



Cloud Event Management: Netcool/Impact Integration

Speaker:

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- **CEM – Netcool/Impact integration requirements and configuration**
 - Prerequisites
 - OMNIbus configuration
 - CEM Gateway installation and configuration
 - Configure Netcool/Impact to run the trigger service
 - IBM Secure Gateway client installation and configuration
 - Configure a connection from CEM to the Netcool/Impact server
 - Map runbooks to Netcool/Impact events
- **DEMO CEM – Netcool/Impact – WebGUI integration**
- **Q&A**

CEM – Netcool/Impact requirements



For trial subscription to CEM: <https://www.ibm.com/cloud/event-management>

1. Omnibus 8.1

2. Gateway for Cloud Event Management (nco-g-cem)

Download details: <https://www.ibm.com/support/pages/node/563481>

Part number: **CC4PJEN**

<input type="radio"/> Netcool/OMNIBus 8 Plus Gateway for Cloud Event Management (nco-g-cem 3_0) Multi-Platform English (CC4PJEN) - View details	
Size	12MB
Date posted	13 Dec 2019




3. Netcool/Impact 7.1 – recommended at least Fix Pack 18

4. IBM Secure Gateway

In CEM -> go to Administration -> Runbooks -> Connections -> Event Trigger (Omnibus/Impact):

1. If this is your first connection being setup, download and install a gateway client. [Download gateway client](#)

How would you like to connect this new gateway?



IBM Installer Docker IBM DataPower

1 Click the download link below for your operating system

2 Locate the documentation for the installation in the IBM Cloud docs or the README.md file provided

3 Install the downloaded client

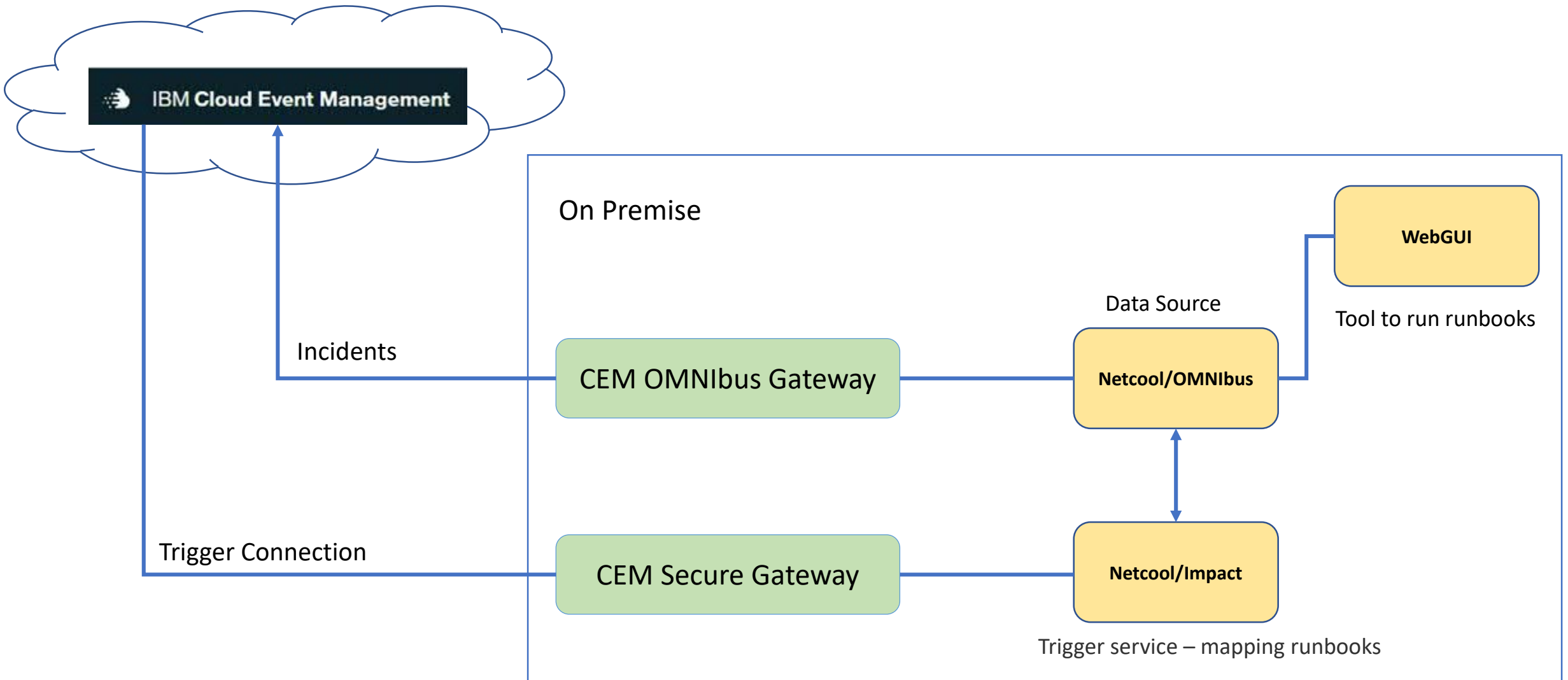
Gateway ID
ysLS8uV09XE_prod_ng

Security Token
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJjb25r

Software Installers

Windows	18.27 MB
Mac OSX	96 MB
RHEL	22.25 MB
Ubuntu Z-Linux	13.95 MB
Ubuntu PPC	13.81 MB
Ubuntu	14.53 MB
AIX	25.61 MB

CEM – OMNibus - Netcool/Impact



CEM – Install CEM gateway



The repository location that needs to be added within IBMIM to proceed with the installation:

/<extracted_path_to_gate>/repository.config

```
=====> IBM Installation Manager> Preferences> Repositories  
Repositories:  
1. [X] /tmpcemgate/repository.config
```

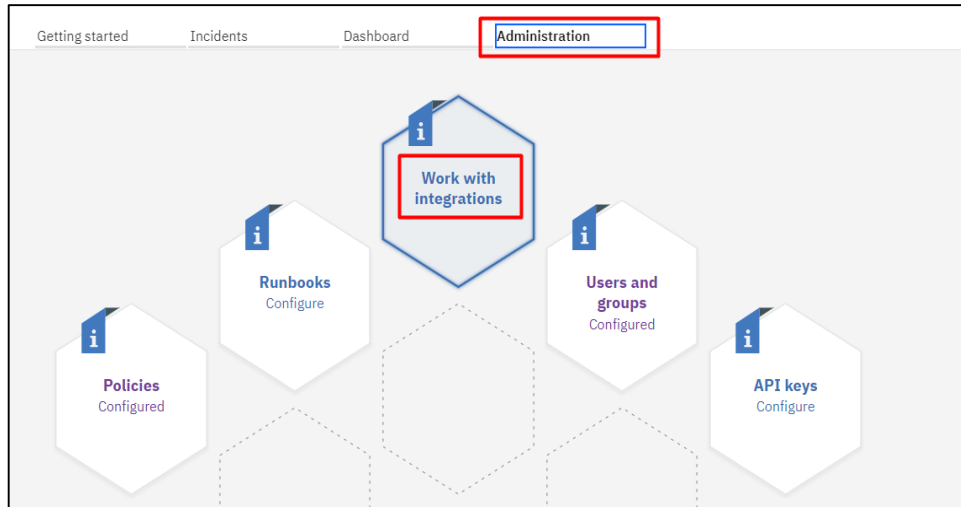
Either by installing in GUI or console mode, select the Netcool/Omnibus Gateway nco-g-cem to be installed and follow the wizard details to proceed with the installation:

```
=====> IBM Installation Manager> Install> Select  
Netcool/OMNIBus Gateway nco-g-cem 1.3.0.0  
Options:  
1. Choose version 1.3.0.0 for installation.  
2. Show all available versions of the package.
```

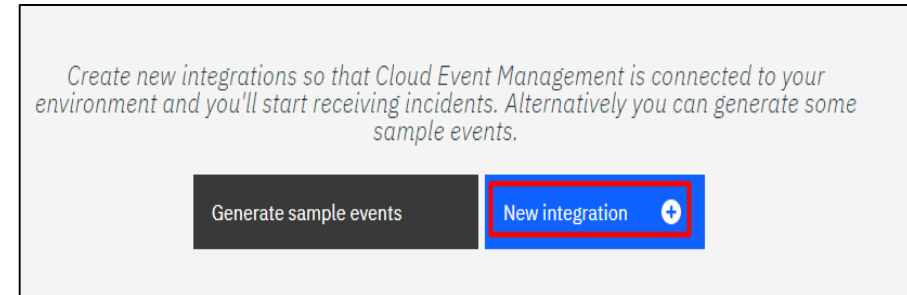
CEM – Create omnibus integration definition



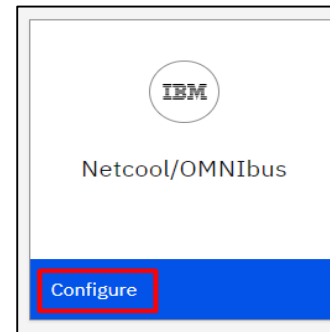
Step 1: In CEM access the “Administration” section and click on the “Work with Integrations” option:



Step 2: Click New integration.



