

CDP Private Cloud Base 7

# Cloudera Base on premises Edition Release Guide

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The Cloudera logo is displayed in a bold, orange, sans-serif font. The word "CLOUDERA" is written in all caps, with a stylized 'E' that has a horizontal bar extending to the right.

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## Cloudera Base on premises Release Guide

This guide contains release and download information for installers and administrators. It includes links to release notes as well as information about installation requirements, supported platforms, and version and download information.

## Cloudera Release Notes

Links to the Cloudera Manager and Cloudera Runtime release notes for Cloudera Base on premises.

**Table 1: Release Note Links**

CDP Version	Release Note Links
Cloudera Base on premises 7.3.1.500 SP3	<a href="#">Cloudera Manager 7.13.1 CHF5 (7.13.1.500) Release Notes</a> <a href="#">Cloudera Runtime 7.3.1.500 SP3 Release Notes</a>
Cloudera Base on premises 7.3.1.400 SP2	<a href="#">Cloudera Manager 7.13.1 CHF4 (7.13.1.400) Release Notes</a> <a href="#">Cloudera Runtime 7.3.1.400 SP2 Release Notes</a>
Cloudera Base on premises 7.3.1.200 SP1	<a href="#">Cloudera Manager 7.13.1 CHF2 (7.13.1.200) Release Notes</a> <a href="#">Cloudera Runtime 7.3.1.200 SP1 Release Notes</a>
Cloudera Base on premises 7.3.1	<a href="#">Cloudera Manager 7.13.1 Release Notes</a> <a href="#">Cloudera Runtime 7.3.1 Release Notes</a>
CDP Private Cloud Base 7.1.9 SP1	<a href="#">Cloudera Manager 7.11.3 Cumulative hotfix 7 Release Notes</a> <a href="#">Cloudera Runtime 7.1.9 SP1 Release Notes</a>
CDP Private Cloud Base 7.1.7 SP3	<a href="#">Cloudera Manager 7.11.3 Release Notes</a> <a href="#">Cloudera Runtime 7.1.7 SP3 Release Notes</a>
CDP Private Cloud Base 7.1.9	<a href="#">Cloudera Manager 7.11.3 Release Notes</a> <a href="#">Cloudera Runtime 7.1.9 Release Notes</a>
CDP Private Cloud Base 7.1.7 SP2	<a href="#">Cloudera Manager 7.6.7 Release Notes</a> <a href="#">Cloudera Runtime 7.1.7 SP2 Release Notes</a>
CDP Private Cloud Base 7.1.7	<a href="#">Cloudera Manager 7.6.1 (Service Pack 1 for Cloudera Manager 7.4.4) Release Notes</a> <a href="#">Cloudera Manager 7.4.4 Release Notes</a> <a href="#">Cloudera Runtime Release Notes</a>

## Version and Download Information

The following topics describe the available versions and download locations for Cloudera Manager and Cloudera Runtime.

### Cloudera Manager Version Information

You must choose the correct Cloudera Manager for your deployment. This page provides a reference of Cloudera Manager versions, their release dates, and important compatibility information.

Cloudera Manager 7.13.1 CHF6 (7.13.1.600) is the current release of Cloudera Manager required for Cloudera Base on premises version 7.3.1.600 SP3 CHF1 and 7.1.9. For more information, see [Cloudera Manager 7.13.1 Release Matrix](#).

Cloudera Manager 7.13.1 CHF4 (7.13.1.400) is the minimum Cloudera Manager version required for Cloudera Base on premises 7.3.1.400 SP2.

Cloudera Manager 7.13.1 CHF2 (7.13.1.200) is the minimum Cloudera Manager version required for Cloudera Base on premises 7.3.1.200 SP1.

Cloudera Manager 7.11.3 CHF7 is the minimum Cloudera Manager version required for CDP Private Cloud Base version 7.1.9 SP1.

Cloudera Manager 7.11.3 CHF4 is the minimum Cloudera Manager version required for CDP Private Cloud Base version 7.1.7 SP3.

**Important:**

- You must install Python 3 on all hosts before installing or upgrading to Cloudera Manager 7.13.1. For more information, see the [Installing Python 3](#).
- You must install Python 3 on all hosts before installing or upgrading to Cloudera Manager 7.11.3. For more information, see the [Installing Python 3](#).

Release date: December 18, 2025

Previous releases:

- Cloudera Manager 7.13.1 CHF5 (7.13.1.500) Release Date: November 5, 2025
- Cloudera Manager 7.13.1 CHF4 (7.13.1.400) Release Date: June 27, 2025
- Cloudera Manager 7.13.1 CHF3 (7.13.1.300) Release Date: June 2, 2025
- Cloudera Manager 7.13.1 CHF2 (7.13.1.200) Release Date: April 24, 2025
- Cloudera Manager 7.13.1 CHF1 (7.13.1.100) Release Date: March 18, 2025
- Cloudera Manager 7.13.1 Release Date: December 10, 2025
- Cloudera Manager 7.11.3 CHF7 Release Date: July 19, 2024
- Cloudera Manager 7.11.3 CHF4 Release Date: April 05, 2024
- Cloudera Manager 7.11.3 Release Date: August 18, 2023
- Cloudera Manager 7.7.3 Release Date: October 28, 2022
- Cloudera Manager 7.7.1 Release Date: August 30, 2022
- Cloudera Manager 7.6.1 Release Date: March 29, 2022
- Cloudera Manager 7.5.1 Release Date: October 4, 2021
- Cloudera Manager 7.4.4 Release Date: August 5, 2021

## Cloudera Manager Download Information

**Important:** Access to Cloudera Manager binaries for production purposes requires authentication. To access the binaries at the locations below, you must first have an active subscription agreement and obtain a license key file along with the required authentication credentials (username and password).

The license key file and authentication credentials are provided in an email sent to customer accounts from Cloudera when a new license is issued. If you have an existing license with a Cloudera Base on premises Edition entitlement, you might not have received an email. In this instance you can identify the authentication credentials from the license key file. If you do not have access to the license key, contact your account representative to receive a copy.

To identify your authentication credentials using your license key file, complete the following steps:

- From Cloudera.com, log in to the Cloudera.com account associated with the Cloudera Base on premises license and subscription agreement.
- On the [Cloudera Base on premises Download page](#), click Download Now and scroll down to the Credential Generator.

- In the Generate Credentials text box, copy and paste the text of the “PGP Signed Message” within your license key file and click Get Credentials. The credentials generator returns your username and password.



**Important:** Make a note of the authentication credentials. You might need them during installation to complete tasks such as configuring a remote parcel repository, or installing Cloudera Manager packages using a package manager such as YUM, APT, or other tools that you might be using in your environment.

When you obtain your authentication credentials, use them to form the URL where you can access the Cloudera Manager repository in the Cloudera Archive.



**Important:**

Before performing an upgrade of Cloudera Manager or the Cloudera Runtime, creating a backup of all the metadata databases is important. This includes the Cloudera Manager database, and the various Cloudera Runtime component databases such as Hive Metadata Server, Ranger Admin, Ranger KMS, Schema Registry, etc. The backups are necessary if there is a reason to rollback to the prior version.

### Repositories for Cloudera Manager 7.13.1 and its cumulative hotfixes

#### Cloudera Manager 7.13.1 CHF6 (7.13.1.600)

Repository Type	Repository Location
RHEL 9 Compatible	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/redhat9/yum</pre> Repository File: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/redhat8/yum</pre> Repository File: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/redhat8/yum/cloudera-manager.repo</pre>
SLES 15	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/sles15/yum</pre> Repository File: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/sles15/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.600/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.13.1 CHF5 (7.13.1.500)

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/redhat8/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/sles15/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.500/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.13.1 CHF4 (7.13.1.400)

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/redhat9/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/redhat8/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/sles15/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.400/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.13.1 CHF3 (7.13.1.300)

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/redhat8/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/sles15/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.300/ubuntu2004/apt/cloudera-manager.list</pre>

**Cloudera Manager 7.13.1 CHF2 (7.13.1.200)**

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/redhat8/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/sles15/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.200/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.13.1 CHF1 (7.13.1.100)

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/redhat8/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/sles15/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.100/ubuntu2004/apt/cloudera-manager.list</pre>

**Cloudera Manager 7.13.1**

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/redhat8/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/sles15/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/ubuntu2204/apt</pre> <p>Repository file:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/ubuntu2004/apt</pre> <p>Repository file:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.13.1.0/ubuntu2004/apt/cloudera-manager.list</pre>

### Repositories for Cloudera Manager 7.11.3 and its cumulative hotfixes

#### Cloudera Manager 7.11.3 CHF15

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/sles12/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.34/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF14

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/redhat8/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.33/ubuntu2004/apt/cloudera-manager.list</pre>

**Cloudera Manager 7.11.3 CHF13**

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/sles12/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.32/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF12

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/redhat8/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/ubuntu2204/apt/cloudera-manager.list</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.31/ubuntu2004/apt/cloudera-manager.list</pre>

**Cloudera Manager 7.11.3 CHF11**

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/sles12/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/ubuntu2004/apt/cloudera-manager.list</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.28/ubuntu2204/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF10

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/redhat8/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/ubuntu2004/apt/cloudera-manager.list</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.26/ubuntu2204/apt/cloudera-manager.list</pre>

**Cloudera Manager 7.11.3 CHF9.1**



**Important:** Cloudera Manager 7.11.3 CHF 9.1 (7.11.3.24) has replaced Cloudera Manager CHF 9 (7.11.3.21). Contact Cloudera Support for questions related to any specific hotfixes.

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/sles15/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/ubuntu2004/apt/cloudera-manager.list</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.24/ubuntu2204/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF8

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/redhat9/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/ubuntu2004/apt/cloudera-manager.list</pre>

Repository Type	Repository Location
Ubuntu 22	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/ubuntu2204/apt</pre> Repository File: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.16/ubuntu2204/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF7 (Version: 7.11.3.14)



**Important:** Cloudera Manager 7.11.3 CHF7 (version: 7.11.3.14) is for CDP Private Cloud Data Services customers. Cloudera Manager 7.11.3 CHF7 Data Services (version: 7.11.3.14) supports [CDP Private Cloud Data Services 1.5.4 CHF1](#) release.

Repository Type	Repository Location
RHEL 9 Compatible	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.14/redhat9/yum</pre> Repository File: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.14/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.14/redhat8/yum</pre> Repository File: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.14/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.14/redhat7/yum</pre> Repository File: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.14/redhat7/yum/cloudera-manager.repo</pre>

### Cloudera Manager 7.11.3 CHF7 (Version: 7.11.3.11)



**Important:** Cloudera Manager 7.11.3 CHF7 (version: 7.11.3.11) is for CDP Private Cloud Base customers.

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/sles12/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/ubuntu2004/apt/cloudera-manager.list</pre>
Ubuntu 22	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/ubuntu2204/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.11/ubuntu2204/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF6

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/redhat8/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.9/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF5

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat9/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/sles12/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/ubuntu2004/apt/cloudera-manager.list</pre>
IBM PowerPC RHEL 7	<pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat7-ppc/yum</pre>
IBM PowerPC RHEL 8	<pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.7/redhat8-ppc/yum</pre>

### Cloudera Manager 7.11.3 CHF4

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/redhat7/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3.6/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF3

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/redhat8/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.4-50275000/ubuntu2004/apt/cloudera-manager.list</pre>

### Cloudera Manager 7.11.3 CHF2

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/sles12/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/ubuntu2004/apt/cloudera-manager.list</pre>
IBM PowerPC RHEL 9	<pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat9-ppc/yum</pre>
IBM PowerPC RHEL 8	<pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.3-47960007/redhat8-ppc/yum</pre>

### Cloudera Manager 7.11.3 CHF1

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat9/yum/cloudera-manager.repo</pre>
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat7/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/ubuntu2004/apt</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/ubuntu2004/apt/cloudera-manager.repo</pre>
IBM PowerPC RHEL 8	<pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat8-ppc/yum</pre>
IBM PowerPC RHEL 9	<pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/patch/7.11.3.2-46642574/redhat9-ppc/yum</pre>

### Cloudera Manager 7.11.3

Repository Type	Repository Location
RHEL 9 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/redhat9/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/redhat9/yum/cloudera-manager.repo</pre>

Repository Type	Repository Location
RHEL 8 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/redhat8/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/redhat8/yum/cloudera-manager.repo</pre>
RHEL 7 Compatible	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/redhat7/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/redhat7/yum/cloudera-manager.repo</pre>
SLES 15	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/sles15/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/sles15/yum/cloudera-manager.repo</pre>
SLES 12	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/sles12/yum</pre> <p>Repository File:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/sles12/yum/cloudera-manager.repo</pre>
Ubuntu 20	<p>Repository:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/ubuntu2004/apt</pre> <p>Repository file:</p> <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/ubuntu2004/apt/cloudera-manager.list</pre>

Repository Type	Repository Location
Ubuntu 22	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/ubuntu2204/apt</pre> Repository file: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/ubuntu2204/apt/cloudera-manager.list</pre>
Oracle 8.8 UEK	Repository: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/**oracle88***/</pre> Repository file: <pre>https://USERNAME:PASSWORD@archive.cloudera.com/p/cm7/7.11.3/**oracle88***/t</pre>

## Cloudera Runtime Version Information

Version numbers for current and previous releases of Cloudera Runtime 7.x.

Cloudera Runtime 7.3.1.500 SP3 is based on Apache Hadoop 3. For more information, see [Cloudera Runtime Component Versions](#).

Release date: November 5, 2025

Previous releases:

- Cloudera Runtime 7.3.1.400 SP2 Release Date: June 27, 2025
- Cloudera Runtime 7.3.1.200 SP1 Release Date: April 24, 2025
- Cloudera Runtime 7.3.1 Release Date: December 10, 2024
- Cloudera Runtime 7.1.9 SP1 Release Date: July 19, 2024
- Cloudera Runtime 7.1.7 SP3 Release Date: May 07, 2024
- Cloudera Runtime 7.1.9 Release Date: September 08, 2023
- Cloudera Runtime 7.1.7 SP2 Release Date: January 31, 2023
- Cloudera Runtime 7.1.8 Release Date: August 30, 2022
- Cloudera Runtime 7.1.7 SP1 Release Date: March 30, 2022
- Cloudera Runtime 7.1.7 Release Date: August 5, 2021
- Cloudera Runtime 7.1.6 Release Date: March 3, 2021
- Cloudera Runtime 7.1.5 Release Date: November 30, 2020
- Cloudera Runtime 7.1.4 Release Date: October 13, 2020
- Cloudera Runtime 7.1.3 Release Date: August 10, 2020
- Cloudera Runtime 7.1.2 Release Date: July 13, 2020
- Cloudera Runtime 7.1.1 Release Date: May 22, 2020
- Cloudera Runtime 7.0.3 Release Date: November 22, 2019

### Related Information

[Cloudera Runtime Component Versions](#)

## Cloudera Runtime Download Information

**Important:** Access to Cloudera Runtime parcels for production purposes requires authentication. To access the parcels at the locations below, you must first have an active subscription agreement and obtain a license key file along with the required authentication credentials (username and password).

