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Upgrading Ops Center OS from OEL 8.x to OEL 9.2

Preparation:

- Make sure you have upgraded the OpsCenter to v10.9.3 or v11.0.1.
- 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.

Downloads:

Download either Express installer ISOs or separate installer ISO for v10.9.3 or v11.0.1 from [support connect](#)

Download Oracle Enterprise Linux v9.2 [ISO](#)

Download Oracle [Leapp](#) utility packages (only the latest of each package).

Installation of Leapp Utility:

Has the OEL 7.9 to 8.x upgrade done before it is necessary to clean up the old Leapp first

Cleanup:

```

yum config-manager --save --setopt exclude=''
yum remove leapp-upgrade-el7toel8-0.17.0-1.0.19.el7_9.noarch
yum remove python2-leapp-0.15.0-2.0.1.el7_9.noarch leapp-deps-
el8-5.0.8-1.0.1.el8.noarch

```

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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 Leapp packages:
`rpm -ivh`

OS Upgrade 8.x to 9.2 Preparation:

1. Reboot the system:
`Reboot`
2. Install and start the Apache HTTP Server:
`yum install httpd`
`systemctl enable --now httpd`
3. Mount Oracle 9.2 install media
`mount /tmp/OracleLinux-R9-U2-x86_64-dvd.iso /var/www/html/oel92`
4. Restart Apache
`systemctl restart httpd`
5. Check that repository is accessible
`curl http://localhost/oel92/BaseOS/repodata/repomd.xml`
6. Remove online repositories
`rm -f /etc/yum.repos.d/oracle-linux-ol8.repo`
`rm -f /etc/yum.repos.d/uek-ol8.repo`
`rm -f /etc/yum.repos.d/virt-ol8.repo`
7. Edit leapp repository file
`vi /etc/yum.repos.d/leapp_upgrade_repositories.repo`
or
`vi /etc/yum.repos.d/leap-upgrade-repos-ol9.repo`
 And put following in it:

```
[ol9_baseos_latest]
name=Oracle Linux 9.2 x86_64 BaseOS
baseurl=http://localhost/oel92/BaseOS
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY
gpgcheck=0
enabled=1

[ol9_appstream]
name=Oracle Linux 9.2 x86_64 AppStream
baseurl=http://localhost/oel92/AppStream
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY
gpgcheck=0
enabled=1
```
8. Run Leapp preupgrade:
`leapp preupgrade --enablerepo=ol9_appstream --enablerepo=ol9_baseos_latest`

Potential Problems during Leapp:

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

Modify Firewallld configuration:

```
vi /etc/firewalld/firewalld.conf
```

Set **AllowZoneDrifting=no**, save and exit, then restart Firewallld:

```
systemctl restart firewalld
```

Edit the sshd_config file to permit root logins.

```
vi /etc/ssh/sshd_config
```

Uncomment the line «#PermitRootLogin yes» by removing the hash mark (#):

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
```

Migrate legacy network scripts

```
nmcli connection migrate
```

remove make-devel package

```
remove make-devel
dnf remove make-devel
```

Remove /HORCM symbolic link

```
rm -rf /HORCM
```

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

```
leapp preupgrade --enablerepo=ol9_appstream --
enablerepo=ol9_baseos_latest
```

Make sure there are no errors. The output should look the following:

```

Debug output written to /var/log/leapp/leapp-preupgrade.log

=====
                        REPORT
=====

A report has been generated at /var/log/leapp/leapp-report.json
A report has been generated at /var/log/leapp/leapp-report.txt

=====
                        END OF REPORT
=====

```

Before OS 8.x to 9.2 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".

Common Services

Open the Common Service Portal UI and remove the Administrator from it. Ignore the error message that Administrator was not reachable.

```

systemctl stop csportal postgresql-15@csportal.service postgresql-
15@csidp.service
systemctl disable csportal postgresql-15@csportal.service postgresql-
15@csidp.service
systemctl is-enabled csportal postgresql-15@csportal.service postgresql-
15@csidp.service
rpm -e postgresql15 postgresql15-libs postgresql15-server
rpm -e postgresql11 postgresql11-libs postgresql11-server

```

Configuration Manager API

```
/opt/hitachi/ConfManager/stop.sh
```

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Analyzer/Automator

```
/opt/hitachi/Base64/bin/hcmds64srv -stop
/opt/hitachi/Base64/bin/hcmds64srv -starttype manual -all
/opt/hitachi/Base64/HDB/pdistup/pdeinstall -d -r
/opt/hitachi/Base64/conf/hcmdshdbuit_result /opt/hitachi/Base64/HDB
```

Analyzer Detail View

