About Aria Crescendo Connector

The Anypoint Connector for Aria Crescendo lets you connect to the Aria Crescendo platform. The connector exposes convenient methods for taking advantage of the capabilities of Aria Crescendo, allowing you to access the entire Aria Crescendo functional suite.

The connector executes API calls targeting Aria Crescendo's REST API. All required request headers and error handling are abstracted from you and built into the connector.

Prerequisites

This document assumes that, to use this connector you are familiar with:

- Aria Crescendo System API
- Anypoint Connectors
- Mule runtime engine (Mule)
- Elements and global elements in a Mule flow
- How to create a Mule app using Anypoint Studio (Studio)

Before creating an app, you must have access to the ARIA Crescendo target resource.

Audience

- New user
- Create your Mule app in Anypoint Studio.
- Advanced user, read:
- XML and Maven Support
- Aria Crescendo Connector Examples

Next Step

After you complete the prerequisites, you are ready to create an app in Anypoint Studio.

Authentication Types

Aria Crescendo Connector connections use the following authentication types:

- **Basic authentication**
  Uses a client number and authorization key for authentication.

See Also

- o Introduction to Anypoint Connectors
- o Use Exchange to Discover Connectors, Templates, and Examples
- o Aria Crescendo Connector Reference

o   [MuleSoft Help Center](#)

Hardware and Software Requirements

For hardware and software requirements, see the Hardware and Software Requirements page.

To use the ARIA connector, you need:

- Anypoint Studio - If you do not use Anypoint Studio for development, follow the instructions in Configuring Maven Dependencies for your project.

- An ARIA account – with client number, authentication key and the URL.

Compatibility

Application/Service	Version
Mule Runtime	Mule Enterprise Edition 4.3.1 and newer
ARIA Crescendo	v37,v38,v39,v40

- Basic authentication is enabled using the parameters URL, client_number and auth_key.

- Though TLS config parameters are available, it is recommended to use basic authentication in the version 1.0.0.

To Install this Connector

- In Anypoint Studio, click the Exchange icon in the Studio taskbar.

- Click Login in Anypoint Exchange.

- Search for this connector and click Install.

- Follow the prompts to install the connector.

To Update from an Older Version

When an updated version of a connector is released, Anypoint Studio displays the Updates Available popup in the bottom right corner of Studio. Click the popup and install the new version.

To Create a New Project

- In Anypoint Studio, click File > New > Mule Project.

- Enter a name for your new project and leave the remaining options with their default values.

- If you plan to use Git, select Create a default .gitignore file for the project with default ignores for Studio Projects, and then click Next.

- Click Finish to create the project.

Configure the ARIA Crescendo Global Element

You can configure a global ARIA element to use with the ARIA Crescendo Connector.

The global parameters are:

Field	Description
Base url	The URL of the ARIA core API to make requests to the ARIA system needs to be entered.
Client_number	Enter the client number.
Auth_key	Enter the Authentication Key

See Also

- [Introduction to Anypoint Connectors](#)

- [Use Exchange to Discover Connectors, Templates, and Examples](#)

- [Aria Crescendo Connector Reference](#)

- [MuleSoft Help Center](#)

Upgrade the Connector:

Upgrade Prerequisites

Before you perform the upgrade, you must:

- Create a backup of your files, data, and configuration in case you need to restore to the previous version.

- Install Aria Crescendo Connector to replace the operations that were previously included in Aria Crescendo Connector 1.x.x.

Upgrade Steps

Follow these steps to perform the upgrade to Aria Crescendo Connector **1.0.0**:

- In Studio, create a Mule project.

- In the Mule Palette view, click **Search in Exchange**.

- In Add Modules to Project, type 'Aria Crescendo' in the search field.

- In Available modules, select **Aria Crescendo Connector**, and then click **Add**.

- Click **Finish**.

- Verify that the mule-aria-crescendo-connector dependency version is 1.0.0 in the pom.xml.

Anypoint Studio upgrades the connector automatically.

Verify the Upgrade

After you install the latest version of the connector, follow these steps to verify the upgrade:

- In Anypoint Studio, verify that there are no errors in the **Problems** or **Console** views.

