HCM-F services in STOPPED state after appliance upgrade

Contents

[Introduction](#)
[Prerequisites](#)
[Requirements](#)
[Components Used](#)
[Problem](#)
[Troubleshooting Performed](#)
[Solution](#)
[Verification](#)

Introduction

This document describes a problem that transpired after upgrading Hosted Collaboration Mediation Fulfillment (HCM-F) along with the troubleshooting process.

The root cause of the issue is related to an expired Tomcat Certificate. Many customers who are planning to upgrade their HCM-F appliance (to benefit from the newly introduced features) will face this issue if their existing HCM-F Tomcat Certificate has expired, and was not regenerated.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Cisco Hosted Collaboration Solution (HCS)
- Cisco Hosted Collaboration Mediation Fulfillment (HCM-F)

Components Used

The information in this document is based on these software and hardware versions:

- HCM-F 11.5.4

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Problem

After Upgrading HCM-F (11.5.1 to 11.5.4) and switch version, the Graphical User Interface (GUI)

page is no longer reachable and services are in stopped state.

Troubleshooting Performed

- While checking services status, it is observed that Web User Interface (UI) and Tomcat related services are in STOPPED state:

```
admin:utils service list
Requesting service status, please wait...
System SSH [STARTED]
Name Service Cache [STOPPED] Service Not Activated
Entropy Monitoring Daemon [STARTED]
Cisco SCSI Watchdog [STARTED]Service Manager [STARTED]
Service Manager is running
Getting list of all services
>>Return code = 0
Cisco AMC Service[STARTED]
Cisco Audit Event Service[STARTED]
Cisco CDM Database[STARTED]
Cisco CDP[STARTED]
Cisco CDP Agent[STARTED]
Cisco Certificate Expiry Monitor[STARTED]
Cisco Configuration Manager[STARTED]
Cisco DRF Local[STARTED]
Cisco DRF Master[STARTED]
Cisco HCS Admin UI[STOPPED] Component is not running
Cisco HCS CSF UI Service[STOPPED]  Component is not running
Cisco HCS CUCDMSync Service[STARTED]
Cisco HCS ConfigMgr[STARTED]
Cisco HCS DMA-SA Service[STARTED]
Cisco HCS Data Access Manager Service[STARTED]
Cisco HCS Fulfillment Service[STARTED]
Cisco HCS IPA Service[STARTED]
Cisco HCS Intelligent Loader Service[STOPPED]  Component is not running
Cisco HCS License Manager Service[STARTED]
Cisco HCS NBI REST FF Web Service[STOPPED] Component is not running
Cisco HCS NBI REST SDR Web Service[STOPPED]  Component is not running
Cisco HCS NBI REST UCMon Web Service[STOPPED]  Component is not running
Cisco HCS North Bound Interface Web Service[STOPPED]  Component is not running
Cisco HCS Provisioning Adapter Service[STARTED]
Cisco HCS SDR Change Notification Service[STARTED]
Cisco HCS SDR UI[STOPPED]  Component is not running
Cisco HCS SI UI[STOPPED]  Component is not running
Cisco HCS SSO SP Service[STOPPED]  Component is not running
Cisco HCS Service Inventory[STOPPED]  Component is not running
Cisco HCS UCPA Service[STARTED]
Cisco HCS UCSMSync Service[STARTED]
Cisco HCS VCenterSync Service[STARTED]
Cisco JMS Broker[STARTED]
Cisco Log Partition Monitoring Tool[STARTED]
Cisco Platform Manager Service[STOPPED]  Component is not running
Cisco RIS Data Collector[STARTED]
Cisco RTMT Web Service[STOPPED]  Component is not running
Cisco Syslog Agent[STARTED]
Cisco Tomcat[STARTED]
Cisco Tomcat Stats Servlet[STOPPED]  Component is not running
Cisco Trace Collection Service[STARTED]
Cisco Trace Collection Servlet[STOPPED]  Component is not running
Host Resources Agent[STARTED]
MIB2 Agent[STARTED]
```

Platform Administrative Web Service[**STOPPED**] Component is not running
SNMP Master Agent[STARTED]System Application Agent[STARTED]
Cisco HCS UC Monitor Service[STOPPED] Service Not ActivatedPrimary Node =true