The license key file and authentication credentials are provided in an email sent to customer accounts from Cloudera when a new license is issued. If you have an existing license with a Cloudera Base on premises Edition entitlement, you might not have received an email. In this instance you can identify the authentication credentials from the license key file. If you do not have access to the license key, contact your account representative to receive a copy.

To identify your authentication credentials using your license key file, complete the following steps:

- From Cloudera.com, log into the Cloudera.com account associated with the Cloudera Base on premises license and subscription agreement.
- On the [Cloudera Base on premises Download page](#), click Download Now and scroll down to the Credential Generator.
- In the Generate Credentials text box, copy and paste the text of the “PGP Signed Message” within your license key file and click Get Credentials. The credentials generator returns your username and password.



**Important:** Make a note of the authentication credentials. You might need them during installation to complete tasks such as configuring a remote parcel repository.



**Note:**

- For information on repositories for the Cloudera Runtime 7.3.1 service packs and cumulative hotfixes, see [Release Matrix](#).
- For information on repositories for the Cloudera Runtime 7.1.9 SP1 cumulative hotfixes, see [Cumulative hotfixes](#).
- For information on repositories for the Cloudera Runtime 7.1.9 cumulative hotfixes, see [Cumulative hotfixes](#).
- For information on repositories for the Cloudera Runtime 7.1.7 SP3 cumulative hotfixes, see [Cumulative hotfixes](#).

When you obtain your authentication credentials, use them to form the URL where you can access the Cloudera Runtime repository in the Cloudera Archive. Cloudera Manager can also download the Cloudera Runtime parcels directly during the installation process.

The repositories for Cloudera Runtime 7.x are listed in the following tables:

**Table 2: Cloudera Runtime 7.3.1.0**

Parcel Repository Location
<code>https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.3.1.0/parcels</code>

**Table 3: Cloudera Runtime 7.1.9.1000 (Service Pack 1):**

Parcel Repository Location
<code>https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.9.1000/parcels</code>

**Table 4: Cloudera Runtime 7.1.7.3000 (Service Pack 3):****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.7.3000/parcels
```

**Table 5: Cloudera Runtime 7.1.9.0:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.9.0/parcels
```

**Table 6: Cloudera Runtime 7.1.8.57 (Hotfix for IBM PPC):****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.8.57/parcels
```

**Table 7: Cloudera Runtime 7.1.8.10 (Hotfix for IBM PPC):****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.8.10/parcels
```

**Table 8: Cloudera Runtime 7.1.8.0:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.8.0/parcels
```

**Table 9: Cloudera Runtime 7.1.7.2000 (Service Pack 2):****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.7.2000/parcels
```

**Table 10: Cloudera Runtime 7.1.7.1000 (Service Pack 1):****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.7.1000/parcels
```



**Note:** Cloudera Runtime 7.1.7 has been replaced by Cloudera Runtime 7.1.7 SP1 for use with CDP Private Cloud Base 7.1.7 SP1.

**Table 11: Cloudera Runtime 7.1.7.0 (with log4j fixes in HOTFIX-4836):****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.7.78/parcels
```

**Table 12: Cloudera Runtime 7.1.6.0:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.6.0/parcels
```

**Table 13: Cloudera Runtime 7.1.5.0:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.5.0/parcels
```

**Table 14: Cloudera Runtime 7.1.4.0:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.4.0/parcels
```

**Table 15: Cloudera Runtime 7.1.3.0:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.3.0/parcels
```

**Table 16: Cloudera Runtime 7.1.2.1:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.2.1/parcels
```

**Table 17: Cloudera Runtime 7.1.1.1:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.1.1.2001/parcels
```

**Table 18: Cloudera Runtime 7.0.3.0:****Parcel Repository Location**

```
https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cdh7/7.0.3.0/parcels
```

## Cloudera Base on premises Trial Download Information

You can try the Cloudera Base on premises Edition of Cloudera for 60 days without obtaining a license key file.

To download Cloudera Base on premises without obtaining a license key file, visit the [Cloudera Base on premises Trial Download](#) page, click Try Now, and follow the download instructions. When you install Cloudera Base on premises without a license key, you are performing a trial installation that includes an embedded PostgreSQL database and is not suitable for a production environment. For more information on trial installations, see the trial installation documentation.

A 60-day trial of Cloudera Base on premises Edition can be enabled permanently with the appropriate license. To obtain a Cloudera Base on premises Edition license, fill in the [Contact Us](#) form or call 866-843-7207

## Product Compatibility Matrices

For more information on component compatibility across versions, see the following compatibility matrices:

### Replication Manager on Cloudera Base on premises

Cloudera Base on premises Replication Manager can replicate HDFS directories, Hive external tables, Impala data, Hive ACID tables, Iceberg tables, Ranger policies and roles for HDFS, Hive, and HBase services, and data in Ozone buckets.

See the following sections for the supported cluster and runtime versions:

- [Replicate from CDH and Cloudera Base on-premises source clusters](#) section lists the cluster and runtime versions to:
  - replicate data from CDH source clusters
  - replicate data between Cloudera Base on premises clusters using same storage
  - replicate data between Cloudera Base on premises clusters using different storage
- [Replicate HDFS and Hive data to cloud storage](#)
- [Replicate from HDP 2 and HDP 3 source clusters](#)

Replication policies support the following scenarios:

#### **Kerberos**

Replication Manager supports the following replication scenarios when Kerberos authentication is used on a cluster:

- Secure source to a secure destination.
- Insecure source to an insecure destination.
- Insecure source to a secure destination. The following requirements must be met for this scenario:
  - When a destination cluster has multiple source clusters, all the source clusters must either be secure or insecure. Replication Manager does not support a mix of secure and insecure source clusters.
  - The destination cluster must run Cloudera Base on premises 7.x or higher.
  - The source cluster must run a compatible Cloudera Base on premises version.
  - This replication scenario requires additional configuration. For more information, see [Replicating from insecure to secure clusters](#).

#### **Transport Layer Security (TLS)**

You can use TLS with Replication Manager. Additionally, Replication Manager supports replication scenarios where TLS is enabled for non-Hadoop services (Hive/Impala) and TLS is disabled Hadoop services (such as HDFS, YARN, and MapReduce).

### Apache Knox

When Cloudera Base on premises is configured with Knox and the source and target clusters are Knox-SSO enabled, you must ensure that you use the Cloudera Base on premises port in the peer URL when you add the source and target clusters as peers.

### FIPS clusters

Starting from Cloudera Base on premises 7.3.1 CHF1 and higher using Cloudera Manager 7.13.1.100 and higher versions, you can use the source and target clusters that support FIPS in Replication Manager.

To use FIPS clusters in Replication Manager, you must run the following commands on the source cluster after you add the [source cluster as a peer to use in replication policies](#):

1. 

```
/usr/java/default/bin/keytool -exportcert -keystore /var/lib/cloudera-scm-agent/agent-cert/cm-auto-global_truststore.jks -alias CMRootCA-0 -file ./source-cert.txt -storepass $STOREPASS -provider com.safelogic.cryptocomply.jcajce.provider.CryptoComplyFipsProvider -providerpath com-safelogic-cryptocomply-fips-core.jar
```
2. 

```
usr/java/default/bin/keytool -importcert -noprompt -v -trustcacerts -keystore /var/lib/cloudera-scm-agent/agent-cert/cm-auto-global_truststore.jks -alias cmrootca-1 -file ./source-cert.txt --storepass $STOREPASS -provider com.safelogic.cryptocomply.jcajce.provider.CryptoComplyFipsProvider -providerpath com-safelogic-cryptocomply-fips-core.jar
```

The following replication policies support FIPS source and target clusters:

- Atlas replication policies
- HDFS replication policies
- Hive replication policies
- Hive ACID replication policies



**Note:** Before you use FIPS clusters for Hive ACID replication policies, ensure that you perform the following steps:

1. Open `hive3qt.sh` located in `/opt/cloudera/cm-agent/service/dr/hive3qt.sh`.
2. Add `CLASSPATH=${CLASSPATH}:/cdep/extra_jars/com-safelogic-cryptocomply-fips-core.jar`.
3. Save the file.

- Hive external replication policies
- Iceberg replication policies
- Ranger replication policies

The following do not support FIPS clusters:

- Hive external table with Ozone storage
- Ozone replication policies
- Ozone snapshots



**Caution:** Replication Manager does not support CDP 6.x clusters when you use Cloudera Manager 7.11.3.x or later due to known compatibility issues with Guava library dependencies.

### Replicate from CDH and Cloudera Base on premises source clusters

The following tables list the source and destination clusters, lowest supported versions of Cloudera Manager, and the services that are available for each supported cloud provider for CDH and Cloudera Base on premises source clusters; ensure that the target database name is the same as the source database name, otherwise issues appear during or after data replication:

**Table 19: Replicate data from CDH source clusters**

Source cluster	Lowest supported source Cloudera Manager version	Lowest supported source Cloudera Runtime version	Lowest supported destination cluster version	Supported services on Replication Manager
CDH 5 CDH 6	6.3.0	5.10	CDP Private Cloud Base 7.0.3	HDFS, Sentry to Ranger*, Hive external tables

\*To perform Sentry to Ranger replication using HDFS and Hive external table replication policies, you must have installed Cloudera Manager version 6.3.1 and higher on the source cluster and Cloudera Manager version 7.1.1 and higher on the target cluster.

**Table 20: Replicate data between Cloudera Base on premises clusters using same storage**

Source cluster	Lowest supported source Cloudera Manager version	Lowest supported source Cloudera Runtime version	Destination cluster	Supported services on Replication Manager
CDP Private Cloud Base	7.1.1	7.1.1	CDP Private Cloud Base	<ul style="list-style-type: none"> <li>HDFS</li> <li>Hive external tables</li> </ul>
CDP Private Cloud Base	7.7.1	7.1.8	Cloudera Base on premises	<ul style="list-style-type: none"> <li>Hive ACID tables*</li> <li>Use Cloudera Manager APIs to replicate Ozone buckets.</li> </ul>
CDP Private Cloud Base	7.7.1 CHF4	7.1.8	Cloudera Base on premises	Ozone buckets
CDP Private Cloud Base	7.11.3	7.1.9	Cloudera Base on premises	<ul style="list-style-type: none"> <li>Iceberg tables</li> <li>Ranger policies and roles, and Ranger audit logs in HDFS**</li> </ul>
CDP Private Cloud Base	7.11.3 CHF7	7.1.9 SP1	Cloudera Base on premises	Atlas replication policies***

- \*You can use [REPL commands](#) or Replication Manager to replicate Hive ACID tables between CDP Private Cloud Base 7.1.8 or higher versions using Cloudera Manager versions 7.7.1 or higher.
- \*\*You can also create Ranger replication policies on Kerberos-enabled CDP Private Cloud Base 7.1.8 or higher clusters using Cloudera Manager 7.7.1 CHF6 and higher, if the Ranger replication feature flag is enabled.
- \*\*\*Replicating Atlas metadata using Hive external table replication policies and Iceberg replication policies, and replicating the metadata and data lineage of all the Hive external tables, Iceberg tables, and any other Atlas supported entities in the source cluster to the target cluster using Atlas replication policies is a technical preview feature. It is not recommended for production deployments. Cloudera recommends that you try this feature in development or test environments. To enable this feature, contact your Cloudera account team.

**Table 21: Replicate data between Cloudera Base on premises clusters using different storage**

Source cluster	Lowest supported source Cloudera Manager version	Lowest supported source Cloudera Runtime version	Destination cluster	Supported services on Replication Manager
CDP Private Cloud Base	7.11.3 CHF1	7.1.9	Cloudera Base on premises	Replicate HDFS and Hive external tables from: <ul style="list-style-type: none"> <li>source using Cloudera HDFS to destination using Dell Powerscale storage (Powerscale)</li> <li>source using Powerscale to destination using Cloudera HDFS</li> <li>source using Powerscale to destination using Powerscale</li> <li>source using Powerscale to destination using AWS, Azure, or GCP</li> </ul>
CDP Private Cloud Base	7.11.3 CHF2	7.1.9	Cloudera Base on premises	Replicate Hive ACID tables and Iceberg tables from source using Powerscale to destination using Powerscale.
CDP Private Cloud Base	7.11.3 CHF7	7.1.9 SP1	Cloudera Base on premises	Replicate metadata-only for Ozone storage-backed Hive external tables using Hive external table replication policies. You must replicate the data using Ozone replication policies.



**Important:** Hive external table replication policies do not support managed to managed table replication. When you replicate from a CDH cluster to a Cloudera Base on premises cluster, Replication Manager converts managed tables to external tables.

Therefore, to replicate managed tables (ACID) and external tables in a database successfully, you must perform the following steps in the order shown below:

1. Create Hive ACID table replication policy for the database to replicate the managed data.
2. After the replication completes, create the Hive external table replication policy to replicate the external tables in the database.

Ensure that the target cluster version is CDP Private Cloud Base 7.1.8 or higher.

### Replicate HDFS and Hive data to cloud storage

Cloudera Base on premises Replication Manager supports the following replication scenarios:

- Replicate to and from Amazon S3 from CDH 5.14+ and Cloudera Manager version 5.13+.
- Replication Manager does not support S3 as a source or destination when S3 is configured to use SSE-KMS.
- Replicate to and from Microsoft ADLS Gen1 from CDH 5.13+ and Cloudera Manager 5.15, 5.16, 6.1+.
  - Replicate to Microsoft ADLS Gen2 (ABFS) from CDH 5.13+ and Cloudera Manager 6.1+.
  - Supports snapshots from CDH 5.15+ and Cloudera Manager 5.15+.
  - Replicate HDFS and Hive external tables from CDP Private Cloud Base 7.1.9 CHF3 and higher clusters using Dell Powerscale storage to Cloudera on cloud clusters on AWS, Azure, and GCP.


- Replicate HDFS and Hive external tables from CDP Private Cloud Base 7.1.9 SP1 and higher to Cloudera on cloud clusters on GCP.

Starting in Cloudera Manager 6.1.0, Replication Manager ignores Hive tables backed by Kudu during replication. The change does not affect functionality since Replication Manager does not support tables backed by Kudu. This change was made to guard against data loss due to how the Hive Metastore, Impala, and Kudu interact.

