Linux System Upgrade Instructions (Online)

Version 8.03 | Last Updated 2020-07-31

1. Upgrading Linux System Online

This instruction will guide you to automatically upgrade Linux operating system from v7.x (v7.0 to v7.6) to v7.8 via internet repositories.

- Upgrading CentOS to v7.8
- Upgrading RHEL to v7.8

> **Note:** Linux upgrade must be done by the **root** user because sudo account cannot be used to upgrade the packages at the OS level.

1.1. Upgrading CentOS to v7.8

1. Create a snapshot or checkpoint of your VMware server for rollback purpose in case of any failure.

   > **Note:** Ensure that the MongoDB data has been backed up, all the system services including MongoDB on the Linux server are running normally, and **DON'T** restart Linux server during and after the Linux operating system upgrade.
   >
   > **Note:** If anything is incorrect, please hold for advice or contact your system administrator.

2. Check the version detail of the CentOS system that is kept in the **/etc/redhat-release** and **/etc/centos-release** directories.

   1) Run the `uname -a` and `uname -r` commands to check the information about the current system.

   ```
   [root@localhost ~]# uname -a
   Linux localhost.localdomain 3.10.0-693.el7.x86_64 #1 SMP Tue Aug 22 21:09:27 UTC 2017 x86_64 x86_64 x86_64 GNU/Linux
   [root@localhost ~]# uname -r
   3.10.0-693.el7.x86_64
   ```

   2) Run the `cat /etc/centos-release` command to check the system version. For example, the version information is displayed as `CentOS Linux release 7.4.1708 (Core)`.

3. Run the `yum check-update` command to check the available CentOS upgrades.

   > **Tip:** The system will display a list of available updates, including the core operating system updates. Scan the list to make sure everything is in order.

4. Run the following commands to upgrade the CentOS system to v7.8.

   1) Run the `yum clean all` command to clean the cache.

2) Run the `yum update -y` command to upgrade the Linux server.

> **Tip:** This will then update all the packages to the latest version. It may take a while to complete. Keep an eye out for any errors. If any errors pop up, please hold for advice or contact your system administrator.

5. Run the `service <mongodb service name> status` command to double-check the MongoDB service status to ensure it is running normally after the Linux system upgrade.

> **Note:** The default name of the MongoDB service varies by different system versions. In v7.0b/b1 system, MongoDB service name is `mongodnetbrain`; starting from v7.1 system, MongoDB service name is `mongod`.

6. Run the `cat /etc/centos-release` command to check if the CentOS system has been upgraded successfully. For example, the following information is displayed: `CentOS Linux release 7.8.2003 (Core)`.

7. As the CentOS system has been upgraded to v7.8, then you can continue to upgrade the system Database Server according to the upgrade guide.

1.2. Upgrading RHEL to v7.8

The Red Hat Enterprise Linux (RHEL) v7.x can be upgraded to v7.8 only if the system meets the following conditions:

- The system is on the latest version of the server variant of Red Hat Enterprise Linux 7 for Intel 64 and AMD64 architecture.
- The system is registered to receive updates from Subscription Management (Red Hat Enterprise Linux 7 must be registered with the Subscription Management tool subscription-manager rather than RHN Classic tools like rhn_register.)

1. Create a snapshot or checkpoint of your VMware server for rollback purpose in case of any failure.

> **Note:** Ensure that the MongoDB data has been backed up, all the system services including MongoDB on the Linux server are running normally, and **DON'T** restart Linux server during and after the Linux operating system upgrade.
>
> **Note:** If anything is incorrect, please hold for advice or contact your system administrator.

2. Check the version detail of RHEL that is kept in the **/etc/redhat-release** and **/etc/os-release** directories.

1) Run the `uname -a` and `uname -r` commands to check the information about the current system.

```
[root@netbrainmongodb141 ~]# uname -a
Linux netbrainmongodb141 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57 EDT 2014 x86_64 x86_64 x86_64 GNU/Linux
[root@netbrainmongodb141 ~]# uname -r
3.10.0-123.el7.x86_64
```

2) To check the Linux version, run the following commands:

   - Run the `cat /etc/redhat-release` command. For example, the version information is displayed as `Red Hat Enterprise Linux Server release 7.0 (Maipo)`.
   - Run the `cat /etc/os-release` command.

```
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
HOME_URL="https://www.redhat.com/"
BUG_REPORT_URL="https://bugzilla.redhat.com/"

REDHAT_BUGZILLA_PRODUCT="Red Hat Enterprise Linux 7"
REDHAT_BUGZILLA_PRODUCT_VERSION=7.0
REDHAT_SUPPORT_PRODUCT="Red Hat Enterprise Linux"
REDHAT_SUPPORT_PRODUCT_VERSION=7.0
```

3. Run the `yum check-update` command to check the available upgrades.

> **Tip:** The system will display a list of available updates, including the core operating system updates. Scan the list to make sure everything is in order.
>
> **Note:** If the error shows as below, it requires an internet connection to connect to RHEL.
>
> ```
> Loaded plugins: product-id, search-disabled-repos, security, subscription-manager
> This system is not registered with an entitlement server. You can use subscription-manager to
>  register.
> Setting up Update Process
> No Packages marked for Update
> ```
>
> or
>
> ```
> [root@localhost ~]# yum check-update
> Loaded plugins: langpacks, product-id, search-disabled-repos, subscription-manager
> This system is not registered with an entitlement server. You can use subscription-manager to register.
> There are no enabled repos.
>  Run "yum repolist all" to see the repos you have.
>  To enable Red Hat Subscription Management repositories:
>      subscription-manager repos --enable <repo>
>  To enable custom repositories:
>      yum-config-manager --enable <repo>
> [root@localhost ~]#
> ```

4. Register your subscription carefully again. You have to unregister and register again for a proper upgrade. See yum upgrade for more details.

5. Run the `yum update -y` command to upgrade the RHEL system to v7.8.

> **Tip:** This will then update all the packages to the latest version. It may take a while to complete. Keep an eye out for any errors. If any errors pop up, please hold for advice or contact your system administrator.

6. Run the `service <mongodb service name> status` command to double-check the MongoDB service status to ensure it is running normally after the Linux system upgrade.

   > **Note:** The default name of the MongoDB service varies by different system versions. In v7.0b/b1 system, MongoDB service name is `mongodnetbrain`; starting from v7.1 system, MongoDB service name is `mongod`.

7. Run the `cat /etc/redhat-release` command to check if the RHEL system has been upgraded successfully. For example, the following information is displayed: `Red Hat Enterprise Linux Server release 7.8 (Maipo)`.

8. As the RHEL system has been upgraded to v7.8, then you can continue to upgrade the system Database Server according to the upgrade guide.