Step 3: Go to the Netcool/OMNIbus tile and click Configure



CEM – Create omnibus integration definition



Step 4: Enter a name for the integration and click Copy to add the generated webhook URL to clipboard.

Step 5: Ensure that you save the generated webhook to make it available later in the configuration process. This is required for the gateway configuration.

Step 6: Click Save.

Create the incoming integration with Netcool/OMNIbus

Configure this event source to integrate with existing on-premise installations of Netcool/OMNIbus. Events are received through a gateway that you need to install and configure.

Before you begin, you must install IBM Tivoli Netcool/OMNIbus Gateway for Cloud Event Management



[Docs](#)

1. Name the integration

Omnibus

2. Configure a webhook channel in Netcool/OMNIbus

https://normalizer.us-south.cloudeventmanagement.cloud.ibm.com/webhook/noi/505154582/60b35985-53cf-4fcc-bd09-4fbed8c3d30



Add the webhook URL to Gate.CEM.WebhookURL field in G_CEM.props file. [More information](#)

3. Enable event management from this source

☒

On

Cancel

Save

IBM Cloud / © 2020 IBM Corporation

CEM – Configure Omnibus for the integration



- Insert the required columns for CEM into the ObjectServer alerts.status table.

Run the following SQL command:

```
$OMNIHOME/bin/nco_sql -server <server_name> -user <user_name> -password <password> <  
$OMNIHOME/gates/cem/cem.sql
```

```
[root@prawned1 tmpcemgate]# cd /opt/IBM/tivoli/netcool/omnibus/gates/cem/  
[root@prawned1 cem]# ls  
cem.map          cem.rdrwtr.tblrep.def      cem.rdrwtr.tblrep.tivoli_eif.def  cem.sql  G_CEM.props  
cem.notification.js  cem.rdrwtr.tblrep.mttrapd.def  cem_rollback.sql                default  nco_g_cem.env
```

```
/opt/IBM/tivoli/netcool/omnibus/bin/nco_sql -server CEM -user root < /opt/IBM/tivoli/netcool/omnibus/gates/cem/cem.sql
```

```
[root@prawned1 cem]# /opt/IBM/tivoli/netcool/omnibus/bin/nco_sql -server CEM -user root < /opt/IBM/tivoli/netcool/omnibus/gates/cem/cem.sql  
Password:  
(0 rows affected)  
(0 rows affected)  
(0 rows affected)  
(0 rows affected)
```


CEM – Configure CEM gateway



- Configuration properties file: \$OMNIHOME/gates/cem/G_CEM.props can be obtained from:

```
cp /opt/IBM/tivoli/netcool/omnibus/gates/cem/G_CEM.props
```

- Edit CEM gateway props file (G_CEM.props):

1) Enable the gateway to read alerts from your ObjectServer by updating the Gate.RdrWtr.Server property.

Gate.RdrWtr.Server : 'CEM'

2) Assign the webhook URL that you generated in CEM to the Gate.CEM.WebhookURL property:

Gate.CEM.WebhookURL : 'https://normalizer.us-south.cloudeventmanagement.cloud.ibm.com/webhook/noi/505154582/60b35985-53cf-4fcc-bd09-4fbed8c3d308/QRVSWbeGoBb6hLU3FPDQsPo-Gknml0lAmm9f5mGqW4w'

3) Make sure **Gate.CEM.KeyStoreFile** points to correct path.

Gate.CEM.KeyStoreFile : '\${NCHOME}/platform/linux2x86/jre64_1.7.0/jre/lib/security/cacerts'

- Start the CEM gateway

```
$OMNIHOME/bin/nco_g_cem
```

CEM – Check incidents in CEM dashboard



To check the incoming alerts received from omnibus in CEM, just access the “Incidents” menu.

The screenshot displays the IBM Cloud Event Management (CEM) dashboard. The top navigation bar includes links for 'Getting started', 'Incidents' (highlighted with a red box), 'Dashboard', and 'Administration'. Below the navigation bar, the main section is titled '47 incidents'. On the right side of this section, there are filters for 'My incidents', 'Group incidents', and 'All incidents' (highlighted with a red box). A search bar is also present. The main content area lists three incidents:

- #0001-5900**: INCIDENT: prawned1.fyre.ibm.com: 0 sites affected - siteless alarms present. Status: Unassigned. Top resources affected: 1. Event types: 1. Priority: 1. Open for: 2h 51m. Last changed: May 24, 2020 | 01:20:16 PM GMT+3. 1 Event. Highest. Investigate button.
- #0001-5301**: prawned1.fyre.ibm.com - NO SITE: CAUSE AND IMPACT: UNKNOWN (4 active alarms). Status: Unassigned. Top resources affected: 1. Event types: 5. Priority: 1. Open for: 2h 51m. Last changed: May 24, 2020 | 01:20:11 PM GMT+3. 6 Events. Highest. Investigate button.
- #0001-4301**: INCIDENT: droves1.fyre.ibm.com: 0 sites affected - siteless alarms present. Status: Unassigned. Top resources affected: 1. Event types: 1.

CEM – Configure Impact to run the trigger service



Import the database schema and Runbook Automation project

- Run the following command under the same user account that you used to install Netcool/Impact:

`$IMPACT_HOME/install/cfg_addons/rba/install_rba.sh <derby_password>`

```
[root@prawned1 tmpimpactfix]# cd /opt/IBM/tivoli/impact/install/cfg_addons/rba/
[root@prawned1 rba]# ls -altr
total 36
-rwxr--r-- 1 root root 26606 Jun 12 2019 install_rba.xml
-rwxr--r-- 1 root root 4050 Jun 12 2019 install_rba.sh
-rwxr--r-- 1 root root 2882 Jun 12 2019 import_cert.sh
drwxr--r-- 3 root root 17 Apr 10 01:12 ..
drwxr--r-- 2 root root 73 Apr 10 02:25 .
```

For derby connection, the default username is impact and the default password is derbypass.

`./install_rba.sh derbypass`

CEM – Configure Impact to run the trigger service



Update the ObjectServer

- IBM Runbook Automation requires additional fields in the alerts.status events table.