### Replicate from HDP 2 and HDP 3 source clusters

Replicating to and from HDP to Cloudera Manager 7.x is not supported by Replication Manager. However, you can replicate data using other methods. The following table lists the methods and the supported data replications to Cloudera Base on premises clusters that are supported:

**Table 22: Replicate data from HDP 2 and HDP 3 source clusters**

Lowest supported source version	Services that require alternate replication methods
HDP 2.6.5	HDFS. Use <a href="#">DistCp</a> to replicate data.
HDP 3.1.1	HDFS. Use <a href="#">DistCp</a> to replicate data.
HDP 3.1.1	<ul style="list-style-type: none"> <li>HBase. Use <a href="#">HBase replication</a> to replicate HBase data.</li> <li>Hive external tables. For information to replicate data, contact Cloudera Support.</li> </ul>
HDP 3.1.5	Hive ACID tables to CDP Private Cloud Base 7.1.6 and higher clusters. Use <a href="#">REPL commands</a> to replicate data.  <b>Note:</b> Requires HDP 3.1.5 hotfixes.

## Cloudera Manager with Cloudera Runtime, CDH, and Cloudera Data Services on premises

This topic describes which versions of CDH, Cloudera Runtime, and Cloudera Data Services on premises are supported by Cloudera Manager.



### Important:

Before performing an upgrade of Cloudera Manager or the Cloudera Runtime, creating a backup of all the metadata databases is important. This includes the Cloudera Manager database, and the various Cloudera Runtime component databases such as Hive Metastore, Ranger Admin, Ranger KMS, Schema Registry, and so on. The backups are necessary if there is a reason to rollback to the prior version.



**Note:** Not all combinations of Cloudera Manager, Cloudera Runtime, and Cloudera Data Services on premises are supported. Ensure that the version of Cloudera Manager you are using supports the version of Cloudera Runtime and Cloudera Data Services on premises you have selected. For more information, see the [Cloudera Support Matrix](#).


The versions of Cloudera Runtime, Cloudera Data Services on premises, and CDH clusters that can be managed by Cloudera Manager are limited to the following:

**For Cloudera Base on premises**

**Table 23: Cloudera Manager support for Cloudera Runtime**

Cloudera Manager Version	Supported CDH/Cloudera Runtime versions
<a href="#">Cloudera Manager 7.13.1 Latest cumulative hotfix</a>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.3.1.500 SP3</li> <li>• Cloudera Runtime 7.3.1.400 SP2</li> <li>• Cloudera Runtime 7.3.1.200 SP1</li> <li>• Cloudera Runtime 7.3.1</li> <li>• Cloudera Runtime 7.1.9 SP1</li> <li>• Cloudera Runtime 7.1.9</li> <li>• Cloudera Runtime 7.1.8</li> <li>• Cloudera Runtime 7.1.7 SP3</li> <li>• Cloudera Runtime 7.1.7 SP2</li> <li>• Cloudera Runtime 7.1.7 SP1</li> <li>• Cloudera Runtime 7.1.7</li> </ul>
<a href="#">Cloudera Manager 7.13.1</a>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.3.1</li> <li>• Cloudera Runtime 7.1.9 SP1</li> <li>• Cloudera Runtime 7.1.9</li> <li>• Cloudera Runtime 7.1.8</li> <li>• Cloudera Runtime 7.1.7 SP3</li> <li>• Cloudera Runtime 7.1.7 SP2</li> <li>• Cloudera Runtime 7.1.7 SP1</li> <li>• Cloudera Runtime 7.1.7</li> <li>• CDH 6.3</li> <li>• CDH 6.2</li> <li>• CDH 6.1</li> <li>• CDH 6.0</li> </ul>
<a href="#">Cloudera Manager 7.11.3 Latest cumulative hotfix</a>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.9 SP1</li> <li>• Cloudera Runtime 7.1.7 SP3</li> <li>• Cloudera Runtime 7.1.9</li> <li>• Cloudera Runtime 7.1.7 SP2</li> <li>• Cloudera Runtime 7.1.8</li> <li>• Cloudera Runtime 7.1.7 SP1</li> <li>• Cloudera Runtime 7.1.7</li> <li>• Cloudera Runtime 7.1.6</li> <li>• Cloudera Runtime 7.1.5</li> <li>• Cloudera Runtime 7.1.4</li> <li>• Cloudera Runtime 7.1.3</li> <li>• Cloudera Runtime 7.1.2</li> <li>• Cloudera Runtime 7.1.1</li> <li>• Cloudera Runtime 7.0.3</li> <li>• CDH 6.3</li> <li>• CDH 6.2</li> <li>• CDH 6.1</li> <li>• CDH 6.0</li> </ul>

Cloudera Manager Version	Supported CDH/Cloudera Runtime versions
<p><a href="#">Cloudera Manager 7.11.3</a></p>  <p><b>Note:</b> You must install Python 3.8 (or 3.9 for RHEL 9.1) on all hosts before installing or upgrading to Cloudera Manager 7.11.3. For more information, see the <a href="#">Installing Python 3</a>.</p>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.9</li> <li>• Cloudera Runtime 7.1.7 SP2</li> <li>• Cloudera Runtime 7.1.8</li> <li>• Cloudera Runtime 7.1.7 SP1</li> <li>• Cloudera Runtime 7.1.7</li> <li>• Cloudera Runtime 7.1.6</li> <li>• Cloudera Runtime 7.1.5</li> <li>• Cloudera Runtime 7.1.4</li> <li>• Cloudera Runtime 7.1.3</li> <li>• Cloudera Runtime 7.1.2</li> <li>• Cloudera Runtime 7.1.1</li> <li>• Cloudera Runtime 7.0.3</li> <li>• CDH 6.3</li> <li>• CDH 6.2</li> <li>• CDH 6.1</li> <li>• CDH 6.0</li> </ul>
<p><a href="#">Cloudera Manager 7.7.3</a> should only be used when you need to use Python 3.8 for the Cloudera Manager agents. You must install Python 3.8 on all hosts before installing or upgrading to Cloudera Manager 7.7.3. Cloudera Manager 7.7.3-CHF2 supports only RHEL 8.4, RHEL 8.6, and RHEL 7.9. See the <a href="#">CDP Private Cloud Base Installation Guide</a> for more information.</p>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.8</li> </ul>
<p><a href="#">Cloudera Manager 7.7.1</a></p>  <p><b>Note:</b> Cloudera recommends you to use latest cumulative hotfix of Cloudera Manager 7.7.1 with Cloudera Runtime 7.1.7-SP2.</p>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.7 SP2</li> <li>• Cloudera Runtime 7.1.8</li> <li>• Cloudera Runtime 7.1.7 SP1</li> <li>• Cloudera Runtime 7.1.7</li> <li>• Cloudera Runtime 7.1.6</li> <li>• Cloudera Runtime 7.1.5</li> <li>• Cloudera Runtime 7.1.4</li> <li>• Cloudera Runtime 7.1.3</li> <li>• Cloudera Runtime 7.1.2</li> <li>• Cloudera Runtime 7.1.1</li> <li>• Cloudera Runtime 7.0.3</li> <li>• CDH 6.3</li> <li>• CDH 6.2</li> <li>• CDH 6.1</li> <li>• CDH 6.0</li> </ul>
<p><a href="#">7.6.7</a></p>  <p><b>Important:</b> Do not upgrade to Cloudera Manager 7.6.7 if you are running <a href="#">Cloudera Data Services on premises</a> in your deployment.</p>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.7 SP2</li> <li>• Cloudera Runtime 7.1.7 SP1</li> <li>• Cloudera Runtime 7.1.7</li> <li>• Cloudera Runtime 7.1.6</li> <li>• Cloudera Runtime 7.1.5</li> <li>• Cloudera Runtime 7.1.4</li> <li>• Cloudera Runtime 7.1.3</li> <li>• Cloudera Runtime 7.1.2</li> <li>• Cloudera Runtime 7.1.1</li> <li>• Cloudera Runtime 7.0.3</li> <li>• CDH 6.3</li> <li>• CDH 6.2</li> <li>• CDH 6.1</li> <li>• CDH 6.0</li> <li>• CDH 5.16.2</li> </ul>

Cloudera Manager Version	Supported CDH/Cloudera Runtime versions
<p>7.6.1</p>  <p><b>Important:</b> Do not upgrade to Cloudera Manager 7.6.1 if you are running <a href="#">Cloudera Data Services on premises</a> in your deployment.</p>	<ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.7 SP1</li> <li>• Cloudera Runtime 7.1.7</li> <li>• Cloudera Runtime 7.1.6</li> <li>• Cloudera Runtime 7.1.5</li> <li>• Cloudera Runtime 7.1.4</li> <li>• Cloudera Runtime 7.1.3</li> <li>• Cloudera Runtime 7.1.2</li> <li>• Cloudera Runtime 7.1.1</li> <li>• Cloudera Runtime 7.0.3</li> <li>• CDH 6.3</li> <li>• CDH 6.2</li> <li>• CDH 6.1</li> <li>• CDH 6.0</li> <li>• CDH 5.13 - 5.16</li> </ul>

**For Cloudera Data Services on premises**

**Table 24: Cloudera Manager support for Cloudera Data Services on premises**

Supported Cloudera Manager versions with Cloudera Data Services on premises	Supported Cloudera Runtime versions with Cloudera Data Services on premises
7.13.1 Cumulative hotfix 5 (7.13.1.501)	Cloudera Data Services on premises <a href="#">1.5.5 SP1</a> supported only with: <ul style="list-style-type: none"> <li>• Cloudera Runtime 7.3.1.500 SP3</li> <li>• Cloudera Runtime 7.1.9 SP1 CHF11 or higher</li> <li>• Cloudera Runtime 7.1.7 SP3 CHF10 or higher</li> </ul>
7.13.1 Cumulative hotfix 4 (7.13.1.402)	Cloudera Data Services on premises <a href="#">1.5.5 CHF1</a> supported only with: <ul style="list-style-type: none"> <li>• Cloudera Runtime 7.3.1.400 SP2</li> <li>• Cloudera Runtime 7.1.9 SP1 CHF7 or higher</li> <li>• Cloudera Runtime 7.1.7 SP3 CHF10 or higher</li> </ul>
7.13.1 Cumulative hotfix 3 (7.13.1.303)	Cloudera Data Services on premises <a href="#">1.5.5</a> supported only with: <ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.9 SP1 CHF7 or higher</li> <li>• Cloudera Runtime 7.1.7 SP3 CHF10 or higher</li> </ul>
7.13.1 Cumulative hotfix 1 (7.13.1.100)	Cloudera Data Services on premises <a href="#">1.5.4 SP2</a> supported only with: <ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.9 SP1 CHF4 or higher</li> <li>• Cloudera Runtime 7.1.9 CHF7 or higher</li> <li>• Cloudera Runtime 7.1.7 SP3</li> </ul>
7.11.3 cumulative hotfix 11	Cloudera Data Services on premises <a href="#">1.5.4 SP1</a> supported only with: <ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.9 SP1 CHF4 or higher</li> <li>• Cloudera Runtime 7.1.9 CHF7 or higher</li> <li>• Cloudera Runtime 7.1.7 SP3</li> </ul>
7.11.3 cumulative hotfix 9.1 (version: 7.11.3.24)	Cloudera Private Cloud Data Services <a href="#">1.5.4 CHF3</a> supported only with: <ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.9 SP1</li> <li>• Cloudera Runtime 7.1.9 CHF6 or higher</li> <li>• Cloudera Runtime 7.1.7 SP3</li> </ul>
7.11.3 cumulative hotfix 7 Data Services (version: 7.11.3.14)	Cloudera Private Cloud Data Services <a href="#">1.5.4 CHF1</a> supported only with: <ul style="list-style-type: none"> <li>• Cloudera Runtime 7.1.9 SP1</li> <li>• Cloudera Runtime 7.1.9 CHF5 or higher</li> <li>• Cloudera Runtime 7.1.7 SP3</li> </ul>

Supported Cloudera Manager versions with Cloudera Data Services on premises	Supported Cloudera Runtime versions with Cloudera Data Services on premises
7.11.3 cumulative hotfix 6	Cloudera Private Cloud Data Services 1.5.4 supported only with: <ul style="list-style-type: none"> <li>Cloudera Runtime 7.1.9 CHF6</li> <li>Cloudera Runtime 7.1.8 CHF22 or higher</li> <li>Cloudera Runtime 7.1.7 SP3</li> </ul>

## Product Compatibility Matrices for KMS and Encryption Products

Cloudera Navigator encryption comprises several components including Ranger KMS, Navigator Encrypt, KTS, and Key HSM.



**Note:** Support for Key Trustee Server and Key HSM has been removed since 7.3.1.

The individual compatibility matrices for each component are as follows.

### Product Compatibility Matrix for Ranger KMS

Learn about the recommended hardware and supported distributions for Ranger KMS.

Ranger KMS can be installed with either Key Trustee Server or a separate database as the backing keystore.

#### Ranger KMS: Recommended Hardware and Supported Distributions

Ranger KMS with Key Trustee Server must be installed on a separate host than Key Trustee Server.



**Note:** Support for Key Trustee Server and Key HSM has been removed since 7.3.1.

The recommended minimum hardware specifications are as follows:

- Processor: 1 GHz 64-bit quad core
- Memory: 8 GB RAM
- Storage: 20 GB on moderate- to high-performance disk drives

For details on compatibility matrix for Ranger KMS, check respective Cloudera Base on premises version in [Cloudera Support Matrix](#).

### Product Compatibility Matrix for Navigator Encrypt

Learn about the recommended hardware and supported distributions for Navigator Encrypt.



**Note:** Cloudera Enterprise, with the exception of Cloudera Navigator Encrypt, is supported on platforms with Security-Enhanced Linux (SELinux) enabled and in enforcing mode. Cloudera is not responsible for policy support or policy enforcement. If you experience issues with SELinux, contact your OS provider.

Supported command-line interpreters:

- sh (Bourne)
- bash (Bash)
- dash (Ubuntu)



**Note:** Navigator Encrypt does not support installation or use in chroot environments.

## Network Requirements

For new Navigator Key Trustee Server installations, Navigator Encrypt initiates TCP traffic over port 11371 (HTTPS) to the Key Trustee Server.



**Note:** Support for Key Trustee Server and Key HSM has been removed since 7.3.1.

For new Ranger KMS installations, Navigator Encrypt initiates TCP traffic over port 9494 (HTTPS) to Ranger KMS.

For upgrades, Navigator Encrypt initiates TCP traffic over ports 80 (HTTP) and 443 (HTTPS) to the Navigator Key Trustee Server.

## Internet Access

You must have an active connection to the Internet to download many package dependencies, unless you have internal repositories or mirrors containing the dependent packages.

## Maintenance Window

Data is not accessible during the encryption process. Plan for system downtime during installation and configuration.