- If you're running the app from Anypoint Platform, the output is visible in the Anypoint Studio console window.

- If you're running the app using Mule from the command line, the app log is visible in your OS console.

- Unless the log file path is customized in the app's log file (log4j2.xml), you can also view the app log in the default location MULE_HOME/logs/<app-name>.log.

- Check the project pom.xml and verify that there are no problems.

- Test the connection and verify that the operations work.

Troubleshooting

If there are problems with caching the parameters and caching the metadata, try restarting Anypoint Studio.

Reverting the Upgrade

If it is necessary to revert to the previous version of Aria Crescendo Connector, change the mule-aria-crescendo-connector dependency version 2.0.0 in the project's pom.xml to the previous version.

You must update the project's pom.xml in Anypoint Studio.

Aria Crescendo Connector Studio Configurations

Anypoint Studio (Studio) editors help you design and update your Mule applications, properties, and configuration files.

To add and configure a connector in Studio:

- [Create a Mule project.](#)

- [Add the connector to your Mule project.](#)

- [Configure an input source for the connector's flow.](#)

- [Add a connector operation to the flow.](#)

- [Configure a global element for the connector.](#)

When you run the connector, you can view the app log to check for problems, as described in [View the App Log.](#)

If you are new to configuring connectors in Studio, see [Use Studio to Configure a Connector](#). If, after reading this topic, you need additional information about the connector fields, see the [Aria Crescendo Connector Reference.](#)

Create a Mule Project

In Studio, create a new Mule project in which to add and configure the connector:

- In Studio, select **File > New > Mule Project**.

- Enter a name for your Mule project and click **Finish**.

Add the Connector to Your Mule Project

Add Aria Crescendo Connector to your Mule project to automatically populate the XML code with the connector's namespace and schema location and add the required dependencies to the project's pom.xml file:

- In the **Mule Palette** view, click **(X) Search in Exchange**.

- In **Add Modules to Project**, type Aria Crescendo in the search field.

- Click **Aria Crescendo** in **Available modules**.

- Click **Add**.

- Click **Finish**.

Adding a connector to a Mule project in Studio does not make that connector available to other projects in your Studio workspace.

Configure a Source

A source operation initiates a flow when a specified condition is met. You can configure one of these input sources to use with Aria Crescendo Connector:

- **HTTP > Listener**, which initiates a flow each time it receives a request on the configured host and port

- Scheduler, which initiates a flow when a time-based condition is met

For example, to configure an HTTP listener, follow these steps:

- In the **Mule Palette** view, select **HTTP > Listener**.

- Drag **Listener** to the Studio canvas.

- On the **Listener** configuration screen, optionally change the value of the **Display Name** field.

- Specify a value for the **Path** field.

- Click the plus sign (+) next to the **Connector configuration** field to configure a global element that can be used by all instances of the HTTP listener in the app.

- On the **General** tab, specify the connection information for the connector.

- On the **TLS** tab, optionally specify the TLS information for the connector.

- On the **Advanced** tab, optionally specify reconnection information, including a reconnection strategy.

- Click **Test Connection** to confirm that Mule can connect with the specified server.

- Click **OK**.

Add a Connector Operation to the Flow

When you add a connector operation to your flow, you immediately define a specific operation for that connector to perform.

To add an operation for Aria Crescendo Connector, follow these steps:

- In the **Mule Palette** view, select **Aria Crescendo** and then select the desired operation.

- Drag the operation onto the Studio canvas to the right of the input source.

Configure a Global Element for the Connector

When you configure a connector, it's best to configure a global element that all instances of that connector in the app can use. Configuring a global element requires you to provide the authentication credentials the connector uses to access the target Aria Crescendo system.

To configure the global element for Aria Crescendo Connector, follow these steps:

- Select the name of the connector in the Studio canvas.

- In the configuration screen for the operation, click the plus sign (+) next to the **Connector configuration** field to access the global element configuration fields.

- On the **General** tab, enter the following required values to configure authentication for:

  Basic Auth Connection Type

  You can reference a configuration file that contains ANT-style property placeholders (recommended), or you can enter your authorization credentials in the global configuration properties. For information about the benefits of using property placeholders and how to configure them, see Anypoint Connector Configuration.

