Cisco Smart Software Manager On-Prem Console Reference Guide

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Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

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CONTENTS

Preface

This section describes the objectives and organization of this document and explains how to find additional information on related products and services. This preface contains these sections.

Objectives

This document provides an overview of software functionality specific to the Cisco Smart Software Manager On-Prem (SSM On-Prem). It is not intended as a comprehensive guide to all the software features that can be run, but only the specific software aspects to this application.

Related Documentation

This section refers to other documentation that also might be useful as you configure your SSM On-Prem. This document covers important information for the SSM On-Prem and is available online.

Listed below are other guides, references, and release notes associated with Cisco Smart Software On-Prem.

- *Cisco Smart Software Manager On-Prem User Guide*
- *Cisco Smart Software Manager On-Prem Installation Guide*
- *Cisco Smart Software Manager On-Prem Migration Guide*
- *Cisco Smart Software Manager On-Prem Release Notes*

Document Conventions

This documentation uses the following conventions:

Convention	Description
bold	Bold text indicates the commands and keywords used in one or more step(s).
Italic	Italic text indicates arguments for which the user supplies the values or a citation from another document
[x]	Square brackets enclose an optional element (keyword or argument).
[x | y]	Square brackets enclosing keywords or arguments separated by a vertical bar indicate an optional choice.
{x | y}	Braces enclosing keywords or arguments separated by a vertical bar indicate a required choice.

Convention	Description
[x {y | z}]	Nested set of square brackets or braces indicates optional or required choices within optional or required elements. Braces and a vertical bar within square brackets indicate a required choice within an optional element.
variable	Indicates a variable for which you supply a value, in context where italics cannot be used.
string	A non-quoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Examples for the following conventions:

Convention	Description
screen font	Terminal sessions and information switch displays are in screen font.
boldface screen font	Information you must enter is in boldface screen font.
italic screen font	Arguments for which you supply values are in italic screen font.
< >	Nonprinting characters, such as passwords, are in angle brackets.
[ ]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following call-out conventions:

NOTE This means the reader takes note. Notes contain helpful suggestions or references to material not covered in the manual.

CAUTION This means the reader to be careful. In this situation, you might do something that could result in equipment damage or loss of data

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*.

Introduction to Cisco Smart Software Manager On-Prem Console

About the SSM On-Prem Console

The SSM On-Prem console is a Command Line Interpreter (CLI) used to deploy, configure, and manage SSM On-Prem. The On-Prem Console (On-Prem) is Linux-based and provides a secure approach for managing SSM On-Prem.

Once you have deployed On-Prem, navigate to the CLI.

The following On-Prem Console help commands are specific to High Availability.

Use the following command to open the SSH shell:

```
>>ssh admin@<ip address of server>
```

You are prompted for the password. Enter **your admin password.**

```
 <Admin password>
```

Then use this command to access the On-Prem Console type:

```
onprem-console
```

To access the help menu type:

```
help or enter "?"
```

To get help on each command type:

```
Help <command> or enter "?"
```

Where <command> is replaced by a command in the help definitions table.

On-Prem Console Help Command Descriptions

The following On-Prem Console help commands (in alphabetical order).

Command	Description/Action
arp	(Address Resolution Protocol) This command displays and modifies entries in the ARP cache, that contain one or more tables used to store IP addresses and their resolved Ethernet or Token ring physical addresses. The table contains the following columns:

Command	Description/Action
	• Address: IP Address • HWtype: (for example ether,) • HWaddress: in hexadecimal format • Flags Mask: • Iface: shows the interface being used
change_log_level	Use this command to configure the system log level. It allows you to adjust the amount and type of information recorded in system logs. This helps control log verbosity.
change_password	Opens the change password prompt. Follow the steps from the prompts to change your password for the admin onprem console. **NOTE**: CiscoAdmin!2345 is the default admin console password **NOTE**: Console and Admin passwords are independent and need to be changed separately.

copy	Copies a specified file or directory.
	`The copy command only works with SCP protocol. The copy command would follow this general format:`
	`copy username@domain:/source_file/destination_dir:`
	`Here is a specific example of the copy command:` **`copy user@domain.com:/path/SSM_On-Prem_9-202407.sh patches:`**
	NOTE: The copy command in SSM On-Prem only supports FIPS-supported ciphers.
	NOTE: Some versions of winscp do not work with On-Prem due to a bug in winscp code. If winscp is not working with On-Prem please use **git bash** as an alternative.