## Administrative Access

To enforce a high level of security, all Navigator Encrypt commands require administrative (root) access (including installation and configuration). If you do not have administrative privileges on your server, contact your system administrator before proceeding.

## Network Time Protocol (NTP)

The Network Time Protocol (NTP) service synchronizes system time. Cloudera recommends using NTP to ensure that timestamps in system logs, cryptographic signatures, and other auditable events are consistent across systems.

## Package Dependencies

Navigator Encrypt requires these packages, which are resolved by your distribution package manager during installation:

- dkms
- keyutils
- openssl
- lsof
- gcc
- cryptsetup

These packages may have other dependencies that are also resolved by your package manager. Installation works with gcc, gcc3, and gcc4.

For details on compatibility matrix for Navigator Encrypt, check respective Cloudera Base on premises version in [Cloudera Support Matrix](#).

## Product Compatibility Matrix for KTS and Key HSM

Learn about the recommended hardware and supported distributions for Key Trustee Server and Navigator Key HSM.



**Note:** Support for Key Trustee Server and Key HSM has been removed since 7.3.1.

## Key Trustee Server

Because of a change in the ports used by Key Trustee Server, Navigator Encrypt versions lower than 3.7 and Ranger KMS versions lower than 5.4 are not supported in Key Trustee Server 5.4 and higher.

### Recommended Hardware and Supported Distributions

Key Trustee Server must be installed on a dedicated server or virtual machine (VM) that is not used for any other purpose. The backing PostgreSQL database must be installed on the same host as the Key Trustee Server, and must not be shared with any other services. For high availability, the active and passive Key Trustee Servers must not share physical resources.

The recommended minimum hardware specifications are as follows:

- Processor: 1 GHz 64-bit quad core
- Memory: 8 GB RAM
- Storage: 20 GB on moderate- to high-performance disk drives



For details on compatibility matrix for Key Trustee Server, check respective Cloudera Base on premises version in [Cloudera Support Matrix](#).

## Cloudera Navigator Key HSM

Cloudera Navigator Key HSM must be installed on the same host as Key Trustee Server. Although Key HSM is compatible across all versions of Key Trustee Server, Cloudera recommends also upgrading Key HSM after you upgrade Key Trustee Server. See [Installing Cloudera Navigator Key HSM](#) and [Upgrading Cloudera Navigator Key HSM](#) for more information.

### Recommended Hardware and Supported Distributions

The following are prerequisites for installing Navigator Key HSM:

- Oracle Java Runtime Environment (JRE) 8 or higher with Java Cryptography Extension (JCE) Unlimited Strength Jurisdiction Policy Files:
  - [JCE for Java SE 8](#)
    -  **Note:** JDK 1.8u161 and higher enable unlimited strength encryption by default, and do not require policy files.
  - OpenJDK 11
    -  **Note:** The Entrust JCE libraries do not support Java 11, so running Key HSM with Entrust on OpenJDK 11 is unsupported.

- A supported HSM device:
  - Entrust (formerly Safenet) Luna
    - v6
      - HSM firmware version: 6.2.1
      - HSM software version: 5.2.3-1
    - v7
      - HSM firmware version: 7.0.3
      - HSM software version: 7.2.0
  - SafeNet KeySecure
    - HSM firmware version: 6.2.1
    - HSM software version: 8.0.1, 8.1.0, 8.7.0
  - Entrust nSolo, nConnect
    - HSM firmware version: 11.4.0
    - Client software version: 2.28.9cam136



**Note:** Entrust Key HSM is unsupported because the Entrust client Java libraries do not support Java 11.

- AWS CloudHSM
  - Client software version: 1.1.1
- Key Trustee Server 3.8 or higher



**Important:** You must install Key HSM on the same host as Key Trustee Server.

Root access is required to install Navigator Key HSM.



**Note:** For details on compatibility matrix for Navigator Key HSM, check respective Cloudera Base on premises version in [Cloudera Support Matrix](#).

## Product Compatibility Matrix for HSM Support

Learn about the HSMs supported for the different Cloudera/ CDH/ HDP versions.

### HSM Support for Cloudera Base on premises 7.x

**Table 25: Cloudera Base on premises 7.x**

	Luna v7	SafeNet KeySecure	nCipher nSolo/nConnect	AWS CloudHSM
Ranger KMS	Luna Server: 7 Luna Client: 10.5.0 HSM Software Version: 7.7.1-188 HSM Firmware Version: 7.7.1 FIPS Support : Yes		CipherTrust Manager 2.0 ( Supported only for 7.1.8 and 7.1.9)	

	Luna v7	SafeNet KeySecure	nCipher nSolo/nConnect	AWS CloudHSM
Key HSM	HSM firmware version: 7.7.1  HSM software version: 7.7.1-188	HSM firmware version: 6.2.1  HSM software version: 8.0.1, 8.1.0, 8.7.0	HSM firmware version: 11.4.0  Client software version: 2.28.9cam136  CipherTrust Manager 2.0 ( Supported only for 7.1.8 and 7.1.9)	Client software version: 1.1.1

## Changes to CDH and HDP Components in Cloudera Base on premises

CDH and HDP components that have changed or been removed in Cloudera Base on premises.

### Updated CDH Components

CDH Component Changes in CDP Private Cloud Base 7.x.

#### Component Changes in CDP Private Cloud Base 7.0.x

Pig, Flume, Sentry, and Navigator have been removed.

- Pig can be replaced with [Hive](#) or [Spark](#).
- Flume has been replaced with [Cloudera Flow Management](#) (CFM). CFM is a no-code data ingestion and management solution powered by Apache NiFi. Contact your Cloudera account team for more information about moving from Flume to CFM.
- Sentry has been replaced with [Apache Ranger](#). A Sentry-to-Ranger policy migration tool is available for CDP Private Cloud Base 7.1.x and migrations will be supported when Replication Manager is used to migrate Hive tables from CDH to Cloudera.
- Navigator has been replaced with [Apache Atlas](#).
- Cloudera Director is not supported with CDP Private Cloud Base.
- MapReduce v1 was deprecated as of CDH 5.0 and is not supported in Cloudera.



**Note:** Replacements are not direct replacements and are only alternate product offerings.

#### Component Changes in CDP Private Cloud Base 7.1.x

- The YARN Fair Scheduler is being replaced with the [YARN Capacity Scheduler](#). A migration tool will be provided to convert the Fair Scheduler configurations to Capacity Scheduler.
- The Sentry policy files feature option has been deprecated in CDH 5.x and is entirely removed in CDP Private Cloud Base 7.1.x. Prior to an upgrade to CDP Private Cloud Base 7.1.x, the Sentry Service role must be set up and used for enforcing access policies over Hive/Solr. To migrate the existing Sentry Policy file configuration to a Sentry Service, see: [Migrating from Sentry Policy Files to the Sentry Service](#).

- Navigator has been replaced with [Apache Atlas](#).

Navigator lineage data can be transferred to Atlas as part of the CDH to CDP Private Cloud Base upgrade process. Navigator audit data is not transferred to Atlas.

When you upgrade a CDH cluster to CDP Private Cloud Base, the Navigator audits persist. However, services no longer produce audits for Navigator. You can continue to run Navigator to be able to access the audits. See [Transitioning Navigator audits](#).



**Note:** Replacements are not direct replacements and are only alternate product offerings.

The following CDH components have been included in Cloudera Runtime for the first time in CDP Private Cloud Base 7.1.1.

- [Schema Registry](#)
- [Streams Messaging Manager](#)
- [Streams Replication Manager](#)

### Deprecated Items

A deprecated item is a feature, component, platform, or functionality that Cloudera is planning to remove in a future release. Cloudera supports items that are deprecated until they are removed, and the deprecation gives customers time to plan for removal.

The following table lists deprecated items:

**Table 26: CDH Components, Subcomponents, and Product Functionality**

Item	Related Information	CDH Release in Which Item Is Deprecated	Release in Which Support Is Removed
Apache Crunch	Apache Crunch is deprecated, and will be removed in a future release. Cloudera recommends using Spark 2 instead. Additionally, as of CDH 6.0.0, Crunch is available only as Maven artifacts from the Cloudera Maven repository.	6.0.0	Cloudera Runtime 7
AsyncHBaseSink	AsyncHBaseSink is incompatible with HBase 2.0 and you can no longer use AsyncHBaseSink with Apache Flume. For information about using HBase2Sink with Apache Flume, see .	6.0.0	6.0.0, Cloudera Runtime 7
DataFu		5.9.0	6.0.0, Cloudera Runtime 7
HBaseSink	HBaseSink has been replaced with HBase2Sink, which is compatible with HBase 2.0. For information about using HBase2Sink with Apache Flume.	6.0.0	6.0.0, Cloudera Runtime 7
hbck read-write repair mode	hbck is only available in a read-only inconsistency identifying mode.	6.0.0	6.0.0, Cloudera Runtime 7
HFTP	Use WebHDFS	5.10.1	6.0.0, Cloudera Runtime 7
Hive CLI		5.0.0	Cloudera Runtime 7
HiveServer1		5.3.0	6.0.0, Cloudera Runtime 7
Hue UI version 3	Instead use Hue UI version 4	6.0.0	6.0.0., Cloudera Runtime 7

Item	Related Information	CDH Release in Which Item Is Deprecated	Release in Which Support Is Removed
Key HSM Debug Startup	To get debug information during start up, set the root log level to debug in the /usr/share/keytrustee-server-keyhsm/conf/logback.xml file.	6.1.0	6.1.0, Cloudera Runtime 7
Kite Dataset API	Kite Dataset API is deprecated, and will be removed in a future release.	6.0.0	Cloudera Runtime 7
Kudu Flume sink configuration parameters	The producer.skipMissingColumn, producer.skipBadColumnValue, and producer.warnUnmatchedRows Kudu Flume sink configuration parameters have been deprecated in favor of producer.missingColumnPolicy, producer.badColumnValuePolicy, and producer.unmatchedRowPolicy respectively.	6.1.0	Cloudera Runtime 7
kudu perf loadgen tool configuration options	The -table_num_buckets configuration option of the kudu perf loadgen tool is now removed in favor of -table_num_hash_partitions and -table_num_range_partitions	6.1.0	Cloudera Runtime 7
Legacy Scala clients for Kafka (consumer and producer)	The legacy Scala clients (producer and consumer) that are under the kafka.producer.* and kafka.consumer.* package.	CDK 3.0.0 and CDH 6.0.0	6.1.0, Cloudera Runtime 7
Llama		5.5.0	6.0.0, Cloudera Runtime 7
Mahout		5.5.0	6.0.0
Management of Key Trustee Server without Cloudera Manager		5.9.0	6.0.0, Cloudera Runtime 7
MR Pipes		5.9.0	6.0.0, Cloudera Runtime 7
MRv1, MapReduce v1 APIs, MapReduce service	<a href="#">Migrating from MapReduce 1 to MapReduce 2</a>	5.0.0	6.0.0, Cloudera Runtime 7
Navigator Encrypt Filesystem-Level Encryption Using eCryptfs	There is no support for creating new eCryptfs mount points. Previously existing eCryptfs mount points are not affected.	July 2015	6.0.0, Cloudera Runtime 7
Navigator Encrypt migration command	The navencrypt-migration command is deprecated, and has been removed.	February 1, 2018	6.0.0, Cloudera Runtime 7
Old NameNode UI		5.5.0	6.0.0, Cloudera Runtime 7
Oozie Hive Action	<a href="#">Oozie Hive 2 Action Extension</a>	5.7.0	6.0.0, Cloudera Runtime 7
Parquet library with group ID com.twitter		6.0.0	6.0.0, Cloudera Runtime 7
Parquet methods for reading metadata on the client side	See <a href="#">API Methods Removed</a> .	6.0.0	6.0.0, Cloudera Runtime 7
Python 2.6	Python 2.6, packaged with RHEL6, is deprecated. Key Trustee Server uses the utilities ktadmin and keytrustee-orgtool, which use the native version of Python that is packaged with the host OS.	6.0.0	To be determined.

Item	Related Information	CDH Release in Which Item Is Deprecated	Release in Which Support Is Removed
Sentry policy files	<a href="#">Migrating from Sentry Policy Files to the Sentry Service</a>	5.8.0	6.0.0, Cloudera Runtime 7
Spark 1.x		5.13	6.0.0, Cloudera Runtime 7
Spark Standalone		5.5.0	6.0.0, Cloudera Runtime 7
Sqoop2		5.9.0	6.0.0, Cloudera Runtime 7
Unmanaged (CLI-based) CDH deployments		6.0.0	6.0.0, Cloudera Runtime 7
Whirr		5.5.0	6.0.0, Cloudera Runtime 7
YARN Fair Scheduler	See <a href="#">Migrating from Fair Scheduler to Capacity Scheduler</a>	5.9.0	6.0.0, Cloudera Runtime 7

## Updated HDP Components

HDP Component Changes in CDP Private Cloud Base 7.

### Component Changes in CDP Private Cloud Base 7.0

Flume, Storm, Druid, Falcon, Mahout, and Ambari have been removed.

- Flume workloads can be migrated to [Cloudera Flow Management](#) (CFM). CFM is a no-code data ingestion and management solution powered by Apache NiFi. Contact your Cloudera account team for more information about moving from Flume to CFM.
- Storm can be replaced with Cloudera Streaming Analytics (CSA) powered by Apache Flink. Contact your Cloudera account team for more information about moving from Storm to CSA.
- [Cloudera Manager](#) has replaced Ambari, but Ambari will be used as part of the upgrade process from HDP to Cloudera Base on premises 7.1.



**Note:** Replacements are not direct replacements and are only alternate product offerings.

### Component Changes in CDP Private Cloud Base 7.1

Data Lifecycle Manager (DLM), Data Steward Studio (DSS), Hive LLAP, and Streaming Analytics Manager (SAM) are being removed.

- Data Lifecycle Manager (DLM) is being replaced with [Cloudera Replication Manager](#).
- Data Steward Studio (DSS) is being replaced with [Cloudera Data Catalog](#).
- Hive LLAP is being replaced with [Cloudera Data Warehouse](#) (CDW) as CDW is not yet available on CDP Private Cloud Base.
- Streaming Analytics Manager (SAM) was closely tied with Storm and has been removed.
- Cloudbreak is not supported in CDP Private Cloud Base and must not be present when upgrading.
- DataPlane is not supported in CDP Private Cloud Base and must not be present when upgrading.



**Note:** Replacements are not direct replacements and are only alternate product offerings.

The following HDF components were previously available for installation on HDP, and - have been included in Cloudera Runtime for the first time in CDP Private Cloud Base 7.1.1.

- [Schema Registry](#)
- [Streams Messaging Manager](#)
- [Streams Replication Manager](#)

## HDP Core component version changes

You must be aware of the version number changes for the core components included in HDP 2.6.5.x.

