# <Document Title>

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**Version Control**

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| **Version No.** | **Version Date** | **Changes** | **Owner/ Author** | **Date of Review/Expiry** |
| 1 | 0.1 | Intial Draft | Sahoo | Until Suspended |
|  |  |  |  |  |

1. Command to upgrade app in cloud foundry.
2. **Cf push**
3. cf update
4. Is it Mandatory to implement ACS for security?
5. yes
6. **No**
7. What is the type of container to be created in order to get technical console .

a) PROV b) DEBUG c) **TECH** d) AGENT\_DEBUG

1. What is the request format to post Decks to view service.
2. POST /api/decks/Id
3. **POST /api/decks**
4. If no parameters are provided to cf push command, where does the cf cli expect the manifest file to be present by default .
5. **Present folder** b)root folder and other options
6. What is the river used that ingest data from Predix machine to time series
7. HTTP Server b) **Websocket river** c)
8. What is the plan name which gives 50 million data points
9. Platinuim b) gold c) **silver**
10. What is Card in View
11. How do you use px-tables after importing into Platform .(**after install webcomponentsjs , adding webcomponent-lite in head section, import the pX- component in head section , creating the instance of px-component in body section)**
12. What is the command to run Predix seed in local.
13. Grunt dist b) **grunt serve** c) grunt server
14. Which one of the below is not compatible with Blob store service.

Options : Go, AWS, jclouds and **HTTP**

1. What is the GEL query to fetch records with pagination?
2. **<asset-app-url>/locomotive?pageSize=4**
3. <asset-app-url>/locomotive?Size=4
4. What are the scopes of view services?

a) **views.zones.<instanceId>.user** b) views.zones.<instanceId>

1. What is the client scope required to view decks
   1. views.admin.user 🡪 CRUD
   2. views.power.user 🡪 it cannot delete cards and decks

**•views.zones.<view\_instanceId>.user (added by default)**

**•views.admin.user**

**•views.power.user**

1. What is the protocol used by Modbus
2. http b) **tcp/ip**

Modbus standard protocols support both TCP/IP and Serial communication, but for the Modbus Machine Adapter in Predix Machine to support Serial communication

1. What is the correct sequence of data flow from Modbus to cloud time series.

**Modbus adaptor 🡪 Hoover Spillway 🡪 Websocket river 🡪 timeseries db**

1. Which of the below adaptor is not used by Predix machine

Some adaptors supported by predix machine are OPC-UA, Modbus, and MQTT.

1. what is the limit of traverse for a relate operator

options a) 7 b) 14 c) unlimited --🡪 **between 7-12 (correct ans 10)**

1. what is the format of policy files written for ACS

ans) JSON

1. What is the default Boolean expression between conditions used in ACS when there are multiple conditions for a single policy.

Ans) AND

21) What permissions does Technician role user has in predix machine

Ref : <https://www.predix.io/docs/?r=578571#j78qLuJR>

1. Default auth type for predix seed application.-> a**uthorization\_code**
2. What is the Command to push app in cloud. **Cf push push an application using manifest.yml**
3. What is the Command to update app . **Cf push**
4. What is the Command to delete app . cf delete <app-name>
5. What is the Command to list all services. Cf s or cf services
6. What is the Command to find all services available in predix-🡪cf marketplace
7. How to use SASS button style in html--> @import "grids.scss";
8. What is the request url to get all decks.

[GET] /api/decks

1. What is the API to create cards and associate with decks.

[POST] /api/decks/1/cards/add

1. Default configuration file name. ans) manifest file
2. What is Syntax to bind service in manifest.yml
   1. services:

- postgres-certification

- predix-certification-blobstore

1. What are all supported BLOB operations on objects

PUT Object

GET Object

Abort Multipart Upload

DELETE Object

GET Object ACL

**POST on Object ( POST is used only to initiate a multipart upload operation)**

1. Max file size for multipart file upload.

Use the Initiate Multipart Upload operation to upload large objects (greater than 100 MB). This divides the large object into multiple partial uploads and returns a unique upload ID for each part of the object you will upload with the Upload Part request.

