Symantec ICDx

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Release Notes

Version	Date	Notes
1.1.0	07/2022	Drop support for Python 2.7
1.0.1	11/2020	Added support for AppHost and Resilient API Keys
1.0.0	06/2020	Initial Release

Overview

Integration with ICDx which provides access to the ICDx Search API over AMQP

The Symantec Integrated Cyber Defense Exchange (ICDx) is a central hub used to gather information from a number of different products in the Symantec Catalogue, normalising the information from these products into a schema. This establishes ICDx as an enrichment platform reporting on events gathered from other Symantec products

Key Features

- Asynchronous Component for creating Resilient incidents from ICDx Events
- Ability to perform a query for ICDx Events
- Ability to gather the details of a specific event by ID

Requirements

This app supports the IBM Security QRadar SOAR Platform and the IBM Security QRadar SOAR for IBM Cloud Pak for Security.

SOAR platform

The SOAR platform supports two app deployment mechanisms, App Host and integration server.

If deploying to a SOAR platform with an App Host, the requirements are:

- SOAR platform >= `36.0.0`.
- The app is in a container-based format (available from the AppExchange as a `zip` file).

If deploying to a SOAR platform with an integration server, the requirements are:

- SOAR platform >= `36.0.0`.
- The app is in the older integration format (available from the AppExchange as a `zip` file which contains a `tar.gz` file).
- Integration server is running `resilient_circuits>=45.0.0`.
- If using an API key account, make sure the account provides the following minimum permissions:

Name	Permissions
Org Data	Read
Function	Read

The following SOAR platform guides provide additional information:

- *App Host Deployment Guide*: provides installation, configuration, and troubleshooting information, including proxy server settings.
- *Integration Server Guide*: provides installation, configuration, and troubleshooting information, including proxy server settings.
- *System Administrator Guide*: provides the procedure to install, configure and deploy apps.

The above guides are available on the IBM Documentation website at ibm.biz/soar-docs. On this web page, select your SOAR platform version. On the follow-on page, you can find the *App Host Deployment Guide* or *Integration Server Guide* by expanding **Apps** in the Table of Contents pane. The System Administrator Guide is available by expanding **System Administrator**.

Cloud Pak for Security

If you are deploying to IBM Cloud Pak for Security, the requirements are:

- IBM Cloud Pak for Security >= 1.4.
- Cloud Pak is configured with an App Host.
- The app is in a container-based format (available from the AppExchange as a `zip` file).

The following Cloud Pak guides provide additional information:

- *App Host Deployment Guide*: provides installation, configuration, and troubleshooting information, including proxy server settings. From the Table of Contents, select Case Management and Orchestration & Automation > **Orchestration and Automation Apps**.
- *System Administrator Guide*: provides information to install, configure, and deploy apps. From the IBM Cloud Pak for Security IBM Documentation table of contents, select Case Management and Orchestration

& Automation > **System administrator**.

These guides are available on the IBM Documentation website at ibm.biz/cp4s-docs. From this web page, select your IBM Cloud Pak for Security version. From the version-specific IBM Documentation page, select Case Management and Orchestration & Automation.

Proxy Server

The app **does** support a proxy server.

Python Environment

Both Python 3.6 and Python 3.9 are supported. Additional package dependencies may exist for each of these packages:

- ipaddress
- pika~=1.2
- resilient_circuits>=45.0.0

Installation

Install

- To install or uninstall an App or Integration on the *SOAR platform*, see the documentation at ibm.biz/soar-docs.
- To install or uninstall an App on *IBM Cloud Pak for Security*, see the documentation at ibm.biz/cp4s-docs and follow the instructions above to navigate to Orchestration and Automation.