```
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
```

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
```

Protector

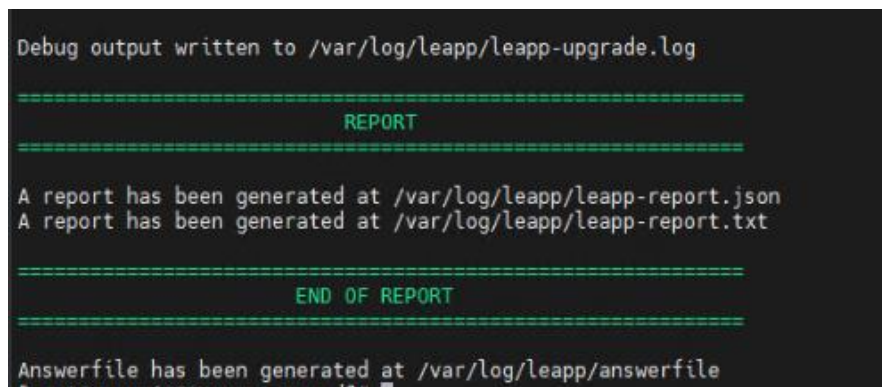
```
systemctl stop cofiohub
systemctl disable cofiohub
```

Final Upgrade:

Perform the OS upgrade:

```
leapp upgrade --enablerepo=ol9_appstream --enablerepo=ol9_baseos_latest
```

After upgrade you should see the following message:



```
Debug output written to /var/log/leapp/leapp-upgrade.log

=====
REPORT
=====

A report has been generated at /var/log/leapp/leapp-report.json
A report has been generated at /var/log/leapp/leapp-report.txt

=====
END OF REPORT
=====

Answerfile has been generated at /var/log/leapp/answerfile
```

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

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```
reboot
cat /etc/os-release
NAME="Oracle Linux Server"
VERSION="9.2"
```

In case the server does not return open a remote console and restart it from there.

After OS Upgrade

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

Install VIM

```
dnf install vim
```

Common Services:

Use Express Installer Server to upgrade OpsCenter Server

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

Complete an overwrite installation of Common Services **only**.

Specify **e(Edit)** and then **n(No)** for "Back up the database before installing." Do not use y(Yes) or the installation will fail with error KAOP70051- and then you can continue to upgrade. You need to go back and select the option 2 again, and take the default and answer Y to install.

```
[root@opsvm1002 mnt]# ./install.sh
warning: Signature not supported. Hash algorithm SHA1 not available.
KAOP71058-W Hitachi Ops Center Analyzer viewpoint does not support this OS version and cannot be installed.
Choose the Hitachi Ops Center products you want to install:
Product name      Existing  Installer  Type
1 All (2,3,4,5,6)
2 Common Services  10.9.3    10.9.3     Repair
3 API Configuration Manager  10.9.3    10.9.3     Repair
4 Protector        7.7.0     7.7.0     Repair
5 Automator        10.9.3    10.9.3     Repair
6 Analyzer         10.9.3    10.9.3     Repair
** Administrator   10.9.3    10.9.3     Not Support (Repair)
** Analyzer detail view  10.9.3    10.9.3     Not Support (Repair)
(Use commas to separate multiple entries)
Enter a number or q to quit [default=1]: 2

Enter parameters for Common Services.
Do you want to back up the Common Services database first? (y/n) [current=y]: n

The installation preparations are completed. Verify the installation settings below.

Hitachi Ops Center Common Services 10.9.3
Database backup:
No

The Common Services installer installs / updates the following bundled software packages.
java-17-amazon-corretto-devel-17.0.8.7-1.x86_64.rpm
postgresql15-15.3-1PGDG.rhel9.x86_64.rpm
postgresql15-libs-15.3-1PGDG.rhel9.x86_64.rpm
postgresql15-server-15.3-1PGDG.rhel9.x86_64.rpm

Prerequisite libraries:
The express installer will install the prerequisite libraries for each product (from the installation media or yum repository).
For details on the prerequisite libraries, refer to the system requirements of each product.