1. Which service to use for storing file

Blobstrore

1. Analytics <ServiceTask> tag

"execution\_uri": "https://predix-analytics-execution-release.run.aws-usw02-pr.ice.predix.io",

"monitoring\_uri": "https://predix-monitoring-service-release.run.aws-usw02-pr.ice.predix.io",

"scheduler\_uri": "https://predix-scheduler-service-release.run.aws-usw02-pr.ice.predix.io","

1. Analytics validation api name (POST

<**catalog\_uri**>//api/v1/catalog/analytics/{id}/validation

1. How to deploy analytics .Ans) using Analytics Catalog service API /api/v1/catalog/analytics/{id}/deployment
2. Steps in analytics lifecycle
   1. **Develop 🡪 Publish🡪. Validate 🡪 Release 🡪 Execute**
   2. Create the analytic.
   3. Upload the analytic to the catalog.
   4. Deploy and test the analytic in the Cloud Foundry environment.
   5. POST <catalog\_uri>/api/v1/catalog/analytics
3. What is the Analytics taxonomy api name.

<CATALOG\_API>/api/v1/catalog/taxonomy

1. How to get analytics UI url

cf service <UI service instance>

1. Dependency of analytics UI for catalog and runtime service ?

catalog\_instance\_predix\_zone\_id

runtime\_instance\_predix\_zone\_id

1. What are ACS scopes

acs.policies.read

acs.policies.write

acs.attributes.read

acs.attributes.write

1. Which of below are ACS policy attributes

ACS ,attribute management service allows you to create attributes for **users and resources .**

So for user ( UAA or asset ) the in attribute management service ,the attribute can be a group , you can add a group for the subject/resource on ACS . From the UAA users ,you can create a group and added your user to that group. In the policy evaluation service while constructing the post body request , you can retrieve the Subject information from UAA OAuth token for the user.

1. What is the data format in GEL query.—**Key-Value**
2. What is the request format supported in Timeseries. **JSON**
3. What is the maximum Timeseries payload size.: **512KB**
4. WebSocket river uses which service to transfer data to predix cloud. **Time serires**
5. Policy management and attribute management service **ACS**
6. What is the POST request format for policy creation

"attributes": [ { "issuer": "https://acs.attributes.int", "name": "role" } ]

1. What is the folder name where Predix Machine is installed.

**Predix Machine SDK**

1. What is the command to create Machine Container through CLI (use generateContainer script file and provide options to –c(type of container) and –e(path of eclipse folder) )
2. What is UAA IssuerID URL format.

https://d8fa28a1-262e-444f-8f9b-acb364cd695f.predix-uaa-training.run.aws-usw02-pr.ice.predix.io/**oauth/token**

1. Which of the below is uaa\_instance\_GUID. **X-Identity-Zone-Id**
2. Why is ACS required

Authentication for the Access Control services(ACS) is controlled by the designated trusted issuer and is managed by the User Account and Authentication (UAA) web service. For role managment

1. What are the available management services in ACS

Policy Management Service

Attribute Management Service

Policy Evaluation Service

1. What is Command to fetch admin token. **uaac token client get admin**
2. what protocol OPC-UA follows in Predix machine.

Machine Gateway we provice modules that support three industry protocols.

OPC-UA, Modbus and MQTT.

OPC-UA is the most secure of the protocols and it provided 128 and 256 bit encryption and is firewall friendly

1. What is Deck creation API Syntax. /decks
2. How many cards can be available in single deck . **multiple**
3. What is the Timeseries Datapoints Limits. **200,000**
4. Correct syntax to use filter in GEL Query /?filter=propertiename (=:| |) value
5. Following is the Difference b/w UAA uri & issuerId.: **/oaut/token**
6. GEL query Syntax to fetch data with pageSize**(<url>/pageSize=4)**
7. What is the correct sequence of data flow from Machine to Timeseries.

