Hewlett Packard Enterprise

Cloud Service Automation

Health Tool Guide

Software version: 4.80

Document release date: January 2017

Software release date: January 2017

Contents

Overview

The Health Tool is a command line interface that you can use to identify HPE Cloud Service Automation (CSA) issues by determining which component (such as the database, JBoss server, Cloud Service Management Console, Identity Management component, or Marketplace Portal) might be causing the issue and where additional troubleshooting is needed.

The Health Tool provides CSA component status (pass/fail) in online, HTML, and text file reports. You must have database and REST API connections to display the corresponding information. Even when connections fail, the Health Tool might still be able to collect and display data about subscriptions, lifecycle transitions, and number of instances.

The Health Tool (`health-tool.jar`) is located in `<csa_home>\Tools\HealthTool` where `<csa_home>` is the directory in which CSA is installed (for example, in Windows, the default installation directory is `C:\Program Files\HPE\CSA` and, in Linux, the directory is `/usr/local/hpe/csa`). In the examples shown in this guide, the Health Tool is run from this directory. If you run the tool from a different directory, you must specify the relative or absolute path to the tool.

Note: In this document, path names apply to both Windows and Linux even though they appear in Windows format. If there are differences between Windows and Linux, examples are given for both.

Command line options and configuration

This section describes Health Tool command line options and the configuration properties file.

Note: The configuration properties file that is required by the Health Tool is automatically generated during CSA installation and is configured with information collected by the CSA installer. If any of this information has changed since installing CSA, you must manually update the configuration properties file. See Configuration properties file parameters for more information.

Command line options

Use the following command to list supported options:

Windows:
```
"<csa_jre>\bin\java.exe" -jar health-tool.jar –h
```

or

```
"<csa_jre>\bin\java" -jar health-tool.jar –h
```

Linux:
```
<csa_jre>/bin/java -jar health-tool.jar –h
```

where `<csa_jre>` is the directory in which the JRE that is used by CSA is installed. The Health Tool must be run by the same JRE used by CSA.

Command line option descriptions

The following table describes Health Tool command line options.

Note: Additional command line options are required if SSL is enabled between the Oracle database and CSA.
See Communicating with the Oracle or MS SQL database using SSL for more information.

Option	Option Description
`-h, --help`	Displays syntax and use.
`-g, --generate`	Generates a sample configuration properties file (`config.properties`) in the default location if the original file (which is automatically generated when CSA is installed) is missing (such as when the `health-tool.jar` file is moved or copied to a different location without the `config.properties` file). The sample configuration properties file must be manually configured with database, CSA, and Identity Management component information. If used with the `–o` option, the existing configuration properties file is overwritten.

Option	Option Description
`-c,--config-file <config property file>`	Optional. The location and name of the configuration properties file. If this option is specified, you must specify the name and location of the configuration properties property file. The location can be an absolute path or a path relative to the location where the Health Tool is run. If the file is located in the same directory from which the Health Tool is run, the path does not need to be specified. If you specify the `-c` option but do not specify a file location and name, or if you do not specify the `-c` option, the Health Tool will look for a file called `config.properties` that is located in the same directory as the Health Tool (`<csa_home>\Tools\HealthTool\`).
`-j,--jars <Oracle JARs>`	Oracle only. Load the Oracle JDBC `.jar` files. Note that if more than one jar file is needed, the jar filenames must be separated by a comma (do not include any spaces between the comma and filename). The Oracle JDBC JAR files must be located in the same folder as the `health-tool.jar` file (`<csa_home>\Tools\HealthTool\`).
`-o,--overwrite`	Optional. Overwrites the `health_tool.log` (text) and `report.html` report files. If this option is not specified, the current report information is added at the top of the files. When used with the `-g` option, overwrites the `config.properties` file that is located in the same folder as the `health-tool.jar` file.

Configuration properties file

The Health Tool requires the configuration properties file (`config.properties`). This file is automatically generated during CSA installation, is located in the same directory as the Health Tool, and contains the information needed by the tool to run.

The information in the configuration properties file is used by the tool to connect to the CSA database, log in to CSA, authenticate REST API calls, and connect to the Identity Management component. If any of this information has changed since installing CSA, you can manually update the configuration properties file. See Configuration properties file parameters for more information. See also Examples for examples of this file.

Configuration properties file parameters

This table describes the configuration properties file parameters.