The service of the following products will be stopped to install or upgrade these products:
Hitachi Ops Center Common Services

Confirm your settings: (continue=y, edit=e, cancel=n)
> e
```

```
systemctl enable csportal postgresql-15@csportal.service postgresql-15@csidp.service
systemctl is-enabled csportal postgresql-15@csportal.service postgresql-15@csidp.service
systemctl start csportal postgresql-15@csportal.service postgresql-15@csidp.service
```

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Configuration Manager API

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

Complete an overwrite installation of API Configuration Manager.

Analyzer/Automator

Note: Specify "No" for [Back up the database before installing] and complete the overwrite installation.

Note: If the normal installer is used instead of the express installer only install Analyzer. Do not install Detail View server at this stage.

Start the following service and perform the overwrite using express installer.

Following is one command:

```
-----
/var/opt/hitachi/Base64/tmp/hcmdschgadmin/BUNDLE/PDEINST -o -p
/var/opt/hitachi/Base64/tmp/hcmdschgadmin/BUNDLE -c utf-8 -r
/opt/hitachi/Base64/conf/hcmdshdbuit_result /opt/hitachi/Base64/HDB -k on
-----
```

```
/opt/hitachi/Base64/bin/hcmds64srv -stop
```

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

```
[root@opsvm1082 mnt]# ./install.sh
warning: Signature not supported. Hash algorithm SHA1 not available.
KAOP71058-W Hitachi Ops Center Analyzer viewpoint does not support this OS version and cannot be installed.
Choose the Hitachi Ops Center products you want to install:
Product name      Existing  Installer  Type
1 All (2,3,4,5,6)
2 Common Services  10.9.3    10.9.3     Repair
3 API Configuration Manager  10.9.3    10.9.3     Repair
4 Protector        7.7.0     7.7.0     Repair
5 Automator        10.9.3    10.9.3     Repair
6 Analyzer         10.9.3    10.9.3     Repair
** Administrator   10.9.3    10.9.3     Not Support (Repair)
** Analyzer detail view  10.9.3    10.9.3     Not Support (Repair)
(Use commas to separate multiple entries)
Enter a number or q to quit [default=1]: 5,6

Enter parameters for Automator.
Do you want to back up the Automator database first? (y/n) [current=y]: n

The installation preparations are completed. Verify the installation settings below.

Hitachi Ops Center Automator 10.9.3
Database backup:
No

Prerequisite libraries:
The express installer will install the prerequisite libraries for each product (from the installation media or yum repository).
For details on the prerequisite libraries, refer to the system requirements of each product.

The service of the following products will be stopped to install or upgrade these products:
Hitachi Ops Center Automator
Hitachi Ops Center Analyzer

Confirm your settings: (continue=y, edit=e, cancel=n)
> y
Setting up kernel parameters ...
Allow several minutes to a half-hour or more for each product installation.
(1/2) Updating Hitachi Ops Center Automator ...
(2/2) Updating Hitachi Ops Center Analyzer ...

Installation results:
```

```
/opt/hitachi/Base64/bin/hcmds64srv -starttype auto -all
```

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A repair installation of Automator is not necessary.

Detail View

As you can see from the install menu, we do not support Repair or overwrite on Detail View, so you need to follow a different procedure.

Install Perl and CPAN as follows:

If it exists, move the existing CPAN configuration file:

```
mv /root/.cpan/CPAN/MyConfig.pm /root/.cpan/CPAN/MyConfig.pm.back
```

Create a temporary work directory:

```
mkdir /root/cpanworkdir
```

Create the CPAN configuration file as follows.

For example, if the Server Express installer is mounted on /mnt/cdom, the sample command line is as follows.

```
# sed -e
"s@%%URL_ENTRY%%@file:///mnt/cdrom/ANALYZER/ANALYTICS/DCA/CPAN/OS7OR8@
g" -e "s@%%HIAA_CPAN_DIR%%@/root/cpanworkdir@g"
/mnt/cdrom/ANALYZER/ANALYTICS/DCA/HIAA_Config.pm >
/root/.cpan/CPAN/MyConfig.pm
```

Install the CPAN modules:

```
cpan -f -i "Log::Log4perl"
```

Delete the temporary directory you created and the CPAN configuration file you created:

```
rm -fr /root/cpanworkdir
```

```
rm -f /root/.cpan/CPAN/MyConfig.pm
```

Restore the original CPAN configuration file:

```
mv -f /root/.cpan/CPAN/MyConfig.pm.back /root/.cpan/CPAN/MyConfig.pm
```

Run the **precheck** command using the same version from which you backed up the data. If necessary, install any required packages and programs.

Note: In the case of Server Express installer, the precheck commands is located in /mnt/cdrom/ANALYZER/ANALYTICS/analytics_precheck.sh

2. Start the Analyzer detail view services and enable the auto-start setting as follows:

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

b. 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)
```

c. Start the megha service using the command:

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

d. Confirm that the megha service has started:

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

Protector

This is no official document by Hitachi Vantara – it is only made available under the premise that the corresponding Linux skills are available and that you act at your own risk.

```
systemctl start cofiohub  
systemctl enable cofiohub
```