Component	HDP 2.6.5.x	Ambari 7.1.x.x	Cloudera Base on premises (CM)
Hadoop	2.7.3	3.1.1	3.1.1
Hive	1.2.1 2.1.0 (LLAP)	3.1.3000 CLI Removed	3.1.3000
Hive LLAP	available	removed	removed
Hive MR	1.2.1	removed	removed
Hive TEZ	0.7.0	0.9.1	0.9.1
Oozie	4.2.0	5.1.0	5.1.0
Sqoop	1.4.6	1.4.7	1.4.7
Flume	1.5.2	removed	removed
Pig	0.16.0	removed	removed
HBase	1.1.2	2.2.3	2.2.3
Phoenix	4.7.0	5.0.0	5.0.0
Knox	0.12.0	1.3.0	1.3.0
Ranger	0.7.0	2.0.0	2.0.0
Ranger KMS	0.7.0	2.0.0	2.0.0
Druid	0.10.1	Not available	Not available
Storm	1.1.0	removed	removed
Spark	1.6.3 2.3.0	2.4.5	2.4.5
ZooKeeper	3.4.6	3.5.5	3.5.5
Zeppelin	0.7.3	0.8.2	0.8.2
Falcon	0.10.0	removed	removed
Atlas	0.8.0	2.0.0	2.0.0
Kafka	1.0.0	2.4.0	2.4.0

Some of the components are removed between HDP and Ambari PvC Base. You must work with the application teams to transition workloads to another part of the stack before you upgrade. When the transition is complete, remove those components from the HDP stack before you upgrade to Ambari PvC Base.

## Changes to Ambari and HDP services

Review the list of additional components that are added to your cluster, along with the deprecated services and views that are removed during the process of upgrading to Ambari 7.1.x and HDP intermediate bits.

These services are removed automatically as part of the upgrade process. You can also remove these services manually prior to the upgrade by following the steps below:

1. Log in to the Ambari UI.
2. Click the service you wish to remove.

3. From the Service Actions menu, click Delete Service.

Ambari 2.6.2.x to Ambari 7.1.x.x.

The Ambari 2.6.2.x to Ambari 7.1.x.x upgrade removes the following views:

- Hive View 1.5, Hive View 2
- Hue To Ambari View Migration
- Slider
- Storm
- Tez
- Pig

HDP 2.6.5.x to HDP intermediate bits

The HDP 2.6.5.x to HDP 7.1.x.x upgrade adds the following components if YARN is deployed in the cluster being upgraded:

- YARN Registry DNS
- YARN Timeline Service V2.0 Reader

The HDP 2.6.5.x to HDP intermediate bits upgrade removes the following services:

- Druid
- Superset
- Accumulo
- Flume
- Mahout
- Falcon
- Spark 1.6
- Slider
- WebHCat
- Spark Thrift Server



**Caution:**

- Druid is not supported on Ambari 7.1.1. Druid is supported from Ambari 7.1.2 version onwards. You can upgrade when Druid is available on CDP Private Cloud Base.
- When you upgrade Ambari to a later version, Accumulo service is not supported as Accumulo is not compatible with other components and cannot access the data. Hence, you must delete Accumulo service when upgrading Ambari.



**Note:** You must remove Accumulo on the Ambari managed HDP cluster as the AM2CM tool does not transition the Accumulo component from HDP to Cloudera. However, you can add Accumulo as a service on the Cloudera Manager managed CDP Private Cloud Base.



**Important:**

- Upgrading from HDP 2.6.5.x to HDP intermediate bits does not support HDP Search to Cloudera Search upgrade.
- LLAP is not supported in CDP Private Cloud Base. You can move the LLAP workloads to Cloudera Data Warehouse.
- The Hive View and the Tez View (collectively known as Ambari Views) are deprecated in CDP Private Cloud Base.

## Assessing the Impact of Apache Hive

## Apache Hive features Apache Hive features in Cloudera Data Hub Apache Hive features in Cloudera Data Warehouse

Major changes to Apache Hive 2.x improve Apache Hive 3.x transactions and security. Knowing the major differences between these versions is critical for SQL users, including those who use Apache Spark and Apache Impala.

Hive is a data warehouse system for summarizing, querying, and analyzing huge, disparate data sets.

### ACID transaction processing

Hive 3 tables are ACID (Atomicity, Consistency, Isolation, and Durability)-compliant. Hive 3 write and read operations improve the performance of transactional tables. Atomic operations include simple writes and inserts, writes to multiple partitions, and multiple inserts in a single SELECT statement. A read operation is not affected by changes that occur during the operation. You can insert or delete data, and it remains consistent throughout software and hardware crashes. Creation and maintenance of Hive tables is simplified because there is no longer any need to bucket tables.

### Materialized views

Because multiple queries frequently need the same intermediate roll up or joined table, you can avoid costly, repetitious query portion sharing, by precomputing and caching intermediate tables into views.

### Query results cache

Hive filters and caches similar or identical queries. Hive does not recompute the data that has not changed. Caching repetitive queries can reduce the load substantially when hundreds or thousands of users of BI tools and web services query Hive.

### Scheduled Queries

Using SQL statements, you can schedule Hive queries to run on a recurring basis, monitor query progress, temporarily ignore a query schedule, and limit the number running in parallel. You can use scheduled queries to start compaction and periodically rebuild materialized views, for example.

### Security improvements

Apache Ranger secures Hive data by default. To meet demands for concurrency improvements, ACID support, render security, and other features, Hive tightly controls the location of the warehouse on a file system, or object store, and memory resources.

With Apache Ranger and Apache Hive ACID support, your organization will be ready to support and implement GDPR (General Data Protection Regulation).

### Connection Pooling

Hive supports HikariCP JDBC connection pooling.

### Unsupported features

Cloudera does not support the following features that were available in HDP and CDH platforms:

- Multiple insert overwrite queries that read data from a source table.
- CREATE TABLE that specifies a managed table location

Do not use the LOCATION clause to create a managed table. Hive assigns a default location in the warehouse to managed tables.

- **CREATE INDEX**

Hive builds and stores indexes in ORC or Parquet within the main table, instead of a different table, automatically. Set `hive.optimize.index.filter` to enable use (not recommended--use materialized views instead). Existing indexes are preserved and migrated in Parquet or ORC to Cloudera during upgrade.

## Apache Hive 3 architectural overview Apache Hive 3 in Cloudera Data Hub architectural overview Apache Hive 3 in Cloudera Data Warehouse architectural overview

Understanding Apache Hive 3 major design features, such as default ACID transaction processing, can help you use Hive to address the growing needs of enterprise data warehouse systems.

### Data storage and access control

One of the major architectural changes to support Hive 3 design gives Hive much more control over metadata memory resources and the file system, or object store. The following architectural changes from Hive 2 to Hive 3 provide improved security:

- Tightly controlled file system and computer memory resources, replacing flexible boundaries: Definitive boundaries increase predictability. Greater file system control improves security.
- Optimized workloads in shared files and containers

Hive 3 is optimized for object stores in the following ways:

- Hive uses ACID to determine which files to read rather than relying on the storage system.
- In Hive 3, file movement is reduced from that in Hive 2.
- Hive caches metadata and data aggressively to reduce file system operations

The major authorization model for Hive is Ranger. Hive enforces access controls specified in Ranger. This model offers stronger security than other security schemes and more flexibility in managing policies.

This model permits only Hive to access the Hive warehouse.

### Transaction processing

You can deploy new Hive application types by taking advantage of the following transaction processing characteristics:

- Mature versions of ACID transaction processing:

ACID tables are the default table type.

ACID enabled by default causes no performance or operational overload.

- Simplified application development, operations with strong transactional guarantees, and simple semantics for SQL commands

You do not need to bucket ACID tables.

- Materialized view rewrites
- Automatic query cache
- Advanced optimizations

### Hive client changes

You can use the thin client Beeline for querying Hive from a client. You can run Hive administrative commands from the client. Beeline uses a JDBC connection to Hive to run commands. Hive parses, compiles, and runs operations. Beeline supports many of the command-line options that Hive CLI supported. Beeline does not support `hive -e set key=value` to configure the Hive Metastore.

You enter supported Hive CLI commands by invoking Beeline using the hive keyword, command option, and command. For example, `hive -e set`. Using Beeline instead of the thick client Hive CLI, which is no longer supported, has several advantages, including low overhead. Beeline does not use the entire Hive code base. A small number of daemons required to run queries simplifies monitoring and debugging.

Hive enforces allowlist and denylist settings that you can change using SET commands. Using the denylist, you can restrict memory configuration changes to prevent instability. Different Hive instances with different allowlists and denylists to establish different levels of stability.

### Apache Hive Metastore sharing

Hive, Impala, and other components can share a remote Hive metastore.

### Query execution of batch and interactive workloads

You can connect to Hive using a JDBC command-line tool, such as Beeline, or using an JDBC/ODBC driver with a BI tool, such as Tableau. You configure the settings file for each instance to perform either batch or interactive processing.

## Key semantic changes and workarounds

As SQL Developer, Analyst, or other Hive user, you need to know potential problems with queries due to semantic changes. Some of the operations that changed were not widely used, so you might not encounter any of the problems associated with the changes.

Over the years, Apache Hive committers enhanced versions of Hive supported in legacy releases of CDH and HDP, with users in mind. Changes were designed to maintain compatibility with Hive applications. Consequently, few syntax changes occurred over the years. A number of semantic changes, described in this section did occur, however. Workarounds are described for these semantic changes.

### Casting timestamps

Results of applications that cast numerics to timestamps differ from Hive 2 to Hive 3. Apache Hive changed the behavior of CAST to comply with the SQL Standard, which does not associate a time zone with the TIMESTAMP type.

Before Upgrade to Cloudera

Casting a numeric type value into a timestamp could be used to produce a result that reflected the time zone of the cluster. For example, 1597217764557 is 2020-08-12 00:36:04 PDT. Running the following query casts the numeric to a timestamp in PDT:

```
> SELECT CAST(1597217764557 AS TIMESTAMP);
| 2020-08-12 00:36:04 |
```

After Upgrade to Cloudera

Casting a numeric type value into a timestamp produces a result that reflects the UTC instead of the time zone of the cluster. Running the following query casts the numeric to a timestamp in UTC.

```
> SELECT CAST(1597217764557 AS TIMESTAMP);
| 2020-08-12 07:36:04.557 |
```

Action Required

Change applications. Do not cast from a numeral to obtain a local time zone. Built-in functions `from_utc_timestamp` and `to_utc_timestamp` can be used to mimic behavior before the upgrade.

## Casting invalid dates

Casting of an invalid date differs from Hive 1 in CDH 5 to Hive 3 in CDP. Hive 3 uses a different parser formatter from the one used in Hive 1, which affects semantics. Hive 1 considers 00 invalid for date fields. Hive 3 considers 00 valid for date fields. Neither Hive 1 nor Hive 3 correctly handles invalid dates, and Hive-25056 addresses this issue.

Before Upgrade to CDP

Casting of invalid date (zero value in one or more of the 3 fields of date, month, year) returns a NULL value:

```
SELECT CAST ('0000-00-00' as date) , CAST ('000-00-00 00:00:00' AS TIMESTAMP) ;
```

After Upgrade to CDP

Casting of an invalid date returns a result.

```
> SELECT CAST ('0000-00-00' as date) , CAST ('000-00-00 00:00:00' AS TIMESTAMP) ;
...
00002-11-30 00:00:00.0
```

Action Required

Do not cast invalid dates in Hive 3.

## Changing incompatible column types

A default configuration change can cause applications that change column types to fail.

Before Upgrade to Cloudera

In HDP 2.x and CDH 5.x and CDH 6 hive.metastore.disallow.incompatible.col.type.changes is false by default to allow changes to incompatible column types. For example, you can change a STRING column to a column of an incompatible type, such as MAP<STRING, STRING>. No error occurs.

After Upgrade to Cloudera

In Cloudera, hive.metastore.disallow.incompatible.col.type.changes is true by default. Hive prevents changes to incompatible column types. Compatible column type changes, such as INT, STRING, BIGINT, are not blocked.

Action Required

Change applications to disallow incompatible column type changes to prevent possible data corruption. Check ALTER TABLE statements and change those that would fail due to incompatible column types.

## Understanding CREATE TABLE behavior

Hive table creation has changed significantly since Hive 3 to improve useability and functionality. If you are upgrading from CDH or HDP, you must understand the changes affecting legacy table creation behavior. You must understand the default behavior of the CREATE TABLE statement in Cloudera on cloud.

Hive has changed table creation in the following ways:

- Creates ACID-compliant table, which is the default in Cloudera
- Supports simple writes and inserts
- Writes to multiple partitions
- Inserts multiple data updates in a single SELECT statement
- Eliminates the need for bucketing.

If you have an ETL pipeline that creates tables in Hive, the tables will be created as ACID. Hive now tightly controls access and performs compaction periodically on the tables. Using ACID-compliant, transactional tables causes no performance or operational overload. The way you access managed Hive tables from Spark and other clients changes. In Cloudera, access to external tables requires you to set up security access permissions.

In Cloudera on cloud, by default, the CREATE TABLE statement creates a full ACID transactional table in ORC format or insert-only transactional tables for all other table formats. You can choose to modify the default behavior by configuring certain properties. The order of preference for configuration is as follows:

You must understand the behavior of the CREATE TABLE statement in legacy platforms like CDH or HDP and how the behavior changes after you upgrade to Cloudera.

### Before upgrading to CDP Private Cloud Base

In CDH 5, CDH 6, and HDP 2, by default CREATE TABLE creates a non-ACID managed table in plain text format.

In HDP 3 and CDP 7.1.0 through 7.1.7.x, by default CREATE TABLE creates either a full ACID transactional table in ORC format or insert-only ACID transactional tables for all other table formats.

### After upgrading to CDP Private Cloud Base

- If you are upgrading from HDP 2, CDH 5, or CDH 6 to CDP 7.1.0 through CDP 7.1.8, by default CREATE TABLE creates a full ACID transactional table in ORC format or insert-only ACID transactional tables for all other table formats.
- If you are upgrading from HDP 3 or CDP 7.1.0 through 7.1.7.x to CDP 7.1.8, the existing behavior persists and CREATE TABLE creates either a full ACID transactional table in ORC format or insert-only ACID transactional tables for all other table formats.