Copy the following file from the Impact server to the ObjectServer machine if they are installed separately:

```
$IMPACT_HOME/add-ons/rba/db/rba_objectserver_fields_update.sql
```

- Then run the following command:

```
$OMNIHOME/bin/nco_sql -username <username> -password <password> < rba_objectserver_fields_update.sql
```

Example:

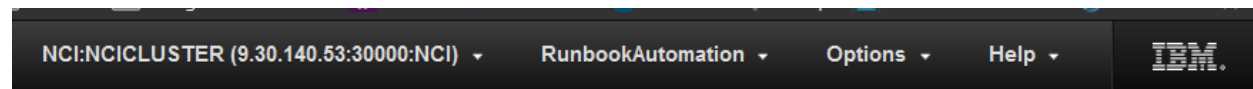
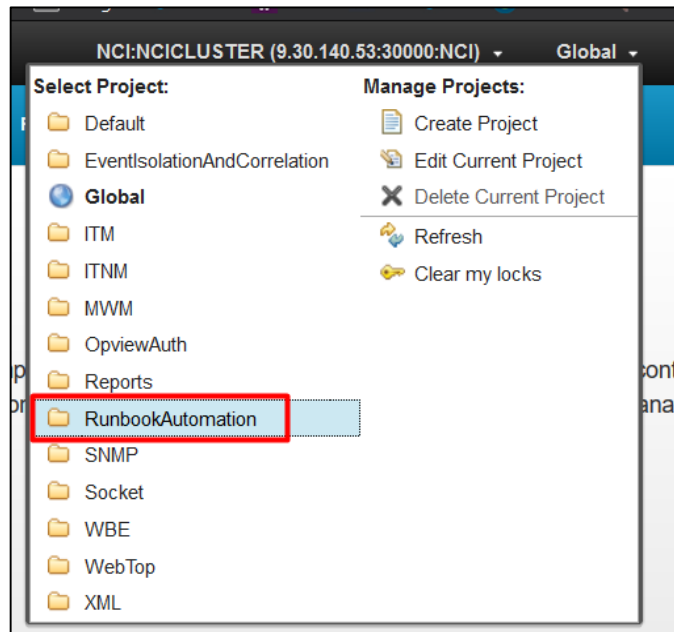
```
/opt/IBM/tivoli/netcool/omnibus/bin/nco_sql -server CEM -user root < /opt/IBM/tivoli/impact/add-ons/rba/db/rba_objectserver_fields_update.sql
```

CEM – Configure Impact to run the trigger service

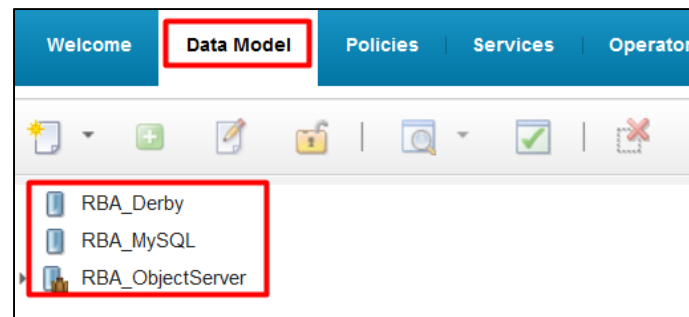


Configure and test RBA_ObjectServer data source connection

Step 1: Log in to Netcool/Impact and switch to the **RunbookAutomation** project from the drop-down menu in the top right corner.



Step 2: Click the **Data Model** tab

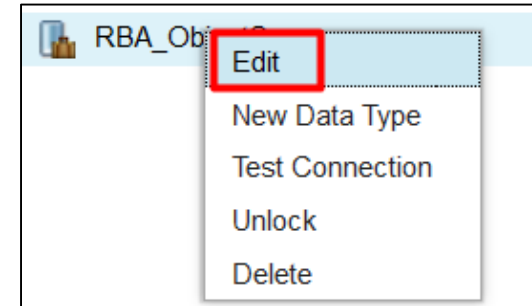


CEM – Configure Impact to run the trigger service



Configure and test RBA_ObjectServer data source connection

Step 3: Right-click **RBA_ObjectServer** datasource and click **Edit**.



Step 4: Enter the access information for your OMNIBus ObjectServer.

Test the connection and save the changes

General Settings:

Provide general information which describes the data source. An * indicates required fields.

* Data Source Name: RBA_ObjectServer

* Username: root

Password:

Maximum SQL Connection: 30

Database Failure Policy:

Select what action to take if Impact cannot connect to the database.

☐ Fail over

☐ Fail back

☒ Disable Backup

Primary Source:

Provide information on the primary database. * marks a required field.

* Host Name: prawned1.fyre.ibm.com

* Port: 4100

☐ SSL Mode

Testing

Connection OK

Close

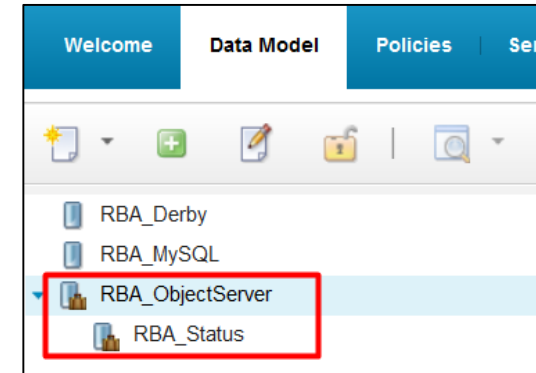
Test Connection

CEM – Configure Impact to run the trigger service

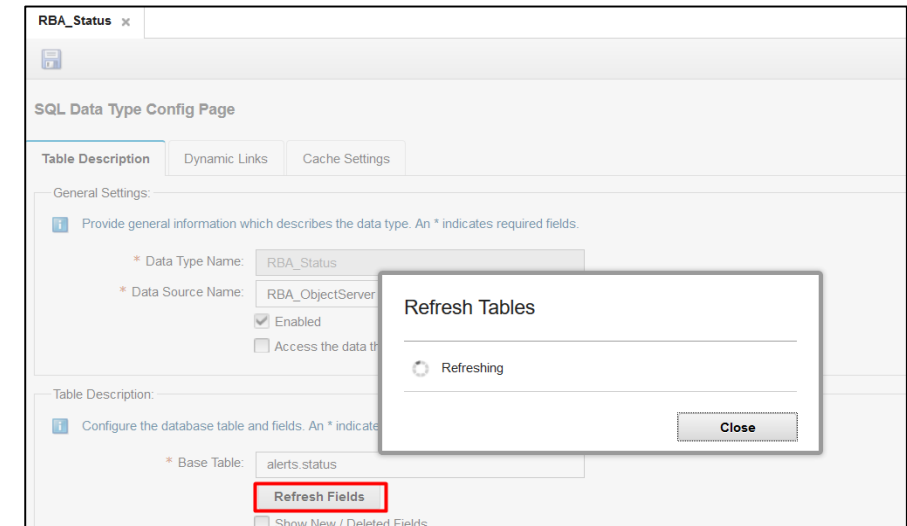


Configure and test RBA_ObjectServer data source connection

Step 5: Expand the **RBA_ObjectServer** data source in the tree view. Then right-click **RBA_Status** data type and click **Edit**.



Step 6: In the **Table Description** area, click **Refresh Fields** for the **alerts.status** base table.



CEM – Configure Impact to run the trigger service



Configure and test RBA_ObjectServer data source connection

Ensure that the table row for the **Serial** item has a value of **Yes** in the **Key Field** column. If the value displayed is **No**, double-click this table entry to enter edit mode, and select the check box that appears in edit mode.

Delete Selection New Edit Move Up Move Down						
<input type="checkbox"/>	ID	Field Name	Format	Display Name	Description	Key Field
<input type="checkbox"/>	Identifier	Identifier	LONG_STRING	Identifier	Identifier	No
<input type="checkbox"/>	Serial	Serial	INTEGER	Serial	Serial	Yes
<input type="checkbox"/>	Node	Node	LONG_STRING	Node	Node	No

Ensure that **Identifier** is selected in the drop-down box for the **Display Name Field**.

Display Name Field:

Identifier

☐ Automatically Remove Deleted Fields

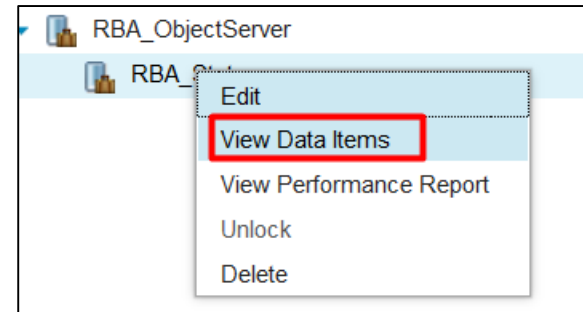
Save the changes and close the editor.

CEM – Configure Impact to run the trigger service



Configure and test RBA_ObjectServer data source connection

Step 7: Right-click **RBA_Status** data type and click **View Data Items**.



Step 8: Verify that some events from Netcool/OMNIBus are listed.

Close the **Data Items: RBA_Status** view.