- In CiscoSyslog we see Hypertext Transfer Protocol (HTTP) 404 Error for different Web-related services:

admin:file view activelog /syslog/CiscoSyslog

Jun 17 16:14:19 hcs862-hcm-f local7 2 : 6: hcs862-hcm-f.XXXXXXXX.net:
Jun 17 2019 14:14:19.781 UTC : **%UC_SERVICEMANAGER-2-ServiceStartFailed:** %[ServiceName=Cisco RTMT Web Service][**Reason=HTTP 404 Error**][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Failed to start service.**
Jun 17 16:14:19 hcs862-hcm-f local7 2 : 7: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 17 2019 14:14:19.781 UTC : **%UC_SERVICEMANAGER-2-ServiceFailed:** %[ServiceName=Cisco RTMT Web Service][Reason=Service stopped abruptly][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Service terminated.**
Jun 17 16:14:20 hcs862-hcm-f local7 2 : 8: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 17 2019 14:14:20.791 UTC : **%UC_SERVICEMANAGER-2-ServiceStartFailed**: %[ServiceName=Cisco Trace Collection Servlet][Reason=HTTP 404 Error][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Failed to start service.**
Jun 17 16:14:20 hcs862-hcm-f local7 2 : 9: hcs862-hcm-f.XXXXXXXXtest.net: Jun 17 2019 14:14:20.791 UTC : **%UC_SERVICEMANAGER-2-ServiceFailed**: %[ServiceName=Cisco Trace Collection Servlet][Reason=Service stopped abruptly][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Service terminated.**
Jun 17 16:14:21 hcs862-hcm-f local7 2 : 10: hcs862-hcm-f.XXXXXXXXtest.net: Jun 17 2019 14:14:21.796 UTC : **%UC_SERVICEMANAGER-2-ServiceStartFailed**: %[ServiceName=Cisco Tomcat Stats Servlet][Reason=HTTP 404 Error][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Failed to start service.**
Jun 17 16:14:21 hcs862-hcm-f local7 2 : 11: hcs862-hcm-f.XXXXXXXXtest.net: Jun 17 2019 14:14:21.796 UTC : **%UC_SERVICEMANAGER-2-ServiceFailed**: %[ServiceName=Cisco Tomcat Stats Servlet][Reason=Service stopped abruptly][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Service terminated.**
Jun 17 16:14:22 hcs862-hcm-f local7 6 : 12: hcs862-hcm-f.XXXXXXXXtest.net: Jun 17 2019 14:14:22.800 UTC : %UC_GENERIC-6-ServiceStarted: %[ServiceName=Cisco CDP][ProcessID=8426][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: Service started.
Jun 17 16:14:23 hcs862-hcm-f local7 2 : 13: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 17 2019 14:14:23.804 UTC : **%UC_SERVICEMANAGER-2-ServiceStartFailed**: %[ServiceName=Cisco HCS Admin UI][**Reason=HTTP 404 Error**][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Failed to start service.**
Jun 17 16:14:23 hcs862-hcm-f local7 2 : 14: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 17 2019 14:14:23.804 UTC : **%UC_SERVICEMANAGER-2-ServiceFailed**: %[ServiceName=Cisco HCS Admin UI][Reason=Service stopped abruptly][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Service terminated.**
Jun 17 16:14:24 hcs862-hcm-f local7 2 : 15: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 17 2019 14:14:24.808 UTC : **%UC_SERVICEMANAGER-2-ServiceStartFailed**: %[ServiceName=Cisco HCS SDR UI][**Reason=HTTP 404 Error**][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Failed to start service.**
Jun 17 16:14:24 hcs862-hcm-f local7 2 : 16: hcs862-hcm-f.XXXXXXXXtest.net: Jun 17 2019 14:14:24.808 UTC : **%UC_SERVICEMANAGER-2-ServiceFailed**: %[ServiceName=Cisco HCS SDR UI][Reason=Service stopped abruptly][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Service terminated.**
Jun 17 16:14:25 hcs862-hcm-f local7 6 : 17: hcs862-hcm-f.XXXXXXXXtest.net: Jun 17 2019 14:14:25.812 UTC : %UC_GENERIC-6-ServiceStarted: %[ServiceName=Cisco Certificate Expiry Monitor][ProcessID=8774][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: Service started.
Jun 17 16:14:25 hcs862-hcm-f local7 2 : 18: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 17 2019 14:14:25.813 UTC : **%UC_SERVICEMANAGER-2-ServiceStartFailed**: %[ServiceName=Cisco HCS NBI REST SDR Web Service][Reason=HTTP 404 Error][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Failed to start service.**
Jun 17 16:14:25 hcs862-hcm-f local7 2 : 19: hcs862-hcm-f.XXXXXXXXtest.net:

Jun 17 2019 14:14:25.813 UTC : **%UC_SERVICEMANAGER-2-ServiceFailed**: %[ServiceName=Cisco HCS NBI REST SDR Web Service][Reason=Service stopped abruptly][AppID=Cisco Service Manager][ClusterID=][NodeID=hcs862-hcm-f]: **Service terminated.**

- Tomcat in Catalina.out reports CCMTrustCerts context issue:

SEVERE: Context [/CCMTrustCerts] startup failed due to previous errors
Jun 18, 2019 2:59:49 PM org.apache.catalina.startup.HostConfig deployDirectoryINFO: Deployment of web application directory /common/log/taos-log-a/tomcat/webapps/CCMTrustCerts has finished in 8,042 ms end of the file reachedoptions: q=quit, n=next, p=prev, b=begin, e=end (lines 1221 - 1223 of 1223) :INFO: Deploying web application directory /common/log/taos-log-a/tomcat/webapps/manager
Jun 18, 2019 2:59:33 PM org.apache.catalina.startup.SetContextPropertiesRule beginWARNING: [SetContextPropertiesRule]{Context} Setting property 'debug' to '0' did not find a matching property.
Jun 18, 2019 2:59:33 PM org.apache.tomcat.util.digester.SetPropertiesRule beginWARNING: [SetPropertiesRule]{Context/Realm} Setting property 'resourceName' to 'TomcatUsersDatabase' did not find a matching property.
Jun 18, 2019 2:59:41 PM org.apache.catalina.startup.TldConfig executeINFO: At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug logging for this logger for a complete list of JARs that were scanned but no TLDs were found in them. Skipping unneeded JARs during scanning can improve startup time and JSP compilation time.
Jun 18, 2019 2:59:41 PM org.apache.catalina.core.StandardContext startInternalSEVERE: One or more Filters failed to start. Full details will be found in the appropriate container log file
Jun 18, 2019 2:59:41 PM org.apache.catalina.core.StandardContext startInternalSEVERE: Context [/manager] startup failed due to previous errors
Jun 18, 2019 2:59:41 PM org.apache.catalina.startup.HostConfig deployDirectoryINFO: Deployment of web application directory /common/log/taos-log-a/tomcat/webapps/manager has finished in 7,483 ms
Jun 18, 2019 2:59:41 PM org.apache.catalina.startup.HostConfig deployDirectoryINFO: Deploying web application directory /common/log/taos-log-a/tomcat/webapps/CCMTrustCerts
Jun 18, 2019 2:59:49 PM org.apache.catalina.startup.TldConfig executeINFO: At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug logging for this logger for a complete list of JARs that were scanned but no TLDs were found in them. Skipping unneeded JARs during scanning can improve startup time and JSP compilation time.
Jun 18, 2019 2:59:49 PM org.apache.catalina.core.StandardContext startInternalSEVERE: **One or more Filters failed to start. Full details will be found in the appropriate container log file**
Jun 18, 2019 2:59:49 PM org.apache.catalina.core.StandardContext startInternal options: **SEVERE: Context [/CCMTrustCerts] startup failed due to previous errors**
Jun 18, 2019 2:59:49 PM org.apache.catalina.startup.HostConfig deployDirectoryINFO: Deployment of web application directory /common/log/taos-log-a/tomcat/webapps/CCMTrustCerts has finished in 8,042 ms

- Running “utils diagnose test” from Command-Line Interface (CLI) displays an error in tomcat_connectors module, indicating that internal connections to Tomcat are not working:

test - tomcat_connectors : **Failed - The HTTP and HTTPS ports are not responding to local requests.**
Please collect all of the Tomcat logs for root cause analysis: file get activelog tomcat/logs/*

- Tomcat certificate expired March 26th. Despite that, problems were not observed during (or prior to) upgrade of HCM-F:

Jun 19 12:00:00 hcs862-hcm-f local99 0 : 42: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 19 2019 10:00:00.19 UTC : %UC_CERT-0-CertExpired: %[Message=Certificate expiration Notification. Certificate name:tomcat.der Unit:tomcat Type:own-cert Expiration:Sun Mar 26 12:30:59:000 CES][AppID=Cisco Certificate Monitor][ClusterID=][NodeID=hcs862-hcm-f]: **Certificate has Expired and needs to be changed at the earliest**
Jun 19 12:00:00 hcs862-hcm-f local99 0 : 43: hcs862-hcm-f.XXXXXXXXtest.net:
Jun 19 2019 10:00:00.21 UTC : %UC_CERT-0-CertExpired: %[Message=Certificate expiration

```
Notification. Certificate name:ipsec.der Unit:ipsec Type:own-cert Expiration:Sun Mar 26
12:30:57:000 CEST ][AppID=Cisco Certificate Monitor][ClusterID=][NodeID=hcs862-hcm-f]:
Certificate has Expired and needs to be changed at the earliest
```

Solution

1. **Regenerate Tomcat certificate** :

```
admin:set cert regen tomcat
WARNING: This operation will overwrite any CA signed certificate previously imported for  tomcat
Proceed with regeneration (yes|no)? yes
Successfully Regenerated Certificate for tomcat.
You must restart services related to tomcat for the regenerated certificates to become active.
```

2. **Restart HCM-F server:**

```
admin:utils system restart
 Do you really want to restart ?Enter (yes/no)? yes
```

Verification

- **Verify service status:**

```
admin:utils service list
Requesting service status, please wait...
System SSH [STARTED]
Name Service Cache [STOPPED] Service Not Activated
Entropy Monitoring Daemon [STARTED]
Cisco SCSI Watchdog [STARTED]
Service Manager [STARTED]Service Manager is running
Getting list of all services
>>Return code = 0
Cisco AMC Service[STARTED]
Cisco Audit Event Service[STARTED]
Cisco CDM Database[STARTED]
Cisco CDP[STARTED]
Cisco CDP Agent[STARTED]
Cisco Certificate Expiry Monitor[STARTED]
Cisco Configuration Manager[STARTED]
Cisco DRF Local[STARTED]
Cisco DRF Master[STARTED]
Cisco HCS Admin UI[STARTED]
Cisco HCS CSF UI Service[STARTED]
Cisco HCS CUCDMSync Service[STARTED]
Cisco HCS ConfigMgr[STARTED]
Cisco HCS DMA-SA Service[STARTED]
Cisco HCS Data Access Manager Service[STARTED]
Cisco HCS Fulfillment Service[STARTED]
Cisco HCS IPA Service[STARTED]
Cisco HCS Intelligent Loader Service[STARTED]
Cisco HCS License Manager Service[STARTED]
Cisco HCS NBI REST FF Web Service[STARTED]
Cisco HCS NBI REST SDR Web Service[STARTED]
Cisco HCS NBI REST UCMon Web Service[STARTED]
Cisco HCS North Bound Interface Web Service[STARTED]
Cisco HCS Provisioning Adapter Service[STARTED]
Cisco HCS SDR Change Notification Service[STARTED]
Cisco HCS SDR UI[STARTED]
```

```
Cisco HCS SI UI[STARTED]
Cisco HCS SSO SP Service[STARTED]
Cisco HCS Service Inventory[STARTED]
Cisco HCS UCPA Service[STARTED]
Cisco HCS UCSMSync Service[STARTED]
Cisco HCS VCenterSync Service[STARTED]
Cisco JMS Broker[STARTED]
Cisco Log Partition Monitoring Tool[STARTED]
Cisco Platform Manager Service[STARTED]
Cisco RIS Data Collector[STARTED]
Cisco RTMT Web Service[STARTED]
Cisco Syslog Agent[STARTED]
Cisco Tomcat[STARTED]
Cisco Tomcat Stats Servlet[STARTED]
Cisco Trace Collection Service[STARTED]
Cisco Trace Collection Servlet[STARTED]
Host Resources Agent[STARTED]MIB2 Agent[STARTED]
Platform Administrative Web Service[STARTED]
SNMP Master Agent[STARTED]
System Application Agent[STARTED]
Cisco HCS UC Monitor Service[STOPPED]
Service Not ActivatedPrimary Node =true
```