Property Name	Description

`jdbc.driverClassName`	The JDBC driver class.
	Examples
	Oracle
	`jdbc.driverClassName=oracle.jdbc.driver.OracleDriver`
	MS SQL
	`jdbc.driverClassName=net.sourceforge.jtds.jdbc.Driver`
	PostgreSQL
	`jdbc.driverClassName=org.postgresql.Driver`

Property Name	Description

jdbc.dialect	The name of the class that allows JDBC to generate optimized SQL for a particular database.
	Examples
	Oracle
	`jdbc.dialect=org.hibernate.dialect.OracleDialect`
	MS SQL
	`jdbc.dialect=org.hibernate.dialect.SQLServerDialect`
	PostgreSQL
	`jdbc.dialect=org.hibernate.dialect.PostgreSQLDialect`

jdbc.databaseUrl	The JDBC URL. When specifying an IPv6 address, it must be enclosed in square brackets.
	Examples
	Oracle (SSL not enabled)
	`jdbc.databaseUrl=jdbc:oracle:thin:@//127.0.0.1:1521/XE`
	
	Oracle (SSL not enabled, using an IPv6 address):
	`jdbc.databaseUrl=jdbc:oracle:thin:@//[f000:253c::9c10:b4b4]:1521/XE`
	
	Oracle (SSL enabled, CSA does not check the database DN)
	`jdbc.databaseUrl=jdbc:oracle:thin:@(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS)(HOST = <host>)(PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = ORCL)))`
	where <host> is the name of the system on which the Oracle database server is installed.
	
	Oracle (SSL enabled, CSA checks the database DN)
	`jdbc.databaseUrl=jdbc:oracle:thin:@(DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS)(HOST = <host>)(PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME=ORCL))(SECURITY = (SSL_SERVER_CERT_DN= "CN=abc,OU=dbserver,O=xyz,L=Sunnyvale,ST=CA,C=US")))`
	where <host> is the name of the system on which the Oracle database server is installed and the values for SSL_SERVER_CERT_DN are for the DN of the Oracle database server.
	
	MS SQL (SSL not enabled)
	`jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=request`
	
	MS SQL (SSL not enabled, using an IPv6 address)
	`jdbc.databaseUrl=jdbc:jtds:sqlserver://[::1]:1433/example;ssl=request`
	
	MS SQL (SSL enabled)
	`jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate`
	
	MS SQL (FIPS 140-2 compliant)
	`jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate`

jdbc.username	The database user configured to access the CSA database.

Property Name	Description
`jdbc.password`	This password: • Is the password for the database user you configured for the `jdbc.username` property. • Is preceded by ENC, has no separating spaces, and is enclosed in parentheses. • Should be encrypted (see the *CSA Configuration Guide* for instructions on encrypting passwords). **Note:** If you will be configuring your CSA product to be FIPS 140-2 compliant, complete the configuration before you encrypt the password. Example: `jdbc.password=ENC(fc5e38d38a5703285441e7fe7010b0)`
`csa.username`	A user who can access the Cloud Service Management Console. This user is used to test the connection to CSA.
`csa.password`	This password: • Is the password for the Cloud Service Management Console user you configured for the `csa.username` property. • Is preceded by ENC, has no separating spaces, and is enclosed in parentheses. • Should be encrypted (see the *CSA Configuration Guide* for instructions on encrypting passwords). **Note:** If you will be configuring your CSA product to be FIPS 140-2 compliant, complete the configuration before you encrypt the password. Example: `csa.password=ENC(ac7fe2d25cf0578a9b45907ee721ab8099)`
`idm.tenantName`	The provider organization identifier of the Cloud Service Management Console whose connection is being tested. Set this property to `Provider.`
`idm.transportUser`	A user configured to authenticate REST API calls. This user is used to test the REST API connection and to capture CSA license information.
`idm.transportPassword`	This password: • Is the password for the user you configured for the `idm.transportUser` property. • Is preceded by ENC, has no separating spaces, and is enclosed in parentheses. • Should be encrypted (see the *CSA Configuration Guide* for instructions on encrypting passwords). **Note:** If you will be configuring your CSA product to be FIPS 140-2 compliant, complete the configuration before you encrypt the password. **Example** `idm.transportPassword=ENC(b5af870d6ce23951af09)`
`idm.username`	A user who can connect to the Identity Management component.
`idm.password`	This password: • Is the password for the user you configured for the `idm.username` property. • Is preceded by ENC, has no separating spaces, and is enclosed in parentheses. • Should be encrypted (see the *CSA Configuration Guide* for instructions on encrypting passwords). **Note:** If you will be configuring your CSA product to be FIPS 140-2 compliant, complete the configuration before you encrypt the password. **Example** `idm.password=ENC(79dfa03785cbe407001f7ab310e31)`

Generating a sample configuration properties file

This section describes the commands used to generate a sample configuration properties file. The sample configuration properties file must be updated before it can be used by the Health Tool. If the configuration properties file exists, make a backup of the file before running the command to overwrite it.

Scenario	Command	Results and Action

Configuration properties file does not exist
The configuration properties file (`config.properties`) no longer exists in the same directory as the Health Tool (for example, in `<csa_home>\Tools\HealthTool`).
	Windows:
	`"<csa_jre>\bin\java" –jar health-tool.jar –g`
	
	Linux:
	`<csa_jre>/bin/java –jar health-tool.jar -g`
		A sample `config.properties` file is created in the same directory as the Health Tool.

