



WEBMETHODS CLOUDSTREAMS API REFERENCE GUIDE

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1 Overview

CloudStreams provides a robust set of APIs that allow developers to programmatically integrate their own applications with CloudStreams in a simple and secure manner. CloudStreams APIs permit access to CloudStreams functionalities and data in an authorized way to accomplish integration of systems and applications. The APIs are based on the REST architectural style and can be communicated via HTTP requests.

2 Authentication

CloudStreams uses the HTTP basic authentication method to authenticate each HTTP request made to the API.

The basic authentication scheme used for CloudStreams API is the same as Integration server. This authentication method verifies the API consumer's authentication credentials contained in an Authentication Header against the list of users registered in the Integration Server on which CloudStreams is running.

3 CloudStreams APIs

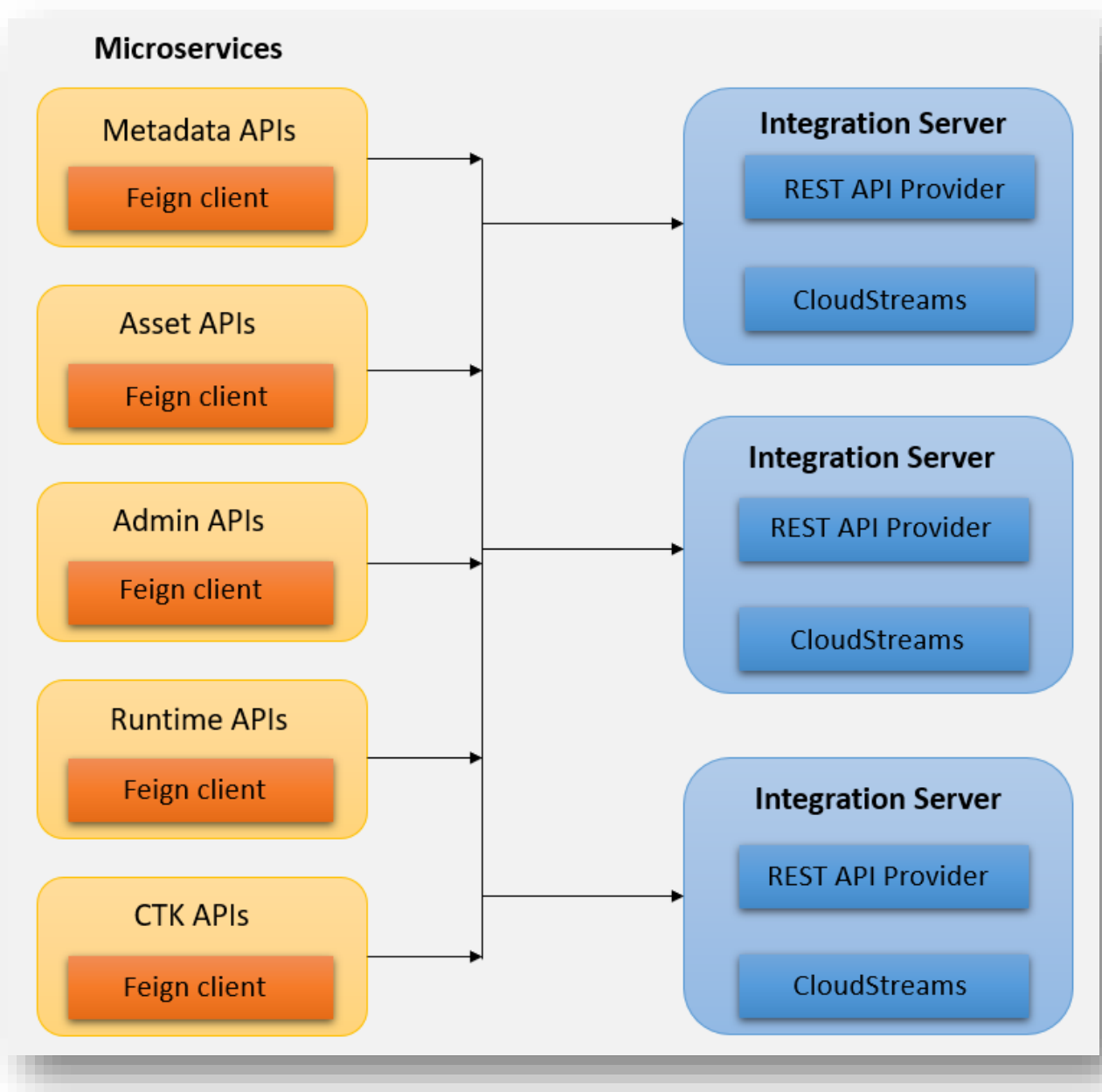
CloudStreams APIs are categorized into the following domains:

API Category	Used for...
Metadata APIs	Querying the platform for available connectors, operations, authentication schemes, lookups to use connectors.
Admin APIs	Managing connectors and other administrative operations.
Asset Management APIs	Managing customer-defined assets like accounts (connections), services (operations), listeners, and other relevant assets.
Runtime APIs	Executing connector services for runtime flows, and integration into workflows or Flows in the platform.
CTK APIs	Connector development

4 Architectural approach for CloudStreams APIs

The architectural style followed for exposing CloudStreams APIs is **Microservices**. Using the Microservices architecture, we are providing a collection of independent, autonomous component services for CloudStreams capabilities within a package. Each smaller service in microservices is independently deployed and operated.

The following diagram shows a high-level overview of the architectural approach followed to expose CloudStreams API.



1. Microservices communicate with one or more Integration servers.
2. Feign client is implemented in each smaller service in a microservices architecture.
3. The Feign client implemented in each microservice is responsible for communication with the CloudStreams REST provider, which is installed in the Integration server.
4. The REST Provider invokes native services of CloudStreams, and the transformed data is provided to the requested microservice.

5 Product Setup

CloudStreams API is a beta feature for this release. We will upgrade the feature in the upcoming releases.

In the CloudStreams v10.11 release, CloudStreams API package will be installed along with other CloudStreams functionalities. However, the CloudStreams API package will be hidden. Microservices will be made available in a later release.

For the CloudStreams v10.11 release, the API category - Metadata APIs in CloudStreams API provider is released. The download URL for OpenAPI specification for Metadata APIs has the following format:

`http://<integration_server_hostname:port>/rad/wm.c10s.api:metadata?openapi.yaml`

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