select Payer profile in the navigation pane. The Payer Profile page is displayed.
- 2. On the Payer Profile page, you can view the following information for your organization:
- Payer Profile ID: The OCID that is associated with your organization. Select Show to view the entire OCID and select Copy if you want to copy the OCID.
- Name: The name of your organization.
- Address: Your corporate headquarters address.
- Email: Your organization's email address.
- Phone: Your organization's main phone number.
- Fax: Your organization's fax number.
- Last Updated: The data and time that your payer profile was most recently updated.
- To modify your organization's contact information, complete the following steps:
  - a. Select Edit contact info. The Edit contact info wizard is displayed.
  - **b.** Enter a description of your organization in the About us box.
  - c. Enter the address of your corporate headquarters in the Address box.
  - d. Enter your organization's email address in the Email box.
  - e. Enter your organization's phone number in the Phone box.
  - f. Enter your organization's fax number in the Fax box.
  - g. If you want to undo your changes, select Cancel.
  - h. Select Save changes. When the lifecycle state becomes active, the profile is created. You can track progress using the Work Request ID. If any issues occur, details are provided.



# **Confirm Payer Profile Information**

This topic provides information on confirming payer profile information using Oracle Health Clinical Data Exchange.

Periodically, you need to confirm your information as a payer. When this situation occurs, the Is your contact info up to date message is displayed when you log into Payer Hub. The contact information is displayed below the message.

- 1. If the information is correct, select Confirm it is up to date.
- If the information is incorrect, select Edit contact info, make any necessary changes, and select Save changes.

### **Confirm Data Access**

This topic provides information on confirming data access using Oracle Health Clinical Data Exchange.

A system message is displayed if a provider changes their data-sharing criteria for your site, for example, if they stop sharing a specific document concept or event notification.



# Manage Oracle Health Clinical Data Exchange Endpoints

This topic provides information on managing endpoints for Oracle Health Clinical Data Exchange.

Oracle Health Clinical Data Exchange uses two types of endpoints: document query endpoints and notification delivery endpoints. Document query endpoints allow you to access patient encounter data from provider EHRs using FHIR. Oracle Health Clinical Data Exchange uses the standard C-CDA format for sharing patient encounter data. Notification delivery endpoints allow you to receive clinical event notifications about patient encounters. Currently, you can receive ADT messages using Oracle Health Clinical Data Exchange.

In the Document query endpoints section, you can view a list of document query endpoints, filter endpoints, create and delete endpoints, and view a list of work requests and errors. See Creating a VCN for more information.

The Manage Oracle Health Clinical Data Exchange Endpoints section contains the following sections:

#### Create a Document Query Endpoint

This topic provides information on creating document query endpoints using Oracle Health Clinical Data Exchange.

#### Review a Document Query Endpoint

This topic provides information on reviewing document query endpoints in Oracle Health Clinical Data Exchange.

#### Edit a Document Query Endpoint

This topic provides information on editing document query endpoints in Oracle Health Clinical Data Exchange.

#### Delete a Document Query Endpoint

This topic provides information on deleting document query endpoints in Oracle Health Clinical Data Exchange.

#### List and Filter Document Query Endpoints

This topic provides information on filtering the list of document query endpoints.

#### Create a Notification Delivery Endpoint

This topic provides information on creating notification delivery endpoints using Oracle Health Clinical Data Exchange.

#### · Review a Notification Delivery Endpoint

This topic provides information on reviewing notification delivery endpoints in Oracle Health Clinical Data Exchange.

#### Edit a Notification Delivery Endpoint

This topic provides information on editing notification delivery endpoints using Oracle Health Clinical Data Exchange.

#### Delete a Notification Delivery Endpoint

This topic provides information on deleting notification delivery endpoints using Oracle Health Clinical Data Exchange.

List and Filter Notification Delivery Endpoints

This topic provides information on listing and filtering notification delivery endpoints using Oracle Health Clinical Data Exchange.

View Work Requests

This topic provides information on viewing work requests using Oracle Health Clinical Data Exchange.

### Create a Document Query Endpoint

This topic provides information on creating document query endpoints using Oracle Health Clinical Data Exchange.

A document query endpoint is a URL provided by the Oracle Health Clinical Data Exchange service that payers can use to request information from providers. You can create FHIR document query endpoints in Oracle Health Clinical Data Exchange.



You can create up to 25 document query endpoints per tenancy. If you want to use more than 25 document query endpoints, you can request a limit increase using the Limit and Quota Console.

Oracle Health Clinical Data Exchange creates C-CDA documents for clinical data from requested patient encounters retrieved from provider EHRs, along with unstructured clinical notes included as C62 documents. These C-CDA documents include the following data concepts if enabled by the provider:

- Patient (required)
- Encounter (required)
- Practitioner (required)
- Provenance (required)
- Allergy Intolerance
- Condition
- Immunization
- Medication Request
- Procedure
- Social History
- Vital Signs
- Laboratory Result
- Care Plan
- Care Team
- Device
- Goal
- Practitioner
- Document Reference



- Diagnostic Report
- Medication Administration

Complete the following steps to create a document query endpoint:

 With Oracle Health Clinical Data Exchange open, select **Document query endpoints** in the navigation pane. The Document query endpoints page is displayed.



You must have completed the prerequisites including created a client application before you can create a document query endpoint.

- Select Create document query endpoint. The Create document query endpoint wizard is displayed.
- 3. Enter a descriptive name for the endpoint in the Display Name box.
- 4. Enter a meaningful description of the endpoint in the Description box.
- Select the applicable compartment in the Create document query endpoint in compartment box.
- Select the applicable identity domain in the Identity Domain box. Select Change compartment if the identity domain you want to select is not associated with the compartment you selected in Step 5.
- 7. Select the applicable client application ID in the App Client Id box.
- 8. Optionally, select the applicable CA bundle in the CA bundle Id box.
- 9. If you selected a CA bundle in Step 8, complete the following optional steps as applicable:
  - Select the Add common name (CA) and subject alternative names (SAN) to CA bundle checkbox.
  - b. Enter a common name (CN) in the Common name (CN) box.
  - c. Select Add subject alternative name (SAN) and enter a subject alternative name (SAN) in the Subject alternative name (SAN) box. Repeat this step as needed to add up to five SANs.
- 10. If you want to use tags, complete the following optional steps:
  - a. Select Show advanced options.
  - b. Select the applicable tag in the Tag namespace box. If you want to enter a freeform tag, select None (add a free-form tag).
  - **c.** Select the applicable tag key in the Tag key box. If you are entering a freeform tag, enter the tag key that you want to use.
  - d. Enter the applicable tag value in the Tag value box.
  - If you want to add additional tags, select Add tag and repeat the above substeps as needed.
- Select Create document query endpoint. The Document query endpoint page is displayed.