- On the **Advanced** tab, optionally specify reconnection information, including a reconnection strategy.

- Click **Test Connection** to confirm that Mule can connect with the specified server.

- Click **OK**.

Basic Authentication

Enter the following information on the **General** tab of the **Global Element Properties** screen to configure Basic authentication:

- **Client number:** Aria Crescendo specified unique Client_number

- **Authentication key:** Aria Crescendo authentication key

- **Base URL:** Base path of the Aria Crescendo REST API for your instance, for **example:** https://secure.future.stage.ariasystems.net/v1/core

The following screenshot shows an example of configuring Basic authentication:

Global Element Properties ✕

Aria Crescendo Connector - Mule4 Config

Default configuration

General Advanced Notes Help

Name: Aria_Crescendo_Connector__Mule4_Config

Connection

General Proxy TLS Advanced

Base URL: _fx_ https://secure.future.stage.ariasystems.net/v1/core

Client Number: _fx_ 7777777

Authentication Key: _fx_ a7wsuZuVJRyBWkpxy98NDXVj7RB99A8K

Test Connection... OK Cancel

View the App Log

To check for problems, you can view the app log as follows:

- If you're running the app from Anypoint Platform, the output is visible in the Anypoint Studio console window.

- If you're running the app using Mule from the command line, the app log is visible in your OS console.

Unless the log file path is customized in the app's log file (log4j2.xml), you can also view the app log in the default location MULE_HOME/logs/<app-name>.log.

Next Step

After configuring an app in Studio, see the Aria Crescendo Examples section to experiment with the Aria Crescendo connector.

Aria Crescendo XML and Maven Support - Mule 4

If you manually code a Mule app in XML either from the Studio XML editor or a text editor, you must perform the following actions to get access to the connector:

1. Add the namespace for the connector to your XML flow.

2. Add dependency information to your Maven `pom.xml` file.

In the Studio visual editor, when you drag a connector from the palette to the canvas, Studio automatically populates the XML code with the connector namespace and schema location.

Add a Namespace for the Connector

If you manually code the Mule app using Studio's XML editor or another text editor, paste the following code inside the `<mule>` tag of the header of your configuration XML.

```
xsi:schemaLocation="
...
http://www.mulesoft.org/schema/mule/mule-aria-connector
http://www.mulesoft.org/schema/mule/mule-aria-connector/current/mule-aria-connector.xsd"
```

This example shows how the namespace statements are placed in the mule XML block:

```
<mule xmlns:http="http://www.mulesoft.org/schema/mule/http"
        xmlns:mule-aria-connector="http://www.mulesoft.org/schema/mule/mule-aria-connector"
        xmlns="http://www.mulesoft.org/schema/mule/core"
        xmlns:doc="http://www.mulesoft.org/schema/mule/documentation"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:schemaLocation="
                http://www.mulesoft.org/schema/mule/core
                http://www.mulesoft.org/schema/mule/core/current/mule.xsd
                http://www.mulesoft.org/schema/mule/mule-aria-connector
                http://www.mulesoft.org/schema/mule/mule-aria- connector/current/mule-mule-
aria-connector.xsd
                http://www.mulesoft.org/schema/mule/http
http://www.mulesoft.org/schema/mule/http/current/mule-http.xsd">

<!-- Insert your configuration elements and your flow here -->
</mule>
```

Add a POM File Dependency

The `pom.xml` Maven file generated by Anypoint Studio contains dependencies for a Mule app. When you code a Mule app manually, include this XML snippet in your `pom.xml` file to enable access to this connector.

```xml
<dependency>
  <groupId>com.mulesoft.connectors</groupId>
  <artifactId>mule-aria-crescendo-connector</artifactId>
  <version>x.x.x</version>
  <classifier>mule-plugin</classifier>
</dependency>
```

Replace `x.x.x` with the version that corresponds to the connector you are using.

To obtain the most up-to-date `pom.xml` file information, access the connector in [Anypoint Exchange](#) and click **Dependency Snippets**.

