

# AZI: Python Scripting

The following API calls are available for the Azure Injector Module and can be executed within any of the available Ignition scopes.

- [createConfig](#)
- [readConfig](#)
- [updateConfig](#)
- [deleteConfig](#)

## APIs

- `system.cirruslink.azure.createConfig(type, props) void`
  - Parameters
    - `type (str)`
      - The type of configuration to create with valid options:
        - "Cert Files"
        - "IoT Hubs"
        - "IoT Edge"
        - "IoT Central"
        - "Event Hubs"
        - "Agents"
        - "Sets"
    - Map props
      - Dictionary of properties making up the configuration with the following keys and datatypes:
        - Cert Files
          - Name (str)
          - FileName (str)
          - FileContents (str)
          - Description (str)
        - IoT Hubs
          - Id (long)
          - Name (str)
          - Enabled (bool)
          - Protocol (str) "MQTT"
          - AzureSetId (long)
          - CertAuthEnabled (bool)
          - ConnectionString (str)
          - MqttHostname (str)
          - DeviceId (str)
          - CaCertFileId (long)
          - ClientCertFileId (long)
          - ClientPrivateKeyFileId (long)
          - ClientKeyPassword (str)
          - HistoryEnabled (bool)
          - HistoryStoreType (str) "In\_Memory"
          - MessageCapacity (int)
          - FlushPeriod (long)
          - KeepAlive (int)
          - MaxSize (int)
          - Expiration (long)
          - ContentType (str) "NONE" or "APPLICATION\_JSON"
          - ContentEncoding (str) "NONE", "UTF\_8", "UTF\_16", or "UTF\_32"
          - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
          - CustomTopicExtension (str)
        - IoT Edge
          - Id (long)
          - Name (str)
          - Enabled (bool)
          - Protocol (str) "MQTT"
          - AzureSetId (long)
          - MqttServerUrl (str)
          - CertAuthEnabled (bool)
          - ConnectionString (str)
          - CaCertFileId (long)
          - ClientCertFileId (long)
          - ClientPrivateKeyFileId (long)
          - ClientKeyPassword (str)
          - HostnameVerification (bool)
          - MqttHostname (str)
          - DeviceId (str)
          - ModuleIdOption (str) "NONE", "ENVIRONMENT\_VARIABLE" or "IGNITION\_CONFIG"
          - ModuleId (str)
          - HistoryEnabled (bool)
          - HistoryStoreType (str) "In\_Memory"
          - MessageCapacity (int)

- FlushPeriod (long)
    - KeepAlive (int)
    - MaxSize (int)
    - Expiration (long)
    - ContentType (str) "NONE" or "APPLICATION\_JSON"
    - ContentEncoding (str) "NONE", "UTF\_8", "UTF\_16", or "UTF\_32"
    - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
    - CustomTopicExtension (str)
  - IoT Central
    - Id (Long)
    - Name (str)
    - Enabled (bool)
    - ScopeId (str)
    - EnrollmentGroupSymmetricKey (str)
    - GlobalEndpoint (str)
    - ProvisionedDeviceId (str)
    - ModelId (str)
    - AureSetId (long)
    - HistoryEnabled (bool)
    - HistoryStoreType (str) "In\_Memory"
    - MessageCapacity (int)
    - FlushPeriod (long)
    - MaximumSize (int)
    - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
  - Event Hubs
    - Id (long)
    - Name (str)
    - Enabled (bool)
    - AzureSetId(long)
    - ConnectionString (str)
    - HistoryEnabled (bool)
    - HistoryStoreType (str) "In\_Memory"
    - MessageCapacity (int)
    - FlushPeriod (long)
    - MaxSize (int)
    - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
  - Agents
    - Id (long)
    - TagProvider (str)
    - TagPath (str)
    - PushTrigger (str) "EVENT\_DRIVEN" or "PERIODIC"
    - TagPacingPeriod (long)
    - ConvertUdts (bool)
    - PublishUdtDefinitions (bool)
    - OptimizeUdts (bool)
    - AzureSetId (long)
    - AutoDiscover (bool)
    - GroupId (str)
    - EdgeNodeId (str)
    - DeviceId (str)
    - FilteredProperties (str)
  - Sets
    - Id (long)
    - Name (str)
    - Description (str)
    - PushPolicy (str) "PUSH\_TO\_ALL" or "PUSH\_TO\_ANY"
- Return Value
    - None
  - **system.cirruslink.azure.readConfig(type) List**
    - Parameters
      - type (str)
        - The type of configuration to read with valid options:
          - "General"
          - "Cert Files"
          - "IoT Hubs"
          - "IoT Edge"
          - "IoT Central"
          - "Event Hubs"
          - "Agents"
          - "Sets"
  - Return Value
    - A List of Dictionaries of properties making up the configurations with the following keys and datatypes:
      - General
        - Id (long)
        - Enabled (bool)
      - Cert Files
        - Name (str)
        - FileName (str)

