Cognite Functions Template for Time Series Analytics - Deployment Plan

**Center of Excellence - Analytics**

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| --- | --- | --- | --- | --- |
| Version Control | | | | |
| Version | Date | Change | Responsible | Approver |
| 1.0 | 08.09.23 | Initial version | Vetle Nevland |  |
| 2.0 | 21.11.23 | Generalization to multiple time series inputs/outputs | Vetle Nevland |  |
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***Roles and Responsabilites***

|  |  |
| --- | --- |
| Tech Lead 1 | Name |
| Tech Lead 2 | Name |

[1. Deployment Scope 3](#_Toc41391441)

[2. Premisses 3](#_Toc41391442)

[3. Relationship/Dependencies to Other Existing or New Integrations 3](#_Toc41391443)

[4. Depolyment Timeline 4](#_Toc41391444)

[5. Contingency Plan 5](#_Toc41391445)

[6. Rollback Plan 5](#_Toc41391446)

[7. Contact List 5](#_Toc41391447)

[8. Guidelines for Configuration 5](#_Toc41391448)

[9. Configurations 5](#_Toc41391449)

[10. Other info 5](#_Toc41391450)

# Deployment Scope

*Describe briefly the scope of the installation*

The scope of the project is for the Cognite Function Template is to be an easy and versatile framework to perform semi-advanced time series analysis, a cross-functional initiative applicable for people internally in DataOps and also externally in other units. A separate dataset will be dedicated for time series produced through this project’s template.

# Premisses

*Describe premisses for the deployment*

Prerequisites for deployment of a new time series to a designated dataset Center of Excellence – Analytics in the CDF project *akerbp*:

* Create an account at Cognite Hub to connect with Azure AD tenant
* Authenticate with Python SDK to connect to a Cognite Client
* Approval of access request for read/write access to the designated dataset (see procedure in 2 – DataIntegrationArchitecture)
* Create an Owner group and a Read group in Azure AD
* Create the following groups in CDF and link them to your Azure AD groups:
  + Owner:
    - Capabilities:
  + Read:
    - Capabilities:

# Relationship/Dependencies to Other Existing or New Integrations

No existing relationships or dependencies are impacted by the transformed time series. These time series are linked to the same asset as their associated input time series. Hence, the contextualization for these assets are expanded.

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| **Integration** | **Impact** | **Date** | **Contact** |
|  |  |  |  |

# Depolyment Timeline

| **#** | **Activity/ Requirements** | **System** | **Executer** | | | | **Participant** | **Dependency** | | **Objects** | | **Obs** | **Date/TIme Begin** | | | **Date/TIme End** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Pre-Deployment** | | | | | | | | | | | | | | | | |
| 0 | Install Python SDK | Terminal/Anaconda | |  | |  | |  | |  | |  | | 04.09.23 | 04.09.23 | |
| 1 | Create user account at Cognite Hub to get an Azure AD tenant | CDF/ | | - | | - | |  | |  | | Aker BP employees already signed in through their work account | | 04.09.23 | 04.09.23 | |
| 2 | Request read/write access to CDF | CDF | |  | |  | |  | |  | |  | | 06.09.23 | 06.09.23 | |
| 3 | Assert authentication with Cognite Client | Cognite Python SDK | |  | |  | |  | |  | |  | | 08.09.23 | 08.09.23 | |
| 4 | Create new dataset | CDF | | CDF Operations Team | |  | |  | |  | |  | |  |  | |
| 5 | Address data- and memory limitations for Cognite Functions |  | |  | |  | | |  | |  |  | | 17.11.23 | 20.11.23 | |
| 6 | Define folder structure of source code to represent template for Cognite Functions |  | |  | |  | | |  | |  |  | | 15.11.23 | 21.11.23 | |
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| **Deployment** | | | | | | | | | | | | | | | | |
| 6 | Generate folder for a particular Cognite Function in the template |  |  | | | |  |  | |  | |  |  | | |  |
| 7 | Create necessary scripts and files in the folder: “handler.py”, “transformation.py”, \_\_init\_\_.py” and “requirements.txt” |  |  | | | |  |  | |  | |  |  | | |  |
| 8 | Define relevant input parameters in data dictionary for this Cognite Function |  |  | | | |  |  | |  | |  |  | | |  |
| 9 | Consequtively run code cells in “run\_functions.ipynb” to deploy Cognite Function |  |  | | | |  |  | |  | |  |  | | |  |
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| **Post-Deployment** | | | | | | | | |
| 12 | Assert unit tests |  |  |  |  |  |  |  |
| 13 | Finalize GitHub documentation |  |  |  |  |  |  |  |
| 14 | Commence with UaT in CDF Test environment |  |  |  |  |  |  |  |

# Contingency Plan

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| --- | --- | --- |
| **Risk** | **Impacted Area** | **Contingency** |
| Low | None |  |
|  |  |  |

# Rollback Plan

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| --- | --- | --- |
| **Risk** | **Action** | **Impacted Areas** |
| Low | *Remove dataset. Remove Cognite Functions* | CDF Data Catalogue. Cognite Functions. |
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# Contact List

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| --- | --- | --- | --- |
| **Name** | **Team** | **Phone** | **E-mail** |
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# Guidelines for Configuration

# Configurations

# Other info