Data Type Name: RBA_Status Number of Objects: 78

Filter Retrieved Data Items:

<input type="checkbox"/> Select	View Links	Edit	Identifier	Serial	Node
<input type="checkbox"/>			SiteNameParent:prawned1.fyre.ibm.com:prawned1.fyre.ibm.com - NO SITE:Fri Apr 10 02:10:51 2020	174	prawned1.fyre.ibm.com - NO SITE
<input type="checkbox"/>			SiteNameParent:link6:link6 - NO SITE:Fri Apr 10 02:47:59 2020	223	link6 - NO SITE
<input type="checkbox"/>			TokyoMachineStats4Stats	88	Tokyo
<input type="checkbox"/>			SiteNameParent:Beijing:Beijing - NO SITE:Thu Apr 09 22:50:08 2020	60	Beijing - NO SITE
<input type="checkbox"/>			OMNIBus ObjectServer: Trigger Status for CEM:	5	prawned1.fyre.ibm.com
<input type="checkbox"/>			NCTImpact:@prawned1.fyre.ibm.comconnectedFri Apr 10 03:05:56 2020	230	prawned1.fyre.ibm.com

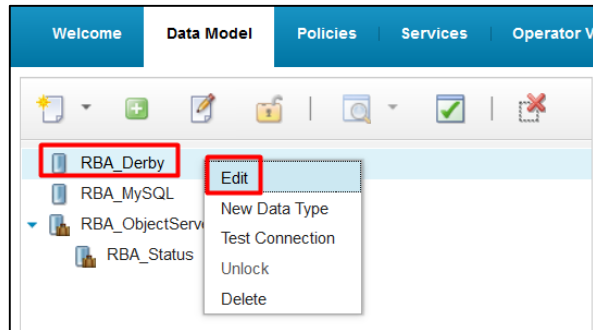
< 1 2 3 4 Next Last

CEM – Configure Impact to run the trigger service



Configure and test RBA_Derby data source connection

- Click the Data Model tab and right-click RBA_Derby datasource and click Edit.



Test the connection to ensure you can communicate successfully with your Derby database.

If you cannot communicate with the Derby database, ensure that the username, password, host, and port are correctly setup in the datasource.

Database Failure Policy:

Select what action to take if Impact cannot connect to the database.

☐ Fail over

☐ Fail back

☒ Disable Backup

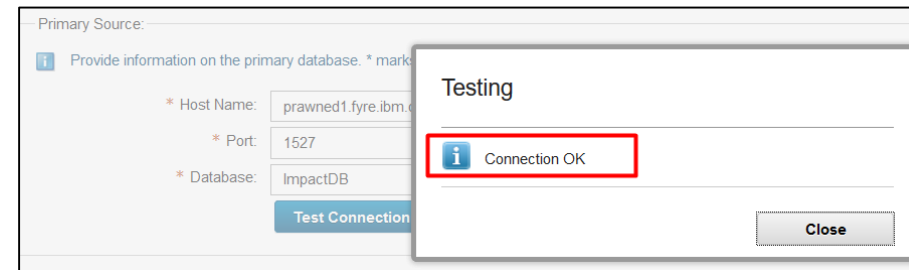
Primary Source:

Provide information on the primary database. * marks a required field.

* Host Name:

* Port:

* Database:



CEM – Configure Impact to run the trigger service



Import Runbook certificate into the Impact Server

- On Linux systems, enter the following command to receive the correct certificate:

```
echo -n | openssl s_client -servername <RBA_ACCESS_HOST> -connect <RBA_ACCESS_HOST>:<RBA_ACCESS_PORT> | sed -ne '/-BEGIN CERTIFICATE-/,/-END CERTIFICATE-/p' > file.cert
```

For CEM trial subscription run:

```
echo -n | openssl s_client -servername console.us-south.cloudeventmanagement.cloud.ibm.com -connect console.us-south.cloudeventmanagement.cloud.ibm.com:443 | sed -ne '/-BEGIN CERTIFICATE-/,/-END CERTIFICATE-/p' > file.cert
```

```
[root@prawned1 ~]# echo -n | openssl s_client -servername console.us-south.cloudeventmanagement.cloud.ibm.com -connect console.us-south.cloudeventmanagement.cloud.ibm.com:443 | sed -ne '/-BEGIN CERTIFICATE-/,/-END CERTIFICATE-/p' > file.cert
depth=2 C = US, O = DigiCert Inc, OU = www.digicert.com, CN = DigiCert Global Root CA
verify return:1
depth=1 C = US, O = DigiCert Inc, CN = DigiCert SHA2 Secure Server CA
verify return:1
depth=0 C = US, ST = New York, L = Armonk, O = International Business Machines Corporation, OU = IBM Cloud, CN = *.us-south.cloudeventmanagement.cloud.ibm.com
verify return:1
DONE
```

CEM – Configure Impact to run the trigger service



Import Runbook certificate into the Impact Server

- Use the following command to import the certificate:

`$IMPACT_HOME/install/cfg_addons/rba/import_cert.sh <KEY_STORE_PASSWORD> <CERTIFICATE_FILE_FULL_PATH>`

where `<KEY_STORE_PASSWORD>` is your Netcool/Impact admin password.

Example:

`/opt/IBM/tivoli/impact/install/cfg_addons/rba/import_cert.sh netcool /rbacert/file.cert`

```
[root@prawned1 rbacert]# /opt/IBM/tivoli/impact/install/cfg_addons/rba/import_cert.sh netcool /rbacert/file.cert
Buildfile: /opt/IBM/tivoli/impact/install/cfg_addons/rba/install_rba.xml

load-properties:
[echo] Server name=NCI
[echo] GUI Server name=ImpactUI
[echo] Derby primary host=prawned1.fyre.ibm.com
[echo] Derby primary port=1527
[echo] Derby db=ImpactDB
[echo] Derby user=impact

check-certificate:
```

CEM – Configure Impact to run the trigger service



Configure user access rights to RBA for impact user

- For existing user such as impactadmin:

```
cd $IMPACT_HOME/install/security
```

```
./mapRoles.sh -add -user <username> -roles impactRBAUser
```

```
[root@prawned1 rbacert]# /opt/IBM/tivoli/impact/install/security/mapRoles.sh -list -all
Roles:
  ConsoleUser
  ReadAdmin
  WriteAdmin
  impactAdminUser
  impactFullAccessUser
  impactMWMAdminUser
  impactMWMUser
  impactOSLCDDataProviderUser
  impactOpViewUser
  impactRBAUser
  impactRestConfigurationRole
  impactSelectedOpViewUser
  impactUIDataProviderUser
  impactWebServiceUser
```

Example:

```
/opt/IBM/tivoli/impact/install/security/mapRoles.sh -add -user impactadmin -roles impactRBAUser
```

CEM – Configure Impact to run the trigger service



Update the Netcool/Impact configuration within derby database

- Edit the default values of the Netcool/Impact derby database to configure launch-in-context support and integration with IBM Runbook Automation.
- Netcool/Impact configuration for fully automated runbooks is stored in the Netcool/Impact derby database in the rbaconfig.defaults table with the exception of the RBAAPIKeyPassword.

Values that need to be updated:

RBAHost=""

RBAManualExecHost=""

RBAAPIKeyName=""

RBAAPIKeyPassword="" – this will be done at the end, within a separate file not in the derby db.