- FileContents (str)
- Description (str)
- IoT Hubs
  - Id (long)
  - Name (str)
  - Enabled (str)
  - Protocol (str) "MQTT"
  - AzureSetId (long)
  - CertAuthEnabled (bool)
  - ConnectionString (str)
  - MqttHostname (str)
  - DeviceId (str)
  - CaCertFileId (long)
  - ClientCertFileId (long)
  - ClientPrivateKeyFileId (long)
  - ClientKeyPassword (str)
  - HistoryEnabled (bool)
  - HistoryStoreType (str) "In\_Memory"
  - MessageCapacity (int)
  - FlushPeriod (long)
  - KeepAlive (int)
  - MaxSize (int)
  - Expiration (long)
  - ContentType (str) "NONE" or "APPLICATION\_JSON"
  - ContentEncoding (str) "NONE", "UTF\_8", "UTF\_16", or "UTF\_32"
  - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
  - CustomTopicExtension (str)
- IoT Edge
  - Id (long)
  - Name (str)
  - Enabled (str)
  - Protocol (str) "MQTT"
  - AzureSetId (long)
  - MqttServerUrl (str)
  - CertAuthEnabled (bool)
  - ConnectionString (str)
  - CaCertFileId (long)
  - ClientCertFileId (long)
  - ClientPrivateKeyFileId (long)
  - ClientKeyPassword (str)
  - HostnameVerification (bool)
  - MqttHostname (str)
  - DeviceId (str)
  - ModuleIdOption (str) "NONE", "ENVIRONMENT\_VARIABLE" or "IGNITION\_CONFIG"
  - ModuleId (str)
  - HistoryEnabled (bool)
  - HistoryStoreType (str) "In\_Memory"
  - MessageCapacity (int)
  - FlushPeriod (long)
  - KeepAlive (int)
  - MaxSize (int)
  - Expiration (long)
  - ContentType (str) "NONE" or "APPLICATION\_JSON"
  - ContentEncoding (str) "NONE", "UTF\_8", "UTF\_16", or "UTF\_32"
  - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
  - CustomTopicExtension (str)
- IoT Central
  - Id (long)
  - Name (str)
  - Enabled (bool)
  - ScopeId (str)
  - EnrollmentGroupSymmetricKey (str)
  - GlobalEndpoint (str)
  - ProvisionedDeviceId (str)
  - ModelId (str)
  - AzureSetId (str)
  - HistoryEnabled (bool)
  - HistoryStoreType (str) "In\_Memory"
  - MessageCapacity (int)
  - FlushPeriod (long)
  - MaximumSize (int)
  - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
- Event Hubs
  - Id (long)
  - Name (str)
  - Enabled (str)
  - ConnectionString (str)
  - HistoryEnabled (bool)
  - HistoryStoreType (str) "In\_Memory"

- MessageCapacity (int)
  - FlushPeriod (long)
  - MaxSize (int)
  - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
- Agents
  - Id (long)
  - TagProvider (str)
  - TagPath (str)
  - PushTrigger (str) "EVENT\_DRIVEN" or "PERIODIC"
  - TagPacingPeriod (long)
  - ConvertUdts (bool)
  - PublishUdtDefinitions (bool)
  - OptimizeUdts (bool)
  - AzureSetId (long)
  - AutoDiscover (bool)
  - GroupId (str)
  - EdgeNodeId (str)
  - DeviceId (str)
  - FilteredProperties (str)
- Sets
  - Id (long)
  - Name (str)
  - Description (str)
  - PushPolicy (str) "PUSH\_TO\_ALL" or "PUSH\_TO\_ANY"
- **system.cirruslink.azure.updateConfig(type, id, collisionPolicy, props) void**
  - Parameters
    - Type (str)
      - The type of configuration to update with valid options:
        - "General"
        - "Cert Files"
        - "IoT Hubs"
        - "IoT Edge"
        - "IoT Central"
        - "Event Hubs"
        - "Agents"
        - "Sets"
    - Id (long)
      - The ID of the record to update
    - collisionPolicy(str)
      - "MergeOverwrite" or "Overwrite"
        - "MergeOverwrite" will replace the existing properties in the record ID with only those included in the call
        - "Overwrite" will replace all properties in the record ID with those in the call
    - Map props
      - Dictionary of properties making up the configuration with the following keys and datatypes:
        - General
          - Id (long)
          - Enabled (bool)
        - Cert Files
          - Name (str)
          - FileName (str)
          - FileContents (str)
          - Description (str)
        - IoT Hubs
          - Id (long)
          - Name (str)
          - Enabled (str)
          - Protocol (str) "MQTT"
          - AzureSetId (long)
          - CertAuthEnabled (bool)
          - ConnectionString (str)
          - MqttHostname (str)
          - DeviceId (str)
          - CaCertFileId (long)
          - ClientCertFileId (long)
          - ClientPrivateKeyFileId (long)
          - ClientKeyPassword (str)
          - HistoryEnabled (bool)
          - HistoryStoreType (str) "In\_Memory"
          - MessageCapacity (int)
          - FlushPeriod (long)
          - KeepAlive (int)
          - MaxSize (int)
          - Expiration (long)
          - ContentType (str) "NONE" or "APPLICATION\_JSON"
          - ContentEncoding (str) "NONE", "UTF\_8", "UTF\_16", or "UTF\_32"
          - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
          - CustomTopicExtension (str)