**Sensor 🡪 OPC-UA Adapter 🡪 Machine Gate Way 🡪 Spillway 🡪 Web socket river 🡪 Time series**

1. Machine to cloud Data Transfer Stream.
2. From where we get Analytic UI Url . cf service analytics-url-ui
3. What are the Catalog  and runtime Analytics zoneId **analytics.zones.<service\_instance\_guid>.user**
4. What is Analytics Taxonomy url patterns**. /taxanomy**
5. Mandatory headers to fetch object from BLOB store

**Authorization or Content-MD5 , Date, HOST**

1. What is the signature standard supported by BLOB store.

Ans) **S3 V2**

1. Before deleting a service what you need to take care?

**First you need unbind your services with blinded apps**

1. What are ACS scopes

**acs.policies.read**

**acs.policies.write**

**acs.attributes.read**

**acs.attributes.write**

1. Main elements of a policy are

**Name, target, effect, condition**

1. Predix machine Language.

**Ans) JAVA.**

1. Which build tool use in predix machine?

**Maven**

1. Most secure grant type is?

**Authorization-code**

1. Which type of container to enroll devices?

**PROV**

1. What are the valid API calls for Blob store?
2. How do you get multi part file upload status?

Ans) GET /ObjectName?uploadId=UploadId (GET Bucket Multipart Uploads )

1. Which is not a edge manager role?

**Manager**, Admin, Operator, Technician

1. Modbus protocol? **Series,** Https
2. Which protocol supports 3rd party tool from UAA?

**SAML 2.0**

1. Data continuity, which services ensures if cloud not sending continuous data?

Store & Forward

1. How micro services communicate? RabitMQ
2. Which property GEL not accepts as query parameter?

Domain object**, Wild cards**, Date

1. What is the Machine Runtime framework?

JEEE, .NET, **OSGI**

To run Orchestration or scheduler what should we do? Deployed to production

1. How will you differentiate between tenants?

X-identity-zone-id

1. Machine Component bundle?

Blue print, iPojo

1. SSO scope?

**OpenID** , password, oAuth.approval

1. Which of the following accepts JSON / XML will request ?

**Machine Adaptor, Machine River**

1. Data ingestion protocol? **WSS**
2. Analytic minimum and maximum memory and data distribution?

512 MB , 1024 MB …. In last 1-instanse , 2 instance

1. how will you filter only diesel data in locomotive ?

Locomotive?filter= Diesel

**Locomotive?filter= type=Diesel**

Locomotive?fields= Diesel

1. How will you add more info to Data points in your time series?

Data points, Data sets, **Attributes**

1. First step in the multipart file upload?

**Split into separate parts**

1. Multi part post request?

**POST/url/uploads/ HTTPS1.1**

POST/url/uploads/ HTTPS1.2

POST/url/upload/HTTPS 1.1

1. How do you deploy Analytic into Analytics catalog?

**Use the UI and OR use the validate/ deploy API**

1. where does keystores saves ? Security Folder
2. Common testing when we use continuous integration?

END to END testing

Unit and Integration tests

1. What objects are returned of the following query .

http://JetEngine?filter = manufacturar = AirBus > manufacturer

1. Time series data qulity format? Ans) 0,1,2,3
2. How do you get data from 1 year ago to now?

{

    "start": "1y-ago",

"end": 1427483525000,

    "tags": [

        {

            "name": "ALT\_SENSOR",

            "limit": 1000

       }

   ]

}

1. Compare dates in a range operator?

Compare dates as strings

1. Machine data type not supports?

Double, float, integer, long, **short**

1. Time series numeric data types not support?

Double, float, **short**

1. how to shared one blob store data to 2 application?

**Binding blobstore service with two applications**