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Upgrading Ops Center OS from OEL 7.9 to OEL 8.x

Preparation:

- Make sure you have upgraded the OpsCenter to v10.9.3.
- Take a snapshot or backup all the components.
- The upgrade can be done using Express Installer.
- Read carefully through the document before you start.
- Download all necessary data after reading the document.
- Deploy a separate Oracle Linux 8.9 or 8.10 with Online access.

Downloads:

The only way to create offline repositories is through an online connected Oracle Linux 8.x.

A) OracleLinux-R7-U9-Server-x86_64-dvd.iso form Oracle Linux ISOs
B) Download Leapp Utility from Oracle Leapp Repository (only the latest files of each)
C) Create an offline repository for OEL8 BaseOS, OEL8 Appstream and OEL8 UEKR6
   - Create a directory for all repos. At least 50Gb disk space is needed.
     `mkdir /root/repo`

   [BaseOS repository]
   ```
   dnf reposync --newest-only --repoid=ol8_baseos_latest -p
   /root/repo/ --download-metadata
   ```

[AppStream repository]

```
dnf reposync --newest-only --repoid=ol8_appstream -p /root/repo/
--download-metadata
```

[UEKR6 repository]

```
dnf reposync --newest-only --repoid=ol8_UEKR6 -p /root/repo/ --
download-metadata
```

Move all three repositories to the target server. Either you place it directly under /var/www/html/ or create a symbolic link there to the local you have placed the repositories.

The directory structure needs to be like following:

```
/var/www/html/
total 0
drwxr-xr-x. 5 root root 64 Mar 21 12:52 ol8_appstream
drwxr-xr-x. 5 root root 64 Mar 21 13:09 ol8_baseos_latest
drwxr-xr-x. 5 root root 64 Mar 21 16:20 ol8_UEKR6
```

Upgrade OEL 7.x to the latest v7.9:

1. Mount the OracleLinux-R7-U9-Server-x86_64-dvd.iso to **/mnt** and create a local repo:
   ```
   mount OracleLinux-R7-U9-Server-x86_64-dvd.iso /mnt/cdrom
   ```
2. Delete all existing repository configurations:
   ```
   rm -f /etc/yum.repos.d/*
   ```
3. Create a local repo configuration:
   ```
   vi /etc/yum.repos.d/local.repo
   ```
   # Add the following content:
   ```
   [OL79]
   name=Oracle Linux 7.9 x86_64
   baseurl=file:///mnt/cdrom
   gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY
   gpgcheck=0
   enabled=1
   ```
4. Clean the yum cache and list the repos to verify:
   ```
   yum clean all
   yum repolist
   ```
5. Upgrade the current OS to the latest 7.9:
   ```
   yum upgrade
   reboot
   ```
6. Install and start the Apache HTTP Server:
   ```
   yum install httpd
   systemctl enable --now httpd
   ```

Installation of Leapp Utility:

1. Copy all Leapp utility related packages to the offline server either via Winscp or scp
2. Install the Leapp utility and related packages with following command executed in the directory with the downloaded leaap packages:
   `rpm –ivh *`

OS Upgrade 7.9 to 8.x Preparation:

1. Reboot the system:
   `Reboot`
2. Configure Leapp for upgrade:
   a. Remove the local repo configuration:
      `rm /etc/yum.repos.d/local.repo`
   b. Configure Leapp upgrade repositories:
      `vi /etc/leapp/files/leapp_upgrade_repositories.repo`

```
[ol8_baseos_latest]
name=Oracle Linux 8.9 x86_64 BaseOS
baseurl=http://<IP>/ol8_baseos_latest
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY
gpgcheck=0
enabled=1

[ol8_appstream]
name=Oracle Linux 8.9 x86_64 AppStream
baseurl=http://<IP>/ol8_appstream
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY
gpgcheck=0
enabled=1

[ol8_UEKR6]
name=Oracle Linux 8.9 x86_64 UEKR6
baseurl=http://<IP>/ol8_UEKR6
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY
gpgcheck=0
enabled=1
```

3. Test the repo accessibility:
   `curl http://<IP>/ol8_baseos_latest/repodata/repomd.xml`
4. Run Leapp preupgrade:
   `leapp preupgrade --oraclelinux`

Potential Problems during Leapp:

If you encounter errors related to Firewalld or VDO check of block devices, perform the following steps:

- Modify Firewalld configuration:
  `vi /etc/firewalld/firewalld.conf`
- Set **`AllowZoneDrifting=no`**, save and exit, then restart Firewalld:
  `systemctl restart firewalld`

Answer Leapp questions to bypass checks (not all needed all the time):

```
leapp answer --section remove_pam_pkcs11_module_check.confirm=True
leapp answer --section check_vdo.confirm=True
```

Run Leapp preupgrade again until the report shows up in green:

```
leapp preupgrade --oraclelinux
```

Make sure there are no error the output should look the following:

Before OS 7.9 to 8.x Upgrade:

Linux

Remove the OpenSSL library path:
`rm -f etc/ld.so.conf.d/rest.conf`
Refresh the library cache:
`ldconfig`
Remove modules:

```
modprobe -r floppy
modprobe -r pata_acpi
```

Note: Python3 is installed in "/usr/local/bin". If you want to use Python3 installed on linux after the upgrade, remove Python3 from"/usr/local/bin".

