



HPE Universal Internet of Things Platform

1.8.0 Build Upgrade Procedure

Release 1.8.0



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Notices

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Document History

Table 1: Document history

Edition	Version	Date	Description
1.0	HPE Universal IoT Platform 1.8.0	23-Apr-2021	Baselined version

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Chapter 1

Introduction

HPE Universal IoT platform delta procedure covers the upgrade from 1.7.1 to 1.8.0 Release.

This document covers in detail the component wise upgrade procedure to be followed to achieve a successful upgrade to HPE UIoT 1.8.0

Chapter 2

Components upgrade procedure

Execute the following steps to perform upgrade.



NOTE:

- Make sure the ansible version is upgraded to **2.5.8** on the controller node before performing upgrade.
- Make sure that the Controller Node used for installation is intact and the UIoT repo is configured correctly. We recommend setting up the Controller Node correctly before proceeding. Also make sure only core repo is enabled and other repos are disabled before proceeding further.

Example: In case of upgrade from 1.7.1 to 1.8.0 release. On Controller VM make sure `/var/www/html/repos/` directory contains **only** required repos `uiot-1.7.1`, `uiot-1.8.0` and `uiot-3rdparty`. Similarly before running upgrade script, ensure `/etc/yum.repos.d/uiot.repo` file parameter "**enabled=1**" only for 1.7.1, 1.8.0 and `uiot-3rdparty` repos.

- Make sure only the required DC rpms are downloaded and placed in the 1.8.0 repo directory based on the DCs enabled in `1.7.1_upgrade_config.yml` available for specific releases in `/opt/uiot-install/data` directory on controller VM.

Example: In case Only http dc is required to be upgraded from 1.7.1 to 1.8.0 `/opt/uiot-install/data/1.7.1_upgrade_config.yml` file contain just one entry as below and `/var/www/html/repos/uiot-1.8.0` repo also contains only http dc rpm.

```
uiot_upgrade_dc_name:
```

```
- dc-onem2m-http
```

2.1 Download and mount latest ISO image

Download the ISO and mount the ISO image on the controller node. Execute the following command to mount the ISO image:

```
mount -t iso9660 /[[Iso_Image full path]/<file.iso> /<mountpoint>[Path of the mounted point] -o loop
```

The following is an example command. This example assumes that the ISO image is downloaded to the `/tmp` directory and that the `/media/cdrom` directory exists in the system.

```
mount -t iso9660 /tmp/HPE-UIoT-1.8.0.iso /media/cdrom -o loop
```

2.2 Create repo for new packages

1. Log in to the controller node as root user.
2. Create the **uiot-1.8.0** repo folder under `/var/www/html/repos` for the latest ISO rpms.

```
su root
mkdir -p /var/www/html/repos/uiot-1.8.0
```

- Copy the Installer rpm from downloaded ISO to uiot-1.8.0 repo directory in Controller VM.

```
cp <ISO_installed_dir>/BINARIES/dist/installer/*>
/var/www/html/repos/uiot-1.8.0
```

- Copy **only below mentioned impacted rpm's** to uiot-1.8.0 repo directory in Controller VM.

```
hpe-uiot-install-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-data-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-dav-1.8.0-1_010588.el7.noarch.rpm
hpe-uiot-dc-lpgaz-lwm2m-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-dc-onem2m-coap-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-dc-onem2m-http-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-dc-onem2m-lwm2m-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-dc-onem2m-mqtt-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-dc-orbiwise-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-dsm-1.8.0-1_010590.el7.noarch.rpm
hpe-uiot-join-server-1.8.0-1_010581.el7.noarch.rpm
hpe-uiot-keycloak-1.8.0-1_010581.el7.noarch.rpm
```

```
cp <ISO_installed_dir>/BINARIES/dist/uiot/<impacted rpm's>
/var/www/html/repos/uiot-1.8.0
```

- Copy uiot-3rdparty from downloaded ISO to uiot-3rdparty repo directory in Controller VM.

```
cp <ISO_installed_dir>/BINARIES/dist/uiot-3rdparty/*>
/var/www/html/repos/uiot-3rdparty
```

- Change permissions to apache user.

```
chown apache:apache -R /var/www/html
chmod -R 755 /var/www
```

2.3 Upgrade installer

- Login as root user to controller node and execute the following command:

```
su root
yum update -y /var/www/html/repos/uiot-1.8.0/hpe-uiot-install-1.8.0-
<version>.rpm
```

This command updates the installer playbooks under `/opt/uiot-install` folder.

