Universal CMDB

Software Version: 10.11 CUP8

Release Notes

Hewlett Packard Enterprise

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Contents

HPE Universal CMDB & Configuration Manager Release Notes

Keep your system up to date with the most recent cumulative update package (CUP) for UCMDB 10.11. This package contains all of the UCMDB 10.11 hotfixes that have been released since the initial release of UCMDB 10.11.

What's New

What's New in UCMDB 10.11 CUP8

UCMDB 10.11 CUP8 contains the following new features and changes:

- **Added possibility for increasing the number of threads for push jobs**

  The new setting **com.hp.ucmdb.synchronizer.manager.SynchronizerManagerFactory** added to the **Settings_STATE_CUSTOMER_SETTING** type offers the possibility for you to increase the number of threads for push jobs from the OOTB value 3 to any desired value. For detailed instructions, see "How to Increase the Number of Threads for Data Push Jobs".

What's New in UCMDB 10.11 CUP7

UCMDB 10.11 CUP7 contains the following new features and changes:

- The Data Flow Management Java API has a new **importIPRanges()** method in the **DDMConfigurationService** class. This method allows you to perform the following tasks by using a customized script to manage the IP ranges of specified Probes:

  ○ Overwrite the IP ranges of specified Probes. The **IPv4/6**, **Range**, and **Type** settings of an IP range are manageable through this method.

  ○ Assign certain probes in the same domain into a probe list, and then distribute the IP addresses in the specified ranges evenly to each probe in the group.

  > **Note: Group** is a temporary parameter used in this API method to group a set of probes assigned to the same domain, and to balance the IPs evenly among these probes.

You can perform this task on any computer that can access the UCMDB server. One or both of the following files are mandatory to set up the work environment on different computers:

○ **ucmdb-api.jar**: On the UCMDB server or on a probe, you only need this file. This file is available for download from the UCMDB server through the following URL: http://*<IP_or_ FQDN>*:8080/ucmdb-api/download

○ **api-client.jar**: On a computer other than the UCMDB server or a probe, you need this file in addition to the ucmdb-api.jar file. This file is available in the following directory on the UCMDB server: <UCMDB_server>\lib\

For more information about how to use the UCMDB API, refer to the following documentation:

○ The **HP Universal CMDB API** chapter in the *HPE Universal CMDB Developer Reference Guide*

○ *API Reference*

For a sample script to perform the IP range management task, see "Sample Script for IP Range Management API " on page 80.

> **Note:**
>
> ○ This method does not support Data Flow Probe clusters.
>
> ○ You can specify the excluded IP ranges in the script. The API will calculate the whole IP ranges and the excluded IP ranges, and only assign the resulting IP ranges to a probe.
>
> ○ For both IPv4 and IPv6, you must specify an IP range with a starting IP address and an ending IP address in the format of x.x.x.x-x.x.x.x. If you want to specify a single IP address, the starting IP address and the ending IP address are the same.
>
> ○ An IP range should not overlap with another IP range in the script or with an IP range in another existing probe. Otherwise, the IP range will not be imported.
>
> ○ When you add probe list in the Java API **importIPRanges()** method, make sure you only add the discovery probe list. Do not add integration probes (for example, Linux probes or integration services).
>
> Linux Probes and integration services do not need IP ranges. If you add Linux probes or integration services, although the IPs in Linux probe or integration services do not display in the UI, they will be assigned to Linux Probes or integration services.

● For upgraded separate mode probes that can be accessed using port 1741 or 1742, basic authentication is enabled automatically. To disable basic authentication for them or change the default basic authentication user name and password, see "Configure Basic Authentication for

Upgraded Data Flow Probes (Separate Mode) Using Port 1741 or 1742" on page 82.

- Added discovery support for Microsoft Windows 10.

What's New in UCMDB 10.11 CUP6

UCMDB 10.11 CUP6 contains the following new features and changes:

- Added user password expiration policy settings in the Infrastructure Settings Manager

  To access the settings, go to **Administration > Infrastructure Settings Manager > Security Settings**.

Name	Description	Default Value
User password expires after the specified number of days	User password expires after the specified number of days	90
User password expires after the specified number of generations	User password expires after the specified number of generations	4

  Note: In order for the above password expiration checks (the expiration time and repetition of passwords generation) to be validated, you must manually set the value for the **Passwords must use default policy** setting to **true** to enable the above user password expiration policy settings. The default value for the **Passwords must use default policy** setting is false.

- You can verify names of CI Types during the matching phase of the identification process for the **TenantOwner** attribute by using the new JMX setting **reconciliation.tenantaware.citypes**. If, compared to the other CI, the value of the **TenantOwner** attribute is different, the verification process stops and the match is rejected.

  For details, see "How to Enable CI Type Tenant Owner Verification during the Matching Phase of Identification" on page 95.

- You can use the JMX console to change the master key that is used to encrypt all UCMDB keys. For detailed instructions, see "How to Set Master Keys" on page 92.

- As an integration user, with tenant information set on the TQL query layout, your autocomplete reconciliation data will also have set the assigned tenant information during push flows.

What's New in UCMDB 10.11 CUP5

UCMDB 10.11 CUP5 contains the following new features and changes:

- **Enhancements implemented to server health check**

  - Added a new JMX method **exportDiscoveryProcessingStatisticsToExcel** in **UCMDB:service=Reconciliation Services**. After invoking this method, an Excel file named **DiscoveryProcessingStatistics.xlsx** in the ZIP file is generated to record discovery throughput statistics data.

  - Added a new JMX method **testConnectionToDB** in **UCMDB:service=DAL services**. Stored procedures for Oracle and MSSQL will be used when invoking the **testConnectionToDB** method.

  - Added a JMX supportability handler **Memory and Thread Count Info** to record the UCMDB memory usage and thread count in the **MemoryAndThreadInfo.html** file. The information is displayed in color: green, orange, and red. If the color is not green, it requires attention.

    Note: LDAP authentication can generate many idle threads. Until these threads are closed, it can temporarily lead to a high thread number, which is causing performance potential issues.

- Added a new JMX method **reindexCiType** in **UCMDB:service=Topology Search Services**. This method selects a subset of data in a short time.

- Added a new JMX method **deactivateAllViewsTqls** in **UCMDB:service=New Views Services** to deactivate all the TQL queries s that are related to views.

- Added a new setting **cmdb.search.use.query.syntax.tree** to the **setSettingValue** method to control if syntax tree is logged or not.

  To enable the setting,

  a. Go to **JMX Console > UCMDB:service=Settings Services**.

  b. Locate the **setSettingValue** method.

  c. To enable logging of syntax tree, invoke the **setSettingValue** method with the following parameters:

     - **customerID:** <customer id>

     - **name:** cmdb.search.use.query.syntax.tree

     - **value:** true

What's New in UCMDB 10.11 CUP4

UCMDB 10.11 CUP4 contains the following new features and changes:

- **A lockout mechanism is now available**

  The lockout mechanism allows UCMDB administrators to:

  - enable or disable the lockout mechanism

  - specify how many failed login attempts are allowed before a user is locked out

  - specify the period of time after which the locked accounts will be automatically released

  - retrieve a list of locked out users and unlock certain users

  In addition, all failed login attempts will be logged, and consecutive attempts are reported to the proper security administration personnel in your organization.

  The table below describes the new infrastructure settings available with the lockout mechanism (**Administration > Infrastructure Settings Manager > Security Settings**):

Name	Description	Default Value
User lockout mechanism enabled	Enable the user lockout mechanism after a number of failed login attempts.	True
User lockout timeout value (minutes)	The time value in minutes until the next login attempt can be successfully permitted in case the current user is locked out.	10
The maximum number of failed login attempts prior to a user lockout	The maximum number of failed login attempts before a user enters the timed lock out state.	3

  Also in JMX, under **Security Services**, two new methods are added for unlocking users:

  - **retrieveCurrentlyLockedOutUsers.** Retrieves a list of the currently locked out users and allows individual unlocking.

  - **unlockUser.** Allows unlocking a certain user that is currently locked out by the login mechanism.

- Added a new API method **void setDiscoveryConfigurationXML(String xmlString, boolean includeGroup)**.

Compared to the existing API method **void setDiscoveryConfigurationXML(String xmlString)**, this new method contains the **includeGroup** parameter. The **includeGroup** parameter allows you to set whether you want to update the entire device group.

For example, if you want to update IP ranges and credentials only and leave the statuses of all jobs as is, you can invoke this new method by setting the **includeGroup** parameter to **false**.

- Added multi-tenant status information into the system information to show whether the UCMDB Server is set up as a single-tenant or multi-tenant environment.

   The multi-tenant status information can be seen in two places:

   a. **Mbean: UCMDB:service=Server Services. Method: viewSystemInformation**

      When executing the JMX method **viewSystemInformation**, the result now displays an additional line:

      ```
      MT: [enabled | disabled]
      ```

   b. **Mbean: UCMDB:service=Supportability Services. Method: runSupportHandlersForAllCategories**

      When exporting the UCMDB System Info information by executing the JMX supportability tool (JMX method **runSupportHandlersForAllCategories**), in one of the archive files created (**systemInfo.properties**), a new line is added to display the status of the multi-tenancy:

      ```
      MT: [enabled | disabled]
      ```

What's New in UCMDB 10.11 CUP3

UCMDB 10.11 CUP3 contains the following change:

- A new attribute **isTopologyRequired** is added in the **<connected-ci-condition>** XML tag of the reconciliation rule of a CI type. Setting the **isTopologyRequired** attribute value to **true** overrides the UNKNOWN result with FALSE for a validation criterion when there are no connected CIs. (QCCR1H96982)

   The following example shows the usage of the attribute, which is taken from the identification rule for the **sap_system** CI type:

   ```
   <validation-criterion priority="2">
       <connected-ci-condition ciType="sap_app_server" linkType="membership"
   isTopologyRequired="true"conditionType="approveAndContradict">
           <overlap-fixed-operator number-of-matches="1"/>
       </connected-ci-condition>
   ```

```
</validation-criterion>
```

Installation Notes

Universal CMDB and Configuration Manager 10.11 CUP8 Files/Components

HPE UCMDB 10.11 CUP8 is packaged in one ZIP file.

The **UCMDB_00183.zip** (for Windows) includes the following files/components:

- **HPUCMDB_Server_10.11.CUP8.exe**. The installation of the version 10.11 CUP8 HPE UCMDB Server and Data Flow Probe for Windows.
- **HPCM_10.11.CUP8.exe**. The installation of version 10.11 CUP8 HPE UCMDB Configuration Manager for Windows.
- **Read_Me.txt**

The **UCMDB_00184.zip** (for Linux) includes the following files/components:

- **HPUCMDB_Server_10.11.CUP8.bin**. The installation of the version 10.11 CUP8 HPE UCMDB Server and Data Flow Probe for the Linux platform.
- **HPCM_10.11.CUP8.bin.** The installation of version 10.11 CUP8 HPE UCMDB Configuration Manager for the Linux platform.
- **Read_Me.txt**

System Requirements

For a list of system requirements, see the **HPE UCMDB Support Matrix** PDF file. Check the most previous Release Notes for any additions or changes to the matrix.

> **Note:** If you are using an Oracle version that is prior to 10.2.0.5, you must apply the Oracle patch that fixes Oracle defect # 5866410. For details, go to the Oracle website and find the information regarding this defect number.

> **Note:** In usual status, the XML Enricher would use 4~5 GB memory for processing scan files on the probe. If scan files are large, add another 1~2 GB memory for the XML Enricher.

> **Note:** HPE provides the following recommendations for increasing the security of your overall infrastructure for informational purposes only. These are only recommendations and are not intended to be a guarantee of protection against all potential vulnerabilities and attacks. Please note that some security measures may impact the features and functionality of your overall system; so, it is recommended that every customer become aware of those impacts when implementing any changes to your environment.
>
> Use of this HPE Software Product [UCMDB CUP] may require the pre-installation of certain third-party components that are not provided by HPE ("Third Party Components"). HPE recommends that its customers check frequently for the most current updates to the Third Party Components, which may include fixes or patches for security vulnerabilities.

Install 10.11 CUP8 on the Universal CMDB and Configuration Manager Servers

CUP Installation for both HPE Universal CMDB and Configuration Manager is performed through an automated procedure using the installation wizard.

You can still install the Data Flow Probes separately by upgrading the Data Flow Probes using the UCMDB user interface. For details, see "HPE Universal CMDB 10.11 CUP8 Manual Data Flow Probe Installation" on page 14.

> **Note:**
>
> - HPE UCMDB 10.11 CUP8 can be installed only on top of an HPE Universal CMDB version 10.11.
>
> - HPE UCMDB CM 10.11 CUP8 can be installed only on top of HPE UCMDB CM 10.11.
>
> - The UCMDB CUP version and the CM CUP version must be the same.

Pre-requisites - UCMDB Server and Data Flow Probes

1. Extract **UCMDB_00183.zip** (for Windows) or **UCMDB_00184.zip** (for Linux) to a temporary

directory.

2. Stop the Universal CMDB 10.11 server and the HPE Universal CMDB Integration Service (if running) before starting the 10.11 CUP8 installation.

> **Note:** If you have a High Availability configuration, the CUP must be installed on all the servers in the cluster, and prior to installation, you must stop all the servers in the cluster.

3. If you have received private patches for the Data Flow Probe, you must delete them before performing the upgrade. These steps for deleting a private patch must be followed whether you are upgrading the probes during the installation wizard, or if you upgrading the probes using the UCMDB user interface after installation is complete.

    a. Stop the Data Flow Probe.

    b. Delete all private patches that were installed on the system prior to this CUP by deleting the following directory:

       \hp\UCMDB\DataFlowProbe\classes directory

    c. Start up the version 10.11 Data Flow Probe.

CUP Installation

You must first install the UCMDB CUP, start up the server, and then perform the Configuration Manager (CM) CUP installation.

1. For UCMDB: Double-click the file **HPUCMDB_Server_10.11.CUP8.exe** (for Windows) or **sh HPUCMDB_Server_10.11.CUP8.bin** (for Linux) to open the HPE Universal CMDB Server CUP Installation Wizard.

   For Configuration Manager: Double click the file **HPCM_10.11.CUP8.exe** (for Windows) or **sh HPCM_10.11.CUP8.bin** (for Linux) to open the HPE Universal CMDB Configuration Manager CUP Installation Wizard.

2. While running the wizard:

    ○ In the Choose Install Folder screen, select the installation directory in which UCMDB/CM is already installed.

    ○ For UCMDB, in the Install Data Flow Probe CUP screen, select the following option:

       • **Automatically update Data Flow Probe with the new CUP version** to automatically update during this installation all the Data Flow Probes reporting to this UCMDB.

- **Update the Data Flow Probe manually** to update the Data Flow Probes reporting to this UCMDB using the UCMDB user interface after completing the installation of this CUP on the UCMDB server. For details, see "HPE Universal CMDB 10.11 CUP8 Manual Data Flow Probe Installation" below.

- In the Required Actions screen, follow the instruction to ensure that the server is down.

3. Once the installation wizard for UCMDB is completed, start up the version 10.11 server per the instructions in the Deployment Guide for version 10.11. Go back to step 1 to install the CM CUP.

   Once the CM CUP installation is completed, start up Configuration Manager version 10.11 per the instructions in the Deployment Guide for version 10.11.

Caution: Apart from the OOTB files, DO NOT ADD any additional resources into the **<UCMDB_ Server_Home>\deploy** directory. Because UCMDB will try to deploy every file from this location, which may cause the **ucmdb-browser.war** file not deployed completely, and as a result the UCMDB Browser will fail to start.

HPE Universal CMDB 10.11 CUP8 Manual Data Flow Probe Installation

Linux: Always required.

Windows: Applicable only when **Update the Data Flow Probes manually** is selected in the CUP installation wizard.

To install the Data Flow Probe CUP upgrade using the UCMDB user interface, follow these steps.

Note: All Data Flow Probes that are associated with the UCMDB are upgraded.

1. If you have received private patches for the Data Flow Probe, perform the steps in the section "Pre-requisites - UCMDB Server and Data Flow Probes" on page 12.

2. In UCMDB, go to **Data Flow Management > Data Flow Probe Setup**, and click **Deploy Probe Upgrade**.

3. In the Deploy Probe Upgrade dialog box, navigate to the **<SERVER_HOME>\content\probe_ patch\probe-patch-10.11.CUP8-windows/linux.zip** and click **OK**.

4. **Linux only:**

a. Stop the Data Flow Probe.

b. Extract the upgrade package by running the following file:

/opt/hp/UCMDB/DataFlowProbe/tools/upgrade/extractUpgradePackage.sh

c. Restart the Data Flow Probe.

Universal CMDB and CM 10.11 CUP8 Uninstall Procedure

When performing the uninstall procedure, this procedure must be performed for both the UCMDB Server and the Data Flow probes, as well as Configuration Manager.

1. Stop the Universal CMDB and Configuration Manager servers, and all running Data Flow Probes before uninstalling the version CUP.

2. For UCMDB:

   ○ Windows: Go to **<CMDB installation folder>\UninstallerCup** and double-click **Uninstall HP Universal CMDB Server CUP**. After the CUP is successfully uninstalled, go to **<CMDB installation folder>**\runtime and delete the **jsp** and **jetty-cache** folders.

   ○ Linux: Go to **<CMDB installation folder>/UninstallerCup** and run **Uninstall HP Universal CMDB Server CUP**. After the CUP is successfully uninstalled, go to **<CMDB installation folder>**/runtime and delete the **jsp** and **jetty-cache** folders.

> **Note:** The uninstaller verifies the status of the UCMDB settings and if any settings are marked sensitive and encrypted (as part of the sensitive settings work), it pops out a warning message asking you to follow the instructions in the UCMDB document to roll back all sensitive settings.
>
> If you see such a warning message, manually decrypt those encrypted settings by invoking the **markSettingAsNonsensitive** JMX method before proceeding with the uninstall procedure.
>
> Only proceed with the uninstall procedure when the result returned by the **listSensitiveSettings** JMX method is empty.
>
> For detailed instructions, see "How to Mark Sensitive Settings and Enable Storing Encrypted Data in the Database Using JMX" on page 86.

> Before proceeding with the uninstaller, make sure the master key is restored to default in case you have changed the master key for the cluster. For instructions, see "How to Set Master Keys" on page 92.

3. For Configuration Manager:

    ○ Windows: Go to **Start** menu > **Programs** > **HP Universal CMDB Configuration Manager 10.11** and double click **Uninstall HP Universal CMDB Configuration Manager 10.11 CUP8**.