App Configuration

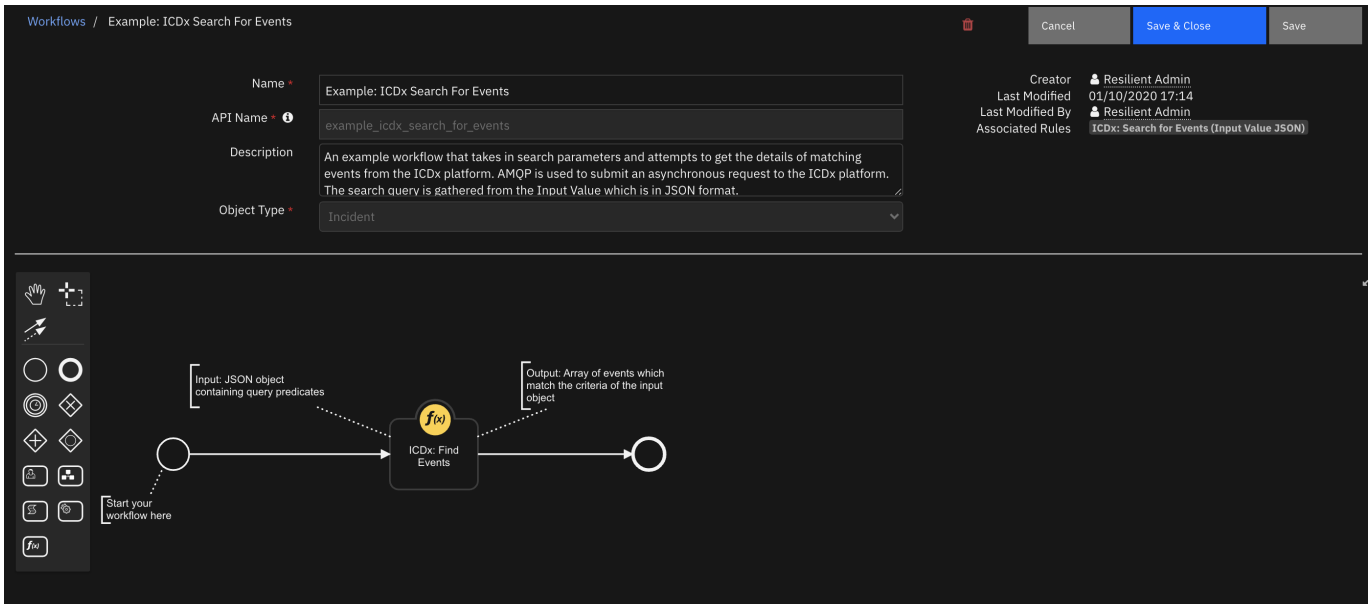
The following table provides the settings you need to configure the app. These settings are made in the app.config file. See the documentation discussed in the Requirements section for the procedure.

Config	Required	Example	Description
icdx_amqp_host	Yes	`icdx.example.com`	*Hostname for the ICDx installation, should be like my-server.com.*
icdx_amqp_port	Yes	`5672`	*Port for the ICDx AMQP Service, defaults to 5672.*
icdx_amqp_vhost	Yes	`dx`	*Virtual Host for the AMQP Exchange. Default is dx.*
icdx_amqp_username	Yes	`admin`	*Username of ICDx user.*
icdx_amqp_password	Yes	`supersecret`	*Password of ICDx user.*
icdx_search_limit	Yes	`100`	*A limiter for how many results are queried in ICDx. Default is 100 unless this value exceeds that.*

Config	Required	Example	Description
icdx_forwarder_toggle	Yes	`<True / False>`	*Boolean specifying whether the forwarder should be enabled when circuits is started.*
icdx_forwarder_inc_owner	Yes	`<USER_EMAIL / USER_ID / GROUP_NAME>`	*Who will be assigned incidents created by the forwarder*

Function - ICDx: Find Events

Takes a number of parameters in a search request and attempts to gather events from the ICDx Platform. Returns a response containing a list of events or a response with a 204 status code when no results are found.



▶ Inputs:

Name	Type	Required	Example	Tooltip
`icdx_search_request`	`textarea`	Yes	`A JSON Payload containing search Query`	The Find Events request retrieves the events that are within the specified time range and satisfy this search condition.

▶ Outputs:

```
results = {
   "version":"1.0",
   "success":False,
   "reason":"None",
   "content":{
      "result_set":"None",
      "num_of_results":0,
      "execution_time":1601631906772
   },
```

```
   "raw":"{\"result_set\": null, \"num_of_results\": 0, \"execution_time\":
1601631906772}",
   "inputs":{
      "icdx_search_request":{
         "format":"text",
         "content":"{\"from\":[\"default\",\"dedicated/d900b5f0-aa0d-11e9-
e053-000000000001\",\"dedicated/13547310-aec6-11e9-eb82-
000000000002\",\"dedicated/3c7b5bd0-1f21-11e9-fa8e-
000000000001\"],\"start\":\"-7d\",\"filter\":\"type =
\\'NETWORK_EVENT\\'\",\"Query_Title\":\"Search for available archives, then
search for NETWORK_EVENTs, limited to all available archives except
system.\",\"limit\":5,\"where\":\"severity_id >= 3\",\"id\":1}"
      }
   },
   "metrics":{
      "version":"1.0",
      "package":"fn-icdx",
      "package_version":"1.0.1",
      "host":"RG-MBP-18.local",
      "execution_time_ms":1889,
      "timestamp":"2020-10-02 10:45:06"
   }
}
```