- IoT Edge
    - Id (long)
    - Name (str)
    - Enabled (str)
    - Protocol (str) "MQTT"
    - AzureSetId (long)
    - MqttServerUrl (str)
    - CertAuthEnabled (bool)
    - ConnectionString (str)
    - CaCertFileId (long)
    - ClientCertFileId (long)
    - ClientPrivateKeyFileId (long)
    - ClientKeyPassword (str)
    - HostnameVerification (bool)
    - MqttHostname (str)
    - DeviceId (str)
    - ModuleIdOption (str) "NONE", "ENVIRONMENT\_VARIABLE" or "IGNITION\_CONFIG"
    - ModuleId (str)
    - HistoryEnabled (bool)
    - HistoryStoreType (str) "In\_Memory"
    - MessageCapacity (int)
    - FlushPeriod (long)
    - KeepAlive (int)
    - MaxSize (int)
    - Expiration (long)
    - ContentType (str) "NONE" or "APPLICATION\_JSON"
    - ContentEncoding (str) "NONE", "UTF\_8", "UTF\_16", or "UTF\_32"
    - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
    - CustomTopicExtension (str)
  - IoT Central
    - Id (long)
    - Name (str)
    - Enabled (bool)
    - ScopeId (str)
    - EnrollmentGroupSymmetricKey (str)
    - GlobalEndpoint (str)
    - ModelId (str)
    - AzureSetId (long)
    - HistoryEnabled (bool)
    - HistoryStoreType (str) "In\_Memory"
    - MessageCapacity (int)
    - FlushPeriod (long)
    - MaximumSize (int)
    - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
  - Event Hubs
    - Id (long)
    - Name (str)
    - Enabled (str)
    - ConnectionString (str)
    - HistoryEnabled (bool)
    - HistoryStoreType (str) "In\_Memory"
    - MessageCapacity (int)
    - FlushPeriod (long)
    - MaxSize (int)
    - AzureDateTimeFormat (str) "LONG\_MS\_SINCE\_EPOCH" or "STRING\_AZURE\_COMPAT"
  - Agents
    - Id (long)
    - TagProvider (str)
    - TagPath (str)
    - PushTrigger (str) "EVENT\_DRIVEN" or "PERIODIC"
    - TagPacingPeriod (long)
    - ConvertUdts (bool)
    - PublishUdtDefinitions (bool)
    - OptimizeUdts (bool)
    - AzureSetId (long)
    - AutoDiscover (bool)
    - GroupId (str)
    - EdgeNodeId (str)
    - DeviceId (str)
    - FilteredProperties (str)
  - Sets
    - Id (long)
    - Name (str)
    - Description (str)
    - PushPolicy (str) "PUSH\_TO\_ALL" or "PUSH\_TO\_ANY"
- Return Value
    - None
  - **system.cirruslink.azure.deleteConfig(type, id) void**
    - Parameters

- Type (str)
  - The type of configuration to delete with valid options:
    - "Cert Files"
    - "IoT Hubs"
    - "IoT Edge"
    - "IoT Central"
    - "Event Hubs"
    - "Agents"
    - "Sets"
- Id (long)
  - The ID of the record to delete
- Return Value
  - None

## Sample Script



Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a particular need.

```
# Cirrus Link provides these scripts as examples only, they are not supported or guaranteed to meet any
particular functionality. Cirrus Link cannot provide any assistance to modify these scripts to meet a
particular need
# Update Certificates
# Get Id for current certificate
savedCerts = system.cirruslink.azure.readConfig("Cert Files")
for config in savedCerts:
    if config["Name"] == "My current cert name":
        certId = config["Id"]

# Read New Cert File
deviceCaCertFilePath = "/path/to/your/certs/iot-edge-device-ca-CA.cert.pem"
deviceCaCert = open(deviceCaCertFilePath, 'r').read()

# Update existing cert config using MergeOverwrite
certProps = {}
certProps["FileContents"] = deviceCaCert
system.cirruslink.azure.updateConfig("Cert Files", certId, "MergeOverwrite", certProps)
```