Configuration Manager API

```
/opt/hitachi/ConfManager/stop.sh
rm -rf /HORCM
```

Analyzer Probe

```
crontab -e
# */5 * * * * F=/usr/local/megha/cron.5min; test -f $F && bash $F
# */5 * * * * F=/usr/local/megha/bin/sysstat.sh; test -f $F && (bash
$F >> /usr/local/megha/logs/sys/`date +\%Y\%m\%d`.log; chown -R
megha:megha /usr/local/megha/logs/sys
```

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Comment out the 2 lines as shown above.

```
/usr/local/megha/bin/stop-all-services.sh
/usr/local/megha/bin/megha-jetty.sh status
mv /usr/local/lib64/perl5 /usr/local/lib64/perl5.bak
mv /usr/local/share/perl5 /usr/local/share/perl5.bak
```

Stop the RAID Agent services using the command:

```
systemctl stop jp1_pc.service
/opt/jp1pc/htnm/bin/htmsrv stop -all
```

Disable the auto-start setting for the RAID Agent services using the following commands:

```
cd /opt/jp1pc
mv jpc_start jpc_start.tmp
mv jpc_stop jpc_stop.tmp
```

Stop the RAID Agent REST services using the command:

```
/opt/jp1pc/htnm/bin/htmsrv stop -webservice
```

Disable the auto-start setting the RAID Agent REST services using the command:

```
/opt/jp1pc/htnm/bin/htmsrv starttype manual -webservice
```

Protector (ISM)

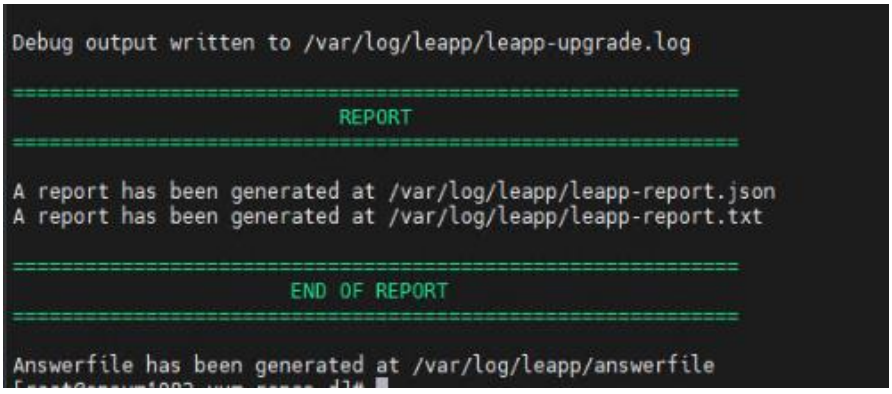
```
systemctl stop cofiohub
```

Final Upgrade:

Perform the OS upgrade:

```
leapp upgrade --oraclelinux
```

After upgrade you should see the following message :



After the upgrade, reboot the server and verify the version:

```
reboot
cat /etc/os-release
NAME="Oracle Linux Server"
VERSION="8.9"
```

After OS Upgrade

Disable the new installed online repositories and enable the offline repository if it has been disabled.

Use Express Installer Server to upgrade OpsCenter Server

```
mount HOC10-93-00_E02_EXPINST.iso /mnt/cdrom
```

Configuration Manager API

```
/mnt/cdrom/install.sh
```

Complete an overwrite installation of API Configuration Manager.

Analyzer Probe:

Run the **precheck** command using the same version. If necessary, install any required packages and programs.

Note: During precheck command, you might see the following warning message on the console, but there is no problem and you can ignore it.

Check premise OS version. [NG]

Ops Center Analyzer probe server does not support this OS (Oracle Linux Server release 8.9).

Note: You cannot use the Client Express installer because it does not support the probe overwrite installation. Please follow the normal installation from Installation Configuration Guide.

Note: During overwrite installation, there might be a following warning message on the console, but there is not a problem. You can proceed with the installation and the installation will complete successfully.

[WARN] Ops Center Analyzer probe server does not support this OS (Oracle Linux Server release 8.9).

Start the Analyzer probe services and enable the auto-start setting as follows:

a. Start the megha service using the command:

```
/usr/local/megha/bin/megha-jetty.sh start
```

b. Confirm that the megha service has started:

```
/usr/local/megha/bin/megha-jetty.sh status
```

c. Run the **crontab -e** command.

At the beginning of each line delete the hash mark (#) to comment out the line as shown in this example:

```
*/5 * * * * F=/usr/local/megha/cron.5min; test -f $F && bash $F
*/5 * * * * F=/usr/local/megha/bin/sysstat.sh; test -f $F && (bash
```

```
$F >> /usr/local/megha/logs/sys/`date +\%Y\%m\%d`.log; chown -R
megha:megha /usr/local/megha/logs/sys)
```

1. If you disabled the RAID Agent REST settings, run the following commands:
   a. Enable the auto-start setting the RAID Agent services using the command:
   ```
   /opt/jp1pc/htnm/bin/htmsrv starttype auto -webservice
   ```
   b. Start the RAID Agent REST services using the command:
   ```
   /opt/jp1pc/htnm/bin/htmsrv start -webservice
   ```
2. If you disabled the RAID Agent settings, run the following commands:
   a. Enable the auto-start setting the RAID Agent services using the command:
   ```
   cd /opt/jp1pc
   mv jpc_start.tmp jpc_start
   mv jpc_stop.tmp jpc_stop
   ```
   b. Start the RAID Agent services using the command:
   ```
   systemctl start jp1_pc.service
   ```