▶ Example Pre-Process Script:

```
########################################
### Define pre-processing functions ###
########################################
payload = {
   "Query_Title": "Search for available archives, then search for
NETWORK_EVENTs, limited to all available archives except system.",
   "id" : 1,
   "start"  : "-7d",
   "where"  : "severity_id >= 3",
   "filter": "type = 'NETWORK_EVENT'",
   "limit"  : 5
   }
def dict_to_json_str(d):
  """Function that converts a dictionary into a JSON stringself.
     Supports basestring, bool and int.
     If the value is None, it sets it to False"""

  json_str = '"{ {0} }"'
  json_entry = '"{0}":{1}'
  json_entry_str = '"{0}":"{1}"'
  list_str = '"{0}":[{1}]'
  entries = []

  # Grab the available archives from the previous function
  archives_to_search = workflow.properties.archive_search["archives"]

  """
```

```
    Here we take the result of the previous function -- a list of available
archives_to_search
    A comma separated string of archives is prepared and then appended to our
payload

    In the below example, we exclude the system archive by adding every other
archive to our payload

    Replace 'system' with any archives you DONT want to be searched
  """
  list_builder_str = ''
  for archive in archives_to_search:
    # If the archive isin't the system archive
    if archive["path"] != "system":
      # Append to the list of archives we will search
      list_builder_str += '"{0}",'.format(archive["path"])

  # Finally prepare our CSV string to be appended to the payload
  if list_builder_str.endswith(','):
    list_builder_str = list_builder_str[:-1]
  entries.append(list_str.format("from", list_builder_str))

  for entry in d:
    key = entry
    value = d[entry]

    if value is None:
      value = False


    if isinstance(value, basestring):
      entries.append(json_entry_str.format(key, value))

    elif isinstance(value, bool):
      value = 'true' if value == True else 'false'
      entries.append(json_entry.format(key, value))

    else:
      entries.append(json_entry.format(key, value))

  return '{' + ','.join(entries) + '}'


inputs.icdx_search_request = dict_to_json_str(payload)
```