Next Step

After completing this section, see the the [Aria Crescendo Examples](#) to experiment with Aria Crescendo Connector.
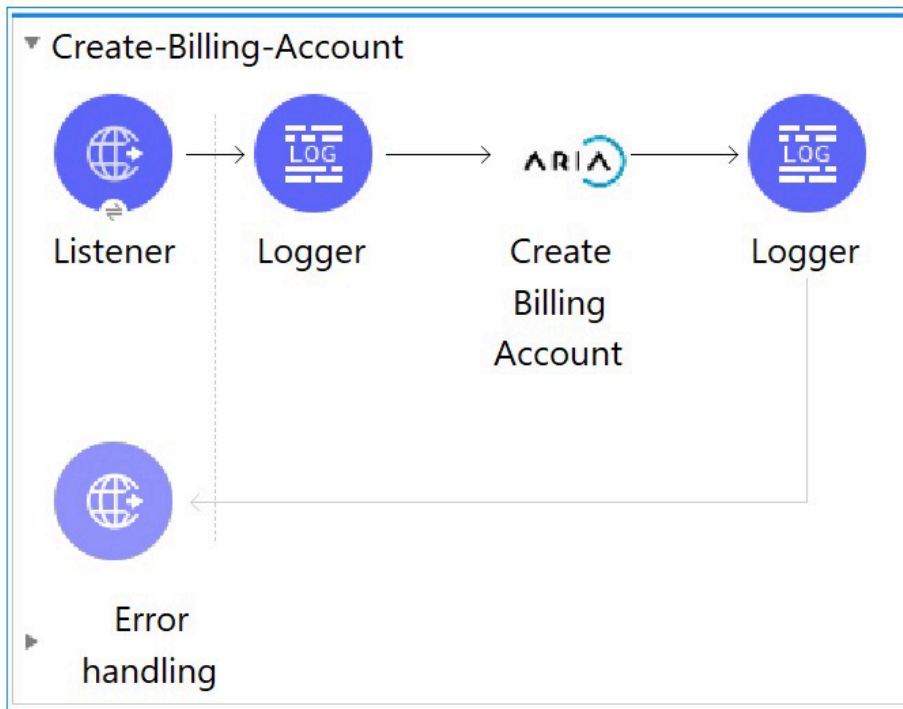
See Also

[MuleSoft Help Center](#)

Aria Crescendo Connector Example

Example: Create Billing Account

This example creates a billing account as per the customer.

Studio Flows

- Listener (HTTP) - Accepts data from HTTP requests.

- Logger- To log the payload.

- Aria Crescendo [Create Billing Account](#) Connector- Connects with Aria Crescendo by the API **create_acct_complete_m** and creates a Billing Account for the given details of the customer.

Create-Billing-Account

Listener → Logger → ARIA Create Billing Account → Logger

Error handling

Create Billing Account | Problems | Console | Mule Debugger

⊘ There are no errors.

General
Advanced
Error Mapping
Metadata
Notes
Help

Display Name: Create Billing Account

Basic Settings

Connector configuration: Aria_Crescendo_Connector__Mule4_Config ⊕ ✎

General

Payload: fx
```
1 payload
```

Input Arguments

API Name: fx create_acct_complete_m

API Version: fx 39

Do Write: True (Default)