    ○ Linux: Go to **<CM installation folder>/_sp_installation/** and run **HPCM_10.11_CUP8-Uninstall**.

    > **Note:** When downgrading CM to a previous CUP, at the end of the uninstall process some "Unable to remove file" errors may show up. These errors have no functional impact, you can safely ignore them.

4. Uninstall all existing Probes as follows:

    a. **Windows:Start > All Programs > HP UCMDB > Uninstall Data Flow Probe**.

       Linux:<Probe_Home> > UninstallerData > Run the **Uninstall_Discovery_Probe** script.

    b. Start the server.

    c. Undeploy the **probeUpdate** package.

5. Reinstall the Probes with the same configuration, that is, use the same Probe IDs, domain names, and server names as for the previous Probe installations. Remember that the Probe ID is case sensitive.

    > **Note:** After performing an upgrade and installing the new Data Flow Probe, all the Discovery jobs that were active before the upgrade are automatically run.

Notes

- When upgrading the Data Flow Probe:

    ○ In a multi-customer environment, if the Data Flow Probe is not automatically upgraded to the latest CUP version, use the manual upgrade procedure to upgrade the Probe manually. For details on the manual upgrade procedure, see "How to Deploy a Data Flow Probe CUP

Manually" in the *HPE Universal CMDB Data Flow Management Guide*.

- The automatic upgrade is not available for Data Flow Probes running on Linux. Use the manual upgrade procedure to upgrade the Probe manually.

- The Data Flow Probe upgrade is only available for upgrades between CUP versions. When performing an upgrade to a major or minor release, you must reinstall the Probe.

- When operating the Data Flow Probe Manager and the Data Flow Probe Gateway on separate machines (that is, separate mode), use the manual upgrade procedure to upgrade the Probe manually. For details on the manual upgrade procedure, see "How to Deploy a Data Flow Probe CUP Manually" in the *HPE Universal CMDB Data Flow Management Guide*.

- If you encounter an error when installing the CUP under Linux on the **/tmp** directory because the **/tmp** directory is configured not to run executables, set the IATEMPDIR environment variable to a location with sufficient permissions and disk space. The IATEMPDIR variable is recognized by InstallAnywhere.

Known Problems, Limitations, and Workarounds

The following problems and limitations are known to exist in CMS 10.11 CUP1 (or later software, as indicated). The problems are categorized by the affected product area. If a problem has an assigned internal tracking number, that tracking number is provided (in parentheses) at the end of the problem descriptions.

- Universal CMDB - General

- Universal CMDB - Platform

- Universal CMDB - Topology

- Universal CMDB - UI

- Configuration Manager

- Integrations

- Universal Discovery

Universal CMDB - General

LIMITATION: If a tenant-aware UCMDB Server is added to another UCMDB Server in HA, then the packages are redeployed and the usage of tenant-aware functionality is not available anymore.

Workaround: To re-enable tenant-aware functionality on the UCMDB servers, you need to repeat the steps for enabling tenant-aware functionality on the first UCMDB server. After that, you will have two UCMDB Servers (writer and reader), both with tenant aware functionality.

PROBLEM: When you downgrade UCMDB from 10.11 CUP8 to 10.11 CUP7 by running the ***<UCMDB_Install_Dir>*/UninstallerCup/Uninstall HP Universal CMDB Server.sh** file, multiple "Unable to remove file" error messages appear during the uninstallation. However, these errors do not affect the functionality of the UCMDB server.

Workaround: None.

PROBLEM: After a change (for example, removing elements) in a perspective that is reused by multiple views, IT Universal Manager displays an "Undefined error code" error message.

Workaround: To clear the error message and display the correct topology in IT Universal Manager, follow these steps:

1. Go to the JMX Console, search for and then invoke the **listAllGates** method.

2. Find out the gate name that contains the changed perspective name.

3. Search for **breakGate**, and then invoke the **breakGate** method with the gate name you found in step 2. The gate should be locked if the "Undefined error code" error occurs.

4. Search for and then invoke the **clearPatternChangesQueue** method.

5. Go to IT Universal Manager and check the result.

PROBLEM: UCMDB server experiences performance degradation after deploying 10.11 CUP3 or CUP4, because all discovery jobs send a full result set to the UCMDB server. (QCCR1H99640)

Workaround: The UCMDB Probe normally caches data. Some CUPs require a database schema change and the cache needs to be cleaned to ensure there are no unexpected issues. The probe will re-build the cache during the next discovery cycle. However since the probe no longer has the prior history, all newly discovered results are sent to the UCMDB Server for reconciliation. This causes the additional load on the server.

If you are concerned about the impact of extra load on the server, you can take one or more of the following actions:

- Inform users to expect a system slowdown

- Schedule the CUP installation on weekend

- Schedule the discovery jobs to run on weekend after the CUP installation

- Spread out the normal discovery over a longer period of time by adjusting the discovery job schedule

---

PROBLEM: When a CUP is applied, if users modified the **C:\hp\UCMDB\UCMDBServer\bin\wrapper.conf** file previously, the changes will be reverted. (QCCR1H99649)

Workaround: During the CUP installation, a backup copy of the **wrapper.conf** file is stored in the **\UCMDB\UCMDBServer\UninstallerCUP\backup_HP Universal CMDB Server CUP\bin** directory. To restore all custom changes made to the **wrapper.conf** file after the CUP installation, before starting the UCMDB server, place the backup copy back to the **C:\hp\UCMDB\UCMDBServer\bin** folder.

PROBLEM: A probe randomly gets stuck during discovery due to insufficient connections. (QCCR1H99653)

Workaround: To resolve the insufficient connections issue,

1. Stop the concerning probe and the UCMDB_Probe_DB service.

2. Locate the **max_connections** setting in the **C:\hp\UCMDB\DataFlowProbe\pgsql\data\postgresql.conf** file, and increase its value to **150**.

3. Locate the **appilog.agent.probe.maxConnection** setting in the **C:\hp\UCMDB\DataFlowProbe\conf\DataFlowProbe.properties** file, and increase its value to **40**.

4. Restart the probe and the UCMDB_Probe_DB service.

LIMITATION: 10.11 CUP3 (or later CUP on top of version 10.11) supports CP15. CP15 can be downloaded at UD Content Packs on HPE Live Network.

However, the following adapters in CP15 cannot work with 10.11 CUP3 or a later CUP (they can only work properly with 10.20):

- ASM adapters

- Top-Down Discovery adapters

- AM Generic Adapter

- Service Manager Enhanced Adapter

10.11 CUP3 can work with UDC 0.91. UDC 0.91 can be downloaded at UCMDB Development Center (UDC) on HPE Live Network.

Workaround: None.

LIMITATION: 10.11 CUP4 or later CUP does not contain the latest MindTerm jar file (**mindterm-4.1.5.jar**).

Workaround: If you want to upgrade your MindTerm from version 4.0beta6 to 4.1.5, go to the following location and download the hotfix: https://patch-hub.corp.hp.com/crypt-web/protected/viewContent.do?patchId=QCCR1H90627.

PROBLEM: If the Enrichment rule is active, the calculation is triggered by attribute changes. Then the Enrichment rule will take into consideration only the changed values and constants when concatenating multiple attributes and constants. (QCCR1H97897)

Workaround: To calculate all attributes, make sure that the Enrichment rule is NOT active and use the scheduler to calculate at certain intervals.

PROBLEM: (High Availability environment only) Changes made to Global Settings in HA take effect for all nodes in cluster only after restarting each node. (QCCR1H98141)

Workaround: In order for all changes in Global Settings that require the server's restart to take effect, you must restart all nodes from the cluster (one by one or with the **restartCluster** JMX method).

PROBLEM: Properties of any CI under the CIT **running_software** could not be viewed. This issue is caused by the fact that a certain custom attribute with the default constraint or index cannot be deleted. The issue is reproducible only on MSSQL when a new attribute is deleted. (QCCR1H95512)

Workaround: To delete the problematic attribute from the database, perform the following steps:

1. Stop the UCMDB server.

2. Back up the UCMDB database. Make sure that the database is backed up appropriately and UCMDB starts with the database backup.

3. Run the following scripts to delete the attribute from all tables: **1_script_delete_index.sql** and **2_script_delete_constraint.sql** (See "Appendixes" on page 78).

   The scripts must be run by Database Administrator in CMDB Database. Set the column name or attribute name to be deleted in the scripts (`SET @column_name = 'Column Name'`).

   ○ If the attribute has an index property, first run **1_script_delete_index.sql** and then run **2_script_delete_constraint.sql**.

   ○ If the attribute has no index property, simply run **2_script_delete_constraint.sql**.

> **Note**: These scripts will be useless if the same attribute is defined for more classes (more CI Types). For one CI Type, the attribute can be deleted from all related types (from all the children). If you are not clear which CI Types include the attribute, run the SQL statement that is described in step 5 below to verify.

4. Save the output generated on MSSQL in a text file.

5. Run the following SQL statement to check whether any columns are left. Replace the **Column Name** value with your column name or attribute name that you want to delete.

```
use 'CMDB DB NAME'

SELECT
    df.name constraint_name ,
    t.name table_name
FROM sys.default_constraints df
INNER JOIN sys.tables t ON df.parent_object_id = t.object_id
INNER JOIN sys.columns c ON df.parent_object_id = c.object_id AND df.parent_
column_id = c.column_id
WHERE c.name = 'Column Name'
```

6. Start UCMDB.

7. Run **rebuildModelDBSchemaAndViews** and **rebuildModelViews** from UCMDB JMX Console under **UCMDB:service=DAL services** for the CI type whose attribute is deleted. Check for any errors in the DAL logs.

8. Check the CI properties from IT Universe Manager.

> **Note**: This issue also occurs when certain custom attributes are deleted. A permanent fix will be available in the next UCMDB version (QCCR1H91560).

Universal CMDB - Platform

PROBLEM: (UCMDB 10.11 CUP3 or earlier) The Writer server becomes unresponsive which schedules a restart of the entire HA infrastructure. This impacts the load balancing URL, causing all probes to disconnect. This is caused by the existing Garbage Collector algorithm used in UCMDB. (QCCR1H100145)

Workaround: The problem can be resolved by improving the performance of the Garbage Collector by using G1 algorithm for the Garbage Collector. For enterprise environments where you have more than

16 GB of RAM allocated just for UCMDB (see the **wrapper.java.maxmemory** property value in the **..\UCMDB\UCMDBServer\bin\wrapper-platform.conf** file), check and make sure you add the following settings to the **wrapper-custom.conf** file if they are not present:

```
#Enable the following parameters for JVM G1 garbage collector in enterprise
environments
wrapper.java.additional.54=-XX:+ParallelRefProcEnabled
wrapper.java.additional.55=-XX:G1HeapRegionSize=32
wrapper.java.additional.56=-XX:InitiatingHeapOccupancyPercent=70
```

Universal CMDB - Topology

PROBLEM: The priority for TQL queries under the pattern-based model are changed from medium on UCMDB 9.05 to inactive on UCMDB 10.xx. The performance may be affected if the TQL queries under the pattern-based model are set to low or medium priority on UCMDB 10.xx. In this case, you can see that the locked gates and calculation for scheduled pattern-based model can take a couple of hours. (QCCR1H95041)

Workaround: None.

PROBLEM: The View result in **Browse Views** is not consistent with the result in the **Modeling Studio**, when creating a New Pattern View with the attribute condition **NOT Node Is Virtual Equal "True"**. (QCCR1H100696).

Workaround: To avoid this issue, create a New Pattern View and define the following attribute conditions in the **Query Node Properties** window: **Node Is Virtual Equal "False"** AND **Node Is Virtual Is null**.

Universal CMDB - UI

PROBLEM: InfrastructureService models are working with the following types of custom key attributes used for identification (without the **Name** attribute): `boolean, date number, double number, float number, integer, list of integers, list of strings, long number, string`.

However, the following types of attributes are not supported: `bytes, xml, some custom lists (such as lists of dates)`.

Workaround: None.

PROBLEM: When a TQL is used by both a pattern-based model (PBM) and a view, the PBM becomes inconsistent with the TQL if the TQL is updated from the view. This issue is caused by the fact that Package Manager Resource Selector becomes inaccessible while a new package is being created or an existing package is open. The following error message is displayed in the logs:

"Caused by: java.lang.IllegalStateException: EnrichmentBusinessViewDefinition *ModelName* is not synchronized with its pattern. Element number *12* does not exist in pattern graph."

ModelName and *12* in the error message could be different values. (QCCR1H95551)

Workaround: Pattern-based models must be created or edited only from the model instead of from the TQL. The same TQL cannot be used both by the model and the view.

To fix a corrupted PBM, use one of the following two ways:

- Delete the model and then recreate it

  a. Log in to UCMDB JMX Console and URM Services.

  b. Run method **listResources** for Resources of type: **Topology_ENRICHMENT_BUSINESS_ VIEW**.

  c. Locate the EnrichmentBusinessView that is mentioned in the error message and delete it. Then the model is deleted.

  d. Recreate the model from Modeling Studio using the same TQL.

- Edit the unsynchronized resources of the problematic model

  a. Log in to UCMDB JMX Console and URM Services.

  b. Run method **listResources** for Resources of type: **Topology_ENRICHMENT_BUSINESS_ VIEW** and **Topology_TQL**.

  c. Retrieve the xml definition of the **Topology_ENRICHMENT_BUSINESS_VIEW** and **Topology_TQL** of the problematic model.

  d. Open the EnrichmentBusinessView and locate the ID that is mentioned in the error message.

  ```
  <CmdbProperty>
      <Key>nodeNumberEnd2</Key>
      <Type>integer</Type>
      <Value>12</Value>
  </CmdbProperty>
  ```

  e. Do one of the following:

    - Change the missing ID in the EnrichmentBusinessView with an existing one from the **Topology_TQL** definition and save the resource.

- Add the missing ID in the **Topology_TQL** definition by replacing an existing one and then save the resource.

> **Here is an example:**
>
> ```
> <tql:node class="node" name="Node" id="19">
>         <tql:where>
>             <tql:data-stores>
>                 <tql:data-store>UCMDB</tql:data-store>
>             </tql:data-stores>
>         </tql:where>
> </tql:node>
> ```
>
> If you do not have id 12 in the tql, you can change it in the following way:
>
> ```
> <tql:node class="node" name="Node" id="12">
> ```

PROBLEM: Before the installation of 10.11 CUP2 (fixed QCCR1H92519), a CIT may have gotten corrupted and no instances of it could be created. This issue is caused by newly-created classes that contain attribute qualifiers on **root_iconproperties**. The following error message is displayed in the log:

"[ErrorCode [404] Attribute [{0}] contains calculated attribute qualifier without items in it.{root_ iconproperties}]. Attribute [root_iconproperties] contains calculated attribute qualifier without items in it."

Workaround: After installing this CUP, this issue no longer happens. But if a CIT is corrupted, it must be manually edited in the XML. To do so,

1. Export all class models using **jmx exportClassModelToXml** from Class Model Services.

2. Locate the **<Attribute-Qualifier name="CALCULATED_ATTRIBUTE" is-factory="false" />** line in the **root_iconproperties Attribute-Override** section as follows.

   ```
   <Attribute-Override is-partially-override="true" name="root_iconproperties"
   is-factory="true">
       <Attribute-Qualifiers>
       <Attribute-Qualifier name="APPLICATIVE_ATTRIBUTE" is-factory="true"
   origin="basic-deployment" version="10" />
       <Attribute-Qualifier name="CALCULATED_ATTRIBUTE" is-factory="false" />
   ```

3. Note down the CITs whose definitions contain the above problematic line.

4. Log in to the UCMDB UI and go to **Modeling > CI Type Manager**.

5. Locate the CITs that you noted down and export them to XML.

6. Open the XML file and delete the **<Attribute-Qualifier name="CALCULATED_ATTRIBUTE"**

is-factory="false"/> line.

7. Save the resource and restart the server.

Configuration Manager

LIMITATION: JMX remote access on Configuration Manager is not secure enough. (QCCR1H98135)

Workaround: To secure the JMX remote access on Configuration Manager, do the following on the Configuration Manager machine:

1. Stop the Windows CM service.

2. Open a command prompt console as an Administrator.

3. Navigate to the **<CM_Install_Home>\tomcat\bin** folder.

4. Run the following command:

   `tomcat7w.exe //ES//HPUCMDBCM1010server0`

5. In the window that pops up, go to the **Java** tab and locate the **Java Options** textbox.

6. In this textbox, remove the following three entries that refer to `jmxremote`:

   `-Dcom.sun.management.jmxremote.authenticate=false`

   `-Dcom.sun.management.jmxremote.ssl=false`

   `-Dcom.sun.management.jmxremote.port=39600`

7. Click **OK**.

8. Start the Windows Configuration Manager service.

Integrations

PROBLEM: (NNMi integration using Integration Service only) After creating an NNMi integration point with **IntegrationService** selected for the **Data Flow Probe** property in the Create Integration Point dialog box, running the scheduled NNMi integration job may fail with a remote connection error.

Workaround: Append the missing jar file to the value for the **remoteJVMClasspath** property in the Edit Integration Point dialog box. To do so,

1. In UCMDB UI, go to **Data Flow Management > Integration Studio**.

2. Locate the NNMi integration point of your interest and click **Edit Integration Point** 🖉.

3. In the Adapter Properties section of the Edit Integration Point dialog box, append the following to the value for the **remoteJVMClasspath** property:

   For SQL Server database: **;../lib/mcsqlserver.jar**

   For Oracle database: **;../lib/mcoracle.jar**

4. Click **OK**.

5. Deactivate the integration point.

6. Activate the integration point again.

7. Run the NNMi integration job.

PROBLEM: Reconciliation causes BSM EUM model problems.

Workaround: After installing the CUP, manually redeploy the UCMDB 9.x integration adapter package located in the **C:\hp\UCMDB\UCMDBServer\content\adapters** directory. (QCCR1H96944)

If the package is not redeployed, the integration adapter still works, but the reconciliation issue fixed in QCCR1H92320 will re-occur.

LIMITATION: You cannot create one integration point for both data push and population. (QCCR1H97157)

Workaround: To create an integration point for both data push and population, do the following:

1. Update the value for **Object Root** from **managed_object** to **root**.

   a. Log in to UCMDB with an administrator account and go to **Administration > Infrastructure Settings Manager**.

   b. From the **Filter by column** drop-down list, click **Name**, type **Object Root** in the text box and double-click the **Object Root** entry that is displayed.

   c. In the Properties dialog box, go to the **Current Value** field, change **managed_object** to **root**, and then click **Save**.

   d. Log out of UCMDB and log in to UCMDB again for the change to take effect.