Configuration properties file exists, overwrite the file
The configuration properties file exists in the same directory as the Health Tool and you want to **overwrite** its content (for example, you want to overwrite the file because it does not contain the most up-to-date information).
	Windows:
	`"<csa_jre>\bin\java" –jar health-tool.jar –g –o`
	
	Linux:
	`<csa_jre>/bin/java –jar health-tool.jar –g –o`
		The Health Tool displays a message that the properties file already exists. When prompted, enter **Y** to overwrite the file.
		The Health Tool overwrites the existing file with the sample file.

Note: Additional command line options are required if SSL is enabled between the Oracle database and CSA.
See Communicating with the Oracle or MS SQL database using SSL for more information.

Configuration property examples

The following are examples of configured properties in the `config.properties` file.

Configuration Properties	Examples

Oracle (SSL not enabled)	`jdbc.driverClassName=oracle.jdbc.driver.OracleDriver`
	`jdbc.databaseUrl=jdbc:oracle:thin:@//127.0.0.1:1521/XE`
	`jdbc.username=csadbuser`
	`jdbc.password=ENC(fc5e38d38a5703285441e7fe7010b0)`
	`jdbc.dialect=org.hibernate.dialect.OracleDialect`

MS SQL (SSL not enabled)	`jdbc.driverClassName=net.sourceforge.jtds.jdbc.Driver`
	`jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=request`
	`jdbc.username=csadbuser`
	`jdbc.password=ENC(fc5e38d38a5703285441e7fe7010b0)`
	`jdbc.dialect=org.hibernate.dialect.SQLServerDialect`

MS SQL (SSL enabled)	`jdbc.driverClassName=net.sourceforge.jtds.jdbc.Driver`
	`jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate`
	`jdbc.username=csadbuser`
	`jdbc.password=ENC(fc5e38d38a5703285441e7fe7010b0)`
	`jdbc.dialect=org.hibernate.dialect.SQLServerDialect`

MS SQL (FIPS 140-2 compliant)	`jdbc.driverClassName=net.sourceforge.jtds.jdbc.Driver`
	`jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate`
	`jdbc.username=csadbuser`
	`jdbc.password=ENC(fc5e38d38a5703285441e7fe7010b0)`
	`jdbc.dialect=org.hibernate.dialect.SQLServerDialect`

PostgreSQL	`jdbc.driverClassName=org.postgresql.Driver`
	`jdbc.databaseUrl=jdbc:postgresql://127.0.0.1:5432/csadb`
	`jdbc.username=csadbuser`
	`jdbc.password=ENC(fc5e38d38a5703285441e7fe7010b0)`
	`jdbc.dialect=org.hibernate.dialect.PostgreSQLDialect`

Configuration Properties	Examples

CSA	`# CSA credentials`
	`csa.username=admin`
	`csa.password=ENC(aJx51YfoPjzN3Dt8FWyugg==)`

Identity Management Component	`# IDM credentials`
	`idm.tenantName=Provider`
	`idm.transportUser=idmTransportUser`
	`idm.transportPassword=ENC(5BMf3m8nKYyJqnTgNj4FT/KqUyVIJ5ovEKtpmgUGDRA=)`
	`idm.username=admin`
	`idm.password=ENC(aJx51YfoPjzN3Dt8FWyugg==)`

Communicating with the Oracle or MS SQL database using SSL

If SSL is enabled between CSA and the Oracle or MS SQL database, additional command line options might be required and the URL in the `jdbc.databaseUrl` database property must be configured correctly.

Oracle database

This table describes Oracle database command line options and the `jdbc.databaseUrl` value for different situations.

Command line options	jdbc.databaseUrl Value
CSA does not check the database DN and client authentication is enabled	

`-Djavax.net.ssl.keyStore="<certificate_key_file>"`
`-Djavax.net.ssl.keyStorePassword=<certificate_key_file_password>`
`-Djavax.net.ssl.keyStoreType=<certificate_key_file_type>`
 	
where:
• `<certificate_key_file>` is the same `keystore` file defined by the `certificate-keyfile` attribute in the ssl element of the `<csa_home>\jboss-as\standalone\configuration\standalone.xml` file (for example, `<csa_home>\jboss-as\standalone\configuration\.keystore`)
• `<certificate_key_file_password>` is the password to the `keystore` file (for example, changeit)
• `<certificate_key_file_type>` is the keystore type (for example, JKS or PKCS12)
	`jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS)(HOST = <host>)(PORT = 1521)))(CONNECT_DATA = (SERVICE_NAME = ORCL)))`
	
	where `<host>` is the name of the system on which the Oracle database server is installed.