curl	Transfers data to/from a network server using a supported protocol such as HTTP, HTTPS, LDAP, etc. It is designed to work without user interaction which makes it very useful for using a shell script.
database_backup	This command will run a backup of your system and save it into the backup directory.
database_restore	Opens the prompt to restore a specified database. Follow the prompts to restore the database. You will need to specify the location of the database you

Command	Description/Action
	want to restore (see database_backup).
database_scheduled_backup	Enables scheduled backups of the database to ensure regular data protection and facilitate disaster recovery.
delete	Deletes the specified file or directory.
dir	Displays all files in the specified directory.
disable_default_user	Disables preconfigured default user account (admin) to enforce custom admin credentials.
disk_usage (du)	Checks the information on disk usage of files and directories on a server. The table shows: • Filesystem: directory • Size: Size of the directory • Used: What space is used • Avail: What space is available Use%: Shows how much of the space is used as a percentage. Mounted on: Shows the partition where the filesystem (dir) exists.
docker_network_config	Use this command to avoid conflicts when you are allocating a network to be designated for use for the SSM On-Prem internal communications. **NOTE**: This command should be used BEFORE configuring a High Availability (HA) mode. (See *Cisco Smart Software Manager On-Prem Installation Guide Appendix 7. Resolving Network Conflicts using the docker_network_config Command.*
EOF	This command is used when no more data can be read from a data source such as a file or stream.
exit (See quit)	This command exits you from the On-Prem Console.
ha_cluster_start	This command is used to start the HA Cluster service.
ha_cluster_stop	This command is used to stop the HA Cluster service.
ha_deploy	This command is for setting up HA availability on Active nodes. The command first checks that the standby has been provisioned before continuing forward, ha_provision_standby command.

Command	Description/Action
	The command takes the following arguments: Active IP, Private IP address of the Active node, Standby IP, Virtual IP, and the HA Cluster password (created in the standby provisioning step.) *if anything goes wrong, run the ha_teardown command on both nodes to get them back into standalone mode. Then try again.
ha_generatekeys	This command is used to generate user and ssh keys in the Primary node to secure a channel of communication between the two nodes for the HA Cluster.
ha_provision_standby	This command prompts you through provisioning the Standby node which is a prerequisite step for deploying an HA cluster. This command takes the following arguments: Active IP, Private IP address of the Active node, Standby IP, Private IP address of the Standby node, and HA Cluster password.
ha_status	Enables you to view the status of an HA Cluster. Describes the resources running as well as streaming replication status.
ha_teardown	This command removes a node from an HA which destroys the HA Cluster and establishes a standalone system. This command should be run on each node individually.
hostname	This command displays the name of the host (hostname) as well as information on the operating system, and kernel version, as well as presenting the virtualization tool (utility). **NOTE**: Before setting up an HA Cluster, each node must have a different Hostname (to distinguish one node from the other). Hostnames can be configured during initial installation or later through the On-Prem Console.
logs	Opens the logs stored under a specified directory such as SYSLOG. (You will need the admin password) Use Ctrl+C to exit the logs. This is a “live” event, so the readout shows the log entries as they occur.
netstat	Displays network connections for TCP, routing tables, and several network interface and network protocol statistics (active Internet connections (w.0 servers).

Command	Description/Action
network_manager	Opens Network Manager, a software utility that simplifies the use of computer networks. This utility allows you to: • Edit a connection • Activate a connection • Set system hostname
nslookup	Opens the Name Server lookup tool to perform DNS lookups in Linux. Using this command enables you to display DNS details, such as the Host Name or IP Address of a particular computer. This command can operate in two modes: interactive and non-interactive.
openssl ciphers	Convert textual OpenSSL cipher lists into ordered SSL cipher preference lists. It can be used as a test tool to determine the appropriate cipherlist.
password_policy	Use this command to see the constraints for creating a password. See Using Password Policy.
ping	Pings a machine to see if it's "online." Type ping then press the spacebar and type in the IP Address of the machine you want then press Enter.
quit (See exit)	This command is identical to the Exit command. Using this command quits the On-Prem Console.
reboot	Reboots the machine.
select_ha_mode	Switches to High Availability (HA) mode.
shell_session_limit	Use this command for setting session limits on a node. Also, for setting limits on each node of an HA cluster. The **default limit is 10**. The range is an integer between 1-999. **NOTE**: In an HA cluster, session limits for each node must be manually set using the shell_session_limit command.
tacacs_config	This command opens the tacacs configuration menu that has five functions. • TACACS primary server config: Provides the parameters for configuring the TACACS primary server. • TACACS secondary server config: Provides the parameters for configuring the TACACS secondary server • Display TACACS config: Shows the configuration