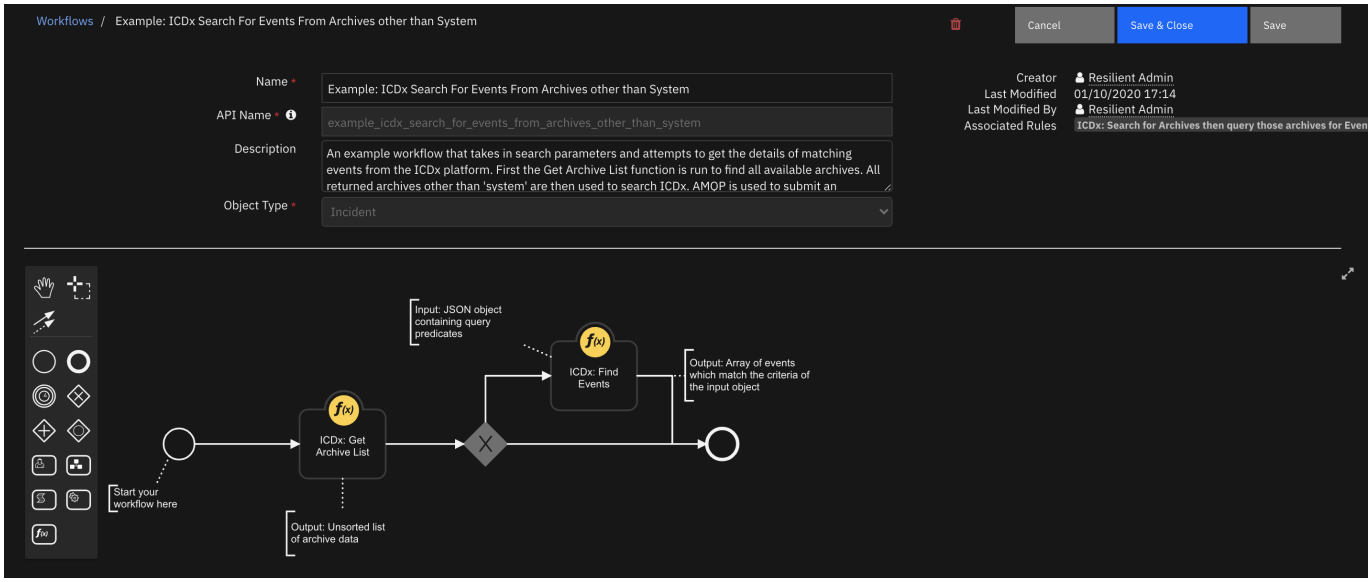
▶ Example Post-Process Script:

```
"""
Example of the return data for this workflow
results = {
            "success": True or False
            "result_set": [{
              Object containing ICDx event data
```

```
            }],
            "num_of_results": How many results returned (INT),
            "execution_time": The time the function was executed
          }

"""
noteText = u"""<br><b>Search Request executed on ICDx :</b>"""

noteText += u"""<br>Number of results found: <b>{0}</b>
               <br>Results are being inserted into the ICDX Event
Datatable""".format(results.num_of_results)

if results.inputs["icdx_search_request"]["Query_Title"] != None:
  noteText += u"""<br><br>A Query_Title attribute was provided with the input
payload.
                <br>Query Title: <b>{0}
</b>""".format(results.inputs["icdx_search_request"]["Query_Title"])
  if results.inputs["icdx_search_request"]["where"] not in (None, ''):
    noteText += u"""<br> Where Condition: <b>{0}
</b>""".format(results.inputs["icdx_search_request"]["where"])
  if results.inputs["icdx_search_request"]["filter"] not in (None, ''):
    noteText += u"""<br> Filter Condition: <b>{0}
</b>""".format(results.inputs["icdx_search_request"]["filter"])

if results.num_of_results >= results.inputs["icdx_search_request"]
["hard_limit"]:
  noteText += u"""<br><br>Query resulted in {0} matching events. ICDx Event
Requests are batched with a configurable limit of {1}.
              <br> To access any results after the {1}th returned result,
please review the app.config parameter `icdx_search_limit` and update where
necessary.
              <br> The Last UUID appears to be <b>{2}
</b>""".format(results.inputs["icdx_search_request"]
["limit"],results.inputs["icdx_search_request"]["hard_limit"],
results.result_set[-1]["uuid"])


incident.addNote(helper.createRichText(noteText))
if results.result_set:
  for event in results.result_set:
    # Now have a handle on each event; Prepare DataTable
    row = incident.addRow("icdx_events")
    row["icdx_uuid"]  = event['uuid']
    row["icdx_severity_id"]  = event['severity_id']
    row["icdx_device_name"]  = event['device_name']
    row["icdx_device_ip"]  = event['device_ip']

    try:
      row["icdx_type"] = event['type']
    except:
      row["icdx_type"] = u"""No Type"""

    row["execution_time"] = results.execution_time
```

Function - ICDx: Get Archive List

The Get Archive List API is used to return a list of archives in the ICDx system. The response is an unsorted list of archive metadata objects which can then be searched by a user.



▶ Inputs:

Name	Type	Required	Example	Tooltip

▶ Outputs:

```
results = {
   "version":"1.0",
   "success":True,
   "reason":"None",
   "content":{
      "archives":[
         {
            "name":"System Archive",
            "path":"system"
         },
         {
            "name":"Default Archive",
            "path":"default"
         },
         {
            "path":"dedicated/d900b5f0-aa0d-11e9-e053-000000000001",
            "uuid":"d900b5f0-aa0d-11e9-e053-000000000001"
         },
         {
            "path":"dedicated/13547310-aec6-11e9-eb82-000000000002",
            "uuid":"13547310-aec6-11e9-eb82-000000000002"
         },
         {
            "path":"dedicated/3c7b5bd0-1f21-11e9-fa8e-000000000001",
            "uuid":"3c7b5bd0-1f21-11e9-fa8e-000000000001"
         }
      ]
```

```
    },
    "raw":"{\"archives\": [{\"name\": \"System Archive\", \"path\":
\"system\"}, {\"name\": \"Default Archive\", \"path\": \"default\"},
{\"path\": \"dedicated/d900b5f0-aa0d-11e9-e053-000000000001\", \"uuid\":
\"d900b5f0-aa0d-11e9-e053-000000000001\"}, {\"path\": \"dedicated/13547310-
aec6-11e9-eb82-000000000002\", \"uuid\": \"13547310-aec6-11e9-eb82-
000000000002\"}, {\"path\": \"dedicated/3c7b5bd0-1f21-11e9-fa8e-
000000000001\", \"uuid\": \"3c7b5bd0-1f21-11e9-fa8e-000000000001\"}]}",
    "inputs":{

    },
    "metrics":{
       "version":"1.0",
       "package":"fn-icdx",
       "package_version":"1.0.1",
       "host":"RG-MBP-18.local",
       "execution_time_ms":1874,
       "timestamp":"2020-10-02 14:48:23"
    }
}
```


▶ Example Pre-Process Script:

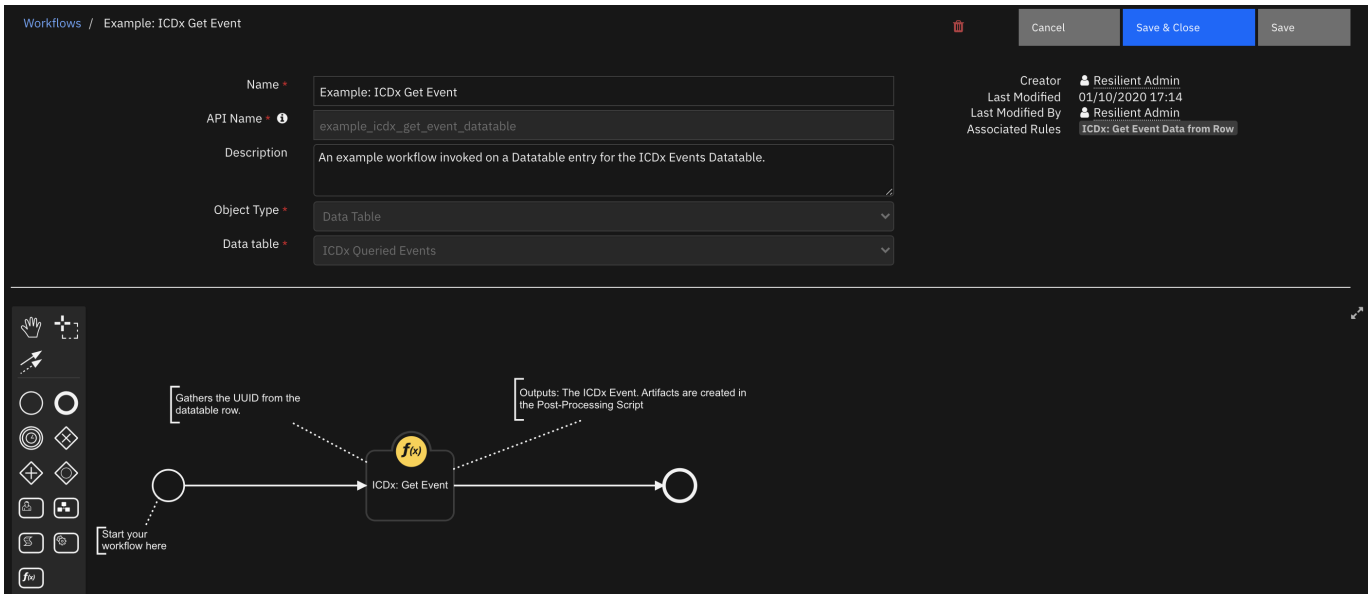
```
None
```

▶ Example Post-Process Script:

```
"""
results = {
            "success": True or False,
            "archives": List of available archives or None
          }
"""
noteText = """<br>Found <b>{0}</b> archives available for
searching""".format(len(results.archives))

for archive in results.archives:
  noteText += """<br> Archive Name: <b>{0}</b> with path:
{1}""".format(archive["name"], archive["path"])

incident.addNote(helper.createRichText(noteText))
```

Function - ICDx: Get Event

Takes in an input of a UUID for an event and attempts to get the details of this event from the ICDx platform.