Now that you understand the behavior of the CREATE TABLE statement, you can choose to modify the default table behavior by configuring certain properties. The order of preference for configuration is as follows:

### Modify the default CREATE TABLE behavior

#### Override default behavior when creating the table

Irrespective of the database, session, or site-level settings, you can override the default table behavior by using the MANAGED or EXTERNAL keyword in the CREATE TABLE statement.

```
CREATE [MANAGED][EXTERNAL] TABLE foo (id INT);
```

#### Set the default table type at a database level

You can use the database property, defaultTableType=EXTERNAL or ACID to specify the default table type to be created using the CREATE TABLE statement. You can specify this property when creating the database or at a later point using the ALTER DATABASE statement. For example:

```
CREATE DATABASE test_db WITH DBPROPERTIES ('defaultTableType'='EXTERNAL');
```

In this example, tables created under the test\_db database using the CREATE TABLE statement creates external tables with the purge functionality enabled (external.table.purge = 'true').

You can also choose to configure a database to allow only external tables to be created and prevent creation of ACID tables. While creating a database, you can set the database property, EXTERNAL\_TABLES\_ONLY=true to ensure that only external tables are created in the database. For example:

```
CREATE DATABASE test_db WITH DBPROPERTIES ('EXTERNAL_TABLES_ONLY'='true');
```

#### Set the default table type at a session level

You can configure the CREATE TABLE behavior within an existing beeline session by setting hive.create.as.external.legacy to true or false. Setting the value to true results in configuring the CREATE TABLE statement to create external tables by default.

When the session ends, the default CREATE TABLE behavior also ends.

### Set the default table type at a site level

You can configure the CREATE TABLE behavior at the site level by configuring the `hive.create.as.insert.only` and `hive.create.as.acid` properties in Cloudera Manager under Hive configuration. When configured at the site level, the behavior persists from session to session. For more information, see [Configuring CREATE TABLE behavior](#).

If you are a Spark user, switching to legacy behavior is unnecessary. Calling 'create table' from SparkSQL, for example, creates an external table after upgrading to Cloudera as it did before the upgrade. You can connect to Hive using the Hive Warehouse Connector (HWC) to read Hive ACID tables from Spark. To write ACID tables to Hive from Spark, you use the HWC and HWC API. Spark creates an external table with the `purge` property when you do not use the HWC API. For more information, see [Hive Warehouse Connector for accessing Spark data](#).

## Configuring legacy CREATE TABLE behavior

After you upgrade to CDP Private Cloud Base and migrate old tables, the legacy CREATE TABLE behavior of Hive is no longer available by default and you might want to switch to the legacy behavior. Legacy behavior might solve compatibility problems with your scripts during data migration, for example, when running ETL.

### About this task

In Cloudera, running a CREATE TABLE statement by default creates a full ACID table for ORC file format and insert-only ACID table for other file formats. You can change the default behavior to use the legacy CREATE TABLE behavior. When you configure legacy behavior, CREATE TABLE creates external tables with the `purge` functionality enabled (`external.table.purge = 'true'`). Therefore, when the table is dropped, data is also deleted from the file system.

You can configure legacy CREATE TABLE behavior at the site level by configuring properties in Cloudera Manager. When configured at the site level, the behavior persists from session to session.

### Procedure

1. In Cloudera Manager, click Clusters and select the Hive on Tez service.
2. From the Hive on Tez service, go to the Configuration tab and search for `hive.create`.

The screenshot shows the Cloudera Manager configuration interface for the HIVE\_ON\_TEZ-1 service. The search bar contains 'hive.create'. The configuration results are as follows:

Property Name	Value	Selected
Default Table Format - Create Tables as ACID Insert Only	hive.create.as.insert.only	<input checked="" type="checkbox"/> HIVE_ON_TEZ-1 (Service-Wide)
hive.create.as.insert.only	hive_create_as_insert_only	
Default Table Format - Create Tables as Full ACID	hive.create.as.acid	<input checked="" type="checkbox"/> HIVE_ON_TEZ-1 (Service-Wide)
hive.create.as.acid	hive_create_as_acid	

3. If the following properties are selected, clear the selection to enable legacy CREATE TABLE behavior.
  - Default Table Format - Create Tables as ACID Insert Only (`hive.create.as.insert.only`)
  - Default Table Format - Create Tables as Full ACID (`hive.create.as.acid`)

## Results

Legacy behavior is enabled and the CREATE TABLE statement now creates external tables with the external.table.purge table property set to true.

## Handling table reference syntax

For ANSI SQL compliance, Hive 3.x rejects `db.table` in SQL queries as described by the Hive-16907 bug fix. A dot (.) is not allowed in table names. As a Data Engineer, you need to ensure that Hive tables do not contain these references before migrating the tables to Cloudera, that scripts are changed to comply with the SQL standard references, and that users are aware of the requirement.

### About this task

To change queries that use such `db.table` references thereby preventing Hive from interpreting the entire db.table string incorrectly as the table name, you enclose the database name and the table name in backticks as follows:

A dot (.) is not allowed in table names.

### Procedure

1. Find a table having the problematic table reference.  
For example, math.students appears in a CREATE TABLE statement.
2. Enclose the database name and the table name in backticks.

```
CREATE TABLE `math`.`students` (name VARCHAR(64), age INT, gpa DECIMAL(3,2));
```

## Add Backticks to Table References

CDP Private Cloud Base includes the Hive-16907 bug fix, which rejects `db.table` in SQL queries. A dot (.) is not allowed in table names. You need to change queries that use such references to prevent Hive from interpreting the entire db.table string as the table name.

### Procedure

1. Find a table having the problematic table reference.

```
math.students
```

appears in a CREATE TABLE statement.

2. Enclose the database name and the table name in backticks.

```
CREATE TABLE `math`.`students` (name VARCHAR(64), age INT, gpa DECIMAL(3,2));
```

## Handling the Keyword APPLICATION

If you use the keyword APPLICATION in your queries, you might need to modify the queries to prevent failure.

To prevent a query that uses a keyword from failing, enclose the query in backticks.

Before Upgrade to CDP Private Cloud Base

In CDH releases, such as CDH 5.13, queries that use the word APPLICATION in queries execute successfully. For example, you could use this word as a table name.

```
> select f1, f2 from application
```

After Upgrade to Cloudera Base on premises

A query that uses the keyword APPLICATION fails.

Action Required

Change applications. Enclose queries in backticks. `SELECT field1, field2 FROM `application`;`

## Dropping partitions

The OFFLINE and NO\_DROP keywords in the CASCADE clause for dropping partitions causes performance problems and is no longer supported.

Before Upgrade to CDP Private Cloud Base

You could use OFFLINE and NO\_DROP keywords in the DROP CASCADE clause to prevent partitions from being read or dropped.

After Upgrade to CDP Private Cloud Base

OFFLINE and NO\_DROP are not supported in the DROP CASCADE clause.

Action Required

Change applications to remove OFFLINE and NO\_DROP from the DROP CASCADE clause. Use an authorization scheme, such as Ranger, to prevent partitions from being dropped or read.

## Handling output of greatest and least functions

To calculate the greatest (or least) value in a column, you need to work around a problem that occurs when the column has a NULL value.

Before Upgrade to Cloudera

The greatest function returned the highest value of the list of values. The least function returned the lowest value of the list of values.

After Upgrade to Cloudera

Returns NULL when one or more arguments are NULL.

Action Required

Use NULL filters or the nvl function on the columns you use as arguments to the greatest or least functions.

```
SELECT greatest(nvl(col1,default value incase of NULL),nvl(col2,default value incase of NULL));
```

## Renaming tables

To harden the system, Hive data can be stored in HDFS encryption zones. RENAME has been changed to prevent moving a table outside the same encryption zone or into a no-encryption zone.

Before Upgrade to Cloudera

In CDH and HDP, renaming a managed table moves its HDFS location.

After Upgrade to Cloudera

Renaming a managed table moves its location only if the table is created without a LOCATION clause and is under its database directory.

Action Required

None

## TRUNCATE TABLE on an external table

Hive 3 does not support TRUNCATE TABLE on external tables. Truncating an external table results in an error. You can truncate an external table if you change your applications to set a table property to purge data.

Before Upgrade to Cloudera

Some legacy versions of Hive supported TRUNCATE TABLE on external tables.

After Upgrade to CDP Private Cloud Base

By default, TRUNCATE TABLE is supported only on managed tables. Attempting to truncate an external table results in the following error:

```
Error: org.apache.spark.sql.AnalysisException: Operation not allowed: TRUNCATE TABLE on external tables
```

Action Required

Change applications. Do not attempt to run TRUNCATE TABLE on an external table.

Alternatively, change applications to alter a table property to set external.table.purge to true to allow truncation of an external table:

```
ALTER TABLE mytable SET TBLPROPERTIES ('external.table.purge'='true');
```

## Hive unsupported interfaces and features

You need to understand the interfaces that are not supported.

### Unsupported Interfaces and features

The following interfaces are not supported in Cloudera Base on premises:

- Druid
- Hcat CLI (however HCatalog is supported)
- Hive CLI (replaced by Beeline)
- Hive View UI feature in Ambari
- Apache Hive Standalone driver
- Renaming Hive databases
- Multiple insert overwrite queries that read data from a source table.
- LLAP
- MapReduce execution engine (replaced by Tez)
- Pig
- S3 for storing tables (available in Cloudera on cloud only)
- Spark execution engine (replaced by Tez)
- Spark thrift server

Spark and Hive tables interoperate using the Hive Warehouse Connector.

- SQL Standard Authorization
- Storage Based Authorization
- Tez View UI feature in Ambari
- WebHCat

You can use Hue in lieu of Hive View.

### Storage Based Authorization

Storage Based Authorization (SBA) is no longer supported in Cloudera. Ranger integration with Hive metastore provides consistency in Ranger authorization enabled in HiveServer (HS2). SBA did not provide authorization support for metadata that does not have a file/directory associated with it. Ranger-based authorization has no such limitation.

### Hive-Kudu integration

Cloudera does not support the integration of HiveServer (HS2) with Kudu tables. You cannot run queries against Kudu tables from HS2.

### Partially unsupported interfaces

Apache Hadoop Distributed Copy (DistCP) is not supported for copying Hive ACID tables.

### Unsupported Features

Cloudera does not support the following features that were available in HDP and CDH platforms:

- CREATE TABLE that specifies a managed table location

Do not use the LOCATION clause to create a managed table. Hive assigns a default location in the warehouse to managed tables. That default location is configured in Hive using the `hive.metastore.warehouse.dir` configuration property, but can be overridden for the database by setting the `CREATE DATABASE MANAGEDLOCATION` parameter.

- CREATE INDEX and related index commands were removed in Hive 3, and consequently are not supported in Cloudera.

In Cloudera, you use the Hive 3 default ORC columnar file formats to achieve the performance benefits of indexing. Materialized Views with automatic query rewriting also improves performance. Indexes migrated to Cloudera are preserved but render any Hive tables with an undroppable index. To drop the index, google the Known Issue for CDPD-23041.

- Hive metastore (HMS) high availability (HA) load balancing in CDH

You need to set up HMS HA as described in the documentation.

- Local or Embedded Hive metastore server

Cloudera does not support the use of a local or embedded Hive metastore setup.

### Unsupported Connector Use

Cloudera does not support the Sqoop exports using the Hadoop jar command (the Java API) that Teradata documents. For more information, see [Migrating data using Sqoop](#).

## Supplemental Upgrade Topics

Additional topics to help with special situations.

### Configuring a Local Package Repository

You can create a package repository for Cloudera Manager either by hosting an internal web repository or by manually copying the repository files to the Cloudera Manager Server host for distribution to Cloudera Manager Agent hosts.



**Note:** This internal web repository can also be used when your Cloudera Manager server or cluster does not have access to internet. You must download the installable separately from [archive.cloudera.com](http://archive.cloudera.com) and place the installable in the internal repository.

Loading Filters ... 7.13.1 7.11.3 7.7.3 7.7.1 7.6.7 7.6.1 7.5.1 7.4.4 7.3.1 7.2.4 7.1.4 7.1.3 7.1.2 7.1.1 7.0.3 5.16 5.15 5.14 5.13 5.16 5.15 5.14 5.13 7.1.9.1000 7.1.9 7.1.8 7.1.7.3000 7.1.7.2000 7.1.7.1000 7.1.7 7.1.6 7.3.1 7.1.9.1000 7.1.9 7.1.8 7.1.7.3000 7.1.7.2000 7.1.7.1000 7.1.7



**Important:** Select a supported operating system for the versions of or CDH that you are downloading. See [CDH and Supported Operating Systems](#).



**Warning:** Upgrades from Cloudera Manager 5.12 and lower to Cloudera Manager 7.1.1 or higher are not supported



**Important:** Upgrading Cloudera Manager to version 7.7.1 or higher from clusters where CDH 5.x is deployed is not supported. To upgrade such clusters:

1. Upgrade Cloudera Manager to version 6.3.4.
2. Upgrade CDH to version 6.3.4
3. Upgrade Cloudera Manager to version 7.6.5 or higher



**Warning:** For upgrades from CDH clusters with Cloudera Navigator to Cloudera Runtime 7.1.1 (or higher) clusters where Navigator is to be migrated to Apache Atlas, the cluster must have Kerberos enabled before upgrading.



**Warning:** Before upgrading CDH 5 clusters with Sentry to Cloudera Runtime 7.1.x clusters where Sentry privileges are to be transitioned to Apache Ranger:

- The cluster must have Kerberos enabled.
- Verify that HDFS gateway roles exist on the hosts that runs the Sentry service.



**Important:** If HDFS ACL sync is enabled (`hdfs_sentry_sync_enable=true`) on the CDH cluster, then you must install Ranger RMS to support the same functionality. For steps to install Ranger RMS, see [Installing Ranger RMS](#).



**Note:** If the cluster you are upgrading will include Atlas, Ranger, or both, the upgrade wizard deploys one infrastructure Solr service to provide a search capability of the audit logs through the Ranger Admin UI and/or to store and serve Atlas metadata. Cloudera recommends that you do not use this service for customer workloads to avoid interference with audit and timeline performance.

## Creating a Permanent Internal Repository

The following sections describe how to create a permanent internal repository using Apache HTTP Server:

### Setting Up a Web server

To host an internal repository, you must install or use an existing Web server on an internal host that is reachable by the Cloudera Manager host, and then download the repository files to the Web server host. The examples in this section use Apache HTTP Server as the Web server. If you already have a Web server in your organization, you can skip to [Downloading and publishing the package repository for Cloudera Manager](#) on page 72.