After you complete the above steps, the system begins creating the endpoint. Progress is displayed on the Work Requests page. When the endpoint is created, you can view details about the endpoint, edit the endpoint details, add tags, or delete the endpoint.



See the below example of a document query endpoint where xxxxx is the customer-specific environment identifier.

```
"payerId": "ocid1.cdexhubpayer.oc1.iad.xxxxx",
    "framework": "FHIR",
    "identityDomainUrl": "https://idcs-xxxxx.identity.oraclecloud.com:443",
    "displayName": "Payer Query Endpoint 1",
    "description": "Query endpoint to make fhir calls.",
    "compartmentId": "ocid1.compartment.oc1..xxxx",
    "clientAppDetails":
    {
        "clientId": "xxxxxx"
    }
}
```

### Review a Document Query Endpoint

This topic provides information on reviewing document query endpoints in Oracle Health Clinical Data Exchange.

- 1. With Oracle Health Clinical Data Exchange open, select **Document query endpoints** in the navigation pane. The Document query endpoints page is displayed.
- 2. View the existing document query endpoints on the available list. The following information is displayed on the list for each document query endpoint:
- Display Name: The given name of the document guery endpoint.
- State: The status of the document query endpoint (for example, Active or Deleted).
- Description: The description that is documented for the document query endpoint.
- Service URL: The system-generated service URL that is associated with the document query endpoint. If you want to copy the service URL, select Copy Service URL from the rollup menu.
- **OCID:** The system-generated OCID that is associated with the document query endpoint. If you want to copy the OCID, select **Copy OCID** from the rollup menu.
- Time Created: The date and time that the document query endpoint was created.
- To view additional information about a document query endpoint, select the endpoint's
  display name on the available list, or select View Details from the rollup menu. The Query
  endpoint details page is displayed.
- 4. On the Query endpoint details page, you can view additional information, tags, metrics, and work requests that are associated with the document guery endpoint.

### Edit a Document Query Endpoint

This topic provides information on editing document query endpoints in Oracle Health Clinical Data Exchange.

- With Oracle Health Clinical Data Exchange open, select **Document query endpoints** in the navigation pane. The Document query endpoints page is displayed.
- 2. Select the display name of the document query endpoint that you want to modify on the available list. The Query endpoint details page is displayed.

- Select Edit. The Edit endpoint wizard is displayed.
- 4. Update the display name and description as applicable.
- Select Submit. Alternatively, if you want to undo your changes, select Cancel.
- 6. If you want to move the document query endpoint to a different compartment, complete the following steps:
  - **a.** On Query endpoint details page, select **Move Resource**. The Move resource wizard is displayed.
  - **b.** In the Destination compartment box, select the compartment to which you want to move the document query endpoint.
  - c. Select Move resource. Alternatively, if you want to undo your changes, select Cancel.
- 7. If you want to add tags for the document query endpoint, complete the following steps:
  - a. On Query endpoint details page, select Add tags. The Add tags wizard is displayed.
  - **b.** Select the applicable tag in the Tag namespace box. If you want to enter a freeform tag, select **None (add a free-form tag)**.
  - c. Select the applicable tag key in the Tag key box. If you are entering a freeform tag, enter the tag key that you want to use.
  - d. Enter the applicable tag value in the Tag value box.
  - e. If you want to add additional tags, select Add tag and repeat the above substeps as needed.
  - f. Select **Add tags**. Alternatively, if you want to undo your changes, select **Cancel**.

# Delete a Document Query Endpoint

This topic provides information on deleting document query endpoints in Oracle Health Clinical Data Exchange.

- With Oracle Health Clinical Data Exchange open, select **Document query endpoints** in the navigation pane. The Document query endpoints page is displayed.
- 2. Select the display name of the document query endpoint that you want to delete on the available list. The Query endpoint details page is displayed.
- 3. Select **Delete**. The Delete query endpoint wizard is displayed.



If you delete the only endpoint of the type across compartments, you lose access to that data.

4. Enter the display name of the document query endpoint in the available box to confirm that you want to delete the endpoint, and then select **Delete**. Alternatively, if you do not want to delete the endpoint, select **Cancel**.

### List and Filter Document Query Endpoints

This topic provides information on filtering the list of document query endpoints.

 With Oracle Health Clinical Data Exchange open, select **Document query endpoints** in the navigation pane. The Document query endpoints page is displayed.



- 2. To search for a document query endpoint by the display name, enter the display name in the Search by name box and press **Enter**.
- To filter the list of document query endpoints by compartment, select the applicable compartment in the Compartment box.
- 4. To filter the list of document query endpoints by the status, select one of the following statuses in the State box:
- Any state
- Creating
- Active
- Updating
- Deleting
- Deleted
- Failed
- 5. To add a tag filter, complete the following steps:
  - a. Select add on the Tag filters heading. The Apply tag filer wizard is displayed.
  - b. Select the applicable tag in the Tag namespace box.
  - **c.** Select the applicable tag key in the Tag key box. If you are entering a freeform tag, enter the tag key that you want to use.
  - d. Select the Match any values option or the Specify matching values option. If you select the Specify matching values option, enter the applicable tag values in the available box.
  - Select Apply filter. Alternatively, if you want to undo your changes, select Cancel.

# Create a Notification Delivery Endpoint

This topic provides information on creating notification delivery endpoints using Oracle Health Clinical Data Exchange.