Client Receipt Id: fx 1234

XML Flows

Paste this XML code into Anypoint Studio to experiment with the flow described in the previous section:

```xml
<?xml version="1.0" encoding="UTF-8"?>

<mule xmlns:tls="http://www.mulesoft.org/schema/mule/tls"
xmlns:http="http://www.mulesoft.org/schema/mule/http"

xmlns:mule-aria-connector="http://www.mulesoft.org/schema/mule/mule-aria-connector"

xmlns="http://www.mulesoft.org/schema/mule/core"
xmlns:doc="http://www.mulesoft.org/schema/mule/documentation"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.mulesoft.org/schema/mule/core
http://www.mulesoft.org/schema/mule/core/current/mule.xsd

http://www.mulesoft.org/schema/mule/mule-aria-connector
http://www.mulesoft.org/schema/mule/mule-aria-connector/current/mule-mule-aria-connector.xsd

http://www.mulesoft.org/schema/mule/http http://www.mulesoft.org/schema/mule/http/current/mule-http.xsd

http://www.mulesoft.org/schema/mule/tls http://www.mulesoft.org/schema/mule/tls/current/mule-tls.xsd">

<http:listener-config name="HTTP_Listener_config" doc:name="HTTP Listener config" doc:id="77883002-ff2f-4a66-a155-79207cad4ab7" >

<http:listener-connection host="0.0.0.0" port="8082" />

</http:listener-config>

<mule-aria-connector:config name="Aria_Crescendo_Connector___Mule4_Config" doc:name="Aria Crescendo Connector - Mule4 Config" doc:id="28a7cb36-d753-448d-b75f-99f0e8d85e84" >

<mule-aria-connector:connection

baseURL="https://secure.future.stage.ariasystems.net/v1/core"

client_number="5025549"

auth_key="e3wsuAjVJRyEAkpxyMaNDXVj7RB99A8R" >

</mule-aria-connector:connection>

</mule-aria-connector:config>

<flow name="create-billing-acct-flow" doc:id="90e7acc1-7340-4c0b-98e6-e9750cb09290" >

<http:listener doc:name="Listener" doc:id="b10e345c-94de-45b1-8064-9eef2f789c47" config-ref="HTTP_Listener_config" path="/createAcct"/>
```

<logger level="INFO" doc:name="Logger" doc:id="f1e35f2f-87e8-49ab-98c1-4e40a9685800" message="#[payload]"/>

<mule-aria-connector:create-billing-account doc:name="Create Billing Account" doc:id="692874fc-ddd7-4770-a155-fa6f42736907" config-ref="Aria_Crescendo_Connector__Mule4_Config" releaseVersion="36" client_receipt_id="1234"/>

<logger level="INFO" doc:name="Logger" doc:id="114520a5-f84c-438d-b310-9249d6007c06" message="#[payload]"/>