RBASubscription=""

MaxNumTrialsToUpdateRBAStatus='600'

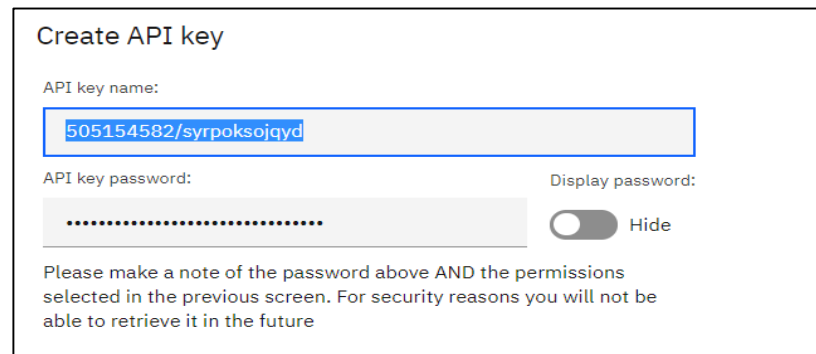
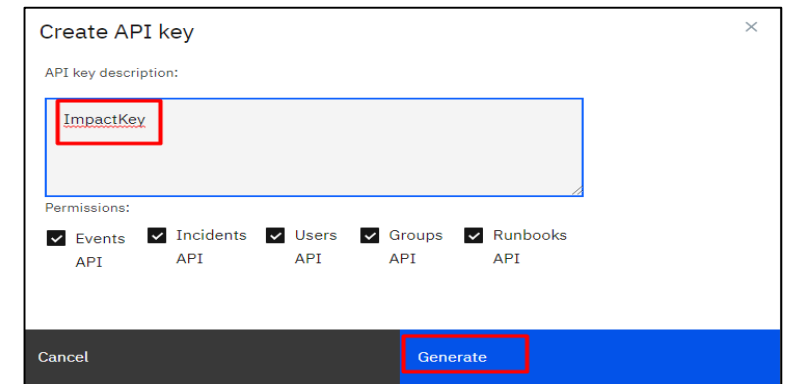
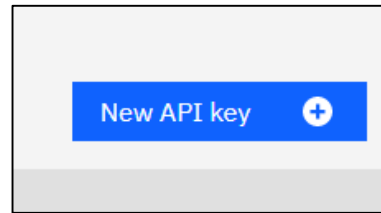
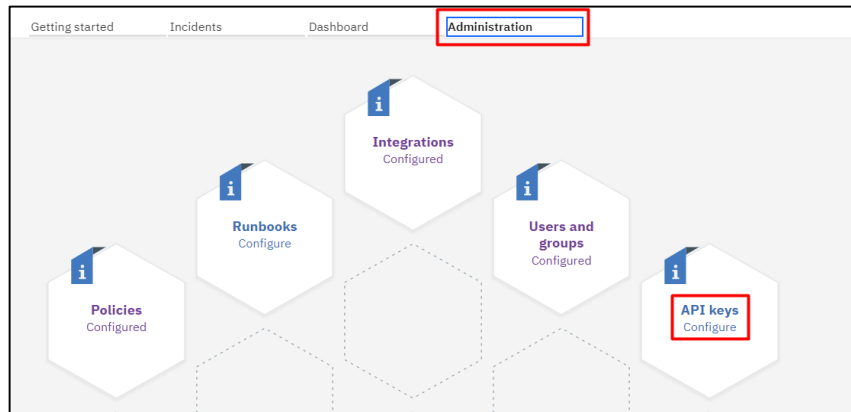
CEM – Configure Impact to run the trigger service



Update the Netcool/Impact configuration within derby database

For the **RBAAPIKeyName** and **RBAAPIKeyPassword** properties you need to generate from CEM an API key as follows:

Connect to CEM -> Administration -> API keys -> Click on create new API key -> Enter a description and click Generate:



CEM – Configure Impact to run the trigger service



Update the Netcool/Impact configuration within derby database

Copy over the key name and password as you'll be using them to update impact derby db. The RBAAPIKeyName property will be the API key that is generated:

RBAAPIKeyName='505154582/syrpoksojqyd'

The API key password needs first to be encrypted.

Example of CEM API key password: dgIjVgp9yLrA7IG1Q1ma7R9ILpnJkac9

Run nci_crypt in Impact against the generated password and use it for RBAAPIKeyPassword:

```
/opt/IBM/tivoli/impact/bin/nci_crypt dgIjVgp9yLrA7IG1Q1ma7R9ILpnJkac9  
{aes}AE48A0E29AAC2CC764EA4B3F8E0F2412B8A30A5AC0D166488C91495DA540A4CAAB71B733777E53C520819D0FE22CB460
```

```
[root@prawned1 rbacert]# /opt/IBM/tivoli/impact/bin/nci_crypt dgIjVgp9yLrA7IG1Q1ma7R9ILpnJkac9  
{aes}AE48A0E29AAC2CC764EA4B3F8E0F2412B8A30A5AC0D166488C91495DA540A4CAAB71B733777E53C520819D0FE22CB460
```

Create API key

API key name:

API key password:

Display password: ☐ Hide

Please make a note of the password above AND the permissions selected in the previous screen. For security reasons you will not be able to retrieve it in the future

CEM – Configure Impact to run the trigger service



Update the Netcool/Impact configuration within derby database

- Connect to Impact Derby database by running:

```
/opt/IBM/tivoli/impact/bin/nci_db connect
```

```
ij> connect 'jdbc:derby://prawned1.fyre.ibm.com:1527/ImpactDB;user=impact;password=derbypass;';
```

- Run each of the update command from above with the correct values:

```
update rbaconfig.defaults set FieldValue = '505154582/syrpoksojqyd' WHERE FieldName='RBAAPIKeyName';
```

```
update rbaconfig.defaults set FieldValue = 'console.us-south.cloudeventmanagement.cloud.ibm.com' WHERE FieldName='RBAHost';
```

```
update rbaconfig.defaults set FieldValue = 'console.us-south.cloudeventmanagement.cloud.ibm.com' WHERE  
FieldName='RBAManualExecHost';
```

```
update rbaconfig.defaults set FieldValue = '600' WHERE FieldName='MaxNumTrialsToUpdateRBAStatus';
```

```
update rbaconfig.defaults set FieldValue = '505154582' WHERE FieldName='RBASubscription';
```

CEM – Configure Impact to run the trigger service



Update the Netcool/Impact configuration within derby database

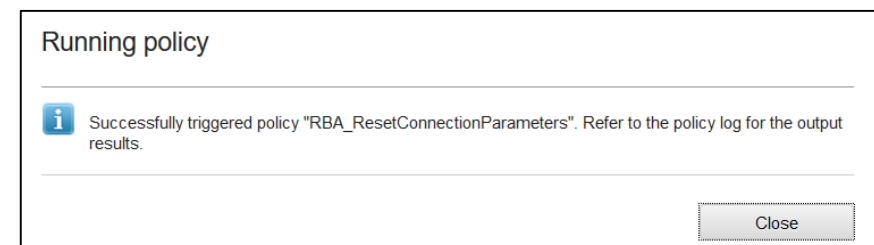
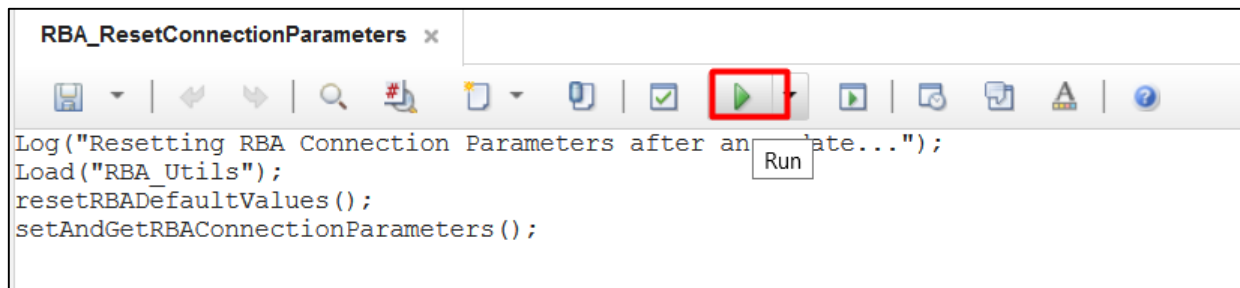
- Create the following file:

\$IMPACT_HOME/etc/RBAAPIKeyPassword.txt

and copy the encrypted value for the API Key password generated and encrypted into this file.

```
[root@prawned1 etc]#  
[root@prawned1 etc]# cat RBAAPIKeyPassword.txt  
{aes}AE48A0E29AAC2CC764EA4B3F8E0F2412B8A30A5AC0D166488C91495DA540A4CAAB71B733777E53C520819D0FE22CB460  
[root@prawned1 etc]#
```

- Connect to Impact console again and run the RBA_ResetConnectionParameters policy