2. Add the **discoverypattern_mdr_type** attribute to **Auto Discovery Pattern definition**.

   a. Go to **Modeling > CI Type Manager > CI Types** pane **> Root** tree **> Data > Object > Configuration**, and click **Auto Discovery Pattern definition**.

    b. In the right pane, click the **Attributes** tab and click the **Add** ⊕ button.

    c. In the Add Attribute dialog box, type **discoverypattern_mdr_type** in the **Attribute Name** and **Display Name** fields, and click **OK**.

3. If you already create an integration point, delete it and create it again.

4. Open Adapter Source Editor and save.

    a. Go to **Data Flow Management > Adapter Management > Resources** pane, select the adapter that is related to your integration point.

    b. Right-click the adapter, select **Edit adapter source**.

    c. In the Adapter Source Editor dialog box, click **Save**.

PROBLEM: When you create an NNMi integration point in the CP13 environment, and then upgrade CP13 to CP15, an error is returned while running the integration job. (QCCR1H98191)

Workaround: To fix this issue, you must recreate the NNMi integration point in the CP15 environment.

PROBLEM: The integration between UCMDB 10.01 and OMi 10 does not work. This issue is caused by the OMi's and UCMDB's tenant name mismatch. (QCCR1H101056)

Workaround: To solve this issue, OMi must use the same default tenant name as UCDMB. To change the default tenant in OMi, perform the following steps:

1. Add a new tenant named **System Default Tenant** (go to the RTSM's JMX Console > **Tenant Management Services** > **addTenant** method)

2. Set the newly created tenant (**System Default Tenant**) as default (in the RTSM's JMX console > **Tenant Management Services** > **setTenantAsDefault** mehod)

3. Delete the old tenant (**DEFAULT_TENANT**) (in the RTSM's JMX console > **Tenant Management Services** > **deleteTenant** method)

To avoid the re-occurrence of this issue in the future, for the new OMi releases, rename the default tenant from **DEFAULT_TENANT** to **System Default Tenant**. This will ensure OOTB interoperability with UCMDB.

Universal Discovery

PROBLEM: Version 10.10 probes appear to corrupt the PostgreSQL database under normal discovery loads. The root cause is that when Anti-Virus is scanning the PostgreSQL data folder, it could cause PostgreSQL tables to corrupt. (QCCR1H105110)

Workaround: To resolve the issue, perform the following:

- Always make sure that the PostgreSQL install directory is added into the anti-virus software exclusion list. The exclusion of data files will not introduce any potential security risk.

- If you need to run weekly-based scan, monitor the **probeerror.log** file, and if a database error shows up (for example, a database error related to the Discovery_result table), do the following:

  a. Clean the probe log folder.

  b. Run **Clear Probe Results Cache** from **UCMDB UI > Data Flow Management > Universal Discovery > Discovery Modules/Jobs** to clean the problematic table.

  This should resolve the issue.

LIMITATION: Probe discovery will result in duplicate node CIs (Windows/Unix) if re-imaging the Virtual Machine system with the same template, IP address, and hostname. This is because the unique calculation logic for the node is different between the UCMDB server and the probe. (QCCR1H104153)

Workaround: Before re-imaging your Virtual Machine system, remove the CI instance of the old Windows/Unix system from UCMDB manually.

LIMITATION: When probes are in Separate Mode, connecting to the UCMDB server may fail after changing the default credential for basic authentication.

Workaround: You need to update the default credentials for basic authentication manually. To do so,

1. Open the JMX Console of the UCMDB Server side, enter **changeBasicAuthenticationCredential** in the quick search field and click the link that appears.

2. Specify the **userName** and **password** that you want. For example:

changeBasicAuthenticationCredential

Change basic authentication credential.

Name	Type	Value	Description
customerId	int	1	Customer Id
userName	java.lang.String	test	new user name for basic authentication.
password	java.lang.String	123456	new password for basic authentication.

Invoke

> **Note:** Password must contain at least six characters.

3. Click **Invoke**.

4. Encrypt the password by using the JMX Console of the probe side as follows:

   a. Open the JMX Console of the probe side, enter **getEncryptedKeyPassword** in the quick search field and click the link that appears.

   b. Enter the password that you specified.

getEncryptedKeyPassword

Encrypt a password for use with Keystore/Truststore properties file

Name	Type	Value	Description
Key Password	java.lang.String	123456	

Invoke

   c. Click **Invoke** and then the encrypted password is generated.

5. Copy the encrypted password.

6. Edit the **DataFlowProbe.properties** file as follows:

```
appilog.agent.Probe.BasicAuth.User = <the user name that you specified>

appilog.agent.Probe.BasicAuth.Pwd = <the encrypted password that you just
copied>
```

7. Save the change and then restart the probe.

PROBLEM: When the **appilog.collectors.storeDomainScopeDocument** property in the **<UCMDB_ HOME>\DataFlowProbe\conf\DataFlowProbe.properties** file is set to **false**, jobs which run in the remote process mode may fail, because the remote process cannot read the probe memory, thus having no access to the **domainScopeDocument** file stored in the memory. When the setting is false, the file is only stored in the probe memory. (QCCR1H93459, QCCR1H96126)

Workaround: If some jobs run in the remote process mode, make sure that you set the value of the **appilog.collectors.storeDomainScopeDocument** property in the **DataFlowProbe.properties** file to **true**.

LIMITATION: When using PostgreSQL as your database on the Windows platform, the UCMDB_ Probe_DB service is not starting as a non-system user. This is a third-party product limitation, because PostgreSQL is able to "irrevocably give up administrative rights at startup". For details, see this PostgreSQL wiki page. (QCCR1H96208)

Workaround: In order for the UCMDB_Probe_DB service to start properly, you may configure the **Log On** options for the UCMDB_Probe_DB service as follows:

1. Locate the **UCMDB_Probe_DB** service in the Services window.

2. Right-click **UCMDB_Probe_DB** and select **Properties**.

3. In the UCMDB_Probe_DB Properties window, go to the **Log On** tab, and do either of the following:

   ○ Select the **Local System account** option.

   > **Note:** This is the recommended option, because the SYSTEM account can access all necessary folders according to the default settings on Windows.

   ○ Select **This account**, and specify the account name and password.

   > **Note:** This option is NOT recommended. Even if you specify an administrator account, it will be treated as a common user account by PostgreSQL, because PostgreSQL is able to "irrevocably give up administrative rights at startup".
   >
   > If you really need to specify a different account, make sure that the USERS group on your Windows platform has:

> - **Read** and **Write** access to the **C:/hp/UCMDB/DataFlowProbe/pgsql** folder.
>
> - **Read** access to the files in system library (for example, the **C:/Windows/System32** folder) that PostgreSQL needs to access.
>
>   For the list of files that PostgreSQL needs to access, see PostgreSQL documentation.

4. Click **OK**.

PROBLEM: After deleting some customized protocols, adding or editing credentials or ranges may fail with the "`Can not find class protocol`" error. (QCCR1H96595)

Workaround: Before you add or edit credentials or ranges, do the following:

1. Re-add the deleted protocol.

2. Go to **Data Flow Management > Data Flow Probe Setup > Domains and Probes** pane **> Domains and Probes** root node **>** a domain **> Credentials**, locate the protocol that you just re-added.

3. Delete all credentials under this protocol, and click **OK** to save the change.

4. Delete the customized protocol again.

PROBLEM: No password is required when running **clearprobedata.bat** to clear the data on the Data Flow Probe. (QCCR1H93320)

Workaround: None.

PROBLEM: The **WebSphere to Web Server Dependency** job is causing OutOfMemoryError on the probe side. (QCCR1H97711)

Workaround: The probe requires at least 4G memory to run the **WebSphere to Web Server Dependency** job. Therefore, allocate at least 4G memory for the probe.

PROBLEM: Data Flow Probes cannot be upgraded to the latest CUP successfully on the Linux platform. (QCCR1H102387)

Workaround: To resolve the issue,

1. Copy **/opt/hp/UCMDB/UCMDBServer/content/probe_patch/probe-patch-<version>-linux.zip** (for example, **probe-patch-10.11.CUP6-linux.zip**) to the following folder:

   /opt/hp/UCMDB/DataFlowProbe/runtime/upgrade

2. Extract the upgrade package by running the following file:

   /opt/hp/UCMDB/DataFlowProbe/tools/upgrade/extractUpgradePackage.sh

3. Restart the Data Flow Probe.

Universal Discovery - Inventory Discovery

PROBLEM: (PostgreSQL only) Some SQL statements are observed running more than 30 minutes, which causes Probe database to crash. The root cause is that the default value of the **statement_ timeout** setting in the **postgresql.conf** file is **0**. (QCCR1H101769)

Workaround: To workaround the issue, locate and open the **hp\UCMDB\DataFlowProbe\pgsql\data\postgresql.conf** file in a text editor, and then modify the default value of the **statement_timeout** setting from **0** to **3600000**.

Enhancements Requests

Enhancements Requests in 10.11 CUP8

Here is a list of the enhancement requests that were implemented in the CUP8 release.

Global ID	Problem	Solution
QCCR1H99062	The **OS Architecture** attribute cannot be discovered on SunOS hosts.	Implemented the enhancement by adding ability for the **Host Connection by Shell**, **Inventory Discovery by Scanner**, and **Inventory Discovery by Manual Scanner Deployment** jobs to discover the **OS Architecture** attribute on Apple OS X, IBM AIX, Oracle Solaris, HP-UX, and Windows. **Note:** Content Pack 20 is required for this enhancement to work properly.
QCCR1H106790	The push engine is limited to 3 pushes to be scheduled automatically by UCMDB.	Added a new JMX setting (**com.hp.ucmdb.synchronizer. manager.SynchronizerManager Factory**) for increasing the thread count for data push jobs. For details, see "How to Increase the Number of Threads for Data Push Jobs" on page 78.
QCCR1H107411	VMware VirtualCenter Topology by VIM jobs fails with reconciliation error: [SQLServer]Violation of PRIMARY KEY constraint 'PK_ MERGED_CIS'. Cannot insert duplicate key in object 'dbo.MERGED_CIS'...	Enhanced the mechanism which ensures that the CIs from table MERGED_CIS are consistent.
QCCR1H107837	This is a request for	Implemented the enhancement by adding hardware

Global ID	Problem	Solution
	adding hardware detection in Supportability.	detection in the core **Basic** supportability handler. Every time the basic supportability handler is run, an **Environment.properties** file is created in the Supportability zip file, recording all the hardware information about the target physical or virtual machine.

Enhancements Requests in 10.11 CUP7

Here is a list of the enhancement requests that were implemented in the CUP7 release.

Global ID	Problem	Solution
QCCR1H97075	When there are many enrichments based on a query that has a Changed or Unchanged During 24 hours condition on some CI Types, each time the query gets calculated, because the starting point is a link and the number of links is huge, the calculation time is high due to a fuse. The fuse is broken when the starting point is being determined but the TQL query is calculated eventually with another starting point. Therefore, the following error is found in the **error.log**: "Query result exceeded size limit".	Implemented the enhancement by defining links for which an additional count of objects should be performed to throw the errors, thus reducing the calculation time. To enable this feature, invoke the **setInternalSetting** JMX method to set the **dal.link.condition.citypes.to.count.for.max.result** setting to the desired value with the name of the links for which to verify the count (comma separated values). For example, if the link name is **membership**, invoke **setInternalSetting** with name = "dal.link.condition.citypes.to.count.for.max.result" and value = "membership".
QCCR1H101748	From time to time UCMDB server experiences performance issue, where GUI becomes unresponsive for about 2 hours.	Implemented the enhancement by applying a code improvement to treat the user TQL operations with higher priority over other TQL operations.

Global ID	Problem	Solution
QCCR1H103987	Users cannot create, update or delete the IP ranges of the connected Probes. This is a request for the following functionality to be available in the product: • IP Range Management provides all Servers IP's to the UCMDB • UCMDB handles ranges and distributes them to the Discovery UCMDB • UCMDB manages IP ranges in a Meta Model	Implemented an enhancement by adding a new API method **importIPRanges()**. This method allows you to create, update, or delete the IP ranges of all the connected Probes. For details, see "What's New in UCMDB 10.11 CUP7" section.
QCCR1H104232	Users cannot use the SAI Editor to add Windows Appstore and XenApp types package rule into SAI.	Implemented the enhancement by providing this capability. Now users can add Windows Appstore and XenApp types package rule into SAI.
QCCR1H105140	This is a request for the support for discovering Microsoft Windows 10.	Implemented the enhancement by adding the discovery support for Microsoft Windows 10.

Enhancements Requests in 10.11 CUP6

Here is a list of the enhancement requests that were implemented in the CUP6 release.

Global ID	Problem	Solution
QCCR1H99728	In the High Availability (HA) environment, the reader server cannot be logged in to if the writer server is busy.	You can now log in to the reader server even if the writer is blocked.
QCCR1H101710	Currently it is hard to reproduce complex reconciliation issues. It will	Implemented the enhancement by adding a new property **reconciliation.dump.bulks** to the **setSettingValue** JMX method in the

Global ID	Problem	Solution
	help greatly if we can record the exact bulk and CMDB data that is being processed and reproduce the issue on any environment.	**UCMDB:service=Settings Services** category. By setting the **reconciliation.dump.bulks** property to **true**, you can dump CMDB and bulk containers to files in the **<UCMDB_Server_Home>\runtime\log\bulkDumps** directory.

Enhancements Requests in 10.11 CUP5

Here is a list of the enhancement requests that were implemented in the CUP5 release.

Global ID	Problem	Solution
QCCR1H83305	Invoking the full **reindex** method in the JMX console takes hours.	Implemented an enhancement by adding a new JMX method **reindexCiType** in **UCMDB:service=Topology Search Services**. This method selects a subset of data in a short time.
QCCR1H90820	Package manager should take resource dependencies into account when creating packages.	Enhanced the Create Custom Package Wizard by adding the **Automatically export dependencies of the checked resources** check box to the Resource Selection page of the wizard. Selecting this check box allows you to automatically export dependencies of the checked resources when creating a package.
QCCR1H91311	UCMDB Browser returns undesired results after conducting a search related to a specific time period.	Implemented an enhancement so that the search results are filtered based on finding and ignoring query matches.
QCCR1H95577	Users request to remove the "[ ]" characters from the **Concatenated List** column in reports.	Implemented an enhancement so that the "[ ]" characters are no longer added automatically to the string representation of a Java ArrayList object. Now the **Concatenated List** column in reports does not contain the "[ ]" characters.
QCCR1H96022	Users request to improve the	Added a new permission to allow users to view

Global ID	Problem	Solution
	troubleshooting of the discovery.	the discovery status and errors.
QCCR1H98825 QCCR1H98833 QCCR1H98834	Users request for a server health check dashboard.	Implemented server health check enhancements. For details, see "Enhancements implemented to server health check " on page 8.
QCCR1H98835	The Jetty monitoring mechanism should be enhanced so that each UCMDB instance checks whether Jetty is accessible. When the Jetty Server is stuck, the UCMDB server cluster should respond accordingly.	Enhanced the Jetty monitoring mechanism so that each UCMDB instance checks whether Jetty is accessible. The writer will not update its timestamp if the Jetty Server is not responding. The UCMDB instance only updates its timestamp in the High Availability environment if Jetty is accessible to new connections. In case Jetty is stuck, this will force another UCMDB to become a writer.
QCCR1H98837	Push back of global IDs works for population flows, but not for push flows.	Push back of global IDs for push flows is now working, with similar behavior like that for population flows.
QCCR1H99006	More logs are needed to debug adapter states.	Added more logs on the debug level for Push engine states.
QCCR1H99103	When using Integration Adapter 10.x, the Push creates CIs in a wrong Tenant because the tenant information is not pushed because of the integration user's default tenant assignment.	Improved the design of the tenant assignment. Now tenant information is also pushed to the other UCMDB.
QCCR1H99448	The **Is Candidate for Deletion** status can be synchronized with the population flow. Integration users request for the same capability for the Push flow.	Implemented an enhancement so that the **Is Candidate for Deletion** status can be synchronized with the Push flow as well.

Global ID	Problem	Solution
QCCR1H99600	A JMX method is needed to deactivate all the TQLs that are related to views.	Added a new JMX method **deactivateAllViewsTqls** in **UCMDB:service=New Views Services** to deactivate all the TQLs that are related to views.

Enhancements Requests in 10.11 CUP4

Here is a list of the enhancement requests that were implemented in the CUP4 release.

Global ID	Problem	Solution
QCCR1H98666	Pattern Based Models (PBMs) that are created based on existing Instance Base Models (IBMs) in an environment (for example, development) are not available in the Package Manager for exporting to other environments.	Enhanced the Package Manager to provide the capability of exporting all the resources of a Pattern Based Model that is created based on an Instance Base Model, including the business enrichment, TQL, and model CI. Now Pattern Based Models that are created based on existing Instance Based Models are available in the Package Manager for selection when exporting a package.

Fixed Defects

Fixed Defects for UCMDB 10.11 CUP8

Here is a list of the defects fixed in the CUP8 release.

Global ID	Problem	Solution
QCCR1H101413	After running the **Inventory Discovery by Scanner** job, the Probe failed to save the data into ID Mapping table, and many CIs are deleted incorrectly due to the auto deletion triggers.	Fixed the issue by implementing a code change so that the CIs are not deleted incorrectly anymore.
QCCR1H102686	The **Max Width** in Asset Field Configuration is less than or equal to 255, which is too small for multi-string registry.	Fixed the issue by implementing a code change to extend the max value to 2048.
QCCR1H103058	The View Scan Debug Log button does not work in HTTPS UCMDB environment. The Probe is set to HTTPS, but the Probe still sends uploadScanFile request using HTTP.	Fixed the issue by implementing a code change so that when the probe sends the uploadScanFile request, it chooses HTTP or HTTPS protocol according to the Probe configuration.
QCCR1H104912	After processing a scan file from a Unix machine, it creates lots of installed software, but some of them are multiple versions of the Microsoft Internet Explorer, and some others are Windows applications.	Fixed the issue by implementing a code change to resolve the application version ID conflict between **user.zsai** and **auto.zsai**.
QCCR1H105008	Accessing the Icon tab in CIT Manager might lead to class model inconsistencies. Also, the Save button is highlighted, although there were no changes made.	Fixed the issue by changing the behavior of the Change the Configuration Item Type icon according to its attribute value checkbox.
QCCR1H105064	When using Push Adapter on a UCMDB instance on Oracle database, NET8	Fixed the issue by updating the JDBC Oracle driver.