CSA does not check the database DN and client authentication is not enabled	
None	`jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS)(HOST = <host>)(PORT = 1521)))(CONNECT_DATA = (SERVICE_NAME = ORCL)))` where `<host>` is the name of the system on which the Oracle database server is installed

Command line options	jdbc.databaseUrl Value
CSA checks the database DN and client authentication is enabled	

`-Doracle.net.ssl_server_dn_match=true`
`-Djavax.net.ssl.keyStore="<certificate_key_file>"`
`-Djavax.net.ssl.keyStorePassword=<certificate_key_file_password>`
`-Djavax.net.ssl.keyStoreType=<certificate_key_file_type>`
 	
where
• `<certificate_key_file>` is the same `keystore` file defined by the `certificate-keyfile` attribute in the SSL element of the `<csa_home>\jboss-as\standalone\configuration\standalone.xml` file (for example, `<csa_home>\jboss-as\standalone\configuration\.keystore`)
• `<certificate_key_file_password>` is the password to the `keystore` file (for example, changeit)
• `<certificate_key_file_type>` is the `keystore` type (for example, JKS or PKCS12)
	`jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS)(HOST = <host>)(PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = ORCL))(SECURITY = (SSL_SERVER_CERT_DN = "CN=abc, OU=dbserver,O=xyz,L=Sunnyvale, ST=CA,C=US")))`
	
	where `<host>` is the name of the system on which the Oracle database server is installed and the values for `SSL_SERVER_CERT_DN` are for the DN of the Oracle database server.

CSA checks the database DN and client authentication is not enabled	
None	`jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS)(HOST = <host>)(PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = ORCL))(SECURITY = (SSL_SERVER_CERT_DN = "CN=abc, OU=dbserver,O=xyz,L=Sunnyvale, ST=CA,C=US")))` where `<host>` is the name of the system on which the Oracle database server is installed and the values for `SSL_SERVER_CERT_DN` are for the DN of the Oracle database server.

MS SQL database

This table displays the MS SQL database `jdbc.databaseUrl` value.

Configurations	Command line options	jdbc.databaseUrl Value
SSL is enabled	None	`jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate`

Health Tool reports

The Health Tool generates reports in three different formats that provide different levels of information: online, HTML, and text.

Online report

The online report is displayed in the window from which the Health Tool is run, and provides general statuses (`pass`/`fail`) for:

- Database connection
- JBoss server connection
- CSA service
- Identity Management component
- Marketplace Portal service
- CSA data

Note: If the database and JBoss server connections fail, these records will not be displayed in the report.

Here is an example of the online display output.

```
------------------------------------------------------------
Start Health Tool at 4/13/16 11:55 AM
 Note: You must run this tool using the same Java that HPE CSA is using.
------------------------------------------------------------
Check CSA database connection … passed
------------------------------------------------------------
Check connection to JBoss … passed
------------------------------------------------------------
Check CSA is running … passed
------------------------------------------------------------
Check IDM is running … passed
------------------------------------------------------------
Check MPP is running … passed
------------------------------------------------------------
CSA Data Checks … passed
------------------------------------------------------------
End Health Tool at 4/13/16 11:55 AM
‘report.html’ report was created.
Check files report.html and health_tool.log for detailed results.
```

HTML report

The HTML report (`<csa_home>\Tools\HealthTool\report.html`) contains a table that displays status and response times for the tests listed below.

- Status (`pass/fail`) for each test
- Response times for each test (where applicable)
- Log messages for failed connections
- Database:
  - Number of records in the `csa_person` table
  - Type and version
  - Driver and version
- JBoss server:
  - JMX connection
  - MBean server connection
  - Server system resource usage
  - Server memory usage
- CSA:
  - Cloud Service Management Console login
  - Number of active subscriptions
  - Number of transitions
  - Number of completed instances
  - Process state
  - Number of pending subscriptions
  - REST API connection and CSA licensing
  - All uncommented properties in the `csa.properties` file

- Marketplace Portal Service
- Identity Management component: connection response time

Note: If the database, JBoss server, or REST API connections fail, the records that depend on each of these connections will not be displayed in the report. For example, if the REST API connection fails, CSA licensing information and the global CSA data check status will not be reported.

Here is an example of the HTML report.