A notification delivery endpoint is a web address that payers host and use to receive clinical event notifications, such as ADT messages. The following clinical event notifications can be shared with payers:

- Admission or visit notifications (ADT A01)
- Discharge or end visit (ADT A03)
- Register a patient (ADT A04)
- Pre-admit a patient (ADT A05)
- Update patient information (ADT A08)

Oracle Health Clinical Data Exchange uses the URL that you provide to deliver the event notifications. You can create ADT notification delivery endpoints in Oracle Health Clinical Data Exchange.



#### Note:

You can create up to 25 notification delivery endpoints per tenancy. If you want to use more than 25 notification delivery endpoints, you can request a limit increase using the Limit and Quota Console.

Complete the following steps to create a notification delivery endpoint:

- 1. With Oracle Health Clinical Data Exchange open, select **Notification delivery endpoints** in the navigation pane. The Notification Delivery Endpoints page is displayed.
- Select Create notification delivery endpoint. The Create notification delivery endpoint wizard is displayed.
- 3. Enter the applicable ADT service URL in the ADT Service URL box.

#### Note:

You cannot update the ADT service URL after you create it. If you need to update it later, you must delete and then re-create it.

- 4. Select the applicable supported message types (for example, ADT-A03 and ADT-A05) in the Message types supported box.
- 5. Enter a descriptive name for the endpoint in the Display Name box.
- 6. Enter a meaningful description of the endpoint in the Description box.
- Select the compartment in which you want to create the notification delivery endpoint in the Create In Compartment box.
- 8. Select the applicable CA bundle with which you want to associate the notification delivery endpoint in the Select CA box. Select **Change compartment** if the CA bundle that you want to select is not associated with the compartment you selected in Step 7.
- **9.** Optionally, select the **Enable OAuth 2.0 configuration** checkbox. If you select this checkbox, complete the following steps:
  - a. Enter the applicable client identifier for OAuth 2.0 authentication in the Client ID box.
  - b. Select the applicable vault for the compartment in the Select Vault box. Select Change compartment if the vault that you want to select is not associated with the compartment you selected in Step 7 above.
  - Select the OCID for the secret that is associated with the client identifier in the Select Secret box. Select **Change compartment** if the secret that you want to select is not associated with the compartment you selected in Step 7 above.
  - d. Select the OCID for the secret that is associated with the client identifier in the Select Secret box. Select **Change compartment** if the secret that you want to select is not associated with the compartment you selected in Step 7 above.
  - e. Enter the URL that is used to request the OAuth 2.0 token in the Token URL box.
  - f. Enter the scopes of the OAuth 2.0 authorization in the Scopes box. Enter all the applicable scopes in a comma-separated list format.
  - g. Enter the applicable key-value pairs using the Key and Value boxes. Select Add another row and repeat this step as needed to add all the applicable key-value pairs.
- 10. If you want to use tags, complete the following optional steps:



- a. Select Show advanced options.
- b. Select the applicable tag in the Tag namespace box. If you want to enter a freeform tag, select None (add a free-form tag).
- c. Select the applicable tag key in the Tag key box. If you are entering a freeform tag, enter the tag key that you want to use.
- d. Enter the applicable tag value in the Tag value box.
- If you want to add additional tags, select Add tag and repeat the above substeps as needed.
- **11.** Select **Create notification delivery endpoint**. The Notification delivery endpoint details page is displayed.

After you complete the above steps, the system begins creating the endpoint. Progress is displayed in the Work Requests section. When the endpoint is created, you can view details about the endpoint, edit the endpoint details, add tags, or delete the endpoint.

```
"payerId": "ocid1.cdexhubpayer.oc1.iad.xxxxx",
    "messageType": "ADT",
    "adtEventType": ["ADT-A01", "ADT-A03", "ADT-A04", "ADT-A08"],
    "url": "https://some.customer.hosted.endpoint.org:8443/adt",
    "displayName": "Payer Hosted Delivery Endpoint",
    "description": "delivery endpoint to forward ADTs to from cdex.",
    "compartmentId": "ocid1.compartment.oc1..xxxxx",
    "caBundleId": "ocid1.cabundle.oc1.iad.xxxxx"
```

# Review a Notification Delivery Endpoint

This topic provides information on reviewing notification delivery endpoints in Oracle Health Clinical Data Exchange.

- 1. With Oracle Health Clinical Data Exchange open, select **Notification delivery endpoints** in the navigation pane. The Notification delivery endpoints page is displayed.
- 2. View the existing notification delivery endpoints on the available list. The following information is displayed on the list for each notification delivery endpoint:
- Name: The given name of the notification delivery endpoint.
- **Lifecycle State:** The status of the notification delivery endpoint (for example, Active or Deleted).
- **Message Type:** The message type that is associated with the notification delivery endpoint (for example, ADT).
- Connectivity: The status of the notification delivery endpoint's connectivity.
- Description: The description that is documented for the notification delivery endpoint.
- Service URL: The system-generated service URL that is associated with the notification delivery endpoint. If you want to copy the service URL, select Copy Service URL from the rollup menu.
- **OCID:** The system-generated OCID that is associated with the notification delivery endpoint. If you want to copy the OCID, select **Copy OCID** from the rollup menu.
- Created: The date and time that the notification delivery endpoint was created.



- To view additional information about a notification delivery endpoint, select the endpoint's display name on the available list, or select View Details from the rollup menu. The Delivery endpoint details page is displayed.
- **4.** On the Delivery endpoint details page, you can view additional information, tags, metrics, and work requests that are associated with the notification delivery endpoint.

### Edit a Notification Delivery Endpoint

This topic provides information on editing notification delivery endpoints using Oracle Health Clinical Data Exchange.