1. Install Apache HTTP Server:

**RHEL / CentOS**

```
sudo yum install httpd
```

**SLES**

```
sudo zypper install httpd
```

**Ubuntu**

```
sudo apt-get install httpd
```

2. Start Apache HTTP Server:

**RHEL 8**

```
sudo systemctl start httpd
```

**SLES 12, Ubuntu 16 or later**

```
sudo systemctl start apache2
```

### Downloading and publishing the package repository for Cloudera Manager

1. Download the package repository for the product you want to install:

**Cloudera Manager 7**

Do the following steps to download the files for a Cloudera Manager release:

- a. Run the following command to create a local repository directory to hold the Cloudera package repository:

```
sudo mkdir -p /var/www/html/cloudera-repos/cm7
```

- b. Run the following command to download the repository tarball for your operating system:

```
wget https://[USERNAME]:[PASSWORD]@archive.cloudera.com/p/cm7/7.0.3/repo-as-tarball/cm7.0.3-redhat7.tar.gz
```

- c. Run the following command to unpack the tarball into the local repository directory:

```
tar xvfz cm7.0.3-redhat7.tar.gz -C /var/www/html/cloudera-repos/cm7 --strip-components=1
```

- d. Run the following command to modify the file permission that allows you to download the files under the local repository directory:

```
sudo chmod -R ugo+rX /var/www/html/cloudera-repos/cm7
```

2. Visit the Repository URL [http://<WEB\\_SERVER>/cloudera-repos/](http://<WEB_SERVER>/cloudera-repos/) in your browser and verify the files you downloaded are present.



**Important:** If you do not see the list of downloaded files in your web browser, then you might have been configured not to display indexes. Verify your web browser settings.

**Important:**

If you downloaded the rpm files individually instead of using `repo-as-tarball`, ensure that the `allkeys*.asc` files (`allkeys.asc` and the `allkeysha256.asc` for Cloudera Manager 7.11.2 and later versions) are present at the top level of the package repository. The `allkeys*.asc` files are included in the `repo-as-tarball` file. Ensure to include `allkeys*.asc` files, if you are manually copying the package files between hosts.

The `allkeys*.asc` files are used to validate the signatures of the package files during host installation. If `allkeys*.asc` files are not available in the repository, then you cannot add a host in the Cloudera Manager.

## Creating a Temporary Internal Repository

You can quickly create a temporary remote repository to deploy packages on a one-time basis. Cloudera recommends using the same host that runs Cloudera Manager, or a gateway host. This example uses [Python SimpleHTTPServer](#) as the Web server to host the `/var/www/html` directory, but you can use a different directory.

1. Download the repository you need following the instructions in [Downloading and publishing the package repository for Cloudera Manager](#) on page 72.
2. Determine a port that your system is not listening on. This example uses port 8900.
3. Start a Python SimpleHTTPServer in the `/var/www/html` directory:

```
cd /var/www/html
python -m SimpleHTTPServer 8900
```

```
Serving HTTP on 0.0.0.0 port 8900 ...
```

4. Visit the Repository URL `http://<WEB_SERVER>:8900/cloudera-repos/` in your browser and verify the files you downloaded are present.

## Configuring Hosts to Use the Internal Repository

After establishing the repository, modify the client configuration to use it:

OS	Procedure
RHEL compatible	<p>Create <code>/etc/yum.repos.d/cloudera-repo.repo</code> files on cluster hosts with the following content, where <code>&lt;WEB_SERVER&gt;</code> is the hostname of the Web server:</p> <pre>[cloudera-repo] name=cloudera-repo baseurl=http://&lt;WEB_SERVER&gt;/cm/5 enabled=1 gpgcheck=0</pre>
SLES	<p>Use the <code>zypper</code> utility to update client system repository information by issuing the following command:</p> <pre>zypper addrepo http://&lt;WEB_SERVER&gt;/cm &lt;ALIAS&gt;</pre>
Ubuntu	<p>Create <code>/etc/apt/sources.list.d/cloudera-repo.list</code> files on all cluster hosts with the following content, where <code>&lt;WEB_SERVER&gt;</code> is the hostname of the Web server:</p> <pre>deb http://&lt;WEB_SERVER&gt;/cm &lt;CODENAME&gt; &lt;COMPONENTS&gt;</pre> <p>You can find the <code>&lt;CODENAME&gt;</code> and <code>&lt;COMPONENTS&gt;</code> variables in the <code>./conf/distributions</code> file in the repository.</p> <p>After creating the <code>.list</code> file, run the following command:</p> <pre>sudo apt-get update</pre>

## Configuring a Local Parcel Repository

You can create a parcel repository for Cloudera Runtime either by hosting an internal Web repository or by manually copying the repository files to the Cloudera Manager Server host for distribution to Cloudera Manager Agent hosts.

Loading Filters ... 7.13.1 7.11.3 7.7.3 7.7.1 7.6.7 7.6.1 7.5.1 7.4.4 7.3.1 7.2.4 7.1.4 7.1.3 7.1.2 7.1.1 7.0.3 5.16 5.15 5.14 5.13 5.16 5.15 5.14 5.13 7.1.9.1000 7.1.9 7.1.8 7.1.7.3000 7.1.7.2000 7.1.7.1000 7.1.7 7.1.6 7.3.1 7.1.9.1000 7.1.9 7.1.8 7.1.7.3000 7.1.7.2000 7.1.7.1000 7.1.7

## Using an Internally Hosted Remote Parcel Repository

The following sections describe how to use an internal Web server to host a parcel repository:

### Setting Up a Web Server

To host an internal repository, you must install or use an existing Web server on an internal host that is reachable by the Cloudera Manager host, and then download the repository files to the Web server host. The examples on this page use Apache HTTP Server as the Web server. If you already have a Web server in your organization, you can skip to [Downloading and Publishing the Parcel Repository](#) on page 75.

1. Install Apache HTTP Server:  
**RHEL / CentOS**


```
sudo yum install httpd
```

#### SLES

```
sudo zypper install httpd
```

#### Ubuntu

```
sudo apt-get install httpd
```

2.  **Warning:** Skipping this step could result in an error message Hash verification failed when trying to download the parcel from a local repository, especially in Cloudera Manager 6 and higher.

Edit the Apache HTTP Server configuration file (/etc/httpd/conf/httpd.conf by default) to add or edit the following line in the <IfModule mime\_module> section:

```
AddType application/x-gzip .gz .tgz .parcel
```

If the <IfModule mime\_module> section does not exist, you can add it in its entirety as follows:



**Note:** This example configuration was modified from the default configuration provided after installing Apache HTTP Server on RHEL.

```
<IfModule mime_module>
#
# TypesConfig points to the file containing the list of mappings from
# filename extension to MIME-type.
#
TypesConfig /etc/mime.types
#
# AddType allows you to add to or override the MIME configuration
# file specified in TypesConfig for specific file types.
#
AddType application/x-gzip .tgz
#
# AddEncoding allows you to have certain browsers uncompress
```

```

# information on the fly. Note: Not all browsers support this.
#
#AddEncoding x-compress .Z
#AddEncoding x-gzip .gz .tgz
#
# If the AddEncoding directives above are commented-out, then you
# probably should define those extensions to indicate media types:
#
AddType application/x-compress .Z
AddType application/x-gzip .gz .tgz .parcel

#
# AddHandler allows you to map certain file extensions to "handlers":
# actions unrelated to filetype. These can be either built into the se
rver
# or added with the Action directive (see below)
#
# To use CGI scripts outside of ScriptAliased directories:
# (You will also need to add "ExecCGI" to the "Options" directive.)
#
#AddHandler cgi-script .cgi

# For type maps (negotiated resources):
#AddHandler type-map var

#
# Filters allow you to process content before it is sent to the client
.
#
# To parse .shtml files for server-side includes (SSI):
# (You will also need to add "Includes" to the "Options" directive.)
#
AddType text/html .shtml
AddOutputFilter INCLUDES .shtml
</IfModule>

```

### 3. Start Apache HTTP Server:

#### RHEL 8

```
sudo systemctl start httpd
```

#### SLES 12, Ubuntu 16 or later

```
sudo systemctl start apache2
```

### Downloading and Publishing the Parcel Repository

1. Look up the Cloudera Runtime *VERSION* number for your deployment on the [Cloudera Runtime Download Information](#) page. You will need this version number in the next step.
2. Download manifest.json and the parcel files for the product you want to install:

To download the files for the latest Cloudera Runtime 7 release, run the following commands on the Web server host:

```

sudo mkdir -p /var/www/html/cloudera-repos
sudo wget --recursive --no-parent --no-host-directories https://
[username]:[password]@archive.cloudera.com/p/cdh7/CLOUDERA_RUNTIME
VERSION/parcels/ -P /var/www/html/cloudera-repos

sudo chmod -R ugo+rX /var/www/html/cloudera-repos/cdh7

```

3. Visit the Repository URL `http://<WEB_SERVER>/cloudera-repos/` in your browser and verify the files you downloaded are present. If you do not see anything, your Web server may have been configured to not show indexes.

### Configuring Cloudera Manager to Use an Internal Remote Parcel Repository

1. Use one of the following methods to open the parcel settings page:
  - Navigation bar
    - a. Click the parcel icon in the top navigation bar or click Hosts and click the Parcels tab.
    - b. Click the Configuration button.
  - Menu
    - a. Select AdministrationSettings.
    - b. Select CategoryParcels.
2. In the Remote Parcel Repository URLs list, click the addition symbol to open an additional row.
3. Enter the path to the parcel. For example: `http://<WEB_SERVER>/cloudera-parcels/cdh7/7.2.16.0.0/`
4. Enter a Reason for change, and then click Save Changes to commit the changes.

### Using a Local Parcel Repository

To use a local parcel repository, complete the following steps:

1. Open the Cloudera Manager Admin Console and navigate to the Parcels page.
2. Select Configuration and verify that you have a Local Parcel Repository path set. By default, the directory is `/opt/cloudera/parcel-repo`.
3. Remove any Remote Parcel Repository URLs you are not using, including ones that point to Cloudera archives.
4. Add the parcel you want to use to the local parcel repository directory that you specified. For instructions on downloading parcels, see [Downloading and Publishing the Parcel Repository](#) on page 75 above.
5. In the command line, navigate to the local parcel repository directory.
6. Create a SHA1 hash for the parcel you added and save it to a file named `PARCEL_NAME.parcel.sha`.

For example, the following command generates a SHA1 hash for the parcel `CDH-6.1.0-1.cdh6.1.0.p0.770702-e17.parcel`:

```
sha1sum CDH-6.1.0-1.cdh6.1.0.p0.770702-e17.parcel | awk '{ print $1 }'  
> CDH-6.1.0-1.cdh6.1.0.p0.770702-e17.parcel.sha
```

7. Change the ownership of the parcel and hash files to `cloudera-scm`:

```
sudo chown -R cloudera-scm:cloudera-scm /opt/cloudera/parcel-repo/*
```

8. In the Cloudera Manager Admin Console, navigate to the Parcels page.
9. Click Check for New Parcels and verify that the new parcel appears.
10. Download, distribute, and activate the parcel.

## Changes to CDH Hive Tables

As a Data Scientist, Architect, Analyst, or other Hive user you need to locate and use your Apache Hive 3 tables after an upgrade. You also need to understand the changes that occur during the upgrade process. The location of existing tables after a CDH to Cloudera upgrade does not change. Upgrading CDH to CDP Private Cloud Base converts Hive managed tables to external tables in Hive 3.

### About this task

When the upgrade process converts a managed table to external, it sets the table property `external.table.purge` to true. The table is equivalent to a managed table having `purge` set to true in your old CDH cluster.

Managed tables on the HDFS in `/user/hive/warehouse` before the upgrade remain there after the conversion to external. Tables that were external before the upgrade are not relocated. You need to set HDFS policies to access external tables in Ranger, or set up HDFS ACLs.

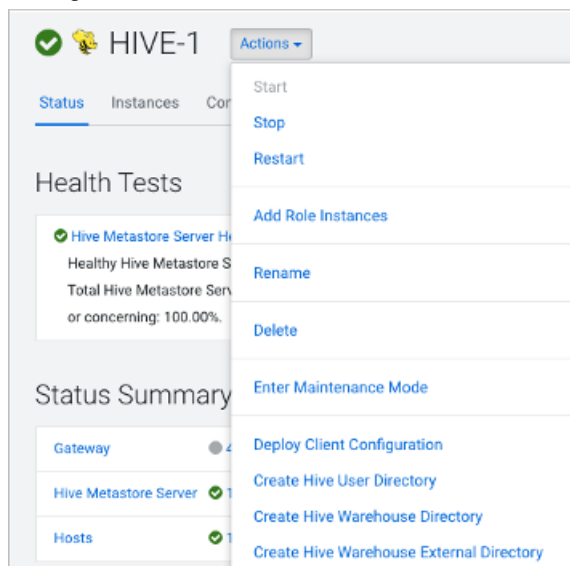
The upgrade process sets the `hive.metastore.warehouse.dir` property to `/warehouse/tablespace/managed/hive`, designating it the Hive warehouse location for managed tables. New managed tables that you create in Cloudera are stored in the Hive warehouse. New external tables are stored in the Hive external warehouse `/warehouse/tablespace/external/hive`.

To change the location of the Hive warehouses, you navigate to one of the following menu items in the first step below.

- Hive Action Menu Create Hive Warehouse Directory
- Hive Action Menu Create Hive Warehouse External Directory

### Procedure

1. Set up directories for the Hive warehouse directory and Hive warehouse external directory from Cloudera Manager Actions.



2. In Cloudera Manager, click Clusters Hive (the Hive Metastore service) Configuration , and change the `hive.metastore.warehouse.dir` property value to the path you specified for the new Hive warehouse directory.
3. Change the `hive.metastore.warehouse.external.dir` property value to the path you specified for the Hive warehouse external directory.
4. Configure Ranger policies or set up ACL permissions to access the directories.

## Changes to HDP Hive tables

As a Data Scientist, Architect, Analyst, or other Hive user you need to locate and use your Apache Hive 3 tables after an upgrade. You also need to understand the changes that occur during the upgrade process.

Managed, ACID tables that are not owned by the hive user remain managed tables after the upgrade, but hive becomes the owner.

After the upgrade, the format of a Hive table is the same as before the upgrade. For example, native or non-native tables remain native or non-native, respectively.

After the upgrade, the location of managed tables or partitions do not change under any one of the following conditions:

- The old table or partition directory was not in its default location `/apps/hive/warehouse` before the upgrade.

- The old table or partition is in a different file system than the new warehouse directory.
- The old table or partition directory is in a different encryption zone than the new warehouse directory.

Otherwise, the upgrade process from HDP to CDP Private Cloud Base moves managed files to the Hive warehouse / warehouse/tablespace/managed/hive. The upgrade process carries the external files over to CDP Private Cloud Base with no change in location. By default, Hive places any new external tables you create in /warehouse/tablespace/external/hive. The upgrade process sets the `hive.metastore.warehouse.dir` property to this location, designating it the Hive warehouse location.

### Changes to table references using dot notation

Upgrading to Cloudera includes the Hive-16907 bug fix, which rejects ``db.table`` in SQL queries. The dot (.) is not allowed in table names. To reference the database and table in a table name, both must be enclosed in backticks as follows: ``db`.`table``.