Health Tool Report

Tue Apr 13 11:55:50 PDT 2016

Check	Result	Message	Duration	Log
Ping database	**PASSED**	Database connection passed	50 milliseconds	
Table 'csa_person' rows count	**PASSED**	Database table 'csa_person' has 1 records.	0 milliseconds	
CSA database check	**PASSED**	Connection to CSA database passed.		
Get database info	**PASSED**	Connected to database: PostgreSQL 9.3.6	4 milliseconds	
Get database driver info	**PASSED**	Connected to database: PostgreSQL Native Driver PostgreSQL 9.0 JDBC4 (build 801)	0 milliseconds	
JMX connection check	**PASSED**	Connection to JBoss JMX passed.	346 milliseconds	
MBean Server connection check	**PASSED**	Connection to JBoss MBean Server	898 milliseconds	
MBean Server connection check	**PASSED**	JBoss MBean Server data load	0 milliseconds	Operating System --- LoadAverage: 0.23 FreePhysicalMemory: 192 MB processCpuTime: 351120000000 committedVirtualMemorySize: 7996 MB freeSwapSpaceSize: 30498 MB totalPhysicalMemorySize: 15999 MB totalSwapSpaceSize: 30516 MB Memory - Heap Memory Usage --- commited : 1989 MB init : 2048 MB max : 1989 MB used : 549 MB percentage : 27 % Memory - Non Heap Memory Usage --- commited : 328 MB init : 2 MB max : 0 MB used : 310 MB
CSA running check	**PASSED**	CSA Service is running		
Login to CSA	**PASSED**	CSA login passed	407 milliseconds	
IDM running check	**PASSED**	Connection to IDM passed	230 milliseconds	
MPP running check	**PASSED**	MPP Service is running		
CSA data: Subscriptions	**PASSED**	ACTIVE: 25	10 milliseconds	
CSA data: Lifecycle Transitions	**PASSED**		2 milliseconds	
CSA data: Instances	**PASSED**	COMPLETED: 25	2 milliseconds	
CSA data: Process state	**PASSED**	No NULL data found in 'CSA_PROCESS_INSTANCE.PROCESS_INSTANCE_STATE_ID'.	2 milliseconds	
CSA data: Pending Subscriptions	**PASSED**	There are no Pending Subscriptions.	2 milliseconds	

CSA REST Check	**PASSED**	https://localhost:8444/csa/api/license/	108 milliseconds	
CSA REST: License	**PASSED**	https://localhost:8444/csa/api/license/	108 milliseconds	Total OS Instance Limit : 0 Active OS Instance Count : 2 daysRemaining : 90 licenseType : INSTANT_ON activeOSInstancesLimit : 0 expiresOn : Mon Jun15 23:59:59 PDT 2016 productName : HP CSA
CSA Properties	**PASSED**			com.hp.csa.CleanupScheduler.MAX_DEPLOYMENTS_SIZE : 30 csa.dynamic.list.properties.only.secure : false csa.provider.msvc.rest.protocol : https com.hp.csa.service.process.ProcessExecutorDelegate.EXTERNAL_POOL_SIZE : 2 com.hp.ccue.consumption.disallowedExtensions : exe,bat,com,cmd com.hp.csa.SchedulerExecutor.SCHEDULED_JOB_MAX_SIZE : 20 csaKeystore : C:/Program Files/HPE/CSA/jboss-as/standalone/configuration/.keystore csa.login.lockout.enable : true csa.notification.type : html csa.productPerspective : enterprise filter.users.with.no.subscriptions : true external.pricing.url : https://localhost:8444/eps/api/pricing/quote codar.CleanupScheduler.PURGE_NOTIFICATION : true csa.login.watchSeconds : 60 com.hp.csa.PEM.PARAM_PROCESS_INSTANCE_ID : CSA_PROCESS_ID com.hp.csa.LifecycleExecutor.THREAD_POOL_SIZE : 2 com.hp.csa.TimeoutChecker.THREAD_WAKEUP_TIME : 300000 com.hp.csa.SchedulerExecutor.SCHEDULER_POOL_SIZE : 2 csa.consumer.legalNoticeUrl : https://www.hpe.com/us/en/legal/privacy.html csa.provider.msvc.port : 9000 csa.provider.es.idmURL : https://myhost.com:8444/idm-service csaAuditEnabled : true com.hp.csa.ProcessExecutor.THREAD_WAKEUP_TIME : 5000 csaTruststorePassword : ****** com.hp.csa.RequestEngine.NOTIFICATION_POOL_SIZE : 2 com.hp.csa.service.process.ProcessExecutorDelegate.INTERNAL_POOL_SIZE : 2 csa.provider.es.authPassword : ****** securityCodarIntegrationUserPassword : ****** csa.ldapReadOnly : false com.hp.csa.service.process.ReleaseGateExecutor.APPROVAL_POOL_SIZE : 2 external.pricing.active : false securityEncryptedSigningKey : ****** com.hp.csa.RequestEngine.THREAD_WAKEUP_TIME : 5000 csa.notification.cacheTemplates : true csa.group.numberOfApprovers : 10 com.hp.csa.OosMonitor.THREAD_WAKEUP_TIME : 60000 csaKeystorePassword : ****** com.hp.csa.service.process.OosMonitorDelegate.MONITOR_POOL_SIZE : 2 com.hp.csa.ExportSvcOffering.THREAD_WAKEUP_TIME : 1440000 csa.provider.es.authUser : consumer com.hp.csa.oo.OOClient.SOCKET_TIMEOUT : 60000 com.hp.csa.ApprovalDecisionMaker.THREAD_POOL_SIZE : 4 server.instanceId : instanceId com.hp.csa.CleanupScheduler.MAX_PACKAGES_SIZE : 30 securityCatalogAggregationTransportUserPassword : ****** com.hp.csa.sa.SAClient.SOCKET_TIMEOUT : 60000 com.hp.csa.plugin.cloudos.util.TokenCache.TIMEOUT : 300000 TopologyDesignProvisioning.TIMEOUT : 7200 serviceRequestProcessorScheduler.period : 5000 com.hp.csa.ApprovalDecisionMaker.THREAD_WAKEUP_TIME : 5000 external.pricing.password : csa csa.provider.rest.protocol : https csa.war.images.directory.byteLimit : 500000000 csa.oo.obfuscation.key : K/jFpxlXskd6q9puEjQzrQ== com.hp.csa.service.process.ReleaseGateExecutor.TEST_SET_POOL_SIZE : 2 embedded.oo.root.dir : C:/Program Files/HPE/HPE Operations Orchestration com.hp.csa.service.process.ProcessExecutorDelegate.MONITOR_POOL_SIZE : 2 csa.subscriber.portal.url : {protocol}://{host}:8089/org/{orgName} com.hp.csa.service.process.ProcessExecutorDelegate.SIU_INTERNAL_POOL_SIZE : 2 external.pricing.username : pricing integrationAccountUserList : admin,csaReportingUser,ooInboundUser,cdaInboundUser,csaTransportUser ⋮ rest.restrict : false csa.oo.content.root.external approval : /Library/CSA Content Pack/CSA3.2/External Approval System/Service Manager/Actions csaPropelIntegrationUserPassword : ****** DynamicPropertyFetch.RESPONSE_SIZE : 50000 securityAdminPassword : ****** securityCdaInboundUserPassword : ****** securityTransportUserName : csaTransportUser com.hp.csa.service.process.ReleaseGateExecutor.CUSTOM_POOL_SIZE : 2 com.hp.csa.import.BUILD_ARTIFACT_RELATIONSHIP : true com.hp.csa.PromotionScheduler.MAX_ACTIVE_SCHEDULES_PER_DAY : 50 csa.provider.es.authOrganization : CONSUMER csa.orgName.compatibility : true csa.provider.es.exists : true com.hp.csa.aosMonitor.THREAD_WAKEUP_TIME : 86400000