- Change user ownership on uiot-install folder to iotuser.

```
chown -R iotuser:iotuser /opt/uiot-install/
```

Chapter 3 Upgrade Procedure

Following sections describe steps for the supported upgrade paths.

3.1 Upgrade from 1.7.1 to 1.8.0

3.1.1 Configure repo for the upgrade path

1. Log in to the controller node as iotuser user and execute the following commands:

```
su iotuser

cd /opt/uiot-install/1.7.1_to_1.8.0_Upgrade

ansible-playbook -vbK /opt/uiot-
install/1.7.1_to_1.8.0_Upgrade/update_local_repo.yml
```

2. Indicate the sudo password when requested.

3.1.2 Define new configurations

Perform property updates mentioned in [Configurations update from 1.7.1 to 1.8.0](#)

3.1.3 Upgrade binaries

Log in to the controller node as iotuser user and execute the following commands:

```
su iotuser

cd /opt/uiot-install/1.7.1_to_1.8.0_Upgrade

SIMPLEX
ansible-playbook -vbK /opt/uiot-
install/1.7.1_to_1.8.0_Upgrade/update_build_package.yml -i /etc/opt/uiot-
install/environments/sample/uiot1.yml -e "trigger=upgrade"

HA
ansible-playbook -vbK /opt/uiot-
install/1.7.1_to_1.8.0_Upgrade/update_build_package.yml -i /etc/opt/uiot-
install/environments/sample/uiot-ha.yml -e "trigger=upgrade"
```

Indicate the sudo and ssh password when prompted

- sudo password → iotuser user password for controller node
- ssh password → ssh iotuser user password for topology nodes

3.1.4 Upgrade EDB

Component	Delta
EDB	<ol style="list-style-type: none"> 1. Log in to Master EDB node as root user. 2. Apply the <code>iot_upgrade_1.8.sql</code>. <pre>/usr/edb/as10/bin/psql -U enterprisedb -p <EDBPort> -d <DBName> -f /opt/iot/uiot/data/share/sql/iot_upgrade_1.8.sql</pre>



NOTE: If Keycloak service is not up then please execute the following commands on all keycloak nodes

Simplex:

```
cd /opt/
```

```
nohup /opt/keycloak/bin/standalone.sh -Djboss.server.config.dir=/etc/opt/iot/uiot/keycloak --
properties=/etc/opt/iot/uiot/keycloak/keycloak.properties &
```

HA

```
cd /opt/
```

```
nohup /opt/keycloak/bin/standalone.sh --server-config=standalone-ha.xml -
Djboss.server.config.dir=/etc/opt/iot/uiot/keycloak --
properties=/etc/opt/iot/uiot/keycloak/keycloak.properties &
```

Chapter 4 Configurations update

4.1 Configurations update from 1.7.1 to 1.8.0

Component	Delta
DSM	<ol style="list-style-type: none"><li data-bbox="368 441 863 470">1. Log in to all the DSM nodes as root user.<li data-bbox="368 472 1078 501">2. Edit the following file and add the following property values. <pre data-bbox="413 539 1477 622">vi /etc/opt/iot/uiot/dsm/config/com/hpe/iot/uiot/dsm/main/iot.properties</pre> <pre data-bbox="379 696 927 813"># Description : DSM Logout URL # Property Type : Mandatory dsm.session.logout.url=saml/logout</pre>

Chapter 5 Configurations rollback

Execute the following procedures to roll back the upgrade.