Global ID	Problem	Solution
	Error message is received due to the Oracle library being used.	
QCCR1H105110	Version 10.10 probes appear to corrupt the PostgreSQL database under normal discovery loads. The root cause is that when Anti-Virus is scanning the PostgreSQL data folder, it could corrupt the PostgreSQL tables.	Added the workaround into the Release Notes. For details, see QCCR1H105110.
QCCR1H105229	TQL result count calculated in the Server UI does not match the calculation via JMX or SM data push.	Fixed the issue by implementing a code change to the calculation logic. Now the TQL result count calculated in the Server UI matches the calculation via JMX or SM data push.
QCCR1H105257	Users experience poor performance, especially the Generic Database Adapter (GDBA) integrations running in full synchronization mode take extremely long time to finish.	Fixed the issue by implementing a code change to improve and enhance the performance.
QCCR1H105260	There is a problem with red icons on UCMDB 10.11, which are not colored in red 10.11.	Fixed the issue by implementing a code change so that red icons are properly colored.
QCCR1H105294	Running multiple AM computer push jobs in parallel completes with failure rate of 6% to 8%, while less than 1% failure rate on running a single push job at a time. Most of the failures are caused by the following **java.lang.RuntimeException** error: ... 'execAql' exception: 'Error (12,011): Oracle error: ORA-00001: unique constraint (ACAPP.ASGMT_CMDBID) violated Index error: A record in table 'Portfolio items (amPortfolio)' with the value	Fixed the issue by implementing a code change to made the code thread safe.

Global ID	Problem	Solution
	'<hidden>' for field 'uCMDB identifier (CMDBId)' already exists in the database.'	
QCCR1H105474	Probe limit is not working properly, triggers fail to respect the defined probe limits. When re-running the single trigger or multiple triggers the probe limit flag is discarded.	Fixed the issue by implementing a code change. Now the probe limit works properly.
QCCR1H105510	By default, scheduled SM population jobs synchronize changes only. Setting full-population-days-interval to 0 in the SM adapter XML has no effect -- only changes are synchronized.	Fixed the issue by implementing a code change so that it is possible to schedule full SM populations by setting full-population-days-interval to 0 in the SM adapter XML.
QCCR1H105623	When trying to create a VMware Host Report, it fails with a NullPointerException and the report is not generated.	Fixed the issue by implementing a code change. Now the VMware Host Report can be properly generated.
QCCR1H105680	When pushing the data from UCMDB to OMi, if the data is larger than the chunk size, invalid CIs are pushed to OMi and fail to be reconciled.	Fixed the issue by implementing a code change, so that related topologies data are sent from UCMDB to OMi properly in different chunks.
QCCR1H105717	When trying to display the probe status from the Data Flow Probe Status page, there is no results for some probes, and the following error is found with the **DiscoveryDestDAO.getDisplayLables ForTriggerIds()** method in the **error.log**: 'ORA-01795: maximum number of expressions in a list is 1000'.	Fixed the issue by implementing a code change to split the SQLs if the number of expressions exceeds 1000.
QCCR1H105821	(Oracle database only) Duplicated Java processes are found after running the discovery job.	Fixed the issue by implementing a code change to increase the Oracle DB type CREATE OR REPLACE TYPE VARCHAR2_TABLE IS TABLE OF VARCHAR2(3950) from

Global ID	Problem	Solution
		300.
QCCR1H105901	There is a custom rule that creates "Membership" relation between Location and Node CIs based on a custom attribute (building) in CIT Node. But after running the enrichment, no relationship is generated.	Fixed the issue by implementing a code change to improve the data import so that the correct CI type name is used by the enrichment.
QCCR1H105928	UCMDB to UCMDB push back global Ids is disrupting the aging on the low level UCMDB by updating the Last Access Time value.	Fixed the issue by implementing a code change to disable the aging mechanism on the push back flow.
QCCR1H106039	When loading the Integration Studio, if there are many integration points, the system takes a very long time to display the user interface.	Fixed the issue by implementing a code change to build cache for queries to reduce query execution.
QCCR1H106327	When any integration job execution causes links to be deleted, link deletion occurs but deletion status of the links is not displayed in the integration job statistics pane.	Fixed the issue by implementing a code change to correct the typo in the code that prevented the deleted links status to be taken into account.
QCCR1H106365	AM push job for SW utilization causes out of memory errors in java heapspace.	Fixed the issue by implementing a code change to the logging mechanism, so that it does not log the large TQL anymore, but display a short message instead.
QCCR1H106371	When the node is discovered by the Host Connection by Shell job, it sets the flag for the **host_iscomplete** attribute to **true**, and then when the Host Resources/Applications by Shell job is run, it changes this attribute to **false**. This is a problem for the Breakdown Report that takes this attribute into consideration.	Fixed the issue by implementing a code change to remove the **host_ iscomplete** condition from the Breakdown Report TQL query.

Global ID	Problem	Solution
QCCR1H106762	SiteScope and OMi 10.10 Topology integration is not working because the **jythonGlobalLibs.xml** file for SiteScope is not properly converted.	Fixed the issue by implementing a code change so that the **jythonGlobalLibs.xml** file for SiteScope can be properly converted.
QCCR1H106779	After invoking the **startHistoryDB** JMX method, the HDM_xxxxxx_UNIX_1 and HDM_xxxxxx* tables are not dropped.	Fixed the issue by implementing a code change. Now invoking the **startHistoryDB** JMX method deletes all the history data by dropping the tables, and then the history data is initialized based on the existing CIs.
QCCR1H106880	History operation "hist query: get data changes" does not close its attached transaction in the multi-tenancy environment.	Fixed the issue by implementing a code change to the flow for the transaction to be committed and adding more logging to catch smilar issues easier in the future. Now the history transaction when viewing CI history can be properly handled in the context of multi-tenancy.
QCCR1H106978	When a non-sysadmin normal LDAP user schedules a topology report, and the user's login name is different from the display name, then the report fails to be generated because the user could not be found.	Fixed the issue by implementing a code change to replace the **getDisplayName** method with the **getLoginName** method.
QCCR1H106989	AM 9.41 push job failed when CP18 is deployed on UCMDB 10.11. This is because UCMDB 10.11 does not support new AM adapter in CP18.	Fixed the issue by implementing a code change, so that AM push job can run properly.
QCCR1H107098	When dispatching jobs, sometimes a NullPointerException is logged in the mam.autodiscovery.log file.	Fixed the synchronization issue that happens when multiple threads try to get discovery common resource at the same time.
QCCR1H107177	Probe deadlocks was observed, caused by a PostgreSQL database defect.	Fixed the issue by implementing a code change to avoid the PostgreSQL

Global ID	Problem	Solution
	Probe result processing periodically halts.	database defect.
QCCR1H107363	Threads updating History get stuck, the Complement Layout Operation was running in timeout due to massive changes.	Fixed the issue by implementing a code change to increase Timeout to 4h and add it as explicit for this operation.
QCCR1H107392	Users are not able to manually add individual CIs to discovery by clicking the **+** button after applying 10.11 CUP7.	Fixed the issue by implementing a code change, so that CIs added manually by clicking + button should be dispatched, bypassing the probe limit when set to Disabled.
QCCR1H107462	UI Packaging is loosing selected TQLs due to long loading time, and the Save button is enabled before all resources are loaded.	Fixed the issue by implementing a code change to disable the **Save** button until all the resources are loaded. While loading is in progress the **Save** button has a tooltip to inform the user why it is still disabled: "Please wait, some resources are still loading...", which disappears after the resources are successfully loaded.
QCCR1H107553	History purge operation fails with java.lang.OutOfMemoryError: Java heap space [HistDalPurgeCommand].	Fixed the issue by implementing a code change, so that only the ID map size in exported and logged in the debug log instead of trying to convert the whole ID map size into string.
QCCR1H108396	The CSV reports containing attributes of enum type cannot be created in UCMDB.	Fixed the issue by implementing a code change so that the CSV reports containing attributes of enum type can be created in UCMDB.
QCCR1H109065	OMI server's CPU usage keeps at 100% due to HPBSM_RTSM.exe's high CPU usage.	Fixed the issue by changing the Log level for printing stack trace from INFO to ERROR.
QCCR1H90996	Errors found in the error log of the reader, including errors related to parsing	Fixed the issue by implementing a code change to escape invalid chars

Global ID	Problem	Solution
	management zone XMLs and some other stuff, which were caused by the invalid XML character "&" in the description.	in XML, including **&'<>"**.
QCCR1H96379	The AWS by Web Services job does not work due to an access credentials issue. The AWS API used by the job includes joda-time-2.2.jar, however the probe lib folder (**C:\hp\UCMDB\DataFlowProbe\lib**) contains an old version of **joda-time.jar**.	Fixed the issue by replacing the old joda-time.jar file with a v2.2 **joda-time.jar** file on the probe side.
QCCR1I116650	RTSM View Builder in **SH > Administration** unable to display views due to lack of permissions.	Fixed the issue by implementing a code change to adapt the UI to the following change: removed tasport usage from UI and checked if the environment is distributed on server side and stored its value in the IS_ DISTRIBUTED_ENVIRONMENT environment parameter.

Fixed Defects for UCMDB 10.11 CUP7

Here is a list of the defects fixed in the CUP7 release.

Global ID	Problem	Solution
QCCR1H93805	Users logging in without any assigned permissions see blank screen instead of an error indicating no modules can be displayed due to a lack of permissions.	Fixed the issue by implementing a code change. User without UI access permission are not allowed to login and see blank page. Also added a warning message if the user has no access to any UI module. This is present as a general action for each role.
QCCR8D44233	(OMi only) The OMi console crashes frequently with "Internal Server Error". When the problem	Fixed the issue by implementing a code change.

Global ID	Problem	Solution
	happens, JBoss does not abort but consumes up to 50% CPU.	
QCCR1H100565	When running the **initializeHistoryDBFromMode** JMX method on MSSQL or PostgreSQL, an error message is returned.	Fixed the issue by removing the "H" alias used in the DB query. The "H" alias is not supported by the MSSQL and PostgreSQL databases.
QCCR1H100903	Displaying a specific view crashes the UCMDB server. This is because too many nodes were returned by the view that caused much more number of meta links generation and crashed the system with OutOfMemory.	Fixed the issue by dropping the capability of generating the meta links for the returned nodes if their size is too big to be displayed in the map, since the map can not show that many nodes anyway.
QCCR1H101160	NNMi integration job fails due to violation of PRIMARY KEY constraint 'PK_LOA'.	Fixed the issue by applying a code change. Now the correct Java class is used when removing from the object referencing the data that was missing in LOA.
QCCR1H101769	(PostgreSQL only) Some SQL statements are observed running more than 30 minutes, which causes Probe database to crash. The root cause is that the default value of the **statement_timeout** setting in the **postgresql.conf** file is **0**.	Added the following workaround to the Release Notes: To workaround the issue, locate and open the **hp\UCMDB\DataFlowProbe\pgsql\data\postgresql.conf** file in a text editor, and then modify the default value of the **statement_timeout** setting from **0** to **3600000**.
QCCR1H101772	Several discovery jobs fail with the "java.lang.IllegalStateException: Shutdown in progress" error.	Fixed the issue by applying a code change. Now discovery jobs can run successfully.
QCCR1H102151	The **Schedule Report** window and the **Job List** window show different time for a scheduled report.	Fixed the issue by implementing a code change. Now the **Schedule Report** window and the **Job List** window show the same time for a scheduled report.

Global ID	Problem	Solution
QCCR1H102225	When logging in to UCMDB, upon opening a new tab to access UCMDB Browser using LWSSO, the session expires. But when logging in directly on the UCMDB Browser, the session does not expire.	Added instructions about how to set UCMDB Browser session to expire when LWSSO is enabled in the *HPE Universal CMDB Administration Guide* and the *HPE Universal CMDB Browser Installation and Configuration Guide*. **Note:** The scenario without enabling LWSSO is not supported.
QCCR1H102411	In UCMDB Browser, an Integer value was received as String. There is a direct cast to Integer.	Fixed the issue by applying a code change to parse the String value into an Integer.
QCCR1H102465	The Instance based adapter does not return the correct **idToTypes** map when it loads the referenced CIs and the push job fails with several errors.	Fixed the issue by implementing a code change. Now the Instance based adapter works properly.
QCCR1H100286	Nodes with the same Display Label are counted as one node in the **Licensed OSIs Report**.	Fixed the issue by changing the license count to calculate nodes by **CI Instance** instead of by **Display Label**.
QCCR1H102362	The aging mechanism does not update the value of the **Is Candidate For Deletion** attribute to **False**.	Fixed the issue by implementing a code change. Now the aging mechanism works as expected.
QCCR1H102406	Fixes provided in the previous CUP need to be easier to implement.	Fixed the issue by applying a code change. For details, see "How to Enable CI Type Tenant Owner Verification during the Matching Phase of Identification" on page 95.
QCCR1H102896	The CUP patch cannot be installed and deployed with the same CUP but an increased build number.	Fixed the issue by applying a code change to include build number in version check. Now the CUP patch can be installed and deployed with the same CUP version but with an increased build number.

Global ID	Problem	Solution
QCCR1H103070	After running an enrichment on CIs, the Tenant Owner is now the System Default Tenant for that CI Type.	Fixed the issue by implementing a code change to enrichments to re-set the **TenantOwner** field to the system default tenant for the CI.

QCCR1H103086	The **Owner Tenant** attribute is overwritten when populating to a multi-tenant (MT) UCMDB and both integration servers are set as GlobalIDGenerator.	Fixed the issue by adding the following settings to the cmdb10xAdaper:
		
		• **shouldOmitTenantOwnerFromAutoRecon**. If not specified, it has **true** as default value. It will skip the tenant owner attribute from Auto Complete Reconciliation.
		
		• **population.autocomplete.reconciliation**. If not specified, it has **true** as default value. This setting enables or disables Auto Complete Reconciliation.
		
		• **shouldOmitGlobalIDFromLayout**. If not specified, it has **false** as default value. It will not add the **global_id** attribute to the TQL query layout.
		
		You can add the new settings to the adapter XML file as needed in the following format. Otherwise, the default values will be used.
		
		`<adapter-setting name="shouldOmitGlobalIDFromLayout">true</adapter-setting>`
		
		`<adapter-setting name="shouldOmitTenantOwnerAutoRecon">true</adapter-setting>`
		
		Since **TenantOwner** is part of CIs identification, it should not be sent from the source UCMDB. To accomplish this, make sure you ensure the following:

Global ID	Problem	Solution
		• The integration TQL query should not have the **TenantOwner**, **TenantsUses**, and **global_id** attributes in the TQL query layout. • The **shouldOmitTenantProperties** setting of the Cmdb10xAdapter must be set to **true**. It can be set from the adapter XML definition: ```<adapter-setting name="shouldOmitTenantProperties">true</adapter-setting>``` **Note:** This fix requires that you manually redeploy the UCMDB 10.x adapter package located in the **C:\hp\UCMDB\UCMDBServer\content\adapters** directory after installing UCMDB 10.11 CUP7.
QCCR1H103221	Many **Java.lang.NullPointerException** errors appeared on different discovery jobs.	Fixed the issue by implementing a code change to add some logic to avoid the NullPointerException errors.
QCCR1H103262	The DB Push Adapter is failing with Net8 protocol error.	Fixed the issue by implementing a code change to close the existing executing statements on DB when querying the counter.
QCCR1H103374	Without granting the user the Administration rights, the user couldn't see the scheduler tasks in the Scheduler. It's empty.	Fixed the issue by implementing a code change, now the user without the Administration rights is able to see the Scheduler and the scheduled tasks.
QCCR1H103377	Trying to generate the list of CIs relationship which are candidate for	Fixed the issue by implementing a code change.

Global ID	Problem	Solution
	deletion by aging mechanism but failed.	
QCCR1H103519	The Support Matrix document didn't specify the limitation of CM not supported by IE 11.	Updated the *Support Matrix* and *Release Notes* document to add the limitation.
QCCR1H103549	After applying the TCP package to support the ASM feature, probes crash when creating core dumps and getting disconnected with the UCMDB server.	Fixed the issue by applying a code change.
QCCR1H103589	Discovery jobs keep running and are not showing as finished for some CIs.	Fixed the issue by implementing a code change.
QCCR1H103641	When using the push adapter, there are situations where the related CIs are not sent in the same chunk. For example, if **parentattr** mapping is used between a location and node CI then the value cannot be copied if the CIs are not in the same chunk.	Fixed the issue by applying a code change to add a new setting for the push adapter "replication.defined.integrity.rule".
QCCR1H103757	Child CIs are shown that have different tenants than the parent CI when the reconciliation engine should be respecting tenants for all CI types.	Fixed the issue by applying a code change to use the correct setting when retrieving tenant aware CI types.
QCCR1H104024	Oracle database did not flush result cache when it executes the SQL script "truncate table CDM_TMP_ JOB_IDS".	Fixed the issue by applying a code change to replace the SQL script "truncate table CDM_TMP_JOB_IDS" with "delete from CDM_TMP_JOB_IDS".
QCCR1H104044	Users are unable to change icons of a custom CI Type without deleting all instances of the custom CI Type, the CI Type itself, and	Fixed the issue by implementing a code change. Now users are able to change icons of a custom CI Type.

Global ID	Problem	Solution
	subsequently reimporting the CIT from XML.	
QCCR1H104153	Probe discovery will result in duplicate node CIs (Windows/Unix) if re-imaging the Virtual Machine system with the same template, IP address, and hostname. This is because the unique calculation logic for the node is different between the UCMDB server and the probe.	Added the following workaround to the Release Notes: Before re-imaging your Virtual Machine system, remove the CI instance of the old Windows/Unix system from UCMDB manually.
QCCR1H104234	Users see many **handlers.SecurityHandlersException** messages in the **probe-error.log** for one of their probes.	Fixed the issue by implementing a code change so that the **handlers.SecurityHandlersException** messages are not shown in the probe log anymore.
QCCR1H104341	The **MSSQL Topology by SQL** job incorrectly reports MS Clusters as SQLServer instances.	Fixed the issue by adding a new parameter **reconciliation.prefer.crg .container** to the **setSettingValue** JMX method in the **UCMDB:service=Settings Services** category. By default it has value **false**. Setting it to **true** prefers the CRG (cluster resource group) as being the **root_ container**. For example, if you have the following topology: Node -- composition > Running_Software < composition -- Cluster Resource Group Setting the new parameter to **true** allows selecting the CRG as being the **root_ container** for the **running_software**. If **false**, **root_container** will be the **Node**. The setting change becomes effective immediately, and you can set it using the **setSettingValue** JMX method from JMX console.