Text report

The text report (`<csa_home>\Tools\HealthTool\ health_tool.log`) contains the information below.

- General status (the same information that is displayed online)
- Log messages for failed connections
- Database:
  - Connection response time
  - Number of records in the `csa_person` table
  - Type and version
  - Driver and version
- JBoss server:
  - JMX connection
  - MBean server connection
  - Server system resource usage
  - Server memory usage
- Identity Management component: connection response time
- Marketplace Portal Service
- CSA data:
  - Cloud Service Management Console login
  - Login response time
  - Subscriptions status
  - Lifecycle transitions status
  - Instances status
  - Process state status
  - Pending subscriptions status
  - REST API connection and CSA licensing
  - All uncommented properties in the `csa.properties` file

Note: If the database, JBoss server, or REST API connections fail, the records that depend on each of these connections will not be displayed in the report. For example, if the REST API connection fails, CSA licensing information and the global CSA data check status will not be reported.

Here is an example of the Health Tool text report.

```
_____________________________________________________________

Start Health Tool at 4/13/16 11:55 AM
---------------------------------------------------------------
Check CSA database connection ...
Database connection passed in 50 milliseconds
Database table 'csa_person' has 1 records.
Connected to database: PostgreSQL 9.3.6
Connected to database: PostgreSQL Native Driver PostgreSQL 9.0 JDBC4 (build 801)
passed
---------------------------------------------------------------
Check connection to JBoss ...
Connection to JBoss JMX passed.
Connection to JBoss MBean Server
JBoss MBean Server data load
Operating System
-------------------------------------------------
                LoadAverage: 0.23
                FreePhysicalMemory: 192 MB
                processCpuTime: 351120000000
                committedVirtualMemorySize: 7996 MB
                freeSwapSpaceSize: 30498 MB
                totalPhysicalMemorySize: 15999 MB
                totalSwapSpaceSize: 30516 MB

Memory - Heap Memory Usage
-------------------------------------------------
                committed  : 1989 MB
                init       : 2048 MB
                max        : 1989 MB
                used       : 549 MB
                percentage : 27 %
```

```
Memory - Non Heap Memory Usage
-------------------------------------------------
                committed  : 328 MB
                init       : 2 MB
                max        : 0 MB
                used       : 310 MB
                percentage : -32572404800 %
passed
---------------------------------------------------------------
Check CSA is running ...
passed

CSA  login  passed in 407 milliseconds.
---------------------------------------------------------------
Check IDM is running ...
Connection to IDM passed in 230 milliseconds.
passed
---------------------------------------------------------------
Check MPP is running ...
passed
---------------------------------------------------------------
CSA Data Checks ...
-------------------------------------------------
CSA data: Subscriptions
CANCELLED: 1

Result: passed
-------------------------------------------------
CSA data: Lifecycle Transitions
TRANSITION_SUCCESSFUL: 8
TRANSITION_ABORTED_ON_FAILURE: 2

Result: passed
-------------------------------------------------
CSA data: Instances
COMPLETED: 49

Result: passed
-------------------------------------------------
CSA data: Process state

Result: passed
-------------------------------------------------
CSA data: Pending Subscriptions

Result: passed
CSA REST call to 'license/'
{
  "activeOSInstanceCount" : 2,
  "totalOSInstanceLimit" : 0,
  "members" : [ {
    "licenseKey" : "ABCD 1234 H0PA CHf3 U4B5 H72F Y9J9 K7PL BP9H MZ9U D0AU 2C9M G1TG L762 KYW2 HWVA WPNH MCFY
TM3Q DBEV X6YR PW9D B9TS XFXC LK4U R46A V888 RCKY 5SCT JC4P 4QNJ 9GEJ\"InstantOn for 90 days with 1 capacity\"",
    "licenseType" : "INSTANT_ON",
    "daysRemaining" : 90,
    "expiresOn" : 1234567899000,