### Changes to ACID properties

Hive 3.x in Cloudera Base on premises supports transactional and non-transactional tables. Transactional tables have atomic, consistent, isolation, and durable (ACID) properties. In Hive 2.x, the initial version of ACID transaction processing was ACID v1. In Hive 3.x, the mature version of ACID is ACID v2, which is the default table type in CDP Private Cloud Base.

### Native and non-native storage formats

Storage formats are a factor in upgrade changes to table types. Hive 2.x and 3.x support the following native and non-native storage formats:

- Native: Tables with built-in support in Hive, such as those in the following file formats:
  - Text
  - Sequence File
  - RC File
  - AVRO File
  - ORC File
  - Parquet File
- Non-native: Tables that use a storage handler, such as the `DruidStorageHandler` or `HBaseStorageHandler`

### CDP Private Cloud Base upgrade changes to HDP table types

The following table compares Hive table types and ACID operations before an upgrade from HDP 2.x and after an upgrade to Cloudera. The ownership of the Hive table file is a factor in determining table types and ACID operations after the upgrade.

**Table 27: HDP 2.x and Cloudera Table Type Comparison**

HDP 2.x				CDP	
Table Type	ACID v1	Format	Owner (user) of Hive Table File	Table Type	ACID v2
External	No	Native or non-native	hive or non-hive	External	No
Managed	Yes	ORC	hive or non-hive	Managed, updatable	Yes
Managed	No	ORC	hive	Managed, updatable	Yes
			non-hive	External, with data delete	No
Managed	No	Native (but non-ORC)	hive	Managed, insert only	Yes
			non-hive	External, with data delete	No

HDP 2.x				CDP	
Table Type	ACID v1	Format	Owner (user) of Hive Table File	Table Type	ACID v2
Managed	No	Non-native	hive or non-hive	External, with data delete	No

## Transitioning from the Cloudera Manager Embedded PostgreSQL Database Server to an External PostgreSQL Database

Cloudera Manager provides an embedded PostgreSQL database server for demonstration and proof of concept deployments when creating a cluster. To remind users that this embedded database is not suitable for production, Cloudera Manager displays the banner text: "You are running Cloudera Manager in non-production mode, which uses an embedded PostgreSQL database. Switch to using a supported external database before moving into production."

If, however, you have already used the embedded database, and you are unable to redeploy a fresh cluster, then you must migrate to an external PostgreSQL database.



**Note:** This procedure does not describe how to migrate to a database server other than PostgreSQL.

Moving databases from one database server to a different type of database server is a complex process that requires modification of the schema and matching the data in the database tables to the new schema. It is recommended that you engage with Cloudera Professional Services if you wish to perform a transition to an external database server other than PostgreSQL.

### Prerequisites

Before migrating the Cloudera Manager embedded PostgreSQL database to an external PostgreSQL database, ensure that your setup meets the following conditions:

- The external PostgreSQL database server is running.
- The database server is configured to accept remote connections.
- The database server is configured to accept user logins using md5.
- No one has manually created any databases in the external database server for roles that will be migrated.



**Note:** To view a list of databases in the external database server (requires default superuser permission):

```
sudo -u postgres psql -l
```

- All health issues with your cluster have been resolved.

For details about configuring the database server, see [Configuring and Starting the PostgreSQL Server](#).



**Important:** Only perform the steps in [Configuring and Starting the PostgreSQL Server](#). Do not proceed with the creation of databases as described in the subsequent section.

For large clusters, Cloudera recommends running your database server on a dedicated host. Engage Cloudera Professional Services or a certified database administrator to correctly tune your external database server.

### Identify Roles that Use the Embedded Database Server

Before you can migrate to another database server, you must first identify the databases using the embedded database server. When the Cloudera Manager Embedded Database server is initialized, it creates the Cloudera Manager database and databases for roles in the Management Services. The Installation Wizard (which runs automatically the first time you log in to Cloudera Manager) or Add Service action for a cluster creates additional databases for roles when run. It is in this context that you identify which roles are used in the embedded database server.

To identify which roles are using the Cloudera Manager embedded database server:

1. Obtain and save the cloudera-scm superuser password from the embedded database server. You will need this password in subsequent steps:

```
head -1 /var/lib/cloudera-scm-server-db/data/generated_password.txt
```

2. Make a list of all services that are using the embedded database server. Then, after determining which services are not using the embedded database server, remove those services from the list. The scm database must remain in your list. Use the following table as a guide:

**Table 28: Cloudera Manager Embedded Database Server Databases**

Service	Role	Default Database Name	Default Username
Cloudera Manager Server		scm	scm
Cloudera Management Service	Activity Monitor	amon	amon
Hive	Hive Metastore Server	hive	hive
Hue	Hue Server	hue	7uu7uu7uhue
Cloudera Management Service	Navigator Audit Server	nav	nav
Cloudera Management Service	Navigator Metadata Server	navms	navms
Oozie	Oozie Server	oozie_oozie_server	oozie_oozie_server
Cloudera Management Service	Reports Manager	rman	rman
Sentry	Sentry Server	sentry	sentry

3. Verify which roles are using the embedded database. Roles using the embedded database server always use port 7432 (the default port for the embedded database) on the Cloudera Manager Server host.

For Cloudera Management Service:

- a. Select Cloudera Management Service > Configuration, and type "7432" in the Search field.
- b. Confirm that the hostname for the services being used is the same hostname used by the Cloudera Manager Server.



**Note:**

If any of the following fields contain the value "7432", then the service is using the embedded database:

- Activity Monitor
- Navigator Audit Server
- Navigator Metadata Server
- Reports Manager

For the Oozie Service:

- a. Select Oozie service > Configuration, and type "7432" in the Search field.
- b. Confirm that the hostname is the Cloudera Manager Server.

For Hive, Hue, and Sentry Services:

- a. Select the specific service > Configuration, and type "database host" in the Search field.
- b. Confirm that the hostname is the Cloudera Manager Server.
- c. In the Search field, type "database port" and confirm that the port is 7432.
- d. Repeat these steps for each of the services (Hive, Hue and Sentry).

4. Verify the database names in the embedded database server match the database names on your list (Step 2). Databases that exist on the database server and not used by their roles do not need to be migrated. This step is to confirm that your list is correct.



**Note:** Do not add the postgres, template0, or template1 databases to your list. These are used only by the PostgreSQL server.

```
psql -h localhost -p 7432 -U cloudera-scm -l
```

```
Password for user cloudera-scm: <password>
```

Name	Access	Owner	List of databases		
			Encoding	Collate	Ctype
amon		amon	UTF8	en_US.UTF8	en_US.U
TF8					
hive		hive	UTF8	en_US.UTF8	en_US.UT
F8					
hue		hue	UTF8	en_US.UTF8	en_US
.UTF8					
nav		nav	UTF8	en_US.UTF8	en_US.
UTF8					
navms		navms	UTF8	en_US.UTF8	en_US.U
TF8					
oozie_oozie_server		oozie_oozie_server	UTF8	en_US.UTF8	en_US.UT
F8					
postgres		cloudera-scm	UTF8	en_US.UTF8	en_US
.UTF8					
rman		rman	UTF8	en_US.UTF8	en_US.
UTF8					
scm		scm	UTF8	en_US.UTF8	en_US.U
TF8					
sentry		sentry	UTF8	en_US.UTF8	en_US.UT
F8					
template0		cloudera-scm	UTF8	en_US.UTF8	en_US
.UTF8	=c/"cloudera-scm"				
template1		cloudera-scm	UTF8	en_US.UTF8	en_US.UT
F8	=c/"cloudera-scm"				
(12 rows)					

You should now have a list of all roles and database names that use the embedded database server, and are ready to proceed with the transition of databases from the embedded database server to the external PostgreSQL database server.

## Migrate Databases from the Embedded Database Server to the External PostgreSQL Database Server

While performing this procedure, ensure that the Cloudera Manager Agents remain running on all hosts. Unless otherwise specified, when prompted for a password use the cloudera-scm password.



**Note:** After completing this transition, you cannot delete the cloudera-scm postgres superuser unless you remove the access privileges for the migrated databases. Minimally, you should change the cloudera-scm postgres superuser password.

1. In Cloudera Manager, stop the cluster services identified as using the embedded database server (see [Identify Roles that Use the Embedded Database Server](#) on page 79). Be sure to stop the Cloudera Management

Service as well. Also be sure to stop any services with dependencies on these services. The remaining services will continue to run without downtime.



**Note:** If you do not stop the services from within Cloudera Manager before stopping Cloudera Manager Server from the command line, they will continue to run and maintain a network connection to the embedded database server. If this occurs, then the embedded database server will ignore any command line stop commands (Step 2) and require that you manually kill the process, which in turn causes the services to crash instead of stopping cleanly.

2. Navigate to Hosts > All Hosts, and make note of the number of roles assigned to hosts. Also take note whether or not they are in a commissioned state. You will need this information later to validate that your scm database was migrated correctly.
3. Stop the Cloudera Manager Server. To stop the server:

```
sudo service cloudera-scm-server stop
```

4. Obtain and save the embedded database superuser password (you will need this password in subsequent steps) from the generated\_password.txt file:

```
head -1 /var/lib/cloudera-scm-server-db/data/generated_password.txt
```

5. Export the PostgreSQL user roles from the embedded database server to ensure the correct users, permissions, and passwords are preserved for database access. Passwords are exported as an md5sum and are not visible in plain text. To export the database user roles (you will need the cloudera-scm user password):

```
pg_dumpall -h localhost -p 7432 -U cloudera-scm -v --roles-only -f "/var/tmp/cloudera_user_roles.sql"
```

6. Edit /var/tmp/cloudera\_user\_roles.sql to remove any CREATE ROLE and ALTER ROLE commands for databases not in your list. Leave the entries for cloudera-scm untouched, because this user role is used during the database import.
7. Export the data from each of the databases on your list you created in [Identify Roles that Use the Embedded Database Server](#) on page 79:

```
pg_dump -F c -h localhost -p 7432 -U cloudera-scm [database_name] > /var/tmp/[database_name]_db_backup-$(date +%m-%d-%Y).dump
```

Following is a sample data export command for the scm database:

```
pg_dump -F c -h localhost -p 7432 -U cloudera-scm scm > /var/tmp/scm_db_backup-$(date +%m-%d-%Y).dump
```

Password:

8. Stop and disable the embedded database server:

```
service cloudera-scm-server-db stop
chkconfig cloudera-scm-server-db off
```

Confirm that the embedded database server is stopped:

```
netstat -at | grep 7432
```

9. Back up the Cloudera Manager Server database configuration file:

```
cp /etc/cloudera-scm-server/db.properties /etc/cloudera-scm-server/db.properties.embedded
```

10. Copy the file `/var/tmp/cloudera_user_roles.sql` and the database dump files from the embedded database server host to `/var/tmp` on the external database server host:

```
cd /var/tmp
scp cloudera_user_roles.sql *.dump <user>@<postgres-server>:/var/tmp
```

11. Import the PostgreSQL user roles into the external database server.

The external PostgreSQL database server superuser password is required to import the user roles. If the superuser role has been changed, you will be prompted for the username and password.



**Note:** Only run the command that applies to your context; do not execute both commands.

- To import users when using the default PostgreSQL superuser role:

```
sudo -u postgres psql -f /var/tmp/cloudera_user_roles.sql
```

- To import users when the superuser role has been changed:

```
psql -h <database-hostname> -p <database-port> -U <superuser> -f /var/tmp/cloudera_user_roles.sql
```

For example:

```
psql -h pg-server.example.com -p 5432 -U postgres -f /var/tmp/cloudera_user_roles.sql
```

```
Password for user postgres
```

12. Import the Cloudera Manager database on the external server. First copy the database dump files from the Cloudera Manager Server host to your external PostgreSQL database server, and then import the database data:



**Note:** To successfully run the `pg_restore` command, there must be an existing database on the database server to complete the connection; the existing database will not be modified. If the `-d <existing-database>` option is not included, then the `pg_restore` command will fail.

```
pg_restore -C -h <database-hostname> -p <database-port> -d <existing-database> -U cloudera-scm -v <data-file>
```

Repeat this import for each database.

The following example is for the scm database:

```
pg_restore -C -h pg-server.example.com -p 5432 -d postgres -U cloudera-scm -v /var/tmp/scm_server_db_backup-20180312.dump
```

```
pg_restore: connecting to database for restore
Password:
```

13. Update the Cloudera Manager Server database configuration file to use the external database server. Edit the `/etc/cloudera-scm-server/db.properties` file as follows:
- Update the `com.cloudera.cmf.db.host` value with the hostname and port number of the external database server.
  - Change the `com.cloudera.cmf.db.setupType` value from "EMBEDDED" to "EXTERNAL".

14. Start the Cloudera Manager Server and confirm it is working:

```
service cloudera-scm-server start
```

Note that if you start the Cloudera Manager GUI at this point, it may take up to five minutes after executing the start command before it becomes available.

In Cloudera Manager Server, navigate to Hosts > All Hosts and confirm the number of roles assigned to hosts (this number should match what you found in Step 2); also confirm that they are in a commissioned state that matches what you observed in Step 2.

15. Update the role configurations to use the external database hostname and port number. Only perform this task for services where the database has been migrated.

For Cloudera Management Service:

- a. Select Cloudera Management Service > Configuration, and type "7432" in the Search field.
- b. Change any database hostname properties from the embedded database to the external database hostname and port number.
- c. Click Save Changes.

For the Oozie Service:

- a. Select Oozie service > Configuration, and type "7432" in the Search field.
- b. Change any database hostname properties from the embedded database to the external database hostname and port number.
- c. Click Save Changes.

For Hive, Hue, and Sentry Services:

- a. Select the specific service > Configuration, and type "database host" in the Search field.
- b. Change the hostname from the embedded database name to the external database hostname.
- c. Click Save Changes.

16. Start the Cloudera Management Service and confirm that all management services are up and no health tests are failing.

17. Start all Services via the Cloudera Manager web UI. This should start all services that were stopped for the database transition. Confirm that all services are up and no health tests are failing.

18. On the embedded database server host, remove the embedded PostgreSQL database server:

- a. Make a backup of the /var/lib/cloudera-scm-server-db/data directory:

```
tar czvf /var/tmp/embedded_db_data_backup-$(date +"%m-%d-%Y").tgz /var/lib/cloudera-scm-server-db/data
```

- b. Remove the embedded database package:

For RHEL/SLES:

```
rpm --erase cloudera-manager-server-db-2
```

For Ubuntu:

```
apt-get remove cloudera-manager-server-db-2
```

- c. Delete the /var/lib/cloudera-scm-server-db/data directory.