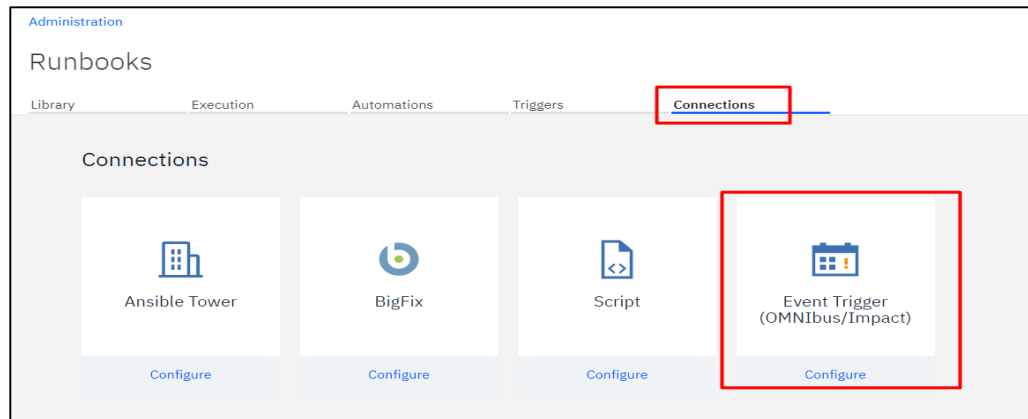


CEM – IBM Secure Gateway client



Download and Install IBM Secure Gateway

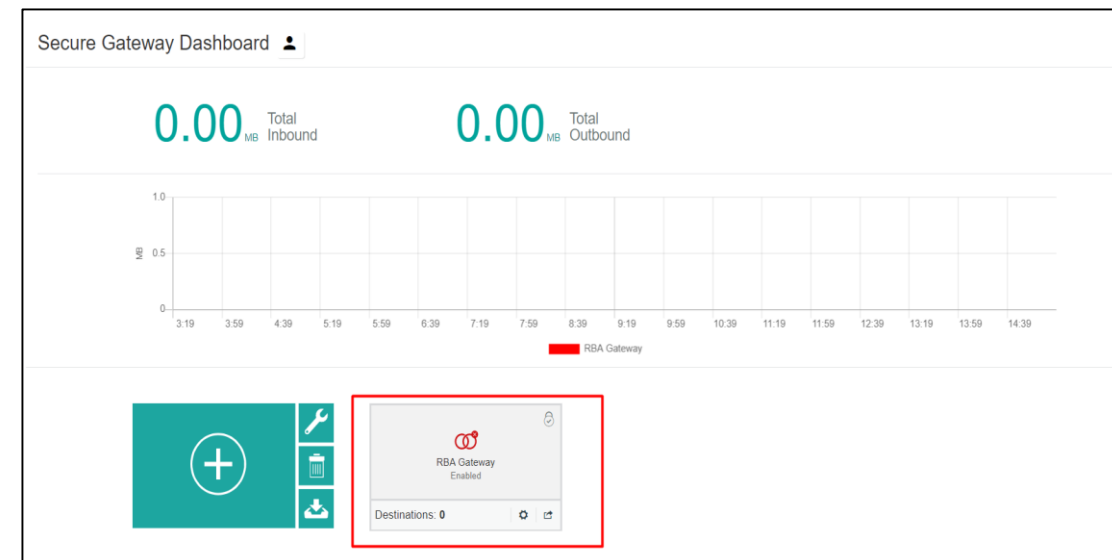
- In CEM -> go to Administration -> Runbooks -> Connections -> Event Trigger (Omnibus/Impact):



- At the bottom of the page you have the link to download the gateway:

1. If this is your first connection being setup, download and install a gateway client. [Download gateway client](#)

- Click on the RBA Gateway.



CEM – IBM Secure Gateway client



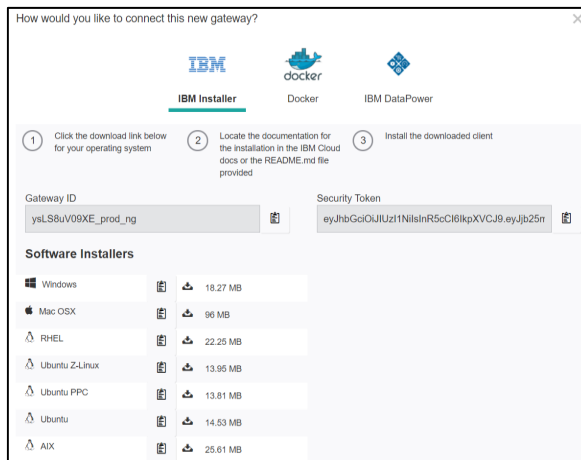
Download and Install IBM Secure Gateway



Switch to the Clients tab and click Connect Client.



Download the gateway for the OS you've used to setup omnibus/impact:



CEM – IBM Secure Gateway client



Download and Install IBM Secure Gateway

- Copy over the Gateway ID details and security token details:

Gateway ID	Security Token
<input type="text" value="ysLS8uV09XE_prod_ng"/>	<input type="text" value="eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJjb25r"/>

```
[root@prawnd1 rbacert]# cd /securegate/  
[root@prawnd1 securegate]# ls  
ibm-securegateway-client-1.8.5fp1+client_x86_64.rpm
```

- To install it run the following command on RHEL, for other OS check:
<https://cloud.ibm.com/docs/services/SecureGateway?topic=securegateway-client-install#installing-the-client>

```
rpm -ivhf ibm-securegateway-client-1.8.5fp1+client_x86_64.rpm
```

- You will be prompted to provide the gateway id and security token.

```
Updating / installing...  
 1:ibm-securegateway-client-1.8.5fp1##### [100%]  
[postinst] =====  
[postinst] Started on: Friday - April 10, 2020 - 05:07:01.455873207  
[postinst] Running for userid: root with uid: 0  
[postinst] The operation for this install is: 1  
[postinst] =====  
[postinst] INFO: Performing 1 operation  
[postinst] INFO: Checking if /var/empty is in filesystem  
[postinst] INFO: Checking if mail folder for /var/mail/securegateway is in filesystem  
[postinst] INFO: Creating mail folder for /var/mail/securegateway  
[postinst] INFO: Checking if /var/log/securegateway is in filesystem  
[postinst] WARNING: /var/log/securegateway is NOT in filesystem, creating it  
[postinst] INFO: Stop and restart the client during this installation: Yes  
Enter the gateway IDs, separated by spaces: ysLS8uV09XE_prod_ng
```

CEM – IBM Secure Gateway client



Open the whitelist of the secure gateway client and add the Netcool/Impact URL

- To start the gateway secure client run the following command:

```
cd /opt/ibm/securegateway/client  
node lib/secgwclient.js <gateway ID> -t <security token>
```

Example:

```
node lib/secgwclient.js ysLS8uV09XE_prod_ng -t  
eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJjb25maWd1cmF0aW9uX2lkIjoieXNMUzh1VjA5WEVfcHJvZm9uZyIsInJlZ2lvdil6InVzLXNvdXRoliwiaWF0IjoxNTg2NTEwOTc3LCJleHAiOjE1OTQyODY5Nzd9.__3gZL7hc80LvG2cCDPZAKuHHozPfRqfL_QC0ffxzkw
```

- Run the following command to allow Impact connections:

```
acl allow [<hostname>]: [<port>]
```

Example:

```
acl allow prawned1.fyre.ibm.com:16311
```

```
ysLS8uV09XE_4NG> show  
ysLS8uV09XE_4NG>  
  
-----  
-- Secure Gateway Client Access Control List --  
  
Connections to unlisted rules are currently: denied  
  
hostname:port                                path                                value  
prawned1.fyre.ibm.com:16311                  Allow  
prawned1.fyre.ibm.com:22                      Allow  
droves1.fyre.ibm.com:16311                   Allow  
-----
```

CEM – Configure a connection to Impact server



- In CEM -> go to Administration -> Runbooks -> Connections -> Event Trigger (Omnibus/Impact):
- For the IBM Netcool/Impact REST service URL, enter the host name and port, or the IP address and port, of your local Netcool/Impact GUI server installation, followed by **ibm/custom/RBAREstUIServlet**.