- 1. With Oracle Health Clinical Data Exchange open, select **Notification delivery endpoints** in the navigation pane. The Notification delivery endpoints page is displayed.
- Select the display name of the notification delivery endpoint that you want to modify on the available list. The Delivery endpoint details page is displayed.
- 3. Select **Edit**. The Edit endpoint wizard is displayed.
- 4. Update the display name and description as applicable.
- 5. Select **Submit**. Alternatively, if you want to undo your changes, select **Cancel**.
- 6. If you want to move the notification delivery endpoint to a different compartment, complete the following steps:
  - a. On Delivery endpoint details page, select Move Resource. The Move resource wizard is displayed.
  - **b.** In the Destination compartment box, select the compartment to which you want to move the notification delivery endpoint.
  - Select Move resource. Alternatively, if you want to undo your changes, select Cancel.
- 7. If you want to add tags for the notification delivery endpoint, complete the following steps:
  - a. On Delivery endpoint details page, select Add tags. The Add tags wizard is displayed.
  - **b.** Select the applicable tag in the Tag namespace box. If you want to enter a freeform tag, select **None (add a free-form tag)**.
  - **c.** Select the applicable tag key in the Tag key box. If you are entering a freeform tag, enter the tag key that you want to use.
  - d. Enter the applicable tag value in the Tag value box.
  - If you want to add additional tags, select Add tag and repeat the above substeps as needed.
  - f. Select Add tags. Alternatively, if you want to undo your changes, select Cancel.

# Delete a Notification Delivery Endpoint

This topic provides information on deleting notification delivery endpoints using Oracle Health Clinical Data Exchange.

- 1. With Oracle Health Clinical Data Exchange open, select **Notification delivery endpoints** in the navigation pane. The Notification delivery endpoints page is displayed.
- 2. Select the display name of the notification delivery endpoint that you want to delete on the available list. The Delivery endpoint details page is displayed.
- 3. Select **Delete**. The Delete delivery endpoint wizard is displayed.



#### Note:

If you delete the only endpoint of the type across compartments, you lose access to that data.

4. Enter the display name of the notification delivery endpoint in the available box to confirm that you want to delete the endpoint, and then select **Delete**. Alternatively, if you do not want to delete the endpoint, select **Cancel**.

### List and Filter Notification Delivery Endpoints

This topic provides information on listing and filtering notification delivery endpoints using Oracle Health Clinical Data Exchange.

- 1. With Oracle Health Clinical Data Exchange open, select **Notification delivery endpoints** in the navigation pane. The Notification delivery endpoints page is displayed.
- 2. To search for a notification delivery endpoint by the display name, enter the display name in the Search by name box and press **Enter**.
- 3. To filter the list of notification delivery endpoints by compartment, select the applicable compartment in the Compartment box.
- **4.** To filter the list of notification delivery endpoints by the status, select one of the following statuses in the State box:
- Any state
- Creating
- Active
- Updating
- Deleting
- Deleted
- Failed
- 5. To filter the list of notification delivery endpoints by type, select the applicable type in the Type box.
- 6. To filter the list of notification delivery endpoints by connectivity, select the applicable connectivity in the Connectivity box.
- To add a tag filter, complete the following steps:
  - Select add on the Tag filters heading. The Apply tag filer wizard is displayed.
  - Select the applicable tag in the Tag namespace box.
  - **c.** Select the applicable tag key in the Tag key box. If you are entering a freeform tag, enter the tag key that you want to use.
  - d. Select the Match any values option or the Specify matching values option. If you select the Specify matching values option, enter the applicable tag values in the available box.
  - e. Select Apply filter. Alternatively, if you want to undo your changes, select Cancel.



# View Work Requests

This topic provides information on viewing work requests using Oracle Health Clinical Data Exchange.

- 1. With Oracle Health Clinical Data Exchange open, select **Work requests** in the navigation pane. The Work requests page is displayed.
- 2. Select a compartment in the Compartment box.
- 3. Optionally, you can filter the work request by status.



4

### **Retrieve Documents**

This topic provides information on retrieving clinical documents using Oracle Health Clinical Data Exchange.

The Retrieve Documents section contains the following sections:

- Retrieve Documents Using Document Query Endpoints (FHIR)
   This topic provides information on retrieving documents using FHIR in Oracle Health Clinical Data Exchange.
- Retrieve Documents Using Bulk Document Retrieval
   This topic provides information on bulk data retrieval functionality that is available in Oracle
   Health Clinical Data Exchange.

### Retrieve Documents Using Document Query Endpoints (FHIR)

This topic provides information on retrieving documents using FHIR in Oracle Health Clinical Data Exchange.

- 1. Log in to Oracle Health Clinical Data Exchange and select View Payer Hub.
- 2. Review your Payer Profile ID.
- 3. Select **Get FHIR Client ID** to obtain an OAuth 2.0 client ID.
- 4. Obtain the Oracle Health Clinical Data Exchange FHIR endpoint and the OAuth 2.0 Token Provider from the payer profile ID resource.
- 5. Configure your application to retrieve the insured patient's documents using the client ID, token provider, and FHIR endpoint.

Oracle Health Clinical Data Exchange receives and processes documents using the following process:

- The payer system receives ADT messages using a configured notification delivery endpoint.
- 2. The system extracts the applicable data such as encounter ID, and then prepares the FHIR request and maps the data extracted from the ADT messages in the request.
- 3. The system sends a request to query the endpoint configured in the service.
- **4.** If the patient match and encounter coverage checks are successful, the system receives a response that includes applicable clinical documents.

See REST APIs for Oracle Health Clinical Data Exchange on Oracle Help Center for more information.

- xxxxx: This value represents the financial identification number (FIN).
- **vvvvv:** This value represents the financial organization ID.
- zzzzz: This value represents the FHIR tenant ID.

MSH|^~\&|fhirTenantId^zzzzz^UUID|HNA500||^1.99.888.7.66666.5.444.33.2.1^ISO|
20241021220538||ADT^A04|Q104785659T118867590X0||2.3|||||8859/1

```
EVN | A04 | 20240423000000
PID|1||
1234^^&1.99.888.7.66666.5.444.33.2.1&ISO~2604321189^^^&1.99.888.7.66666.5.444
.33.2.1&ISO||CDEXHUB^TESTPATIENT^^^^L||20000310|M|||STREET ADDRESS 1^STREET
ADDRESS 2^OP^ST^12345^US^H^^""|||||||xxxxx^^^FIN&yyyyy&ISO^FIN NBR^""|
9876xxxxx|||Not Hispanic, Latino, or Spanish Origin
PV1|1|0|MX Clinic 2^""^""^MX Clinic 2^^^MX Clinic 2|""||""^""^""^""
953^Testuser^Testuser^^^^PERSONNEL PRIMARY
IDENTIFIER^^^^PPI^""|||""|""|""|""|""|""|
SYSTEMSYSTEM^SYSTEM^SYSTEM^Cerner^^^^External Id^^^^EXTID^""|CLI||
CM||""|||||||||||""|""|"MX Clinic 2||DIS|||20240423000000-0500|
20240520235959-0500
IN1|1|3654331^Oracle Health^^^Oracle Health|3808059|Oracle Health|123 MAIN
STREET^^ANYWHERE^ST^12345^US^B^^""|| (816)555-0123^WPN^""|3480||0||
20240401000000-0500|||CM|CDEXHUB^TESTING^^^^L|CD:158|20000310|STREET ADDRESS
1°STREET ADDRESS 2°OP°ST°12345°US°H°°""|""||1||||||||||CM||||||
M||""||9439034
```

See the below examples of a patient query request and response for retrieving a patient ID.