Global ID	Problem	Solution
QCCR1H104374	The documentation should reflect the memory XMl Enricher uses for the scan file processing as well as its continuous work, currently it does not for the Probe installation.	Added the XML Enricher memory usage information in the updated *UCMDB 10.11 Support Matrix* document.
QCCR1H104375	XML Enricher does not properly process scan files without executable signatures. When processing the scan files, many normalized applications are not reported in the Installed Software CIs list.	Fixed the issue by implementing a code change to the XML Enricher logic.
QCCR1H104900	The touching performance provided in UCMDB 10.11 CUP3 is not available with the latest patch.	Fixed the issue by implementing a code change to refactor the touch service, hence improving the touch service performance.
QCCR1H104917	Saving a view with a new name results in loss of Report Layout for Group by CI Type.	Fixed the issue by implementing a code change to keep the report layout while saving a view.
QCCR1H105023	The UCMDB **error.log** often shows the "Unauthorized access at entry point" error (but not only for this user). However the user is not aware of any user authentication related problems.	Fixed the issue by implementing a code change. Now all users have the access right if they passed the authentication.
QCCR1H105103	(OMi 10.01) OMi-UCMDB integration fails on port 80. This is because the DefaultSessionTenant header is missing from the message causing OMi JBoss to reject the messages.	Fixed the issue by implementing a code change to add the DefaultSessionTenant header to the message.
QCCR1H105140	This is a request for the support for discovering Microsoft Windows 10.	Added discovery support for Microsoft Windows 10.
QCCR1H105269	Slow performance with scheduled	Fixed the issue by implementing a code

Global ID	Problem	Solution
	reports. If the client and the server are in different time zones then the reports are wrongly inserted in the Job List Window.	change. If the client and the server are in different time zones then the reports are wrongly inserted in the Job List Window. Now a new method was added in order to properly convert server time zone into client time zone.

Fixed Defects for UCMDB 10.11 CUP6

Here is a list of the defects fixed in the CUP6 release.

Global ID	Problem	Solution
QCCR1H93682	After users sort the CI type by its name or number in the Show Results For Triggered CI dialog box and then double-click a CI type, the original CI type shows in the Discovered CIs dialog box that opens.	After users sort the CI type by its name or number in the Show Results For Triggered CI dialog box and then double-click a CI type, the correct CI type shows in the Discovered CIs dialog box that opens.
QCCR1H99016	When logging in to the UCMDB UI in the authorized state and using the advanced conditional search, the authorized CIs that satisfy the search condition are not found and displayed.	Fixed the issue by applying a code change. Now the advanced CI conditional search works properly.
QCCR1H99244	When configuring HP SIM credential, the integration point has no reference to the credentials being used. The HP SIM Protocol entry has no reference to the HP SIM application server, only to the database.	Fixed the issue by applying a code change. Now the MSSQL_NTLMV2 type connection is available when configuring HP SIM credential. **Note:** This fix requires CP15 Update 3 to work.
QCCR1H99439	When the **Changed CIs** filter is on, some changes that are related to CIs are not displayed.	Fixed the issue by applying a code change. When the **Changed CIs** filter is on, all CI changes appear.

Global ID	Problem	Solution
QCCR1H99647	Information on the verification or validation criterion results is not present in the logs.	Implemented logging for showing the result of each verification and validation criterion. However, you need to set the **cmdb.reconciliation.datain .multiplematch** log to the **TRACE** level in order to enable this implementation.
QCCR1H99918	The integration between Service Manager and UCMDB that is based upon Connect-ITcreates CIs of the Infrastructure Element CI type with the qualifier **Abstract Class**. This means that no CIs of this type may be created. This results in errors with the UCMDB to BSM integration.	Fixed the issue by applying a code change, so that no update type change is allowed when **Abstract Class** is the type to update to.
QCCR1H99940 QCCR1H100476	In certain circumstances, database deadlock occurs in log files when multiple threads try to update records in different orders.	Fixed the issue by using row locks so that no deadlock occurs.
QCCR1H100343	No email is received even if a Scheduler job was created with success for the Compare Archives Report, the Compare CIs Report, or the Compare Snapshot Report. This was caused by an older version of the UI apache.poi jar file.	Fixed the issue by upgrading the UI apache.poi jar to a later version.
QCCR1H100531	There are many triggers that are stuck in the **PARKING** state for a long time.	Added one new column **Last invocation** to indicate the job execution status. The original column shows the workflow status.
QCCR1H100629	Currently the documentation lacks full re-index required steps.	Added documentation about how to perform a full re-index of all CIs. For details, see "How to Perform a Full Reindex of All CIs" on page 85.

Global ID	Problem	Solution
QCCR1H100791	After UCMDB CUP5 is deployed, the out-of-the-box XML PushAdapter export crashes. Integration crashes with the NullPointerException error.	Fixed the issue by applying a code change so that null value check will be performed to avoid NullPointerException.
QCCR1H100800	Data Flow Probe connects to the UCMDB server using the **close** HTTP connections.	Data Flow Probe connects to the UCMDB server using the **keep-alive** HTTP connections and the number of connections can be controlled.
QCCR1H100808	When running the **Migrate DDMI Agent** job to upgrade some DDMI agents to UD, the communication log says that is a successful connection; however, no CI is created for performing Inventory Discovery.	Fixed the issue by applying a code change. When the probe detects the node that is a dummy node and out-of-scope, the probe will not add the license tag to it.
QCCR1H100919	The **Authorized** state of Customer ID 100001 appears with the failed status on the UCMDB server's status page. The **ping_url** is down, causing no probes to connect to the writer. This issue is reproducible when multiple states are present in UCMDB.	Fixed the issue by applying a code change. Now the UCMDB server is started without failure.
QCCR1H100940	Universal Discovery Control Panel is not opening. There is no error in the UI. Nothing happens when users try to open it. Only the NullPointerException is found in the client logs. The root cause is that when initializing the Universal Discovery Control Panel, all activities and their data (for example, templates being used) need to be loaded. If users happen to delete a template that is being used by some activities, NullPointerException will be raised during the control panel initialization.	Now if a template is deleted by users accidentally, activities that are created with this template are corrupted. When loading the control panel, activities are checked, and missing templates are handled, so the control panel still works, and users will see a warning message when accessing a corrupted activity.

Global ID	Problem	Solution
QCCR1H100980	Some jobs are scheduled to send reports in Excel format via email to a few users. The **SMTP server** setting seems okay but there is always an error with one of the scheduled jobs: `javax.mail.MessagingException: SMTP server host is empty.` It turns out that the **Alternate SMTP server** setting was left empty. If sending the email with the **SMTP server** fails, the **Alternate SMTP server** setting will be used.	The following note should be added to the *How to Configure the UCMDB Mail Server* section in the *HPE Universal CMDB Administration Guide* to indicate that why the **Alternate SMTP server** and **Alternate SMTP server port** fields should not be left empty: **Note:** It is recommended to set both the SMTP server and alternate SMTP server. In case the SMTP server is not available, an alternative SMTP server will be used by the UCMDB server when sending emails.
QCCR1H101120	The following error message is returned by the **Oracle Database by SQL** job: "Failed to collect data from Oracle server".	Fixed the issue by applying a code change. Now the **Oracle Database by SQL** job works properly.
QCCR1H101223	The Data Flow Probe status appears disconnected (stopped) in the UCMDB UI for a long time. However, the Probe service is up, and the Probe is reporting data and connecting to UCMDB.	Now UCMDB sets the Data Flow Probe status correctly.
QCCR1H101252	The UCMDB servers experiences the performance issue. The UCMDB GUI becomes unresponsive from time to time.	Fixed the issue by increasing the default value for **jetty.maxThreads** to 300.
QCCR1H101581	Universal Discovery 10.20 sets incorrect values in the **hwHostOS** field for HP-UX by including **hwOSHostHPUXType** into the value.	Fixed the issue by removing the inclusion of **hwOSHostHPUXType** in the **hwHostOS** field. **Note:** This fix requires CP15

Global ID	Problem	Solution
		Update 3 to work.
QCCR1H101843	The corrupted **CALCULATED_ ATTRIBUTE** line in the class definition prevents the CI type icon change.	Fixed the issue by applying a code change. Now the **CALCULATED_ ATTRIBUTE** qualifier is added when creating a new CIT.
QCCR1H102018	The **displayName** attribute is not updated if this setting is selected to be used for LDAP users.	The LDAP display name is now used and updated for users.
QCCR1H102081	Encryption for Oracle ASO does not work.	Fixed the issue by adding the following lines in the **sqlnet.ora** file: SQLNET.ENCRYPTION_SERVER = required SQLNET.CRYPTO_CHECKSUM_ SERVER = required This forced the use of encryption on connection between the UCMDB server and database.
QCCR1H102098	The UCMDB Integration Service cannot be started due to "connection failure to the database" if users have changed the master key on the UCMDB server side.	Fixed the issue by applying a code change. Now UCMDB Integration Service can load the updated master key properly so that it can connect to the database.
QCCR8D38423	When loading factory contents into RTSM at the first startup, some packages fails to be loaded, with the result of some missing content.	Fixed the issue by changing the order in which the deployers are run. Packages can be deployed without errors now.

Fixed Defects for UCMDB 10.11 CUP5

Here is a list of the defects fixed in the CUP5 release.

Global ID	Problem	Solution
QCCR1H95545	Data Flow Probe randomly stops, and does not send results back to the server.	Fixed the issue by resolving the deadlock for DB connection, now Data Flow Probe runs discovery successfully.
QCCR1H95747	The **Add Parameter** button under **Modeling > CI Type Manager >Attached Menu** tab > **Menu Item Method** pane > **New Method** option is not working in UCMDB 10.11.	Fixed the issue by applying a code change, now the **Add Parameter** button works properly.
QCCR1H98611	The SCCM population job fails with the "ClassCastException" error.	Fixed the issue by correcting logic to use proper child type, now the SCCM population job runs successfully.
QCCR1H98947	The reader server restarts in the High Availability environment because the writer server sends the revisions in an incorrect order. The log shows the following error message: "Server had to be restarted because of a missing revision."	Fixed the issue by creating an ordered queue to place the revisions in the expected order.
QCCR1H98963	The SSH credential is changed after being saved and reopened in the UCMDB UI.	Fixed the issue by applying a code change. The SSH credentials now can be saved successfully.
QCCR1H99025	When creating a package using the **Create Custom Package Wizard**, not all Pattern Based Models appear under **Resource Selection** page > **Model** tree > **Service Models** for exporting to other environments, because a simple PBM is translated into a PBM over an Instance-Based Model (IBM) after saving the model.	Fixed the issue by applying a code change. Now all Pattern Based Models can be exported properly.
QCCR1H99152	No documentation about the binary data is found in the communication logs, which causes users to think that the scan files fail to parse the communication logs.	Added the following note to the documentation:

Global ID	Problem	Solution
		Note: CDATA mechanism is used to store information retrieved from user environment in the communication logs. When scan files get some characters or XML segments that cannot be parsed by the CDATA mechanism, the information will be saved in binary format for further troubleshooting purpose. HP Software Support will decode the binary data in the communication logs to perform troubleshooting.
QCCR1H99331	UCMDB to UCMDB Push creates duplicated CIs. Identifier criteria take the calculated ID into consideration when identifying objects. Because **global_id** is changing during the push, the calculated ID is also changing and it creates duplicated data.	Fixed the issue by adding a special setting **reconciliation.calculated. id.attribute** to take the calculated ID into consideration. By default, this setting is set to **false**. If the setting is not present, it is also treated as false by default.
QCCR1H99425	The **VMware vCenter Topology by VIM** job fails with the following error message: "Failed to connect to remote process: details: Software caused connection abort: socket write error".	Fixed the issue to avoid the socket error when running the **VMware vCenter Topology by VIM** job.
QCCR1H99559	When adding a CI to a job that is currently stopped by using IT Universe Manager, the probe limit changes to **disabled** and the job does not start. This is a regression that	Fixed the issue by rolling back the change made in 10.11 CUP3. Now CIs can be added to a job that is currently stopped

Global ID	Problem	Solution
	occurs in the 10.11 CUP3, because this issue does not exist in the 10.11 CUP2.	by using IT Universe Manager as in the 10.11 CUP2.
QCCR1H99736	The following error message occurs when the **Long** type attributes are used in the reconciliation rule: "There is no temp table for cmdb type [CmdbLongType]".	Fixed the issue by applying a code change. Now the **Long** type attributes can be used in the reconciliation rule.
QCCR1H100030	When discovering Cisco devices by the **Host Connection by SNMP** job, thousands of the following warning messages are returned: "Normalization rule output conflict for CI {0}".	Fixed the issue by modifying the attribute comparison code to avoid the normalization rule conflict error.
QCCR1H100066	The reader server restarts in the High Availability environment because of the following error on the writer server: "java.util.ConcurrentModificationException".	Fixed the issue by applying a code change. Now the reader server works properly in the High Availability environment.
QCCR1H100132	A very long dispatch queue is seen on the Universal Discovery server and almost no new jobs are scheduled. The dispatch queue should be reduced to zero till new jobs get activated if you restart the server.	Added logs to show the time that is spent on each step of the dispatch for analysis purposes.
QCCR1H100144	The reader server in the High Availability environment restarts because of the JGroups cluster recreation.	Fixed the issue by changing the JGroups configuration.
QCCR1H100146	When deleting the search folder, the **reindex** method fails with the following error message: "No such core: customer1". This is caused by the **solr.xml** file being changed twice after server restart, which resulted in creation of two instances of the core container.	Fixed the issue by applying a code change, so that the **solr.xml** file is created at server startup, instead of being changed twice after server restart.
QCCR1H100269	All Tenant IDs coming from the automatic deletion process are returned as the System Default Tenant although a specific tenant is set on the Data Flow Probe.	Fixed the issue by applying a code change. Now the automatic deletion process sends the proper Tenant ID to

Global ID	Problem	Solution
		the server.
QCCR1H99123	When Solr Search is enabled, the Disruptor keeps growing and reaches a high memory consumption.	Fixed the performance issue by decreasing the size of the Disruptor ring buffer from 16 * 1024 to 1024. Now JVM heap usage is normal.
QCCR1H99154	Long full Garbage Collector shows in **wrapper.log** and JVM hangs or restart because Solr logging is causing big objects on the heap.	Fixed the issue by adding a new setting **cmdb.search.use.query. syntax.tree** to control if syntax tree is logged or not. For more details, see the What's New section.

Fixed Defects for UCMDB 10.11 CUP4

Here is a list of the defects fixed in the CUP4 release.

Global ID	Problem	Solution
QCCR1H95235	After changing the SAP Server icons in CI Type Manager, the changes do not appear in the CI Type tree or anywhere else.	Now SAP Server icons in CI Type Manager can be changed and the changes appear as expected.
QCCR1H95558	After upgrading from 10.01 CUP4 to 10.01 CUP10, discovery probes in non-union mode cannot run discovery jobs.	Now discovery probes in non-union mode can run discovery jobs.
QCCR1H97566	Many triggers for several discovery jobs fail randomly with the "Java.lang.NullPointerException" error.	Fixed the issue by a code change so that discovery jobs can successfully run.
QCCR1H97715	The Server database returns the time-out error when processing the result.	Fixed the issue by modifying the batch chunk from 10000 to 200 so that the chunk can be processed in a short time.

Global ID	Problem	Solution
QCCR1H97925	Call Home returned incorrect tenant owner ID for some CIs.	Call Home can return the correct tenant owner ID for CIs.
QCCR1H97950	When using Java API **setDiscoveryConfigurationXML** to update Probe IP address ranges, all jobs are restarted because **setDiscoveryConfigurationXML** contains the following parameter that enables or disables all jobs in the group: ``` <DiscoveryGroup name="Network"> <IsEnabled>True </IsEnabled> ```	Fixed the issue by adding a new method **void setDiscoveryConfigurationXML (String xmlString, boolean includeGroup)**. If you want to update IP address ranges and credentials only, you can use this new method by setting the **includeGroup** parameter to **false**. For more details, see the What's New section.
QCCR1H98037	The values of normalized fields are not in a user-friendly format.	Fixed the issue by unifying the result content when Data Flow Probe sends the result to UCMDB.
QCCR1H98051	When multiples roles are assigned to a user, the user's permission level is set to the role with the minimum permissions. This is the desired behavior, but it is not explained in full details, thus causing confusion.	The HP Universal CMDB Administration Guide is updated as follows: For **CIT Menu Items**, you select a CIT from the tree and then select specific actions from the Available Actions pane and move them to the Selected Actions pane. You can also right-click a CIT and select the actions from the pop-up dialog box. If no permissions are assigned for any CIT, all the menu items are permitted by default (in accordance with the permissions granted in the General Actions tab). The following important note is added to clarify the desired behavior: **Note:** The above principle remains

Global ID	Problem	Solution
		valid when there are multiple roles with menu items permissions/general actions. Both the menu items permissions and the general actions are accumulated. If there are NO menu items permissions accumulated from all the user's roles, all the menu items are permitted by default (in accordance with the permissions granted by accumulating all the General Actions from all the user's roles). In the opposite way, if there are menu items permissions accumulated from all the user's roles, they will be taken into account and the UI will enforce them, even in the case when a role with no CIT Menu Items is aggregated with a role with CIT Menu Items.
QCCR1H98095	Browser search stops working because of changes in the snapshot CI type instances.	Browser search works as expected.
QCCR1H98116	The following error message is returned in the management zone: "Failed to initialize CM client (sleep interrupted)".	Now credentials can be fetched from the Confidential Manager Client.
QCCR1H98117	Many unsent results exist on probes.	Fixed the issue by reducing the unsent results on probes.
QCCR1H98290	Custom jobs are stuck with zero working threads, for example, no triggers on one probe are running.	Custom jobs now can run as expected.
QCCR1H98458	The "NullPointerException" error is	Fixed the issue to avoid processing null

Global ID	Problem	Solution
	thrown in processing discovery results.	objects.
QCCR1H98485	Identification by key attributes is not working for certain types of attributes (for example, long) when you create an InfrastructureService model.	Now InfrastructureService models are working with the following types of custom key attributes used for identification (without the **Name** attribute): `boolean,date number, double number, float number, integer, list of integers, list of strings, long number, string.` However, the following types of attributes are not supported: `bytes, xml, some custom lists (such as lists of dates).`
QCCR1H98737	When a Full Synchronization is completed, running a differential synchronization with NNMi pull integration sends Layer 2 Connection CIs without the required reconciliation information.	After a Full Synchronization, a differential synchronization can be run as expected.
QCCR1H99001	After you upgrade to 10.11 CUP3, the Normalization rule does not work.	The Normalization rule works as expected.