Example: **https://prawned1.fyre.ibm.com:16311/ibm/custom/RBAREstUIServlet**

For the user and password, add the username to whom you've granted RBA role and its password.

Edit connection

1. Install IBM Netcool/Impact fixpack 7.1.0.18 or higher.
2. Configure IBM Netcool/OMNIBus to launch a runbook from an event. Instructions are provided in the [IBM Runbook Automation Knowledge Center](#).
3. Enter IBM Netcool/Impact access information.

URL for IBM Netcool/Impact REST service

Username:

Password:





IBM Netcool/Impact server certificate (optional):

1. If this is your first connection being setup, download and install a gateway client. [Download gateway client](#)
2. [Open the whitelist of your gateway client and add the Netcool/Impact URI](#)

Runbooks

Library Execution Automations Triggers **Connections**

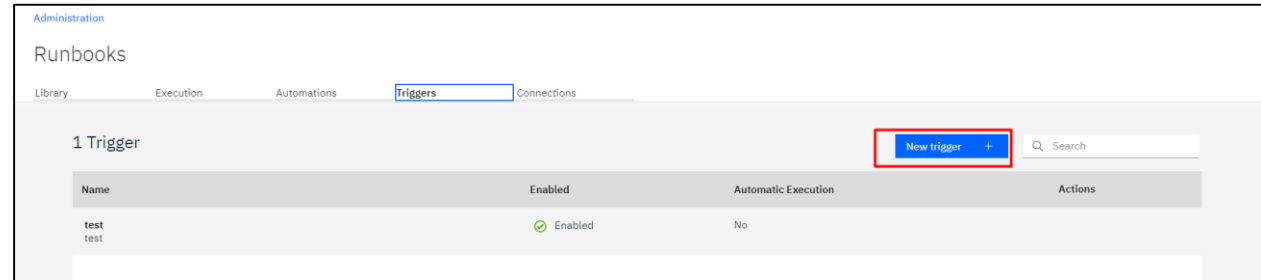
Connections

 Event Trigger (OMNIBus/Impact) <input checked="" type="checkbox"/> Connected	 Ansible Tower Configure	 BigFix Configure	 Script Configure
---	---	--	--

CEM – Map runbooks to Impact events



- CEM -> Administration -> Runbook -> Triggers tab -> Click on “new trigger”:



- Provide a name and click on “Add Filter”:

← Triggers

New trigger

Name:

TestDemo2020

Description:

TestDemo2020

Based on which event(s) would you like this trigger to run on?

Which runbook do you want to match to the event?

Add filter +

Select runbook

CEM – Map runbooks to Impact events



- Check for some values for one of your field of your events from omnibus.

Example:

“Node” field with “DEMO test 2020” as description:

Data Type Name: RBA_Status						Number of Objects: 77
Filter Retrieved Data Items: DEMO test 2020						Showing 3 of 25 items
<input type="checkbox"/> Select	View Links	Edit	Identifier	Serial	Node	NodeAlias
<input type="checkbox"/>			DemoTest1	2646	DEMO test 2020	
<input type="checkbox"/>			DemoTest2	2649	DEMO test 2020	
<input type="checkbox"/>			DemoTest3	2650	DEMO test 2020	

CEM – Map runbooks to Impact events



- Add your selection as a condition to your filter for creating the CEM trigger:

Based on which event(s) would you like this trigger to run on? Add filter +

Event Summary

Event Filter

Attribute Filter

I want to do a comparison on an attribute.

Description:

Attribute:

Operator:

Value:

Example: Node equals disk space error on system Add filter +

Cancel Save

Which runbook do you want to match to the event? Select runbook

CEM – Map runbooks to Impact events



✓ Based on which event(s) would you like this trigger to run on? Add filter +

TestDemo ✎ 🗑

How do you want to match filter criterias to events?

Match all (AND) ▼

View sample events

This trigger runs based on the following event: ×

Summary	Severity	Details
DemoTest1 2020	1	▼
DemoTest2 2020	2	▼
DemoTest3 2020	3	▼
INCIDENT: DEMO test 2020: 0 sites affected - sitel...	3	▼

CEM – Map runbooks to Impact events



- Select a runbook that you want to run when the event matches the condition:

✓ Based on which event(s) would you like this trigger to run on? Add filter +

Which runbook do you want to match to the event? Select runbook

Runbook type:

Manual

Search

Name	Success Rate
<input checked="" type="radio"/> Example: Connectivity check for a server	
<input type="radio"/> Example: Restart Linux process	

Your current selection is: Example: Connectivity check for a server

Cancel Save

CEM – Map runbooks to Impact events



- Configure the parameters for the runbook.
- Make sure you have the trigger enabled and save it.

Which runbook do you want to match to the event? [Select runbook](#)

Selected runbook: Example: Connectivity check for a server

Parameter	Source	Value	Pattern
HOSTNAME	From event	Node	<input type="text" value="Enter regular expression"/>

☒ Enable this trigger to run

3 Triggers

Name	Enabled	Automatic Execution
test test	⊗ Disabled	No
TestImpactTrigger TestImpactTrigger Diskspace alert	✔ Enabled	No
TestDemo2020 TestDemo2020	✔ Enabled	No

CEM – Map runbooks to Impact events



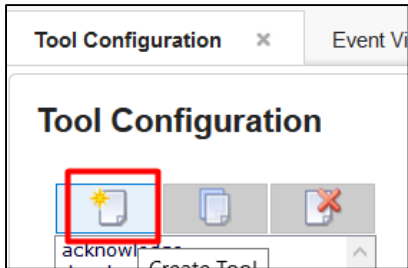
- The events were properly updated in Impact and they now have runbook details associated as seen under Impact -> RBA_Status data type list of events:

Data Type Name: RBA_Status				Number of Objects: 77
Filter Retrieved Data Items: HOSTNAME=DEMO test				Showing 2 of 25 items
Object ID	RunbookParameters	RunbookURL	RunbookStatus	RunbookParametersB64
6f-5394a4cc5da8	HOSTNAME=DEMO test 2020&__CONTEXT__=TestDemo2020	https://console.us-south.cloudeventmanagement.cloud.ibm.com:443/api/v1/rba/runbooks/83e590fc-4402-4a57-af6f-5394a4cc5da8	Runbook set for manual execution	RBAB64=SE9TVE5BTUU9REVNTyB0ZXN0IDlwMjAmX19DT05URVhUX189VGZdERibW8yMDlw
6f-5394a4cc5da8	HOSTNAME=DEMO test 2020&__CONTEXT__=TestDemo2020	https://console.us-south.cloudeventmanagement.cloud.ibm.com:443/api/v1/rba/runbooks/83e590fc-4402-4a57-af6f-5394a4cc5da8	Runbook set for manual execution	RBAB64=SE9TVE5BTUU9REVNTyB0ZXN0IDlwMjAmX19DT05URVhUX189VGZdERibW8yMDlw

CEM – Enable the launch-in-context menu in WebGUI



- Log on to Netcool/OMNIBus Web GUI as an administrator. Select Administration > Event Management Tools > Tool Configuration.
- Click the Create Tool icon to create a new tool.



- Set the Name field to LaunchRunbook and from the Type drop-down field, select Script.