#### Request:

```
curl "https://cell1.query.cdexhub.us-chicago-1.oci.oraclecloud.com/fhir/r4/1234567-1234-1234-1234-123456789101/Patient? family=patient&given=test&birthdate=1900-01-01&phone=8165550123" -H 'Authorization: Bearer <token>'
```

#### Response:

```
"resourceType": "Bundle",
    "total": 1,
    "entry":
    ſ
            "fullUrl": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/Patient/
0123456789",
            "resource":
                "resourceType": "Patient",
                "id": "0123456789",
                "identifier":
                [
                         "use": "usual",
                         "type":
                             "coding":
                                     "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
                                     "code": "MR",
                                     "display": "Medical record number"
```

```
1
                         "system": "1.99.888.7.66666.5.444.33.2.1",
                         "value": "0123456789"
                    },
                         "use": "usual",
                         "type":
                             "coding":
                             [
                                 {
                                     "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
                                     "code": "MR",
                                      "display": "Medical record number"
                             ]
                         },
                         "system":
"12345678123456781234567812345678 2.99.888.7.66666.5.444.33.2.1",
                         "value": "1234"
                    },
                     {
                         "use": "official",
                         "type":
                             "coding":
                             [
                                 {
                                     "system": "http://hl7.org/fhir/sid/us-
ssn",
                                     "code": "SSN"
                             ],
                             "text": "SSN"
                         "system": "http://hl7.org/fhir/sid/us-ssn",
                         "value": "991113333"
                    }
                ],
                "name":
                 [
                     {
                         "use": "official",
                         "family": "DEO",
                         "given":
                             "TEST"
                     }
                ],
                "telecom":
                     {
```

```
"system": "phone",
                         "value": "816-555-0123",
                         "use": "home"
                     }
                 ],
                 "gender": "male",
                 "birthDate": "1987-01-23",
                 "address":
                     {
                         "use": "home",
                         "text": "1234, MAIN ST, ST 12345",
                         "line":
                         [
                             "1234, MAIN ST"
                         "city": "ANYWHERE",
                         "state": "ST",
                         "postalCode": "12345"
                ]
            }
        }
    ]
}
```

See the below examples of a document query request and response for retrieving clinical documents for a specific patient encounter.

#### Request:

```
curl "https://cell1.query.cdexhub.us-chicago-1.oci.oraclecloud.com/
fhir/r4/1234567-1234-1234-1234-123456789101/DocumentReference?
patient=0123456789&encounter=12345678123456781234567812345678_2.99.888.7.66666
.5.444.33.2.1%7C12345"" -H 'Authorization: Bearer <token>'
```