</flow>

</mule>

List of Operations

• Create Billing Account

• Update Billing Account

• Create Billing Group

• Update Billing Group

• Create Dunning Group

• Update Dunning Group

• Assign Account Plan

• Get Account Details All

• Get Invoice Details

• Get Invoice History

• Update Account Credentials

• Update Account Multiple Plans

• Update Account Status

• Update Contact

• Update Payment Method

• Update Order

• Update Account Invoice

• Get Invoice CM Details

- Get Statement for Invoice

- Get Order

- Get Account Balance

- Get Account Plan Balance

- Cancel Account Plan

- Cancel Order

- Create Credit Memo

- Create Order

- Create Order with Plan

- Generate Invoice

- Update Account Plan

- Update Account Plan Status

- Apply Service Credit

- Ban Account

- Bulk Cancel Order

- Cancel Account Universal Contract

- Cancel Instance Contract

- Cancel Unapplied Service Credits

- Cancel Unconsumed Credit

- Create Advanced Service Credit

- Create Write off or Dispute

- Delete Account Data

- Get Account Coupon Details

- Get Account Hierarchy Details

- Get Account Plan Unit Instance All

- Get Account Plans All

- Get Child Accounts

- Get Country from IP

- Get Invoices to Write off or Dispute

- Get Payments on Invoice

- Get Pending Invoice Number

- Get Unapplied Service Credits

- Manage Pending Invoice

- Remove Account from Group

- Remove Account Payment Method

- Settle Account Balance

- Transfer Account Balance

- Update Account Notify Method

- Update Account Plan Unit Instance

- Update Credit Card Blacklist

- Void Invoice

- Account Plan Install Complete

- Adjust Account Plan Billing Dates

- Advance Virtual Datetime

- Apply Cash Credit

- Apply Credit Memo

- Apply Coupon To Account

- Assign Collections Account Group

- Assign Custom Account Plan Rates

- Assign Functional Account Group

- Authenticate Caller

- Authorize Electronic Payment

- Bulk Record Usage

- Calculate Credit Reference Line

- Clear Registration USS Parameters

- Clear Registration USS Configuration Parameters

- Client Has Event Class

- Compare Against CC Blacklist

- Collect From Account

- Create Account Universal Contract

- Create Instance Contract

- Delete Account Coupon

- Delete Registration USS Configuration Parameters

- Delete Registration USS Parameters

- Discard Usage

- Edit Account Plan Queued Changes

- Generate Random String

- Generate RB

- Generate Statement

- Get Account Billing Group Details

- Get Account Comments

- Get Account Contacts

- Get Account Credits

- Get Account Dunning Group Details

- Get Account Groups By Account

- Get Account Groups By Client

- Get Account Message

- Get Account Message Size

- Get Account Number From User Id

- Get Account Notification Details

- Get Account Notify Method

- Get Account Nso Inclusion List

- Get Account Open Charges

- Get Account Payment History

- Get Account Payment Methods And Terms

- Get Account Plan History

- Get Account Plan Notify Method

- Get Account Plan Queued Changes

- Get Account Plans

- Get Account Preview Statement

- Get Account Service Outage Credit

- Get Account Statement History

- Get Account Status History

- Get Account Supplemental Fields

- Get Account Surcharges

- Get Account Tax Exempt Status

- Get Account Tranaction History

- Get Account Universal Contract

- Get Account Uuids

- Get Account Writeoff Or Disputes

- Get Accounts With Existing Pay Method

- Get All Account Contracts

- Get All Account Receipt Ids

- Get All Actions By Receipt Id

- Get All Client Receipt Ids

- Get Aria Xml Statement

- Get Avail Plans For Account All

- Get Avail Plans For Account

- Get Cash Credits Details

- Get Catalog Hierarchy

- Get CC Uuid

- Get CC Velocity Information

- Get Client Countries

- Get Client Currencies

- Get Client Item Prices

- Get Client Item Supplemental Fields

- Get Client Items All

- Get Client Items Basic

- Get Client Plan Service Rates

- Get Client Plan Services

- Get Client Plans All

- Get Client Plans Basic

- Get Credit Memo Details

- Get Credit Memo List

- Get Credit Details

- Get Current System Version

- Get Daily Batch Status

- Get Email Templates

- Get Extended Transaction Information

- Get Family Transaction History

- Get Instance Contract

- Get Invoice Number From BalanceTransfer

- Get Order Items

- Get Payment Application Details

- Get Payment Applications

- Get Plans By Promo Code All

- Get Plans By Promo Code

- Get Payment UUID

- Get Rate Schedules For Plan

- Get Recurring Credit Information

- Get Refund Details

- Get Refundable Payments

- Get Registration USS Configuration Parameters

- Get Registration USS Parameters

- Get Reversible Authorizations

- Get Reversible Invoices By Payment

- Get Statement Content

- Get Statement Content Size

- Get Statement For Invoice Size

- Get Supplemental Field Values

- Get Supplemental Plans By Promo Code All

- Get Supplemental Plans By Promo Code

- Get Unapplied Payments

- Get Unapplied Credits Payments

- Get Unbilled Usage Summary

- Get Usage History

- Get Usage Summary By Type

- Get User Id From Account Number

- Get User Id Has Ordered SKU

- Get Virtual Datetime

- Get Web Replacement Values

- Get Writeoff Details

- Issue Refund To Account

- Keep Alive

- Kill Session

- Modify Account Plan Unit Instances

- Modify Account Supplemental Fields

- Modify Account Universal Contract

- Modify Instance Contract

- Move Payment

- Record External Payment

- Record Out Going Payment

- Record Usage

- Reinstate Transaction

- Remove Account Plan Custom Rates

- Replace Account Plan

- Replace Registration USS Configuration Parameters

- Replace Registration USS Parameters

- Send Account Email

- Send Account Statement Email

- Set Account Notify Template Group

- Set Account Tax Exempt Status

- Set Payment Responsibility

- Set Registration USS Configuration Parameters

- Set Registration USS Parameters

- Set Session Authentication

- Set Session

- Set Usage Threshold

- Set Usage Mtd Ptd Balance

- Settle Dispute Hold

- Subscribe Event Class

- Toggle Test Account

- Unapply Credit Memo

- Unsubscribe Event Class

- Unsubscribe Events

- Update Refund Check Number

- User Id Exists

- User Id Is Available

- Validate Session

- Void Credit Memo

- Void Transaction

- Write Account Comment

See Also

MuleSoft Help Center