    "activeOSInstancesLimit" : 0,
    "productName" : "HPE CSA"
  } ]
}

CSA Properties:
com.hp.csa.CleanupScheduler.MAX_DEPLOYMENTS_SIZE : 30
csa.dynamic.list.properties.only.secure : false
csa.provider.msvc.rest.protocol : https
com.hp.csa.service.process.ProcessExecutorDelegate.EXTERNAL_POOL_SIZE : 2
com.hp.ccue.consumption.disallowedExtensions : exe,bat,com,cmd
com.hp.csa.SchedulerExecutor.SCHEDULED_JOB_MAX_SIZE : 20
csaKeystore : C:/Program Files/HPE/CSA/jboss-as/standalone/configuration/.keystore
csa.login.lockout.enable : true
csa.notification.type : html
csa.productPerspective : enterprise
filter.users.with.no.subscriptions : true
external.pricing.url : https://localhost:8444/eps/api/pricing/quote
codar.CleanupScheduler.PURGE_NOTIFICATION : true
csa.login.watchSeconds : 60
```

```
com.hp.csa.PEM.PARAM_PROCESS_INSTANCE_ID : CSA_PROCESS_ID
com.hp.csa.LifecycleExecutor.THREAD_POOL_SIZE : 2
com.hp.csa.TimeoutChecker.THREAD_WAKEUP_TIME : 300000
com.hp.csa.SchedulerExecutor.SCHEDULER_POOL_SIZE : 2
csa.consumer.legalNoticeUrl : https://www.hpe.com/us/en/legal/privacy.html
csa.provider.msvc.port : 9000
csa.provider.es.idmURL : https://myhost.com:8444/idm-service
csaAuditEnabled : true
com.hp.csa.ProcessExecutor.THREAD_WAKEUP_TIME : 5000
csaTruststorePassword : *****
com.hp.csa.RequestEngine.NOTIFICATION_POOL_SIZE : 2
com.hp.csa.service.process.ProcessExecutorDelegate.INTERNAL_POOL_SIZE : 2
csa.provider.es.authPassword : *****
securityCodarIntegrationUserPassword : *****
csa.ldapReadOnly : false
com.hp.csa.service.process.ReleaseGateExecutor.APPROVAL_POOL_SIZE : 2
external.pricing.active : false
securityEncryptedSigningKey : *****
com.hp.csa.RequestEngine.THREAD_WAKEUP_TIME : 5000
csa.notification.cacheTemplates : true
csa.group.numberOfApprovers : 10
com.hp.csa.OosMonitor.THREAD_WAKEUP_TIME : 60000
csaKeystorePassword : *****
com.hp.csa.service.process.OosMonitorDelegate.MONITOR_POOL_SIZE : 2
com.hp.csa.ExportSvcOffering.THREAD_WAKEUP_TIME : 1440000
csa.provider.es.authUser : consumer
com.hp.csa.oo.OOClient.SOCKET_TIMEOUT : 60000
com.hp.csa.ApprovalDecisionMaker.THREAD_POOL_SIZE : 4
server.instanceId : instanceId
com.hp.csa.CleanupScheduler.MAX_PACKAGES_SIZE : 30
securityCatalogAggregationTransportUserPassword : *****
com.hp.csa.sa.SAClient.SOCKET_TIMEOUT : 60000
com.hp.csa.plugin.cloudos.util.TokenCache.TIMEOUT : 300000
TopologyDesignProvisioning.TIMEOUT : 7200
serviceRequestProcessorScheduler.period : 5000
com.hp.csa.ApprovalDecisionMaker.THREAD_WAKEUP_TIME : 5000
external.pricing.password : csa
csa.provider.rest.protocol : https
csa.war.images.directory.byteLimit : 500000000
csa.oo.obfuscation.key : K/jFpxlXskd6q9puEjQzrQ==
com.hp.csa.service.process.ReleaseGateExecutor.TEST_SET_POOL_SIZE : 2
embedded.oo.root.dir : C:/Program Files/HPE/HPE Operations Orchestration
com.hp.csa.service.process.ProcessExecutorDelegate.MONITOR_POOL_SIZE : 2
csa.subscriber.portal.url : {protocol}://{host}:8089/org/{orgName}
com.hp.csa.service.process.ProcessExecutorDelegate.SIU_INTERNAL_POOL_SIZE : 2
external.pricing.username : pricing
 .
 .
 .

rest.excludedoc : false
loggerEnabled : false
csa.topology.expressDesignEnabled : false
OOS_USERNAME : admin
xAuthToken : X-Auth-Token
com.hp.csa.LifecycleExecutor.THREAD_WAKEUP_TIME : 5000
com.hp.csa.service.process.ProcessExecutorDelegate.CALLBACK_POOL_SIZE : 2
deploymentMode : single
com.hp.csa.UserGroupExecutor.CACHE_EXPIRATION_TIME : 30
csa.provider.port : 8444
rest.restrict : false
csa.oo.content.root.external.approval : /Library/CSA Content Pack/CSA3.2/External Approval System/Service
Manager/Actions
csaPropelIntegrationUserPassword : *****
DynamicPropertyFetch.RESPONSE_SIZE : 50000
securityAdminPassword : *****
securityCdaInboundUserPassword : *****
securityTransportUserName : csaTransportUser
com.hp.csa.service.process.ReleaseGateExecutor.CUSTOM_POOL_SIZE : 2
com.hp.csa.import.BUILD_ARTIFACT_RELATIONSHIP : true
com.hp.csa.PromotionScheduler.MAX_ACTIVE_SCHEDULES_PER_DAY : 50
csa.provider.es.authOrganization : CONSUMER
csa.orgName.compatibility : true
csa.provider.es.exists : true
com.hp.csa.aosMonitor.THREAD_WAKEUP_TIME : 86400000
passed
```

```
End Health Tool at 4/13/16 11:55 AM
```