#### Response:



```
"masterIdentifier":
                     "system": "urn:ietf:rfc:3986",
                     "value":
"2.25.290832971677299890675432599767631684550.200728962"
                "identifier":
                 [
                     {
                         "use": "official",
                         "system": "urn:ietf:rfc:3986",
                         "value": "urn:uuid:76d91416-
fbca-3274-94b3-9d4291e268b8"
                    },
                     {
                         "system": "https://fhir.cerner.com/ceuuid",
                         "value":
"CE87caf4b7-9397-4667-9897-702218017c9e-200728962-2024051320551000"
                ],
                "status": "current",
                "docStatus": "final",
                "type":
                     "coding":
                     [
                             "system": "https://fhir.cerner.com/dacc6494-
e336-45ad-8729-b789ff8663c6/codeSet/72",
                             "code": "166336503",
                             "display": "Wound Clinic Office Note"
                         },
                             "system": "http://loinc.org",
                             "code": "96352-0",
                             "display": "Wound care management Outpatient Note"
                    ]
                },
                "category":
                         "coding":
                         [
                                 "system": "http://loinc.org",
                                 "code": "96352-0",
                                 "display": "Wound care management Outpatient
Note"
                         ]
                    },
                         "coding":
```

```
"system": "http://hl7.org/fhir/us/core/
CodeSystem/us-core-documentreference-category",
                                 "code": "clinical-note",
                                 "display": "Clinical Note"
                        ]
                    }
                ],
                "subject":
                    "reference": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/Patient/
0123456789",
                    "display": "TEST PATIENT"
                "date": "2024-05-12T19:00:00.000Z",
                "author":
                ſ
                         "type": "Practitioner",
                        "identifier":
                            "use": "official",
                            "type":
                                 "coding":
                                 [
                                         "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
                                         "code": "NPI",
                                         "display": "National provider
identifier"
                                     }
                                 ]
                             },
                             "system": "urn:ietf:rfc:3986",
                             "value": "SYSTEMSYSTEM"
                        "display": "SYSTEM SYSTEM"
                    }
                ],
                "authenticator":
                    "type": "Practitioner",
                    "identifier":
                        "use": "official",
                        "type":
                             "coding":
                                     "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
```

```
"code": "NPI",
                                     "display": "National provider identifier"
                            ]
                        "value": "SYSTEMSYSTEM"
                    },
                    "display": "SYSTEM SYSTEM"
                } ,
                "description": "Wound Care",
                "securityLabel":
                [
                        "coding":
                         [
                                 "system": "2.16.840.1.113883.5.25",
                                 "code": "N",
                                 "display": "Normal"
                        ]
                    }
                ],
                "content":
                    {
                         "attachment":
                             "contentType": "text/xml",
                             "language": "en",
                             "url": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/Binary/
urn:uuid:76d91416-fbca-3274-94b3-9d4291e268b8",
                             "creation": "2024-05-12"
                        },
                        "format":
                             "system": "1.3.6.1.4.1.19376.1.2.3",
                             "code": "urn:hl7-org:sdwg:ccda-nonXMLBody:2.1",
                             "display": "HTML Document"
                    }
                ],
                "context":
                    "encounter":
                    [
                             "extension":
                                     "url": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/StructureDefinition/custom-attribute/
encounter-start-datetime",
                                     "valueDateTime": "2024-05-10T05:00:00Z"
                                 }
```

```
"identifier":
                                "system":
"12345678123456781234567812345678 1.99.888.7.66666.5.444.33.2.1",
                                 "value": "12345"
                    ],
                    "period":
                        "end": "2024-05-12"
                    },
                    "sourcePatientInfo":
                        "identifier":
                            "system": "1.99.888.7.66666.5.444.33.2.1",
                            "value": "0123456789"
                        "display": "PATIENT TEST"
                    }
                }
            }
        },
            "fullUrl": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/
DocumentReference/urn:uuid:26ad7f5a-546e-3e86-bb69-bdbe4e6e69a2",
            "resource":
                "resourceType": "DocumentReference",
                "id": "urn:uuid:26ad7f5a-546e-3e86-bb69-bdbe4e6e69a2",
                "meta":
                    "versionId": "1",
                    "lastUpdated": "2024-05-13T20:50:16.000Z"
                "masterIdentifier":
                    "system": "urn:ietf:rfc:3986",
                    "value":
"2.25.290832971677299890675432599767631684550.200728960"
                },
                "identifier":
                ſ
                    {
                        "use": "official",
                        "system": "urn:ietf:rfc:3986",
                        "value": "urn:uuid:26ad7f5a-546e-3e86-bb69-
bdbe4e6e69a2"
                    },
                        "system": "https://fhir.cerner.com/ceuuid",
                        "value":
"CE87caf4b7-9397-4667-9897-702218017c9e-200728960-2024051320501800"
```

```
],
                "status": "current",
                "docStatus": "final",
                "type":
                    "coding":
                    ſ
                             "system": "https://fhir.cerner.com/dacc6494-
e336-45ad-8729-b789ff8663c6/codeSet/72",
                             "code": "2820547",
                             "display": "Procedure Note"
                        },
                             "system": "http://loinc.org",
                             "code": "28570-0",
                             "display": "Procedure note"
                    ]
                },
                "category":
                        "coding":
                         [
                                 "system": "http://hl7.org/fhir/us/core/
CodeSystem/us-core-documentreference-category",
                                 "code": "clinical-note",
                                 "display": "Clinical Note"
                        ]
                    },
                        "coding":
                         [
                                 "system": "http://loinc.org",
                                 "code": "28570-0",
                                 "display": "Procedure note"
                        ]
                    }
                "subject":
                    "reference": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/fhir/r4/1234567-1234-1234-1234-123456789101/
Patient/0123456789",
                    "display": "PATIENT TEST"
                "date": "2024-05-12T19:00:00.000Z",
                "author":
                    {
```

```
"type": "Practitioner",
                         "identifier":
                             "use": "official",
                             "type":
                                 "coding":
                                 [
                                          "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
                                          "code": "NPI",
                                          "display": "National provider
identifier"
                                 ]
                             },
                             "system": "urn:ietf:rfc:3986",
                             "value": "SYSTEMSYSTEM"
                         "display": "SYSTEM SYSTEM"
                    }
                ],
                "authenticator":
                    "type": "Practitioner",
                    "identifier":
                         "use": "official",
                        "type":
                             "coding":
                             [
                                     "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
                                     "code": "NPI",
                                     "display": "National provider identifier"
                             ]
                         },
                         "value": "SYSTEMSYSTEM"
                    },
                    "display": "SYSTEM SYSTEM"
                "description": "Biopsy Procedure",
                "securityLabel":
                [
                    {
                         "coding":
                                 "system": "2.16.840.1.113883.5.25",
                                 "code": "N",
                                 "display": "Normal"
```

```
],
                "content":
                [
                    {
                        "attachment":
                            "contentType": "text/xml",
                            "language": "en",
                            "url": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/Binary/
urn:uuid:26ad7f5a-546e-3e86-bb69-bdbe4e6e69a2",
                            "creation": "2024-05-12"
                        },
                        "format":
                            "system": "1.3.6.1.4.1.19376.1.2.3",
                            "code": "urn:hl7-org:sdwg:ccda-nonXMLBody:2.1",
                            "display": "HTML Document"
                    }
                ],
                "context":
                    "encounter":
                            "extension":
                            ſ
                                     "url": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/StructureDefinition/custom-attribute/
encounter-start-datetime",
                                     "valueDateTime": "2024-05-10T05:00:00Z"
                            ],
                            "identifier":
                                "system":
"12345678123456781234567812345678 2.99.888.7.66666.5.444.33.2.1",
                                 "value": "12345"
                        }
                    ],
                    "period":
                        "end": "2024-05-12"
                    "sourcePatientInfo":
                        "identifier":
                            "system": "1.99.888.7.66666.5.444.33.2.1",
                            "value": "0123456789"
                        },
```

```
"display": "PATIENT TEST"
                    }
                }
            }
        },
            "fullUrl": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/
DocumentReference/urn:uuid:7bc1700d-b565-4dc5-8c05-038909d57edb",
            "resource":
                "resourceType": "DocumentReference",
                "id": "urn:uuid:7bc1700d-b565-4dc5-8c05-038909d57edb",
                "masterIdentifier":
                    "system": "urn:ietf:rfc:3986",
                    "value": "1.3.6.1.4.1.21367.2010.5988262"
                "identifier":
                    {
                         "use": "official",
                         "system": "urn:ietf:rfc:3986",
                         "value": "urn:uuid:7bc1700d-
b565-4dc5-8c05-038909d57edb"
                    }
                "status": "current",
                "docStatus": "final",
                "type":
                     "coding":
                     [
                             "system": "http://loinc.org",
                             "code": "34133-9",
                             "display": "Summary of Episode Note"
                    ]
                },
                "category":
                     {
                         "coding":
                         [
                                 "system": "http://loinc.org",
                                 "code": "34133-9",
                                 "display": "Summary of Episode Note"
                         ]
                    }
                ],
                "subject":
                     "reference": "https://cell1.query.cdexhub.us-
```

```
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/Patient/
0123456789",
                    "display": "PATIENTTWO TEST"
                "date": "2024-10-24T11:56:43.099Z",
                "author":
                [
                         "type": "Practitioner",
                         "identifier":
                             "use": "official",
                             "type":
                                 "coding":
                                 [
                                         "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
                                         "code": "NPI",
                                         "display": "National provider
identifier"
                                     }
                                 1
                             "system": "urn:ietf:rfc:3986",
                             "value": "Cerner HIE"
                         },
                         "display": "Cerner HIE"
                    }
                ],
                "authenticator":
                    "type": "Practitioner",
                    "identifier":
                         "use": "official",
                         "type":
                             "coding":
                             ſ
                                     "system": "http://terminology.hl7.org/
CodeSystem/v2-0203",
                                     "code": "NPI",
                                     "display": "National provider identifier"
                             ]
                         },
                         "value": "Cerner HIE"
                    },
                    "display": "Cerner HIE"
                },
                "custodian":
                    "type": "Organization",
```

```
"identifier":
                         "use": "official",
                         "type":
                             "coding":
                             [
                                 {
                                     "system": "urn:ietf:rfc:3986",
                                     "code": "urn:oid",
                                     "display": "OID"
                         },
                         "value": ""
                    "display": "Model Clinic 1"
                "description": "CCD for Encounter:
12345-1.99.888.7.66666.5.444.33.2.1",
                "securityLabel":
                [
                         "coding":
                         [
                                 "system": "2.16.840.1.113883.5.25",
                                 "code": "N",
                                 "display": "Normal"
                         ]
                    }
                ],
                "content":
                         "attachment":
                             "contentType": "text/xml",
                             "language": "en-us",
                             "url": "https://cell1.query.cdexhub.us-
chicago-1.oci.oraclecloud.com/r4/1234567-1234-1234-1234-123456789101/Binary/
urn:uuid:7bc1700d-b565-4dc5-8c05-038909d57edb",
                             "size": 120879,
                             "hash":
"466cdc04d0c6cd12bb6aa18ae3f08c895ef1eb1d",
                             "creation": "2024-10-24"
                         } ,
                         "format":
                             "system": "1.3.6.1.4.1.19376.1.2.3",
                             "code": "urn:ihe:pcc:xphr:2007",
                             "display": "HL7 CCD Document"
                         }
                    }
```