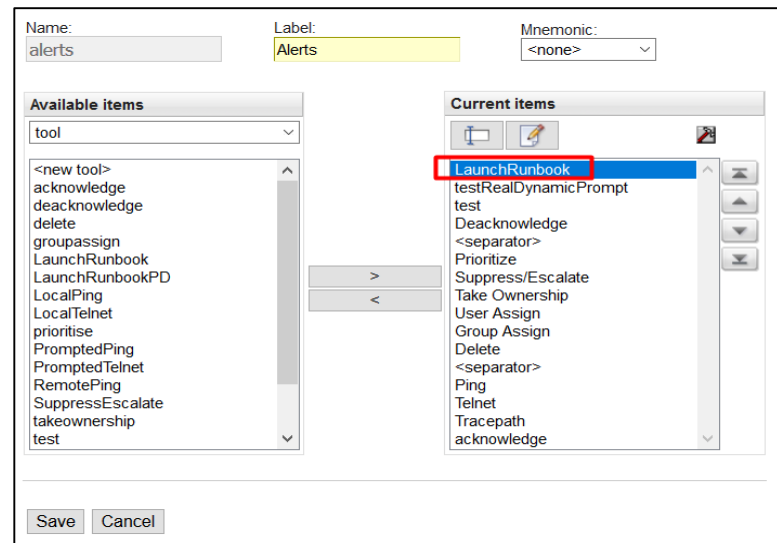
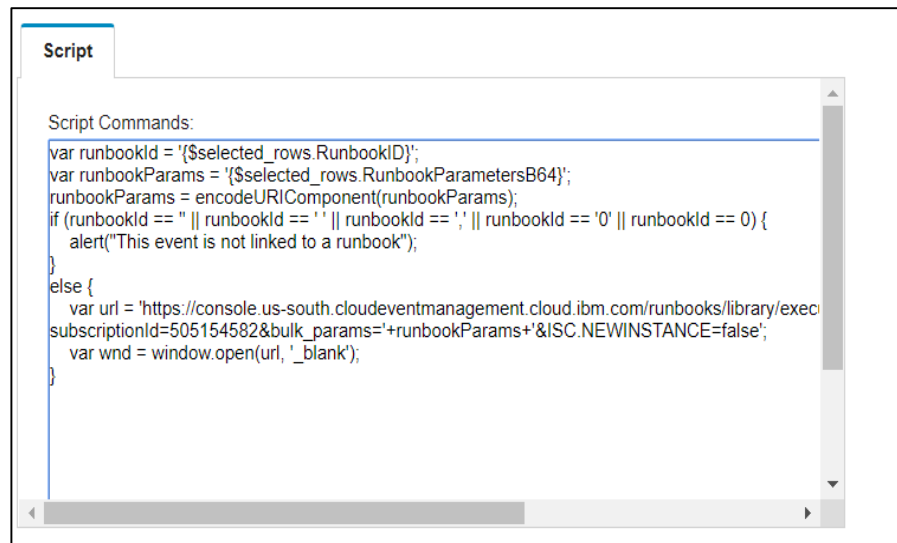
* Name: Type:

CEM – Enable the launch-in-context menu in WebGUI



- Replace the following script with the CEM_HOST_NAME and subscription id:

```
var runbookId = '{$selected_rows.RunbookID}';  
var runbookParams = '{$selected_rows.RunbookParametersB64}';  
runbookParams = encodeURIComponent(runbookParams);  
if (runbookId == '' || runbookId == ' ' || runbookId == ',' || runbookId == '0' || runbookId == 0) {  
  alert("This event is not linked to a runbook");  
} else {  
  var url =  
'https://CEM_HOST_NAME/runbooks/library/execute/'+runbookId+'?subscriptionId=<YOUR_SUBSCRIPTION_ID>&bulk_params='+runbookParams+'&ISC.NEWINSTANCE=false';  
  var wnd = window.open(url, '_blank');
```



CEM – Test the integration WebGUI-Impact-CEM



- From DASH/WebGUI go to Event Viewer and right click on one alarm that matches the specified condition and select the tool created earlier.

The screenshot shows the 'Event Viewer' window with a table of alarms. A right-click context menu is open over the 'DEMO test 2020' alarm. The menu options include 'LaunchRunbook', 'testRealDynamicPrompt', 'test', 'De-acknowledge Ctrl+D', 'Prioritize', 'Suppress/Escalate', 'Take ownership', 'User Assign', 'Group Assign', 'Delete', 'Ping', 'Telnet', 'Tracepath from this host', 'Acknowledge', 'Information...', 'Journal...', 'Copy', and 'Quick Filter'. The 'LaunchRunbook' option is highlighted with a red box. The table below shows the details of the alarms.

Sev	Ack	Node	Summary	First Occurrence	Last Occurrence	Count	Type	ExpireTime
Warning	No	Beijing	Diskspace alert	10/04/2020, 05:52	10/04/2020, 11:22	559	Type Not Set	Not Set
Warning	No	Beijing	INCIDENT: Beijing: 0 sites affected - siteless alarms present	10/04/2020, 05:50	10/04/2020, 11:22	1	Type Not Set	Not Set
Warning	No	Beijing	Diskspace alert	10/04/2020, 05:50	10/04/2020, 11:22	1,763	Type Not Set	Not Set
Warning	No	Beijing - NO SITE	Beijing - NO SITE: CAUSE AND IMPACT: UNKNOWN (2 active alarms)	10/04/2020, 05:50	10/04/2020, 11:22	1	Type Not Set	Not Set
Information	No	Berlin	Port failure : port reset	10/04/2020, 05:49	10/04/2020, 11:22	636	Type Not Set	Not Set
Information	No	Berlin	INCIDENT: Berlin: 0 sites affected - siteless alarms present	10/04/2020, 05:49	10/04/2020, 11:22	1	Type Not Set	Not Set
Information	No	Berlin - NO SITE	Berlin - NO SITE: CAUSE AND IMPACT: UNKNOWN (1 active alarm)	10/04/2020, 05:49	10/04/2020, 11:22	1	Type Not Set	Not Set
Warning	No	DEMO test 2020	DemoTest3 2020	01/01/1970, 00:00	24/05/2020, 12:06	1	Type Not Set	Not Set
Warning	No	DEMO test 2020	INCIDENT: DEMO test 2020: 0 sites affected - siteless alarms present	24/05/2020, 12:06	24/05/2020, 12:06	1	Type Not Set	Not Set
Information	No	DEMO test 2020	DemoTest2 2020	01/01/1970, 00:00	24/05/2020, 12:06	1	Type Not Set	Not Set
Information	No	DEMO test 2020	DemoTest1 2020	01/01/1970, 00:00	24/05/2020, 12:06	1	Type Not Set	Not Set
Warning	No	DEMO test 2020 - NO SITE	DEMO test 2020 - NO SITE: CAUSE AND IMPACT: UNKNOWN (3 active alarms)	24/05/2020, 12:06	24/05/2020, 12:06	1	Type Not Set	Not Set
Information	No	droves1.fyre.ibm.com	WebGUI Status	15/05/2020, 10:39	24/05/2020, 14:24	2,638	Information	330
Information	No	droves1.fyre.ibm.com	WebGUI Status	19/05/2020, 05:24	24/05/2020, 14:24	1,549	Information	330
Information	No	droves1.fyre.ibm.com	ScopeIDParent	15/05/2020, 10:39	24/05/2020, 14:24	1	Type Not Set	Not Set
Information	No	droves1.fyre.ibm.com	ScopeIDParent	15/05/2020, 10:39	24/05/2020, 14:24	1	Type Not Set	Not Set

CEM – Test the integration WebGUI-Impact-CEM



Execute runbook

← Runbooks

Example: Connectivity check for a server

1 parameter

HOSTNAME

DEMO test 2020

[Read more](#)

Apply and Run

2 commands

2 gotos

0 automations

Details

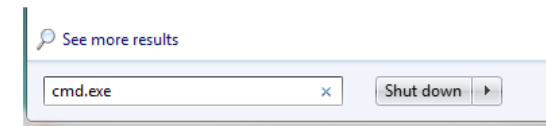
Procedure: (4 steps, approximate time: a few seconds)

STEP 1

Open a terminal window. Go to your Windows start menu, and enter

`cmd.exe`

into the search field - it should look like this:



STEP 2

Copy the following command into the terminal window:

`ping HOSTNAME`

Cancel

DEMO

Thank You!

Q&A

For trial subscription to CEM: <https://www.ibm.com/cloud/event-management>

CEM Gateway: <https://www.ibm.com/support/pages/node/563481>

CEM Documentation: https://www.ibm.com/support/knowledgecenter/SSURRN/com.ibm.cem.doc/em_overview.html

Runbook Automation: https://www.ibm.com/support/knowledgecenter/SSZQDR/com.ibm.rba.doc/CT_installTrigger.html

Secure gateway: <https://cloud.ibm.com/docs/services/SecureGateway?topic=securegateway-acl>

CEM – Email integration: <https://www.ibm.com/support/pages/ibm-cloud-event-management-email-integration-step-step-example>

CEM – Omnibus/Impact integration: <https://www.ibm.com/support/pages/node/6205890>