Fixed Defects for UCMDB 10.11 CUP3

Here is a list of the defects fixed in the CUP3 release.

Global ID	Summary
QCCR1H88798	Fixed an issue that occurred when global_id was not updated if UCMDB was not configured as a global_id generator.
QCCR1H90278	Added the functionality to re-run a job with commlog enabled.
QCCR1H91007	Fixed an issue that occurred when trying to populate some links from Service Manager to UCMDB and errors were returned.

Global ID	Summary
QCCR1H91923	Fixed an issue that occurred when resources were not updated in UCMDB during the content pack deployment because of double file extensions.
QCCR1H92224	Fixed an issue that occurred when the input parameters for the content validator of a job was not available.
QCCR1H92742	Fixed an issue that occurred when the AM integration failed with an error.
QCCR1H92925	Fixed an issue that occurred when the change report did not work correctly if selecting the **LastMonth** option as the parameter.
QCCR1H93378	Fixed an issue that occurred when all triggers were added to the job with **Probe Limit** disabled.
QCCR1H94507	Fixed an issue that occurred when the getProbeFromHost() method did not check whether an IP address was configured in the management zone range before using this IP address's probe name.
QCCR1H94686	Fixed an issue that occurred when editing a service tree failed with the following error: "Pattern existing ci tql has identical names for its (Node or Link) Elements".
QCCR1H94855	Fixed an issue that occurred when the ORA-01400 and ORA-30926 errors were returned on probe logs.
QCCR1H94956	Fixed an issue that occurred when the probe did not properly run from a restart.
QCCR1H95112	Fixed an issue that occurred when errors were returned by the Viewer on the Windows 2012 probe.
QCCR1H95195	Fixed an issue that occurred when the scheduler in the Integration Studio could not support a long repetition period.
QCCR1H95277	Fixed an issue that occurred when the discovery task took several hours to be dispatched to the probe.
QCCR1H95322	Fixed an issue that occurred when the data was not displayed in the CI Type Manager if a particular CI type had two attributes with the same name.
QCCR1H95544	Fixed an issue that occurred when software that was registered by Package Rules could not be identified in UCMDB.
QCCR1H95599	Fixed an issue that occurred when the external policies results were invisible in Configuration Manager.

Global ID	Summary
QCCR1H95638	Fixed an issue that occurred when UCMDB incorrectly assigned Universal Discovery full licenses to incomplete Node CIs with no operating system that were not in the probe scope.
QCCR1H95665	Fixed an issue that occurred when many "java.lang.NullPointerException" errors occurred in the probe-error.log.
QCCR1H95698	Fixed an issue that occurred when the "java.sql.BatchUpdateException" errors constantly occurred in the probe-error.log.
QCCR1H95813	Fixed an issue that occurred when a relationship could not be individually deleted from the IT Universe Manager.
QCCR1H95852	Fixed an issue that occurred when the "Cannot invoke trigger" error was returned.
QCCR1H95915	Fixed an issue that occurred when UNIX nodes were incorrectly merged.
QCCR1H96037	Fixed an issue that occurred when user.zsai was incorrectly imported into the UCMDB Software Library using **Import SAI file**.
QCCR1H96176	Fixed an issue that occurred when the scheduler in the Integration Studio could not support **Week** for the **Interval** repetition.
QCCR1H96216	Fixed an issue that occurred when UCMDB Server encountered the OutOfMemoryError in Java heap in processing the discovery results of the **Host Resources by Shell** and **Host Applicationsby Shell** jobs.
QCCR1H96241	Fixed an issue that occurred when an error was returned while running **loggrabber.bat**.
QCCR1H96242	Fixed an issue that occurred when the "java.lang.RuntimeException: Could not find domain" error was returned.
QCCR1H96251	Fixed an issue that occurred when the authorization failed with errors.
QCCR1H96267	Fixed an issue that occurred when the **Host Applications by Shell** job failed on the UCMDB Server caused by the "java.lang.NullPointerException" error.
QCCR1H96324	Fixed an issue that occurred when the discovery status in the management zone did not update.
QCCR1H96336	Added the capability to control, when LDAP authentication is enabled, whether non-interactive flows are verified against the LDAP Server or not. By default, when LDAP authentication is enabled, all the authentication flows, whether

Global ID	Summary
	interactive (manual user login) or non-interactive (authentication of integrations, Web Services, API's) are checked in the LDAP repository. A new setting **enable.ldap.authentication.in.non.interactive.flow** is added to control whether the non-interactive flows should be verified against the LDAP Server or not. By default, it is set on **true**. When setting to **false**, the-non interactive flows will be verified only against the local UCMDB user repository.
QCCR1H96349	Fixed an issue that occurred when not all Trigger CIs were dispatched to the probes correctly.
QCCR1H96397	Added the **Enable the use of the pfiles command** check box to allow you to enable or disable the use of pfiles command in TCP/IP connectivity detection in scanner on the Solaris and HP-UX platforms. To enable the use of pfiles command in TCP/IP connectivity detection on the Solaris or HP-UX platform when you generate scanners, 1. Go to **Data Flow Management > Adapter Management > Resources > InventoryDiscovery > Scanner Configuration Files >** <Select a configuration file (.cxz) file>. 2. In the right pane, click [Generate Scanners...]. 3. In the Scanner Generate (Manual Deployment Mode) dialog box that opens, provide necessary information and go to the **Scanner Options** page. 4. Go to the **Miscellaneous** tab, and select the **Enable the use of the pfiles command** check box for the **TCP/IP connectivity options** section. By default this setting is not selected.
QCCR1H96504	Fixed an issue that occurred when generating a CI Change report took too much time.
QCCR1H96577	Improved the UCMDB Browser search performance. Folding rules are configurable through a new setting **cmdb.search.enriching.use.folding.rules** for search enriching.
QCCR1H96626	Improved the UCMDB Browser search performance. Enriching no longer runs for a large amount of CIs.
QCCR1H96659	Improved the return messages for an integration point job that operates on a busy Data Flow Probe.

Global ID	Summary
QCCR1H96660	Fixed an issue that occurred when the push adapter did not check credentials. **Note:** You must manually redeploy the push adapter.
QCCR1H96685	Fixed an issue that occurred when discovery jobs could not be saved under existing discovery modules after upgrading to 10.11 CUP2.
QCCR1H96688	Fixed an issue that occurred when the **Enable aging** attribute of CIs that were created by the **Import from Excel** adapter was true though this attribute was set to false.
QCCR1H96783	Fixed an issue that occurred when the push to DB integration was triggered at each server restart.
QCCR1H96842	Fixed an issue that occurred when the UCMDB to UCMDB push adapter returned an error message.
QCCR1H96845	Fixed an issue that occurred when ExternalIdImpl threw "NullPointerException" errors for attributes of type DATE and BYTES.
QCCR1H96907	Fixed an issue that occurred when the Generic Database Adapter did not automatically delete CIs or links.
QCCR1H96982	Fixed an issue that caused an incorrect merging of the **sap_system** CIs in rare cases when the associated node could not be identified and inserted into UCMDB. As a result, a new attribute **isTopologyRequired** is added in the **<connected-ci-condition>** XML tag of the reconciliation rule of a CI type. For details, see the Notes section.
QCCR1H97031	Fixed the null pointer exception issue that occurred when processing the NNMi integration data.
QCCR1H97099	Fixed an issue that occurred when the Number of Changes report failed on database selection with the following error: "Failed to load report".
QCCR1H97103	Fixed an issue that occurred when about 1000 CIs that were in the results of the trigger query disappeared in the triggered CIs list.
QCCR1H97157	Fixed an issue that occurred when the Management Data Repositories (MDR) licenses were counted by integration points. A new mechanism is provided to

Global ID	Summary
	allow users to create one integration point for both data push and population.
	For instructions about creating one integration for both data push and population, see the Notes section.
	Note: Deployment of the Universal Discovery Content Pack 15.00 is required for this defect fix to work.
QCCR1H97168	Fixed an issue that occurred when the following error was returned: "Can't add to DataContainer because its size larger than the fuse 200000 which defined by reconciliation.internal.data.container.size.fuse".
QCCR1H97197	Fixed an issue that occurred when the "collection error -1(-1)" error occurred in the Analysis Workbench after performing a software teaching and using the "Unload Scan File" function.
QCCR1H97273	Fixed an issue that occurred when new errors were returned after applying the ORA30926_classes.zip hotfix.
QCCR1H97374	Added procedure on how to disable the HTTP TRACE or TRACK methods on the probe.
QCCR1H97512	Fixed an issue that occurred when the UCMDB-NNMi integration failed with reconciliation errors on Non-SNMP nodes.
QCCR1H97779	Fixed an inconsistency issue that occurred at minor upgrade from UCMDB 10.01 to UCMDB 10.1x. The links were not migrated correctly from the ROOT table to the ROOT_LINK table during the minor upgrade procedure. If you plan to upgrade from UCMDB 10.01 to UCMDB 10.1x, it is recommended that you proceed with upgrading directly to UCMDB 10.11 CUP3. That is to say, after UCMDB 10.11 is installed, do NOT start the UCMDB server yet. Only after UCMDB 10.11 CUP3 is applied, start the UCMDB Server, which will then trigger the minor upgrade.
QCCR1H97790	Fixed an issue that occurred when the recognition engine incorrectly reported applications after importing a new user SAI file in the Software Library in UCMDB.
QCCR1H97871	Fixed an issue that occurred when the last use date for the discovered software was incorrect.
QCCR1H97888	Fixed an issue that occurred when the NNMi sync took a long time to insert data

Global ID	Summary
	into UCMDB.
QCCR1H97904	Fixed an issue that occurred when false restarts of UCMDB writer server happened occasionally. **Important:** Before starting the UCMDB server, open the **\UCMDBServer\bin\wrapper.conf** file, locate the following settings and modify their values as indicated below: ``` wrapper.cpu.timeout=60 wrapper.ping.timeout=320 wrapper.ping.interval=30 wrapper.stop.timeout=320 wrapper.shutdown.timeout=320 wrapper.jvm_exit.timeout=320 ```
QCCR1H97941	Fixed an issue that occurred when Infrastructure Service instances could not be created without a name value.

Fixed Defects for UCMDB 10.11 CUP2

Here is a list of the defects fixed in the CUP2 release.

Global ID	Summary
QCCR1C20050	Added support for reporting multiple installations of the same software version.
QCCR1H92474	Fixed an issue that occurred when the **MSSQL Server Connection by SQL** job failed to discover while using the NTLM authentication.
QCCR1H94134	Fixed an issue that occurred when trigger CIs for jobs under the management zone were in the status of **Progress**. The UI status of the trigger CI did not update and even continued for several days.
QCCR1H94525	Fixed an issue that occurred when a misleading message indicating that all the CIs were touched was returned when using the touch window.
QCCR1H94615	Fixed an issue that occurred when the **Host Applications by shell** job reported a node CI without any properties except one IP address.
QCCR1H94693	Fixed an issue that occurred when the upgrade from 9.05 to 10.10 failed because of the missing of the server_side attribute for the adapter_config class.

Global ID	Summary
QCCR1H94792	Added the time value for the date cells in exported Microsoft Excel reports.
QCCR1H94815	Fixed an issue that occurred when the XML Enrichment service could not start on any probes with the timezone of GMT +9:30 because of the incorrect WrapperEnricherLicense.conf.
QCCR1H94832	Fixed an issue that occurred when discovery jobs stopped triggering all available CIs after the upgrade from 10.10 to 10.11.
QCCR1H94901	Fixed an issue that occurred when the **Merge Clustered Software** job did not properly merge the duplicated database instances that fit the trigger TQL.
QCCR1H95016	Fixed an issue that occurred when the **Inventory Discovery by Scanner** job did not display the correct trigger count.
QCCR1H95063	Fixed an issue that occurred when the **Layer2 Topology Import** job from NNMi failed with the following error "ORA-12899: value too large for column "UCMDB10"."DDM_TEMP_MAPPINGS"."TEMPID" (actual: 53, maximum: 43)".
QCCR1H95112	Fixed an issue that occurred when Viewer did not work and errors were returned on Windows 2012 probe.
QCCR1H95146	Fixed an issue that occurred when UCMDB on postgresql could not modify the CIT attribute size.
QCCR1H95157	Fixed an issue that occurred when the disconnected 9.05 probes from UCMDB could not be removed.
QCCR1H95182	Fixed an issue that occurred when the Package Manager resource selection took a long time to populate on UI.
QCCR1H95201	Fixed an issue that occurred when the custom adapter and script were deleted from **Adapter Management** > **Resources** > **Packages** > **<<No Package>>**.
QCCR1H95216	Fixed an issue that occurred when a newly-installed probe or LWP could not connect the UCMDB server with basic authentication enabled.
QCCR1H95223	Fixed an issue that occurred when the topology reporting by SiteScope integrated with BSM failed without any alerts.
QCCR1H95264	Added Application-Name to Manifest of GUI jars.
QCCR1H95284	Fixed an issue that occurred when the following warning message in the WrapperProbeGw.log file was returned while running the **Inventory Discovery by**

Global ID	Summary
	Scanner job: "Can not execute the script. The reason is forceDontExecute=false or the script file contains mainfunction=false".
QCCR1H95347	Fixed an issue that occurred when searching in UCMDB Browser froze the server.
QCCR1H95470	Fixed an issue that occurred when the **Push IDs into NNMi** adapter produced the following errors in RemoteProcesses.log: "The ucmdb_wrapper.jar module, which is not valid, caused null"and "java.lang.ExceptionInInitializerError".
QCCR1H95472	Fixed an issue that occurred when manually deployed scanners could not be created.
QCCR1H95545	Fixed an issue that occurred when a Data Flow Probe randomly stopped discovering and sending results to the server.
Configuration Manager Fixed Defects	
QCCR1H95306	Fixed an issue that occurred when the current version of the view did not match the last authorized version.
QCCR1H95599	Fixed an issue that occurred when the external policies results were invisible in Configuration Manager.

Fixed Defects for UCMDB 10.11 CUP1

Here is a list of the defects fixed in the CUP1 release.

Global ID	Summary
QCCR1H84172	Windows Server 2012 is supported for Data Flow Probe and Universal Discovery.
QCCR1H89618	Fixed an issue that occurred when UCMDB Configuration Manager login is case sensitive.
QCCR1H91624	Fixed an issue that occurred when a trigger was dispatched to the wrong Data Flow Probe.
QCCR1H93238	Fixed an issue that IP addresses CIs discovered by member probes of clusters cannot be dispatched on host connection jobs.
QCCR1H93287	Fixed an issue that occurred when Universal Discovery Agent application is not populated to UCMDB.

Global ID	Summary
QCCR1H93297	Fixed an issue that occurred when the SCCM adapter was configured to use the temp table.
QCCR1H93418	Fixed an issue that occurred when modifying the output node for a pattern-based model and an error was returned.
QCCR1H93480	Fixed an issue that occurred when executing UCMDB API Web Service "updateProbeScope".
QCCR1H93712	Fixed an issue that occurred when some scan files are moved to scans\Failed\error folder with error : String index out of range: -1.
QCCR1H93725	Added support for Oracle12c.
QCCR1H93798	Fixed an issue that occurred when new packages were not created.
QCCR1H93805	Fixed an issue that occurred when a user with no permissions attempts to login to UCMDB.
QCCR1H93836	Fixed an issue that occurred when WebSEAL passed the PD session cookie to the backend during a WebSEAL integration. A new setting is added which caused the browser cookies to be read at applet start time. The setting name is mam.web.should.read.web.browser.cookies.
QCCR1H93940	Fixed an issue that occurred when the UcmdbService calculateImpact() method is not able to cope with global Ids.
QCCR1H93980	Fixed an issue that occurred when a processing error was returned because of a List System Type definition.
QCCR1H93982	Fixed an issue that occurred when an "Access Denied" error was returned while logging in to Configuration Manager after an upgrade.
QCCR1H94051	Fixed an issue that occurred when Pattern-Based models with ENUM Attributes revert values back to default values.
QCCR1H94162	Fixed an issue that occurred when the **Rerun discovery** button did not rerun discovery and the following error message was returned: "maximum number of expressions in a list is 1000".
QCCR1H94313	Fixed an issue that occurred when SQL error messages were returned in the Data Flow Probe: "ddm_gw_task_results_pkey index violation".
QCCR1H94350	Fixed an issue that occurred when Class B/C IPs by ICMP jobs failed with error

Global ID	Summary
	"java.lang.NumberFormatException: For input string..".

Documentation Errata

The following items are listed incorrectly in the documentation.

HPE Universal CMDB Administration Guide

Important note about a user's CIT Menu Items permissions when both custom and Out Of Box roles are assigned to the user

Location: *HPE Universal CMDB Administration Guide*, version 10.10, page 188

Error: When multiples roles are assigned to a user, the user's permission level is set to the role with the minimum permissions. This is the desired behavior, but it is not explained in full details, thus causing confusion. (QCCR1H98051)

Correction: Under the current bullet as follows,

● For **CIT Menu Items**, you select a CIT from the tree and then select specific actions from the Available Actions pane and move them to the Selected Actions pane. You can also right-click a CIT and select the actions from the pop-up dialog box. If no permissions are assigned for any CIT, all the menu items are permitted by default (in accordance with the permissions granted in the General Actions tab).

The following important note shall be added to clarify the desired behavior:

> **Note:** The above principle remains valid when there are multiple roles with menu items permissions/general actions. Both the menu items permissions and the general actions are accumulated. If there are NO menu items permissions accumulated from all the user's roles, all the menu items are permitted by default (in accordance with the permissions granted by accumulating all the General Actions from all the user's roles). In the opposite way, if there are menu items permissions accumulated from all the user's roles, they will be taken into account and the UI will enforce them, even in the case when a role with no CIT Menu Items is aggregated with a role with CIT Menu Items.