### Retrieve Documents Using Bulk Document Retrieval

This topic provides information on bulk data retrieval functionality that is available in Oracle Health Clinical Data Exchange.

The Retrieve Bulk Data section contains the following sections:

Set Up Bulk Document Retrieval

This topic provides the steps required to set up bulk document retrieval.

Place Orders

This topic provides the steps required to place an order for bulk document retrieval.

Receive Results

This topic provides information related to accessing the processed results of order requests.

Understand Errors

This topic describes the different types of errors that can occur during the order processing.

### Set Up Bulk Document Retrieval

This topic provides the steps required to set up bulk document retrieval.

- Request bucket: Create an Object Storage bucket where order files can be stored for processing by Oracle Health Clinical Data Exchange. This bucket serves as the input source for order requests.
- 2. Result bucket: Create an Object Storage where Oracle Health Clinical Data Exchange can deliver processed results. This bucket serves as the destination for completed files.
- Access policies: Configure the required access policies. See the Define Payer User Policies section for more information.



Contact your Oracle support resource as needed to help with completing the steps in this section.

### **Place Orders**

This topic provides the steps required to place an order for bulk document retrieval.

Prepare the order file using the required format specified below.



The order file limit is 500,000 rows.

2. Upload the order file to the request object store bucket.

Once these steps are completed, Oracle Health Clinical Data Exchange automatically detects an order file uploaded to your request bucket and processes the order.

Note:

Contact your Oracle support resource as needed to help with completing your bulk document retrieval setup.

Oracle Health Clinical Data Exchange requires you to submit order files in .CSV file format to facilitate the processing of bulk document retrieval requests. Any fields in the .CSV file that include a comma as part of the field value must be enclosed in double quotation marks (" "). The format for the order file is specified below.

**Table 4-1** Order File Format

Field Name	Required	Data Type	Description
Memberld	Yes	<b>Data type:</b> Varchar (1, 256)	The unique identifier for every patient record that
		Allowed characters: A-Z a-z 0-9 #	the payer uses.
FirstName	Yes	Data type: Varchar (1, 256)	The patient's first name.
		Allowed characters: A-Z a-z 0-9 -	
LastName	Yes	Data type: Varchar (1, 256)	The patient's last name.
		Allowed characters: A-Z a-z 0-9 #	
MiddleInitial	No	<b>Data type:</b> Varchar (1, 64)	The patient's middle name or initial.
		Allowed characters: A-Z a-z 0-9 #	
Sex	Yes	Data type: Predefined string	Not applicable
		(M)ale,	
		(F)emale,	
		(U)nkown	
		Allowed characters: M m F f U u	
DOB	Yes	Data type: Varchar	The patient's date of
		Accepted formats: o mm/dd/yyyy	birth. For example, 05/16/1980
		Allowed characters: 0-9 /	
Address1	No	Data type: Varchar (0, 256)	Not applicable
		Allowed characters: A-Z 0-9 a-z #\$ @ space	



Table 4-1 (Cont.) Order File Format

Field Name	Required	Data Type	Description
Address2	No	Data type: Varchar (0, 256)	Not applicable
		Allowed characters: A-Z 0-9 a-z # \$ @ space	
City	No	Data type: Varchar (0, 64)	Not applicable
		Allowed characters: A-Z 0-9 a-z space	
State	No	Data type: Varchar (0, 32)	Not applicable
		Allowed characters: A-Z 0-9 a-z -	
Zip	Yes	Data type: Varchar (0, 12)	Not applicable
		Allowed characters: A-Z 0-9 a-z -	
Homephone	No	Data type: Varchar (0, 16)	Not applicable
		Allowed characters: 0-9 - + ( )	
MobilePhone	No	Data type: Varchar(0,16)	Not applicable
		Allowed characters: 0-9 - + ( )	
Email	No	Data type: Varchar (0, 128)	Not applicable
		Allowed characters: A-Z 0-9 a-z # \$ @	
ServiceStartDate	Yes	Data Type: Varchar Timestamp with time	The service start date indicates the beginning
		zone	of the encounter for which clinical documents
		Accepted formats: 0 yyyy-MM- dd'T'HH:mm:ssZ	are requested. Encounters that began before this date but
		For example,	remain active on or after
		2024-01-01T00:00:00-0 800	this date are included, and encounters that are closed before the
			service start date are excluded. The service
			start date must be the same as or earlier than
			the service end date. If this condition is not met or the date is missing,
			an error is generated for the row.