Note: The overall status of a test (passed/failed) is displayed at the end of each section.

Interpreting Health Tool reports

The following table describes each test reported in the Health Tool reports and suggests troubleshooting actions.

Duration information (which depends on your environment) is provided to help locate where there may be performance or other issues. For example, longer duration for all connection tests might imply that there is a network issue, whereas longer duration for only one component connection test implies that the component should be checked.

Test	Description
Ping database/CSA database check	Tests connectivity to the CSA database. If these tests fail, verify that the information in the `config.properties` file is correct.
Table 'csa_person' row count	Checks that data can be accessed in the CSA database. If connectivity to the CSA database fails, this information is not reported.
Get database info	Displays the database type and version. See the *CSA Support and Compatibility Matrix* for more information about supported versions.
Get database driver info	Displays the JDBC drivers used by CSA to connect to the database. Use this information to verify that you are using drivers that are compatible with the database.
JMX connection check	Tests connectivity to the JBoss JMX server. If this test fails, start the JBoss JMX server.
MBean Server connection check	Tests connectivity to the JBoss MBean server. If this test fails, start the JBoss MBean server.
MBean Server connection test	Displays JBoss MBean server data load. If connectivity to the JBoss MBean server fails, this information is not reported. This call only occurs if the test passes for the MBean server connection call above.
CSA running check	Checks if the CSA service is running. If this test fails, start the CSA service.
Log in to CSA	Tests if the given user can log in to the Cloud Service Management Console. If this test fails, verify that the CSA credentials (`csa.username` and `csa.password`) in the `config.properties` file are valid and that the user has permissions to log in to the Cloud Service Management Console.
IdM running check	Tests connectivity to the Identity Management component. If this test fails, verify that the Identity Management component credentials (`idm.username` and `idm.password`) are valid and that the user has permissions to connect to the Identity Management component.
MPP running check	Checks if the Marketplace Portal service is running. If this test fails, start the Marketplace Portal service.
CSA data: Subscriptions	Displays the number of active subscriptions. Use this value to diagnose performance issues.
CSA data: Lifecycle Transitions	Displays the number of lifecycle transitions. Use this value to diagnose performance issues.
CSA data: Instances	Displays the number of operating system instances (OSIs) being used in current, active subscriptions. Use this value to diagnose performance issues.
CSA data: Process state	Tests the value of `CSA_PROCESS_INSTANCE.PROCESS_INSTANCE_STATE_ID`. Use this value to diagnose performance issues.
CSA data: Pending Subscriptions	Displays the number of pending subscriptions. Use this value to diagnose performance issues.
CSA REST Test	Tests the connection to CSA using the REST API. If this test fails, verify that the CSA credentials (`idm.transportUser` and `idm.transportPassword`) in the `config.properties` file are valid and that the user has permissions to connect to CSA using the REST API.
CSA REST: License	Displays the CSA license information. If connectivity to CSA using the REST API fails, this information is not reported.
CSA Properties	Displays all uncommented properties in the `<csa_home>\jboss-as\standalone\deployments\csa.war\WEB-INF\classes\csa.properties` file. If this test fails, verify

Test	Description
	that you are logged into the CSA system as a user who has access to the `csa.properties` file and that the file exists.

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