HPE UCMDB Discovery and Integrations Content Guide - Supported Content

The description for the Command List column in the *SSH Protocol* section is missing a dot

Location: *HPE UCMDB Discovery and Integrations Content Guide - Supported Content*, page 54 (CP14); page 54 (CP15) (QCCR1H92999)

Error: The description for the Command List column in the *SSH Protocol* section of *Chapter 7: Supported Protocols* is missing a dot.

Correction: The line "For example, entering *uname would select all of the following expressions:" should be changed to "For example, entering **.*uname** would select all of the following expressions:"

HPE Universal CMDB Developer Reference Guide, HPE Universal CMDB Data Flow Management Guide

No documentation about the binary data found in communication logs

Location: *HPE Universal CMDB Developer Reference Guide*, 10.20, pages 66~67; *HPE Universal CMDB Data Flow Management Guide*, 10.20, page 256 (QCCR1H99152)

Error: There is no documentation about the binary data found in the communication logs, which is leading users to think that the scan files fail to parse the communication logs.

Correction: Add the following note to the two guides:

> **Note:** CDATA mechanism is used to store information retrieved from user environment in the communication logs. When scan files get some characters or XML segments that cannot be parsed by the CDATA mechanism, the information will be saved in binary format for further troubleshooting purpose. HP Software Support will decode the binary data in the communication logs to perform troubleshooting.

HPE Universal CMDB Support Matrix, Release Notes

The limitation of Internet Explorer 11 not supported for Configuration Manager is not clarified in the documentation

Location: *HPE Universal CMDB Support Matrix*, version 10.11, page 13 (CP14); Release Notes for UCMDB 10.11, page 8 (QCCR1H103519)

Error: The limitation that Internet Explorer 11 is not supported for Configuration Manager with UCMDB version 10.11 (or with a CUP, up to CUP6) is not clarified in the documentation.

Correction: Added clarification that Internet Explorer 11 is supported for UCMDB UI and UCMDB Browser only. Also added a note in the Support Matrix document to indicate that support for Configuration Manager requires UCMDB 10.11 CUP7.

Appendixes

This appendix includes:

How to Increase the Number of Threads for Data Push Jobs

Version 10.11 CUP8 introduced a new JMX setting
com.hp.ucmdb.synchronizer.manager.SynchronizerManagerFactory, allowing you to increase
the number of threads for data push jobs from the out-of-the-box value **3** to any desired value.

Increase the number of threads for data push jobs

> **Note:** Apply this change for large UCMDB deployments where the hardware resources for

> UCMDB server and data flow probe are assigned as documented in the *HPE Universal CMDB Sizing Guide*.

To do so,

1. Log in to the UCMDB JMX console. (Launch the Web browser and enter the following address: **http://<server_name>:8443/jmx-console**. You may have to log in with a user name and password.)

2. Enter **setInternalSetting** in the Quick Search field and click the link that appears with the **UCMDB:service=Settings Services** category.

3. Invoke the **setInternalSetting** JMX method with the following parameters:

   ○ **customerID:** Enter your Customer ID. (**Default: 1**)

   ○ **key:** Enter **com.hp.ucmdb.synchronizer.manager.SynchronizerManagerFactory**.

   ○ **value:** Enter a desired value as the number of threads for push jobs. (**Default: 3**).

4. Double check the value set by invoking the **getInternalSettings** JMX method.

   The returned result contains the **com.hp.ucmdb.synchronizer.manager.SynchronizerManagerFactory** setting and its value.

5. Restart the UCMDB Server.

6. The new value is loaded successfully if you see the following message logged in the **startup.log** file:

```
The number of threads for manager
com.hp.ucmdb.synchronizer.manager.SynchronizerManagerFactory was overridden
to ...
```

> **Note:** The **startup.log** file is located in the following directory:
>
> On Windows: **C:\hp\UCMDB\DataFlowProbe\UninstallerData\Logs**
>
> On Linux: **/opt/hp/UCMDB/DataFlowProbe/UninstallerData/Logsg**

Revert the change

To revert the change and use the default value,

1. Perform either of the following from the UCMDB JMX console:

   ○ Invoke the **setInternalSetting** JMX method with the following parameters:

       • **customerID:** Enter your Customer ID. (**Default: 1**)

       • **key:** Enter **com.hp.ucmdb.synchronizer.manager.SynchronizerManagerFactory**.

       • **value:** Enter the default value **3**.

   ○ Delete the new setting by invoking the **listResources** method from the
   UCMDB:service=URM Services category.

   If you delete the new setting, UCMDB will use the hard-coded default value.

   To do so,

       i. Enter **listResources** in the Quick Search field and click the link that appears with the
       UCMDB:service=URM Services category.

       ii. Invoke the **listResources** method with the following parameters:

           • **customerID:** Enter your Customer ID. (**Default: 1**)

           • **resourceType:** Enter **Settings_STATE_CUSTOMER_SETTING**.

       iii. On the returned result page, click **delete** for the
       com.hp.ucmdb.synchronizer.manager.SynchronizerManagerFactory setting.

2. Restart the UCMDB Server for the change to take effective.

Sample Script for IP Range Management API

```
package com.hp.ucmdb.api.client.util;

import com.hp.ucmdb.api.UcmdbService;
import com.hp.ucmdb.api.UcmdbServiceFactory;
import com.hp.ucmdb.api.UcmdbServiceProvider;
import com.hp.ucmdb.api.client.types.IPRangeImpl;
import com.hp.ucmdb.api.client.types.IPRangeWithExcludingImpl;
import com.hp.ucmdb.api.discovery.types.IPRange;

import java.lang.reflect.Method;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.List;
```

```
/**
 * Created by dingmen on 8/12/2015.
 */
public class UpdateIpRangeTest {

    private static final String HOST_NAME = "16.187.189.134";
    private static final int HTTP_PORT = 8080;
    private static final String HTTPS = "https";
    private static final String HTTP = "http";
    private static UcmdbService ucmdbService;

    public static void main(String[] args) {
        testSenario1();
    }

    private static  void  testSenario1(){
        try {
            UcmdbServiceProvider provider =
UcmdbServiceFactory.getServiceProvider(HTTP, HOST_NAME, HTTP_PORT);
            ucmdbService = provider.connect(provider.createCredentials("admin",
"admin"), provider.createClientContext("Test"));
            HashMap<String, ArrayList<String>> probeLBGroup = new
HashMap<String, ArrayList<String>>();
            HashMap<String, ArrayList<IPRange>> IPRangeGroup = new
HashMap<String, ArrayList<IPRange>>();
            HashMap<String, ArrayList<String>> domainGroup = new HashMap<String,
ArrayList<String>>();

            //put domain name as key in domainGroup,  and its value is a list of
groups.  'DefaultDomain' is a existing name in UCMDB .
            domainGroup.put("DefaultDomain", new ArrayList<String>());
            domainGroup.get("DefaultDomain").add("PG1");

            //define 'PG1' as the first group name(The group name can be any
other values) in probeLBGroup ,
            //and its value is a list of probe name. 'Probe1' or 'Probe2' should
be existing name in UCMDB .
            probeLBGroup.put("PG1", new ArrayList<String>());
            probeLBGroup.get("PG1").add("Probe1");
            probeLBGroup.get("PG1").add("Probe2");

            //Below all ranges are defined in IPRangeGroup for 'PG1' , and they
will balanced distributed to probes in 'PG1'.
            IPRangeGroup.put("PG1", new ArrayList<IPRange>());
            //should specify ip type 'IPV4/IPV6' , and ip category
'DataCenter/Client' for each range.
            IPRangeGroup.get("PG1").add(new IPRangeWithExcludingImpl("1.1.1.1",
"1.1.1.9", IPRange.IPType.IPV4, IPRange.RangeCategory.CLIENT, new
```

```
ArrayList<IPRangeImpl>()));
            List<IPRangeImpl> excludedRange1=new ArrayList<IPRangeImpl>();
            IPRangeGroup.get("PG1").add(new IPRangeWithExcludingImpl("1.1.1.10",
"1.1.1.19", IPRange.IPType.IPV4,IPRange.RangeCategory.DATA_CENTER,
excludedRange1));
            excludedRange1.add(new IPRangeImpl
("1.1.1.10","1.1.1.19",IPRange.IPType.IPV4,IPRange.RangeCategory.DATA_CENTER));
            excludedRange1.add(new IPRangeImpl
("1.1.1.12","1.1.1.15",IPRange.IPType.IPV4,IPRange.RangeCategory.DATA_CENTER));
            IPRangeGroup.get("PG1").add(new IPRangeWithExcludingImpl
("fe80:0:0:0:41f8:4318:2000:80", "fe80:0:0:0:41f8:4318:2000:83",
IPRange.IPType.IPV6,IPRange.RangeCategory.CLIENT, new ArrayList<IPRangeImpl>
()));

            //below is the second group 'PG2', and assign below 'GP2' range
(1.1.1.20~1.1.1.30)  to below 'PG2' probe(Probe3) .
            domainGroup.get("DefaultDomain").add("PG2");
            probeLBGroup.put("PG2", new ArrayList<String>());
            probeLBGroup.get("PG2").add("Probe3");
            IPRangeGroup.put("PG2", new ArrayList<IPRange>());
            IPRangeGroup.get("PG2").add(new IPRangeWithExcludingImpl("1.1.1.20",
"1.1.1.30", IPRange.IPType.IPV4,IPRange.RangeCategory.DATA_CENTER, new
ArrayList<IPRangeImpl>()));

            //the domain group with probe and range group in set to
importIPRanges API to update ip ranges.
            ucmdbService.getDDMConfigurationService().importIPRanges
(probeLBGroup, IPRangeGroup, domainGroup);
        } catch (Throwable e) {
            e.printStackTrace();
        }
    }

}
```

Configure Basic Authentication for Upgraded Data Flow Probes (Separate Mode) Using Port 1741 or 1742

Starting from version 10.11 CUP8, basic authentication is enabled for upgraded data flow probes automatically.

However, you can disable basic authentication for upgraded separate mode probes that can be accessed using port 1741 or 1742, or change the default basic authentication user name and password.

To do so,

1. Open the following file on both of the probe manager and probe gateway instances using a text editor:

   ***<probe_installation_folder>*\conf\DataFlowProbe.properties**

2. Add the following settings to the file manually:

   ```
   appilog.agent.Probe.rmi.BasicAuth.Enabled=false

   appilog.agent.Probe.rmi.BasicAuth.User=sysadmin

   appilog.agent.Probe.rmi.BasicAuth.Pwd=<encrypted password>
   ```

   ○ Setting the **appilog.agent.Probe.rmi.BasicAuth.Enabled** parameter to **true** enables basic authentication for the probe in separate mode that uses port 1741 or 1742. To disable basic authentication for the probe, simply set the parameter to **false**. The default value is **true**.

   > **Note:** Make sure you set the parameter to the same value on both instances of probe manager and probe gateway.

   ○ The default user name value for the **appilog.agent.Probe.rmi.BasicAuth.User** setting is **sysadmin**.

   ○ The password uses encrypted text in the **DataFlowProbe.properties** file. To change the default password, use the **getEncryptedKeyPassword()** JMX method to get the encrypted text of the desired password.

   For more information about how to use the **getEncryptedKeyPassword()** method, see the *HPE Universal CMDB JMX Reference Guide*.

3. Save the file.

4. Restart the probe.

How to Set UCMDB Browser Session to Expire

To set a UCMDB Browser session to expire when LW-SSO is enabled,

1. In UCMDB, go to **Administration > Infrastructure Settings Manager**.

2. With all categories of infrastructure settings displayed, select **Name** for the **Filter by column** field, and enter **LW-SSO** in the field next to it to display all LW-SSO settings.

3. Check if the **LW-SSO cookie expiration period** setting value is smaller than the **LW-SSO ping**

interval setting value. (Both of the settings are expressed in minutes.)

If not, modify the values for the two settings to ensure that **LW-SSO cookie expiration period** is smaller than the **LW-SSO ping interval**.

When **LW-SSO ping interval** is lower than **LW-SSO cookie expiration period**, this means that the session will never expire. The ping will keep the session active.

4. Click **Save** .

5. Restart UCMDB Server.

Enable Secure Login for the JMX Console

To enable secure login for the JMX console,

1. Access the UCMDB JMX console: Launch a Web browser and enter the following address: **https://<UCMDB machine name or IP address>:8443/jmx-console**. You must log in with a user name and password (default is sysadmin/sysadmin).

2. Locate **UCMDB:service=Ports Management Services** and click the link to open the Operations page.

3. Locate the **mapComponentToConnectors** operation.

4. To enable secure login for the JMX console, invoke the **mapComponentToConnectors** method with the following parameters:

   ○ **componentName**: jmx-console

   ○ **isHTTPS**: true

   ○ All other flags: false

5. Restart the server.

6. Log in to the JMX console using **https://** and port **8443** (default) or the one for https if it was changed.

   For example, **https://mymachine:8443**.

Note: HP also recommends you setting a strong password for the **sysadmin** user and any other user that can access the JMX console.

How to Re-index the CIs of a Given CI Type

You can re-index the CIs of a given CI type from the CMDB model database for search purposes. To do this, follow these steps:

1. Go to **JMX Console** > **UCMDB:service=Topology Search Services** > **reindexCiType**.

2. In the **ciType** field, enter the CI Type that you want to re-index.

3. Select one of the following options for the **includeSubtypes** option:

   ○ **True**: Re-index all the subtypes of the specified CI Type.

   ○ **False**: Do not re-index the subtypes of the specified CI Type.

4. Click **Invoke**.

To check the status and progress of the re-indexing operation, use the **printStatusReport** JMX method. This method can display the information such as overall status, progress, and number of indexed entries.

> **Note:**
>
> - In a multi-UCMDB environment, the **reindexCiType** method triggers the re-indexing operation on all nodes in the cluster.
>
> - During the execution of the re-index operation, search operations are allowed and will return results based on what is already indexed.

How to Perform a Full Reindex of All CIs

Perform a Full Reindex of All CIs

Use either of the following approaches to perform a full reindex of all CIs available for search in the UCMDB Browser:

- Go to **JMX Console > UCMDB:service=Topology Search Services** and invoke the **reindex()** method.

  This method removes all CIs information stored inside the SOLR index files without removing any internal SOLR files.

> **Note:** You can also invoke the **reindexCiType()** method to re-index all the CIs of a given CI type from the CMDB model database. For more information, refer to the *HPE Universal CMDB JMX Reference Guide*.

- Stop the UCMDB server, delete the **<UCMDB_Server_Home>/search** folder, and then start the UCMDB server.

  The deletion of the folder forces a full reindex for all UCMDB customers and reverts the SOLR configuration to the out of the box values. This process removes all internal SOLR files and hence takes longer time than the previous one.

How to Configure Query Search Filter

By default, the search algorithm filters out the queries that are too general. If you want to turn off the filter, follow these steps:

1. Go to **JMX Console** > **UCMDB:service=Settings Services** > **setGlobalSettingValue**.

2. In the **name** field, enter **cmdb.search.filter.queries**.

3. In the **value** field, enter **false**.

   > **Note:** Enter **true** if you want to turn on the filter.

4. Click **Invoke**.

How to Mark Sensitive Settings and Enable Storing Encrypted Data in the Database Using JMX

UCMDB administrators can mark sensitive settings and enabling storing encrypted values for the sensitive settings in the database by using the following JMX methods added in the **UCMDB:service=Settings Services** category:

- **listSensitiveSettings** - Returns the list of settings that are marked as sensitive.

- **markSettingAsSensitive** - Marks a setting as sensitive. Usually sensitive settings contain confidential data. If a setting is marked as sensitive, its data will be encrypted when stored in the database.

> **Note:** A setting can be marked as sensitive only when its value has been changed. If a setting does not have a value or if the value is out of the box, then the setting cannot be marked as sensitive.

- **markSettingAsNonsensitive** - Marks a setting as non-sensitive. Non-sensitive settings will have the value stored in plain text in database. This method is also used to decrypt the sensitive settings you encrypted using the **markSettingAsSensitive** method.

To mark a setting as sensitive,

1. On the UCMDB server, launch the Web browser and enter the following address: **https://localhost:8443/jmx-console.**

2. Click **UCMDB:service=Settings Services** to open the JMX MBEAN View page.

3. Click the **markSettingAsSensitive** method.

4. Enter the name of the setting you would like to mark as sensitive.

5. Click **Invoke**.

To mark a setting as non-sensitive,

1. On the UCMDB server, launch the Web browser and enter the following address: **http://localhost:8443/jmx-console.**

2. Click **UCMDB:service=Settings Services** to open the JMX MBEAN View page.

3. Click the **markSettingAsNonsensitive** method.

4. Enter the name of the setting you would like to mark as non-sensitive.

5. Click **Invoke**.

To view a list of sensitive settings,

1. On the UCMDB server, launch the Web browser and enter the following address: **http://localhost:8443/jmx-console.**

2. Click **UCMDB:service=Settings Services** to open the JMX MBEAN View page.

3. Click the **listSensitiveSettings** method.

4. Click **Invoke**.

A list of settings that are marked as sensitive is returned.

> **Note:** The following existing settings are already encrypted in the database and cannot be marked as sensitive:
>
> - **ha.cluster.authentication.keystore.password**
>
> - **ha.cluster.authentication.shared.secret**
>
> - **ha.cluster.message.encryption.keystore.password**
>
> - **ssl.server.keystore.password**
>
> - **ssl.server.truststore.password**
>
> After upgrading to version 10.11 CUP6, two new OOTB settings introduced in version 10.11 CUP6 are marked as sensitive by default:
>
> - **java.naming.ldap.search.password**
>
> - **jetty.connections.http.probe.basicAuthentication.defaultPassword**

How to Set Shared Key for Encrypting or Decrypting the InfrastructureSettings.xml File Using JMX

UCMDB administrators can set a shared key for encrypting or decrypting the **InfrastructureSettings.xml** file on the UCMDB Server side or the Data Flow Probe/Integration Service side by using the **setSharedKey** JMX method.

Once you have set a shared key on the server side, make sure you set the same shared key on the Data Flow Probe/Integration Service side as well. This ensures that the Data Flow Probe/Integration Service can properly decrypt the **InfrastructureSettings.xml** file.