5.1 Configurations rollback from 1.8.0 to 1.7.1

Component	Delta
DSM	<ol style="list-style-type: none">1. Log in to all the DSM nodes as root user.2. Edit the following file and add the following property values. <pre>vi /etc/opt/iot/uiot/dsm/config/com/hpe/iot/uiot/dsm/main/iot.properties</pre> <pre># Description : DSM Logout URL # Property Type : Mandatory dsm.session.logout.url=/saml/logout</pre>

Chapter 6 Rollback procedure



NOTE:

- Make sure only the required DC rpms are downloaded and placed in the 1.8.0 repo directory based on the DCs enabled in `upgrade_config.yml` available for specific releases in `/opt/uiot-install/data` directory on controller VM.

Ex: In case Only http dc is required to be rollback from 1.8.0 to 1.7.1, ensure that the file `/opt/uiot-install/data/1.7.1_upgrade_config.yml` contains just one entry as below and the repo `/var/www/html/repos/uiot-1.8.0` contains only http dc rpm.

```
uiot_upgrade_dc_name:
  - dc-onem2m-http
```

- DC rollback supports only the impacted DCs of 1.7.1
- Before rollback execution make sure `/opt/keycloak-3.4.3.Final_data_backup.sql` file is available on master EDB node of HA set up. (In case if it's not available on master node copy it from standby node)
 - Execute following command and note down the master EDB host name

```
psql -h 15.112.158.65 -p 5432 -U enterprisedb -d iotdb -c 'show pool_nodes';
```

- Compare the noted host name from the above step with topology file available on the controller node (`/etc/opt/uiot-install/environments/sample/uiot-ha.yml`) if it matches with the host defined for `edb_role: "master"` execute following steps
- Log in to the controller node as `iotuser` execute following steps

```
su iotuser
cd /opt/uiot-install/1.7.1_to_1.8.0_Upgrade/
vi rollback_systemd_configurations.yml
Replace the text ['edb'][0] to ['edb'][1] in the following section
#####Keycloak schema#####
- name: "Rollback Keycloak schema"
hosts: "{ groups['edb'][0] }"
```

6.1 Roll back from 1.8.0 to 1.7.1

6.1.1 Rollback configurations

Perform property updates mentioned in [Configurations revert from 1.8.0 to 1.7.1](#)

6.1.2 Rollback EDB

component	Delta
EDB	<ol style="list-style-type: none"> 1. Log in to all the Master EDB node as root user. 2. Apply the <code>iot_rollback_1.8.sql</code>. <pre>/usr/edb/as10/bin/psql -U enterprisedb -p <EDBPort> -d <DBName> -f /opt/iot/uiot/data/share/sql/iot_rollback_1.8.sql</pre>

6.1.3 Rollback binaries

Log in to the controller node as `iotuser` user and execute the following commands:

```
su iotuser

cd /opt/uiot-install/1.7.1_to_1.8.0_Upgrade

SIMPLEX
ansible-playbook -vbK /opt/uiot-
install/1.7.1_to_1.8.0_Upgrade/update_build_package.yml -i /etc/opt/uiot-
install/environments/sample/uiot1.yml -e "trigger=rollback"

HA
ansible-playbook -vbK /opt/uiot-
install/1.7.1_to_1.8.0_Upgrade/update_build_package.yml -i /etc/opt/uiot-
install/environments/sample/uiot-ha.yml -e "trigger=rollback"
```

Indicate the `sudo` and `ssh` password when prompted

- `sudo` password → `iotuser` user password for controller node
- `ssh` password → `ssh iotuser` user password for topology nodes



NOTE: If Keycloak service is not up then please execute the following commands on all keycloak nodes

Simplex:

```
cd /opt/

nohup /opt/keycloak/bin/standalone.sh -Djboss.server.config.dir=/etc/opt/iot/uiot/keycloak --
properties=/etc/opt/iot/uiot/keycloak/keycloak.properties &
```

HA

```
cd /opt/
```

```
nohup /opt/keycloak/bin/standalone.sh --server-config=standalone-ha.xml -  
Djboss.server.config.dir=/etc/opt/iot/uiot/keycloak --  
properties=/etc/opt/iot/uiot/keycloak/keycloak.properties &
```