**Predix Certified Developer Exam Questionnaires**

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## Predix Cloud & DevOps [12 Questions]

1. Command to upgrade app in cloud foundry.
2. **cf push**
3. cf update
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 command to push app in cloud?

**cf push**

1. What is the command to delete app

**cf delete <app-name>**

1. What is the command to list all services

**cf s or cf services**

1. What is the command to find all services available in Predix

**cf marketplace**

1. Default configuration file name

**manifest file**

1. What is syntax to bind service in manifest.yml
   1. **services:**

**- postgres-certification**

**- predix-certification-blobstore**

1. Common testing when we use continuous integration?

**END to END testing, Unit and Integration tests**

1. How micro services communicate?

**RabitMQ**

## Data Management Services [24 Questions]

### Time Series

1. Not supported data type in Time series?

Double, float, **short**

1. How do you get data from 1 year ago to now?

{

"start": "**1y-ago**",

"end": 1427483525000,

"tags": [{

"name": "ALT\_SENSOR",

"limit": 1000

}]

}

1. Time series data quality format

0 (Bad quality)

1 (Uncertain quality)

2 (Not applicable)

**3 (Good, If you do not specify quality, the default is good (3))**

1. Data ingestion protocol?

**WSS (Example: wss://<ingestion\_url>)**

1. What is the Timeseries Datapoints Limits?

**200,000**

1. What is the maximum Timeseries payload size?

**512KB**

1. What is the request format supported in Timeseries?

**JSON**

1. What is the plan name which gives 50 million data points?
2. Platinum b) gold c) **silver**
3. How will you add more info to data points in your time series?

**Attributes (**This is useful for filtering data)

### Blobstore

1. Which one of the below is not compatible with Blob store service.

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

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 file upload?

**100 MB**

1. Which service to use for storing file or images

**Blobstore**

1. Mandatory headers to fetch object from BLOB store

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

1. What is the signature standard supported by BLOB store

**S3 V2**

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

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

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/ HTTPS 1.2

POST/url/upload/HTTPS 1.1

1. How to share one blobstore data to two applications?

**Binding blobstore service with two applications**

## Asset Services [12 Questions]

1. What is the GEL query to fetch records with pagination?

**<asset-app-url>/locomotive?pageSize=4**

<asset-app-url>/locomotive?Size=4

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

a) 7 b) 14 c) unlimited d)  **7-12**

**Note: Relate operator allows traversing max up to 10**

1. What is the data format in Graph Expression Language (GEL) query?

**Key-Value**

1. Which property GEL not accepts as query parameter?

a) Domain object **b) Wild cards** c) Date

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

Locomotive?filter= Diesel

**Locomotive?filter= type=Diesel**

Locomotive?fields= Diesel

1. What objects are returned of the following query

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

1. Compare dates in a range operator?

**String** (More explanation at <https://www.predix.io/docs/?r=123016#xfix4vDu> )

## Analytics Service [12 Questions]

1. How do you deploy Analytic into Analytics catalog?

**One Using Analytics UI**

**Other way is using Analytics Catalog Service, deploy and Validate passing analytics id, catalog url**

1. Analytic minimum and maximum memory and data distribution?

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

1. What is Analytics Taxonomy url patterns?

**/taxonomy**

**(Ex: POST<catalog\_uri>/api/v1/catalog/taxonomy)**

1. What are the Catalog  and runtime Analytics zone Id

**catalog**

**"catalog\_uri": <Analytics Catalog URI>,**

**"zone-http-header-name": "Predix-Zone-Id",**

**"zone-http-header-value": <service\_instance\_guid>,**

**"zone-oauth-scope": "analytics.zones.<service\_instance\_guid>.user"**

**Note: (name and value of zone id to pass to validate any analytic in analytics catalog request)**

**runtime**

**"credentials": {**

**"config\_uri": <Analytics Runtime Configuration URI>,**

**"execution\_uri": <Analytics Runtime Execution URI>,**

**"monitoring\_uri": <Analytics Runtime Monitoring URI>,**

**"scheduler\_uri": <Analytics Scheduler Service URI>,**

**"zone-http-header-name": "Predix-Zone-Id",**

**"zone-http-header-value": <service\_instance\_guid>,**

**"zone-oauth-scope": "analytics.zones.<service\_instance\_guid>.user"**

1. From where we get Analytic UI Url?

**cf service <analytics-ui url>**

1. Dependency of analytics UI service?

**catalog\_instance\_predix\_zone\_id**

**runtime\_instance\_predix\_zone\_id**

1. What is the Analytics taxonomy API name?

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

1. Steps in analytics lifecycle

**Develop 🡪 Publish🡪 Validate 🡪 Release🡪 Execute**

1. How to deploy analytics?

**Using Analytics Catalog service API (**

**POST <catalog\_uri>/api/v1/catalog/analytics/{id}/deployment)**

1. Analytics validation api name

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

## Predix Machine [24 Questions]

1. Predix Machine data does not support below for timeseries?

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

1. Where does keystores saves?

**Security Folder (<Predix Machine runtime container location>/security)**

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

**Machine Adaptor, Machine River**

1. What is Machine Component bundle?

**While generating a container we select list of bundles**

1. What is the Machine Runtime framework?

JEEE, .NET, **OSGI**

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

**Store & Forward**

1. Modbus protocol?

**Series,** Https

1. Which is not an Edge Manager role?

**Manager**, Admin, Operator, Technician

1. Which type of container to enroll devices?

**TECH (it has feature to generate technical console, using console user can enroll devices)**

1. Predix Machine Language.

**JAVA**

1. Machine to cloud Data Transfer Stream
2. What is the correct sequence of data flow from Machine to Timeseries?

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

1. What protocol OPC-UA follows in Predix machine
2. 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)**

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

**eclipse-plugins**

1. What permissions does Technician role user has in Predix machine

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

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 correct sequence of data flow from Modbus to cloud timeseries?

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

1. What is the protocol used by Modbus
2. http b) **series**
3. What is the river used that ingest data from Predix machine to time series
4. HTTP Server b) **Websocket river**
5. What is the type of container to be created in order to get technical console?

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

## Security Services [24 Questions]

1. Is it Mandatory to implement ACS for security?
2. yes
3. **No**
4. What is the format of policy files written for ACS

**JSON**

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

**AND**

1. Default auth type for predix seed application

**authorization\_code**

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
2. Policy management and attribute management service belong to?

**ACS**

1. What is command to fetch admin token?

**uaac token client get admin**

1. Main elements of a policy are

**Name, target, effect, condition**

1. Most secure grant type is?

**Authorization-code**

1. SSO scope?

**OpenID**, password, oAuth.approval

1. Which protocol supports 3rd party tool from UAA?

**SAML 2.0**

1. Which of the below is uaa\_instance\_GUID

**X-Identity-Zone-Id**

1. Why is ACS required?

## App/UI Services [12 Questions]

1. How many cards can be available in single deck?

**multiple**

1. What is Deck creation API syntax?
2. What is the API to create cards and associate with decks?

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

1. What is the request url to get all decks?

**[GET] /api/decks**

1. What is the request format to post Decks to view service?
2. POST /api/decks/Id
3. **POST /api/decks**
4. How to use SASS button style in html?
5. 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 are the scopes of view services?

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

1. What is Card in View?
2. How do you use px-tables after importing into Platform?

**After installing webcomponentsjs, adding webcomponent-lite in head section, import the pX- component in head section, creating the instance of px-component in body section**