	Table 4-1	(Cont.)	Order	<b>File</b>	<b>Format</b>
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Field Name	Required	Data Type	Description
ServiceEndDate	Yes	Data Type: Varchar Timestamp with time zone Accepted formats: o yyyy-MM- dd'T'HH:mm:ssZ For example, 2025-01-01T00:00:00-0 800	The service end date indicates the conclusion of the encounter for which clinical documents are requested. Encounters that are active on or after the service start date but are not closed before the end date are included, and encounters that started after the service end date are excluded. The service end date must be the same as or later than the service start date. If this condition is not met or the date is missing, an error is generated for the row.
PurposeOfUse	Yes	Data type: Varchar (1, 64)  Allowed characters: A-Z 0-9 a-z # \$ @ space	This value describes the reason that the data is being requested. See the following examples:  Risk & quality  Payment operation
RowUUID	Yes	Data Type: Varchar(1, 150) Allowed characters: A-Z 0-9 az - #	This field includes a unique row identifier for a given row in an order.

### Receive Results

This topic provides information related to accessing the processed results of order requests.



Contact your Oracle support resource as needed to help with completing the steps in this section.

- Result Bucket
  - To view completed files, access the result object store bucket.
- Order Report

Access the order report in the result object store bucket to view the following additional information about the order request:

### Result Bucket

To view completed files, access the result object store bucket.

Completed files (that is, C-CDA documents) are packaged as .ZIP files that contain the applicable patient data based on the order request. Each single row in the order file has a corresponding .ZIP file that contains all the C-CDA documents that were found. If no patient record is matched for a row in the order file, no .ZIP file is created for that row.



Once the order request is placed, the required processing time varies based on the complexity of the request. The results are delivered to the result bucket once the request is completed.

Completed files are named according to the following naming convention: [Member ID]\_[ROW UUID] Encounters.zip.

In the .ZIP file, C-CDA documents are named according to the following naming convention: **[Binary ID]\_[UUID].xml**. In this naming convention, the binary ID is the identifier of the document used within Oracle Health systems, and the UUID is the global unique identifier that is generated by Oracle Health Clinical Data Exchange.

For each encounter, at least one structured C-CDA document is generated; unstructured (C62) document attachments are only generated if applicable.

The generated .ZIP files follow the structure indicated below.

### Order Report

Access the order report in the result object store bucket to view the following additional information about the order request:



An order report is generated regardless of whether the order request was processed successfully. Each row in the order report corresponds to a row in the order file.

- The processing status of each row (for example, Success, Partial, or Failure)
- Any errors that occurred during processing
- Metadata related to the order request

The order report is generated in a .CSV file. The format of the .CSV file is specified below.



Table 4-2 .CSV File Format

Field Name	Required	Data Type	Description
RowUUID	Yes	Data type: Varchar (1, 150) Allowed characters: A-Z 0-9 az - #	The unique row identifier for a given row from the order file.
Memberld	Yes	Data type: Varchar (1, 256) Allowed characters:A-Z a-z 0-9 #	The member ID from the order file.
Status	Yes	Data type: Varchar (1, 256)  Possible Values:  Matched With Data  Matched No Data  No Match  Invalid  Error  Multiple Member Matched	The status of the row data retrieval.
Error Message	No	Data type: Varchar (1, 256) Allowed characters: A-Z 0-9 a-z # \$ @ space	The description of the error details when an error occurs. For example, Multiple Member Matched or Request Period Invalid.
EncounterCount	No	Data type: Varchar (1, 256) Allowed characters: A-Z 0-9 a-z # \$ @ space	The description of the error details when an error occurs. For example, Multiple Member Matched or Request Period Invalid.
EncounterCount	Yes (if successful)	Data type: Integer	The number of encounters retrieved.
OutputFileLocation	Yes (if successful)	Data type: Varchar (1, ) Allowed characters: A- Z 0-9 a-z # /	The blob storage path to the C-CDA files retrieved for the patient record.

### **Understand Errors**

This topic describes the different types of errors that can occur during the order processing.

- Order File Error
  - Oracle Health Clinical Data Exchange cannot start the order processing if order file-related errors exist.
- Row Level Error

Row-level errors do not stop the entire order processing, and the rows with valid inputs are still processed.



### Order File Error

Oracle Health Clinical Data Exchange cannot start the order processing if order file-related errors exist.

For example, an order file cannot be opened, or the file is in the wrong format (such as .XML instead of .CSV).

If this type of error is encountered, only one row is included in the order report file, the status is **Error**, and the displayed error message indicates why the order cannot be processed.

#### Row Level Error

Row-level errors do not stop the entire order processing, and the rows with valid inputs are still processed.

For rows that contain errors, the status and error messages are displayed in the order report file and no clinical data is delivered.

The following items are examples of possible row-level errors:

- **Invalid:** This error indicates that the row has invalid fields. For example, a missing required field or contradicting fields (such as a service start date that is after the service end date). The row status is displayed as **Invalid** on the order report.
- **Error:** This error indicates that Oracle Health Clinical Data Exchange had a problem retrieving the records. The row status is displayed as **Error** on the order report.



5

# **Additional Resources**

This topic provides information on additional resources related to Oracle Health Clinical Data Exchange.

REST APIs for Oracle Health Clinical Data Exchange