Command	Description/Action
	details of either the primary or secondary TACACS+ server. • User management: Opens the User Management menu where you can add, display, and delete local TACACS users. • quit: exits the TACACS configuration server.
tcpdump	Is a utility used to display TCP\IP and other network packets being transmitted over a network. See Using TCPDUMP.
timedate	Displays the time and date of your machine as well as your NTP server if used.
top	This command displays the processor activity of the server as well as other services being used.
traceroute	This command enables you to see several details about the path that a packet takes from the computer or device to whatever destination you specify.
upgrade	Opens the upgrade prompt. Follow the prompts to install the upgrade. (For specific instructions, refer to the *Cisco Smart Software Manager On-Prem Installation Guide* "patch/upgrade" section. • Usage: upgrade <patches:filename>
version	Displays the current version and upgrade history for the SSM On-Prem installation. **NOTE:** The Cisco SSM On-Prem version is only shown for the primary node, as both nodes must run the same version.

Using the TCPDUMP on On-Prem Console

This section describes the ability to pass arguments to TCPDUMP using the On-Prem Console tcpdump command.

Listed here are the expected results of using the tcpdump command.

```
>>? tcpdump
Capture network packets for analysis
        Usage: tcpdump pcaps: [<filename>] [<argfs>]
               -i all | interface: -i: Listen on interface. If
unspecified, all will be used
               -w pcaps:fileneam : Write the raw packets to file rather
than parsing and printing them out. /var/files/pcaps/trace.pcap is the
```

```
default file that will be written if -w is not supplied
               -r pcaps:filename: Read the packet captre file
               <args>  : All other arguments provided will be passed
directly to tcpdump. See linux man-page on tcpdump for complete list
```

Using the Password_Policy Command on On-Prem Console

This section describes the constraints used in creating passwords using the On-Prem Console password_policy command.

Listed here are the expected results for the password_policy command.

```
>> ? password_policy
Set you Secure password policy rules
       Usage: password_policy [options]
-minlen         Minimum length of a password (min 6, default 15)
-minclass       Minimum number of character classes in a password (max 4,
default 4)
-maxrepeat      Maximum number of same consecutive characters in a
password (default 2)
-maxclassrepeat Maximum number of consecutive characters in a password
(default 2)
-lower          Require at least one lowercase character in a password
(default yes)
-upper          Require at least one uppercase character in a password
(default yes)
-digit          Require at least one digit in a password (default yes)
-special        Require at least one other character in a password
(default yes)
```

Example of the Docker_Network_Config Command on On-Prem Console

This section provides an example of the On-Prem Console docker_network policy command.

```
>> docker_network_config
Last login: Mond Feb 22 17:53:22 UTC 2021 on pts/0
The bridge network pool is used to allocate Ips to containers. Docker will
allocate subnets
from this IP pool.

Enter network address [172.16.2.0]: 172.17.2.0
-> Detected 256 IP addresses within IP range: 172.17.2.0 - 172.17.2.255

Using CIDR: 172.17.2.0/24

Docker will be configured to allocate Ips from the network pool provided.
Misconfiguration on the docker network can result in services railing to
start. Please be sure that you are entering the correct information.

Using CIDR: 172.17.2.0/24

Are you sure you want to write this configuration (y/N) y
Stopping application services...
Writing new configuration file...
Restarting docker service...
```

```
Restarting docker service...

Writing new configuration file...
Restarting docker service...
Starting application services...

Changes applied.
Waiting for services to start...
Bridge interface has been assigned IP: 172.17.2.17
```