To set a shared key on the UCMDB Server side,

1. On the UCMDB server, launch the Web browser and enter the following address: **http://localhost:8443/jmx-console.**

2. Click **UCMDB:service=Discovery Manager** to open the JMX MBEAN View page.

3. Click the **setSharedKey** method.

4. Enter a new value in the **Value** field for the shared key.

5. Click **Invoke**.

To set a shared key on the Data Flow Probe/Integration Service side,

1. Access the Data Flow Probe/Integration Service JMX console: Launch a Web browser and enter the following address: **http://<Probe or integration service machine name or IP address>:1977**. If you are running the Data Flow Probe/Integration Service locally, enter **http://localhost:1977**.

   You may have to log in with a user name and password.

2. Locate the **Probe_<Probe Name> type=MainProbe** service and click the link to open the JMX MBEAN View page.

3. Click the **setSharedKey** method.

4. In the **Value** field, enter the same value you provided on the UCMDB Server side for the shared key.

5. Click **Invoke**.

> **Note:** If the Data Flow Probe is running in separate mode, make sure you set the shared key on both probeManager and probeGateway.

Enable Mutual Certificate Authentication for SDK

This mode uses SSL and enables both server authentication by the UCMDB and client authentication by the UCMDB-API client. Both the server and the UCMDB-API client send their certificates to the other entity for authentication.

> **Note:**
>
> - The following method of enabling SSL on the SDK with mutual authentication is the most secure of the methods and is therefore the recommended communication mode.
>
> - The keystore used for client SDK must be in Java Keystore (JKS) format. The Java Cryptography Extension KeyStore (JCEKS) or other formats are not supported.
>
> - The keystore used for SDK must contain only one key-pair and nothing else in it. The password for this key-pair must be the same as the one for keystore.

1. Harden the UCMDB-API client connector in UCMDB:

    a. Access the UCMDB JMX console: Launch a Web browser and enter the following address: **http://<UCMDB machine name or IP address>:8443/jmx-console**. You may have to log in with a user name and password (default is sysadmin/sysadmin).

    b. Locate **UCMDB:service=Ports Management Services** and click the link to open the Operations page.

    c. Locate the **PortsDetails** operation and click **Invoke**. Make a note of the HTTPS with client authentication port number. The default is 8444 and it should be enabled.

    d. Return to the Operations page.

    e. To map the ucmdb-api connector to the mutual authentication mode, invoke the **mapComponentToConnectors** method with the following parameters:

        - **componentName**: ucmdb-api

        - **isHTTPSWithClientAuth**: true

        - All other flags: false

        The following message is displayed:

        Operation succeeded. Component ucmdb-api is now mapped to: HTTPS_CLIENT_ AUTH ports.

    f. Return to the Operations page.

2. Repeat step 1 for the **ping** component.

3. Make sure the JRE that runs the UCMDB-API client has a keystore containing a client certificate.

    Note: The UCMDB-API client certificate must have the minimum size key no less than 2048 bits.

4. Export the UCMDB-API client certificate from its keystore.

5. Import the exported UCMDB-API client certificate to the UCMDB Server Truststore.

    a. On the UCMDB machine, copy the created UCMDB-API client certificate file to the following directory on UCMDB:

        C:\HP\UCMDB\UCMDBServer\conf\security

    b. Run the following command:

    ```
    C:\HP\UCMDB\UCMDBServer\bin\jre\bin\keytool.exe -import -v -keystore
    ```

```
C:\HP\UCMDB\UCMDBServer\conf\security\server.truststore -file <exported
UCMDB-api client certificate> - alias ucmdb-api
```

    c. Enter the UCMDB Server Truststore password (default **hppass**).

    d. When asked, **Trust this certificate?**, press **y** and then **Enter**.

    e. Make sure the output **Certificate** was added to the keystore.

6. Export the UCMDB server certificate from the server keystore.

    a. On the UCMDB machine, run the following command:

```
C:\HP\UCMDB\UCMDBServer\bin\jre\bin\keytool.exe -export -alias hpcert
-keystore
C:\HP\UCMDB\UCMDBServer\conf\security\server.keystore
-file C:\HP\UCMDB\conf\security\server.cert
```

    b. Enter the UCMDB Server Truststore password (default **hppass**).

    c. Verify that the certificate is created in the following directory:

       C:\HP\UCMDB\UCMDBServer\conf\security\server.cert

7. Import the exported UCMDB certificate to the JRE of the UCMDB-API client truststore.

8. The certificate used by the API Client must contain in it's Common Name (CN) field the name of a user that's present in UCMDB.

    This user MUST have an EMPTY password and all required permissions for SDK access.

    To set an empty password to an existing UCMDB user,

    a. Go to **JMX Console > UCMDB:service=URM Services > listResourceTypes**.

    b. Click **Auth_USER**.

    c. Click your user and wait for the XML to load.

    d. In the XML, replace the password with **s39t3O*tfoZXg30xd/nvJGL5is8=**.

    e. Click **Save resource**.

9. Restart the UCMDB Server and the UCMDB-API client.

10. To connect from the UCMDB-API client to UCMDB-API server, use the following code:

```
UcmdbServiceProvider provider = UcmdbServiceFactory.getServiceProvider
("https", <SOME_HOST_NAME>, <HTTPS_WITH_CLIENT_AUTH_PORT_NUMBER
(default:8444>));
UcmdbService ucmdbService = provider.connect
```

```
(provider.createCertificateCredentials(<TheClientKeystore.
e.g: "c:\\client.keystore">, <KeystorePassword>),
provider.createClientContext(<ClientIdentification>));
```

How to Set Master Keys

You can use the JMX console to change the master key that is used to encrypt all UCMDB keys.

Change the master key for a cluster

This method assumes that your UCMDB environment is deployed in a high-availability setup.

Caution:

- This method involves a restart of the entire cluster, so plan accordingly. It is recommended to change the master key of the cluster when there is little or no load on the servers. For example, you should avoid using this method during data-in operations.

- Do not change any settings in the time period between changing the master key and restarting the server. Not following this instruction may result in a failure to start the server.

- Machines that are not up or that will be added later to the cluster will need to be configured manually. Until they are configured, at most they can run as reader machines; trying to run them as writer machines will fail.

1. Back up the **c:\hp\UCMDB\UCMDBServer\conf\cmdb.conf** file and the values for the following settings:

   - ha.cluster.authentication.keystore.password

   - ha.cluster.authentication.shared.secret

   - ha.cluster.message.encryption.keystore.password

   - ssl.server.keystore.password

   - ssl.server.truststore.password

2. Make sure all the servers in the cluster are up and running.

3. On the writer machine, launch the Web browser and enter the following address to log in to the JMX console: **http://localhost:8443/jmx-console**.

> **Note:** If a load balancer is present, you must bypass it and not log on to the writer machine through a load balancer.

4. Do one of the following:

   ○ Search for **changeMasterKeyForCluster**.

   ○ Click **UCMDB:service=Security Services > changeMasterKeyForCluster**.

5. Enter and confirm the master key, and click **Invoke**. The master key will be changed first on the writer machine and then on all reader machines.

6. Restart all the machines in the cluster. You can use the JMX method **High Availability Services > restartCluster** to do this.

> **Note:** Restart the cluster immediately after changing the master key. If you do not, future database connections may fail.

Change the master key for a new machine in a cluster

If at least one of the following settings was changed, use Method A; otherwise, use Method B:

- ha.cluster.authentication.keystore.password

- ha.cluster.authentication.shared.secret

- ha.cluster.message.encryption.keystore.password

- ssl.server.keystore.password

- ssl.server.truststore.password

Method A

This method assumes that you already have properly configured a master key for the writer machine that is up and running in the cluster. If not, follow the instructions in "Change the master key for a cluster" on the previous page.

1. Copy the **c:\hp\UCMDB\UCMDBServer\bin\wrapper.conf** file from the writer machine to the same location on the new (reader) machine.

2. Restart the server.

Method B

1. Back up the **c:\hp\UCMDB\UCMDBServer\conf\cmdb.conf** file.

2. On the writer machine, launch the Web browser and enter the following address to log in to the JMX console: **http://localhost:8443/jmx-console**.

3. Do one of the following:

    ○ Search for **changeMasterKey**.

    ○ Click **UCMDB:service=Security Services > changeMasterKey**.

4. Enter and confirm the master key, and click **Invoke**.

5. Restart the machine.

> **Note:** Restart the cluster immediately after changing the master key. If you do not, future database connections may fail.

Revert the master key for a cluster to its default value

This procedure resets the master key for an entire cluster.

1. Make sure all the servers in the cluster are up and running.

2. On the writer machine, launch the Web browser and enter the following address to log in to the JMX console: **http://localhost:8443/jmx-console**.

> **Note:** If a load balancer is present, you must bypass it and not log on to the writer machine through a load balancer.

3. Do one of the following:

    ○ Search for **restoreMasterKeyForCluster**.

    ○ Click **UCMDB:service=Security Services > restoreMasterKeyForCluster**.

4. Click **Invoke**. The master key will be changed first on the writer machine and then on all reader machines.

5. Restart all the machines in the cluster. You can use the JMX method **High Availability Services > restartCluster** to do this.

> **Note:** Restart the cluster immediately after changing the master key. If you do not, future database connections may fail.

Revert the master key for a machine that was down when master key was reverted for whole cluster

1. Back up the **c:\hp\UCMDB\UCMDBServer\conf\cmdb.conf** file.

2. On the writer machine, launch the Web browser and enter the following address to log in to the JMX console: **http://localhost:8443/jmx-console**.

3. Do one of the following:

    ○ Search for **restoreMasterKey**.

    ○ Click **UCMDB:service=Security Services > restoreMasterKey**.

4. Click **Invoke**.

5. Restart the machine.

> **Note:** Restart the cluster immediately after changing the master key. If you do not, future database connections may fail.

How to Enable CI Type Tenant Owner Verification during the Matching Phase of Identification

You can dynamically add a verification criterion based on the **TenantOwner** attribute during the matching phase of the identification process for CIs by using the new JMX setting **reconciliation.tenantaware.citypes**. If, compared to the other CI, there is a different value among the CI attribute values defined in this setting, the verification process stops and the match is rejected.

The following example explains how this setting works:

- If you have two node CIs:

    ○ Node1 with **TenantOwner**=t1 and **name**=n

    ○ Node2 with **TenantOwner**=t2 and **name**=n

    ○ **reconciliation.tenantaware.citypes** set to **node**

This scenario will result in the two nodes not matching.

- If Node1 does not have **TenantOwner** set, the default Tenant will be provided.

> **Note:** If you add a node CIT, UNIX for example, you do not have to add it since it is inherited by identification rule. Only if you change the UNIX CIT identification rule, you need to add it explicitly.

To enable TenantOwner attribute verification for CITs that are identified by key attributes,

1. Add the **ID_ATTRIBUTE** qualifier for the **TenantOwner** attribute of the **managed_object** CIT.

   > **Note:** The **TenantOwner** attribute will be inherited to all the child classes. Make sure that a child class does not override it.

   a. Go to the **JMX console > UCMDB:service=URM Services**.

   b. Invoke the **listResourceTypes** method.

   c. On the returned page, click **CM_CLASS**, then click **managed_object**.

   d. In the Resource XML box, add the following attribute qualifier to the **TenantOwner** attribute:

   ```
   <Attribute-Qualifier name="ID_ATTRIBUTE" is-factory="false"
   version="15">
       <Data-Items/>
   </Attribute-Qualifier>
   ```

   e. Click **Save resource**.

2. Reload the class model from persistency (go to the **JMX console > UCMDB:service=Class Model Services**, and invoke the **reloadClassModelFromPersistency** method).

3. Go to **JMX console > UCMDB:service=Model Services**, invoke the **recalculateID** method with **classname** field empty.

   This may take a while as it updates the calculated IDs for all instances of the classes with key attributes identification.

To enable the reconciliation.tenantaware.citypes setting for specific CITs (separated by comma) that are identified based on identification rules,

1. Go to **JMX Console > UCMDB:service=Settings Services > setSettingValue**.

2. In the **name** field, enter **reconciliation.tenantaware.citypes**.

3. In the **value** field, enter names of the CITs, separated by comma.

   > **Note:** To disable this setting, leave the **value** field empty.

4. Click **Invoke**.

To enable the reconciliation.tenantaware.citypes setting for all the CITs that are identified based on identification rules,

1. Go to **JMX Console > UCMDB:service=Settings Services > setSettingValue**.

2. In the **name** field, enter **reconciliation.tenantaware.citypes**.

3. In the **value** field, enter *****.

4. Click **Invoke**.

> **Note:**
>
> - If you changed the Tenant ID on the Data Flow Probe, make sure you clear the probe cache as well by performing either of the following:
>
>   - Log in to the probe server, run the following script:
>
>   **Windows:\hp\UCMDB\DataFlowProbe\tools\clearProbeData.bat**
>
>   **Linux:\hp\UCMDB\DataFlowProbe\tools\clearProbeData.sh**
>
>   - Log in to the UCMDB server UI, go to **Data Flow Management > Universal Discovery > Discovery Modules/Jobs**. For each of the jobs that run on the probe, right-click the job and select **Clear Probe Results Cache**.
>
> - In a multi-tenant aware environment, a tenant must be specified for the Data Flow Probe.

Tenant Owner Related Known Issues, Problems, and Workaround

- **PROBLEM:** After switching to Tenant aware reconciliation, the **OwnerTenant** attribute becomes read-only in the Configuration Item Properties dialog.

  Workaround: Use **Assign Tenants** functionality from the CI's context menu.

- **PROBLEM:** After removing the Key Attributes qualifier from the **OwnerTenant** attribute of the Managed Object, sometime no properties are displayed for the CIs in UI.

  Workaround: If you want to switch back (to disable Tenant aware reconciliation), do the following:

  a. Remove the **ID_ATTRIBUTE** qualifier for the **TenantOwner** attribute on the **managed_object** CIT.

  b. Remove the value of the **reconciliation.tenantaware.citypes** setting.

  c. Reload the class model from persistency (go to the **JMX console > UCMDB:service=Class Model Services**, and invoke the **reloadClassModelFromPersistency** method).

  d. Go to **JMX console > UCMDB:service=Model Services**, invoke the **recalculateID** method with **classname** field empty.

  e. Go to **JMX console > UCMDB:service=Model Services**, invoke the **updateClasModel** method.

- **LIMITATION:** Enrichment is not invoking the Reconciliation on Update **OwnerTenant** via **Associate Tenant Rule**. As a result, you may have duplicated data in the system in case if you update the **OwnerTenant**'s CI to a tenant that already has this CI.

  Workaround: None.

- **LIMITATION:** CIs with Identification rule would be duplicated in case if the user is updating the **OwnerTenant** CI to a tenant that already has this CI from **Update OwnerTenant** in the **Assign Tenants** module.

  Workaround: None.

- **PROBLEM:** When adding Consumer Tenants to a CI, the System Default Tenant appears in the list of Consumers after saving, even if it was not selected. This issue occurs only when changing the Owner Tenant or the Consumer Tenant.

  Workaround: None.

- **PROBLEM:** When removing all Consumer Tenants from a CI (from the IT Universe), an error is thrown and the Owner Tenant is overwritten with the System Default Tenant.

Workaround: To avoid removing the System Default Tenant from the Consumer Tenants list, make sure you set the System Default Tenant as consumer.

Only when the System Default Tenant is not set as consumer, the Owner Tenant will be overwritten with the System Default Tenant when trying to save.

- Import topology from Excel Workbook adapter cannot import the CIs of the CI Type with reconciliation **By key attributes** if the **OwnerTenant** value is not defined in the Excel file and it is set as Key attribute.

  Workaround: Specify **TenantOwner** value in the Excel spreadsheet.

- **PROBLEM:** Error message received when setting up a tenant aware environment, for the OOTB enrichments which are adding CIs. (QCCR1H104949)

  Workaround: If there are enrichments which are creating new CIs, after setting the environment as tenant aware, the attribute **Owner tenant** should be set for those CI Types which are being created through enrichments.

1_script_delete_index.sql

The **1_script_delete_index.sql** script is as follows:

```
use 'CMDB Database'

declare
  @column_name nvarchar(255),
  @index_name nvarchar(255),
  @table_name  nvarchar(255),
  @sql_str nvarchar(4000) = ''

SET @column_name = 'COLUMN_NAME'

DECLARE ColumnCursor CURSOR FOR
SELECT
  ind.name as index_name,
  t.name as table_name
FROM sys.indexes ind
INNER JOIN sys.index_columns ic
  ON ind.object_id = ic.object_id
  AND ind.index_id = ic.index_id
INNER JOIN sys.columns col
  ON ic.object_id = col.object_id
  AND ic.column_id = col.column_id
INNER JOIN sys.tables t
```

```
   ON ind.object_id = t.object_id
WHERE col.name = @column_name

OPEN ColumnCursor

FETCH NEXT FROM ColumnCursor INTO @index_name, @table_name
WHILE @@FETCH_STATUS = 0
BEGIN
       -- drop index
       set @sql_str = 'DROP INDEX ' + @index_name + ' ON ' + @table_name

       print @sql_str
       exec sp_executesql @sql_str

FETCH NEXT FROM ColumnCursor INTO @index_name, @table_name
END
CLOSE ColumnCursor
DEALLOCATE ColumnCursor
```

2_script_delete_constraint.sql

The **2_script_delete_constraint.sql** script is as follows:

```
use 'CMDB Database'

declare
  @column_name nvarchar(255),
  @constraint_name nvarchar(255),
  @table_name  nvarchar(255),
  @sql_str nvarchar(4000) = ''

SET @column_name = 'COLUMN_NAME'

DECLARE ColumnCursor CURSOR FOR
SELECT
    df.name constraint_name ,
    t.name table_name
FROM sys.default_constraints df
INNER JOIN sys.tables t ON df.parent_object_id = t.object_id
INNER JOIN sys.columns c ON df.parent_object_id = c.object_id AND df.parent_
column_id = c.column_id
WHERE c.name = @column_name

OPEN ColumnCursor
```

```
FETCH NEXT FROM ColumnCursor INTO @constraint_name, @table_name
WHILE @@FETCH_STATUS = 0
BEGIN
        -- drop constraint
        set @sql_str = 'ALTER TABLE ' + @table_name + ' DROP CONSTRAINT ' +
@constraint_name
        print @sql_str
        exec sp_executesql @sql_str
        --drop column
        set @sql_str = 'ALTER TABLE ' + @table_name + ' DROP COLUMN ' + @column_name
        print @sql_str
        exec sp_executesql @sql_str

FETCH NEXT FROM ColumnCursor INTO @constraint_name, @table_name
END
CLOSE ColumnCursor
DEALLOCATE ColumnCursor
```

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