▶ Inputs:

Name	Type	Required	Example	Tooltip
icdx_uuid	text	Yes	–	A UUID value for an ICDx Event.

▶ Outputs:


```
results = {
   "version":"1.0",
   "success":True,
   "reason":"None",
   "content":{
      "event":{
         "user_name":"admin",
         "session_uid":"hz73OQByQay0mAGlHJz4iw",
         "feature_uid":"default",
         "uuid":"85c62850-0490-11eb-c000-000000000000",
         "  feature_type":"system",
         "device_name":"integration-icdx-ubuntu-2",
         "subfeature_name":"com.symantec.platform.identity.audit.AuditLogger",
         "status_id":1,
         "category_id":4,
         "id":1,
         "feature_path":"system/id_epmp_dx",
         "device_time":1601630433109,
         "feature_name":"Identity Service",
         "x-epmp-sampled":"0",
         "device_os_name":"Linux",
         "log_name":"system",
         "type_id":20,
         "device_os_ver":"4.4.0-131-generic",
         "log_level":"INFO",
         "device_os_bits":"amd64",
         "message":"Successful login of admin",
         "version":"1.0",
         "product_name":"Symantec Integrated Cyber Defense Exchange",
         "log_time":"2020-10-02T05:20:33.109-04:00",
```

```
            "device_ip":"9.70.194.66",
            "event_id":20001,
            "x-epmp-traceId":"0482fb724eca2f19",
            "x-epmp-spanId":"0482fb724eca2f19",
            "time":"2020-10-02T05:20:33.109-04:00",
            "severity_id":1,
            "status_thread_name":"SimpleAsyncTaskExecutor-2"
         },
         "artifacts":{

         },
         "artifact_keys_as_list":[

         ],
         "artifact_values_as_list":[

         ]
      },
      "raw":"{\"event\": {\"user_name\": \"admin\", \"session_uid\":
\"hz73OQByQay0mAGlHJz4iw\", \"feature_uid\": \"default\", \"uuid\":
\"85c62850-0490-11eb-c000-000000000000\", \"  feature_type\": \"system\",
\"device_name\": \"integration-icdx-ubuntu-2\", \"subfeature_name\":
\"com.symantec.platform.identity.audit.AuditLogger\", \"status_id\": 1,
\"category_id\": 4, \"id\": 1, \"feature_path\": \"system/id_epmp_dx\",
\"device_time\": 1601630433109, \"feature_name\": \"Identity Service\", \"x-
epmp-sampled\": \"0\", \"device_os_name\": \"Linux\", \"log_name\":
\"system\", \"type_id\": 20, \"device_os_ver\": \"4.4.0-131-generic\",
\"log_level\": \"INFO\", \"device_os_bits\": \"amd64\", \"message\":
\"Successful login of admin\", \"version\": \"1.0\", \"product_name\":
\"Symantec Integrated Cyber Defense Exchange\", \"log_time\": \"2020-10-
02T05:20:33.109-04:00\", \"device_ip\": \"9.70.194.66\", \"event_id\": 20001,
\"x-epmp-traceId\": \"0482fb724eca2f19\", \"x-epmp-spanId\":
\"0482fb724eca2f19\", \"time\": \"2020-10-02T05:20:33.109-04:00\",
\"severity_id\": 1, \"status_thread_name\": \"SimpleAsyncTaskExecutor-2\"},
\"artifacts\": {}, \"artifact_keys_as_list\": [], \"artifact_values_as_list\":
[]}",
      "inputs":{
         "icdx_uuid":"85c62850-0490-11eb-c000-000000000000"
      },
      "metrics":{
         "version":"1.0",
         "package":"fn-icdx",
         "package_version":"1.0.1",
         "host":"RG-MBP-18.local",
         "execution_time_ms":1851,
         "timestamp":"2020-10-02 14:47:25"
      }
   }
```


