Overview

This chapter contains the following sections:

Cisco UCS Director Express for Big Data

Cisco UCS Director Express for Big Data is a single-touch solution within Cisco UCS Director that automates deployment of Big Data infrastructure. Cisco UCS Director Express for Big Data provides a single management pane across physical infrastructure and across Hadoop and Splunk Enterprise software. It supports key Hadoop distributions, including Cloudera, MapR, and Hortonworks.

Cisco UCS Director Express for Big Data delivers end-to-end automation of Hadoop cluster deployment, allowing you to spin up and expand clusters on-demand. The physical infrastructure configuration is handled automatically, with minimal user input. The configuration includes compute, internal storage, network, and installation of operating system, Java packages, and Hadoop, along with the provisioning of Hadoop services. This is achieved through Cisco UCS service profiles wherein both the physical infrastructure and Hadoop configuration are incorporated into a Hadoop cluster deployment profile.

Cisco UCS Director Express for Big Data also delivers end-to-end automation of Splunk cluster deployment, with minimal user input. This is achieved through Cisco UCS service profiles wherein both the physical infrastructure and Splunk configuration are incorporated into a Splunk cluster deployment profile.

Cisco UCS Integrated Infrastructure for Big Data

Cisco UCS Integrated Infrastructure for Big Data is an industry leading architecture designed to meet various Big Data workloads. It scales as processing and storage needs grow without increasing management challenges and delivers predictable performance along with reduced total cost of ownership (TCO).

Cisco UCS Integrated Infrastructure consists of the following components:

- Cisco UCS Fabric Interconnects

- Cisco UCS 2200 Series Fabric Extenders

- Cisco UCS C-Series Rack-Mount Servers

- Cisco UCS Virtual Interface Cards (VICs)

- Cisco UCS Manager

You can read more about the Cisco UCS Integrated Infrastructure for Big Data in the Data Center Designs Cloud Computing - Design Zone for Big Data .

Supported Hadoop Distributions

Cisco UCS Director Express for Big Data supports the following Hadoop distributions:

- Cloudera 5.4, 5.5, 5.6, and 5.8

- MapR 3.1, 4.0, 4.1, 5.0, 5.1, and 5.2

- Hortonworks 2.1, 2.2, 2.3, and 2.4

Table 1: Java and JDK Software for Hadoop Distributions

Hadoop Distribution	Supported Hadoop Distribution Versions	Installed Java and JDK
Cloudera	5.0.1, 5.0.6, 5.2.0, 5.2.1, 5.3.0, 5.4.1, 5.5.0, 5.6.0, and 5.8.0	oracle-j2sdk1.7
MapR	3.1.1, 4.0.1, 4.0.2, 4.1.0, 5.0.0, 5.1.0, and 5.2.0	java-1.7.0-openjdk
Hortonworks	2.1, 2.2, 2.3, and 2.4	java-1.7.0-openjdk

Note   You can choose and install the required Oracle JDK version.

Supported Splunk Distribution

Cisco UCS Director Express for Big Data supports the following Splunk distribution:

Splunk Distribution	Supported Splunk Distribution Version
Splunk	6.3.x and 6.4.x

Cisco UCS Director Express for Big Data for VMware vSphere

Cisco UCS Director Express for Big Data can be hosted on VMware vSphere or vCenter.

Note The appliance and boot-up logs are located in the `/var/log/ucsd` directory.

- `install.log` contains the one time appliance installation logs.

- `bootup.log` contains the appliance boot-up sequence information, such as startup messages for the database and infrastructure services.

Prerequisites

- Installation of VMware vSphere or vCenter
- Configured system administrator privileges
- Cisco UCS Director Express for Big Data deployed on a VMware vSphere or vCenter host

About Licenses

You must obtain a license to use Cisco UCS Director Express for Big Data, as follows:

1 Before you install Cisco UCS Director Express for Big Data, generate the Cisco UCS Director Express for Big Data license key and claim a certificate (Product Access Key).

2 Register the Product Access Key (PAK) on the Cisco software license site, as described in Fulfilling the Product Access Key, on page 4.

3 After you install Cisco UCS Director Express for Big Data, update the license in Cisco UCS Director Express for Big Data as described in Updating the License.

4 After the license has been validated, you can start to use Cisco UCS Director Express for Big Data.

Fulfilling the Product Access Key

Before You Begin

You need the PAK number.

Step 1 Navigate to the Cisco Software License website.

Step 2 If you are directed to the Product License Registration page, you can take the training or click **Continue to Product License Registration**.

Step 3 On the Product License Registration page, click **Get New Licenses from a PAK or Token**.

Step 4 In the **Enter a Single PAK or TOKEN to Fulfill** field, enter the PAK number.

Step 5 Click **Fulfill Single PAK/TOKEN**.

Step 6 Complete the additional fields in **License Information** to register your PAK:

Name	Description
Organization Name	The organization name.
Site Contact Name	The site contact name.
Street Address	The street address of the organization.
City or Town	The city or town.
State or Province	The state or province.
Zip or Postal Code	The zip code or postal code.
Country	The country name.

Step 7 Click **Issue Key**.
The features for your license appear, and you receive an email with the Digital License Agreement and a zipped license file.