▶ Example Pre-Process Script:

```
inputs.icdx_uuid = row.icdx_uuid
```

▶ Example Post-Process Script:

```
"""
Example of return data

results = {
            "inputs":{
                "icdx_uuid": The UUID we ran the request with
            },
            "success": True or False,
            "event":  {
              Object containing the ICDx Event data
            },
            "artifacts": {
              Object containing the artifacts we parsed from the event.
              Structure is name_of_artifact:artifact_data
            },
            "artifact_keys_as_list": [
              List containing the types of artifacts we parsed from the event.
            ],
            "artifact_values_as_list": [
              List containing the artifact data we parsed from the event.
            ]
          }

"""

# Add a note detailing what happened
noteText = u"""<br><b>Get Event request executed on ICDx :</b>
                <br>UUID Provided: <b>{0}
</b>""".format(results.inputs["icdx_uuid"])

if results.success:
  noteText += u"""<br>Query successful and found an event with matching
UUID."""

  if results.event['type'] != None:
    noteText += u"""<br> Type of Event : <b>{0}
</b>""".format(results.event["type"])
  else:
    noteText += u"""<br> Event Type ID : <b>{0}
</b>""".format(results.event["type_id"])

  noteText += u"""<br> Event was gathered from the <b>{0}</b>
archive""".format(results.event["log_name"])
  if len(results.artifact_keys_as_list) > 0:
    noteText += """<br>Artifacts generated from Event: <b>{0}</b>""".format("
['{}']".format("', '".join(results.artifact_keys_as_list)))
  else:
    noteText += """<br><b>No artifacts generated from Event.</b>"""
else:
  noteText += u"""<br>Query did not find a corresponding event or an exception
occured.
  Check the action status for more information"""
```

```
incident.addNote(helper.createRichText(noteText))


# First save the UUID as an artifact, exposing it to artifact level workflows
incident.addArtifact('String', results.inputs["icdx_uuid"], 'Escalated from
ICDx Event with UUID {}. Gathered from the ICDx Utilities
Integration'.format(results.inputs["icdx_uuid"]))

""" Will only work in v31 upwards
if results.artifacts not None:
  for artifact_type, artifact_values in results.artifacts.items():
    for artifact_value in artifact_values:
      incident.addArtifact(artifact_type, artifact_value, 'Escalated from ICDx
Event with UUID {}. Gathered from the ICDx Utilities
Integration'.format(results.inputs["icdx_uuid"]))
"""

# Parse over the keys and values and add them as artifacts
if results.artifact_keys_as_list != None and results.artifact_values_as_list
!= None:
  for artifact_type, artifact_values in
zip(results.artifact_keys_as_list,results.artifact_values_as_list):
    for artifact_value in artifact_values:
      incident.addArtifact(artifact_type, artifact_value, 'Escalated from ICDx
Event with UUID {}. Gathered from the ICDx Utilities
Integration'.format(results.inputs["icdx_uuid"]))
```

Data Table - ICDx Queried Events

API Name:

icdx_events

Columns:

Column Name	API Access Name	Type	Tooltip
Artifact Type	`artifact_type`	`text`	Input Artifact Type that was queried
Device IP	`icdx_device_ip`	`text`	A Device IP gathered from Event (If Any)
Device Name	`icdx_device_name`	`text`	A Device Name gathered from Event (If Any)
Execution Time	`execution_time`	`datetimepicker`	-
Severity ID	`icdx_severity_id`	`text`	The Severity of the Event. [1] Info; [2] Warning; [3] Minor; [4] Major; [5]; Critical; [6] Fatal

Column Name	API Access Name	Type	Tooltip
Type	icdx_type	text	A Type of Event.
UUID	icdx_uuid	text	A Unique Identifier for the ICDx Event

Rules

Rule Name	Object	Workflow Triggered
ICDx: Get Event Data	artifact	example_icdx_get_event_data
ICDx: Get Event Data from Row	icdx_events	example_icdx_get_event_datatable
ICDx: Search for Archives then query those archives for Events	incident	example_icdx_search_for_events_from_archives_other_than_system
ICDx: Search for Events (Input Value JSON)	incident	example_icdx_search_for_events
ICDx: Search for Events related to Device Name (Pre-Processing JSON)	artifact	example_icdx_search_for_events_related_to_device_name
ICDx: Search for Events related to IP (Pre-Processing JSON)	artifact	example_icdx_search_for_events_related_to_ip

Troubleshooting & Support

Refer to the documentation listed in the Requirements section for troubleshooting information.

For Support

This is an IBM supported app. Please search ibm.com/mysupport for assistance.