



# HP Cloud Service Automation

Software version: 4.00

## Provider Configuration Tool

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## Overview

HP CSA allows for the management of service providers using the Cloud Service Management Console or via the command line using the HP CSA Provider Configuration Tool. Providers are management platforms that offer centralized control over the infrastructure and resources used in a cloud computing environment. For example, a provider such as HP Matrix Operating Environment infrastructure orchestration can deploy virtual machines, while a provider such as HP SiteScope can monitor applications.

The HP CSA Provider Configuration Tool is a command line interface for reading (viewing), creating, updating and deleting providers and is described in this document. See the *HP Cloud Services Automation Management Console Help* for more information on that provider configuration interface.

## Supported Actions

### Read

Use the read action to read, or view, a list of providers. The required `-t (--type)` sub-option limits the list to including only providers associated with a specific provider type (see *Provider Types* later in this document). Output file `provider_out.xml` containing XML of provider properties for all providers, or subset of providers as defined by any sub-options, is created by the read action. See *Provider Properties* for a detailed description of this file content.

### Create

Use the create action to create one or more new providers. An input file containing XML of the provider's properties is required. An easy way to create this file is to first run the provider configuration tool with the `-g` option to generate a sample provider input file. Modify the XML in this file and rename as desired, leaving only information for the provider(s) you want to create.

### Update

Use the update action to update one or more existing providers. An input file containing XML of the providers' properties is required. An easy way to create this file is to first run the provider configuration tool with a read action to generate a sample input file. Modify the XML in this file and rename as desired, leaving only information for the provider(s) you want to update.

---

### Important

The update action will overwrite all provider information for any provider included in the provider input file.

---

### Delete

Use the delete action to delete one or more providers. An input file containing XML of the providers' properties is required. An easy way to create this file is to first run the provider configuration tool with a read action. This will produce a file like the one required by the delete action. Modify the XML in this file as desired, leaving only the provider(s) you want to delete.

---

### Note

Default behavior for the all actions (read, create, update and delete) is to use configuration file `config.properties` in the working directory. The `-c` sub-option can be used to specify a different filename.

Default behavior for the create, update, and delete actions is to use provider input file `provider.xml` in the working directory. The `-p` sub-option can be used to specify a different filename.

---

## Provider Properties

The following table describes properties associated with a provider.

**Table 1 Provider properties**

Item	Sub-item	Description
provider availability		<p>The availability value determines whether the provider will be selected when provisioning a new service. The availability is either <b>true</b> or <b>false</b>. When <b>false</b>, the provider will not be selected when provisioning new services. Disabling a provider will have no effect on existing services that are using that provider.</p> <p>This field is not available when you initially create a provider, but after the provider is created you can edit its properties to change its availability. When a provider is created, the availability is set to <b>false</b> by default.</p>
password		The password for the specified Service Access Point.
user		The user ID for the specified Service Access Point.
url		The user specified Service Access Point URL for connecting to the provider.
description		The user specified description for the provider.
displayName		The user specified name for the provider.
type		The type selected for this provider. See Provider Types for more information. Note that the type cannot be changed after a provider is created.
properties		List of any user-defined properties associated with this provider.
	property description	The description provided for the property.
	displayName	The display name provided for the property
	type	The type associated with the value field for this property. Valid type values include: boolean, integer and string.
	value	The value provided for this property.
	name	The name provided for the property
environments		List of any environments this provider is associated with.
	environment name	The name of an environment this provider is associated with.
plugins		List of any plugins this provider is associated with.
	plugin name	The name of a plugin this provider is associated with.

## Sample Provider XML

```
?xml version="1.0"?>
<providers>
  <provider availability="true" password="ENC(UUV/PSwS9If1NURGsObYPQ==)" user="admin"
url="http://localhost:5000" description="Sample HP Clouds OS Provider" displayName="HP Cloud
OS Provider" type="HP_CLOUDOS">
  <properties>
    <property description="description" displayName="prop1" type="String" value="hello"
name="prop1"/>
  </properties>
  <environments>
    <environment name="environment-1"/>
  </environments>
  <plugins>
    <plugin name="plugin-1"/>
  </plugins>
</provider>
</providers>
```

## Provider Types

A provider type allows you to classify providers for improved filtering and identification. HP CSA includes some pre-defined, out-of-the-box provider types (listed below), and these are the types supported by the HP CSA Provider Configuration Tool. Each instance of a provider can have a single provider type, and each instance of a resource offering can also have a single provider type. In addition, resource offerings can be associated only with providers that share the same provider type.

**Table 2 Supported provider types**

Provider	Internal name to use in command line
Amazon EC2	AMAZON_EC2
HP 3PAR	HP_3PAR
HP CloudOS	HP_CLOUDOS
HP Matrix Operating Environment	HP_MOE
HP Network Automation	HP_NETWORK_AUTOMATION
HP Server Automation	HP_SA
HP UCMDB	HP_UCMDB
Openstack	OPENSTACK
VMware vCenter	VMWARE_VCENTER

## Configuration and Usage

The HP CSA Provider Configuration Tool is installed during HP CSA product installation, typically in Tools\ProviderTool\ in the HP CSA installation folder.

### Configuration Details

#### Config.properties file

The config.properties file must be in the same folder as the provider-tool.jar file, often under <HP CSA install folder>\Hewlett-Packard\CSA\Tools\ProviderTool.

The default property filename is `config.properties`, but this file can have any name. Use the `-c` option to specify the name of the file.

### Sample Configuration files

The `provider-tool.jar` can produce sample configuration files by executing the following at the command prompt:

```
java -jar provider-tool.jar -g
```

The following sample configuration files are created:

- `config.properties.oracle`
- `config.properties.mssql`
- `config.properties.postgresql`

### Configuration Properties File Parameters

The sample configuration file not needed by the database in use by HP CSA can be deleted. For example, if you are using a Microsoft SQL Server database, retain the MS SQL configuration file and if desired rename `config.properties` or other name of your choice. The Oracle configuration file can be deleted since it is not needed.

This table lists the parameters found in the configuration file.

**Table 3 Parameters in config.properties**

<code>jdbc.driverClassName</code>	The database driver class. Do not change this value.
<code>jdbc.dialect</code>	The database dialect. Do not change this value.
<code>jdbc.databaseUrl</code>	When specifying an IPv6 address, it must be enclosed in square brackets (see examples below).  Examples  Oracle (SSL not enabled): <code>jdbc.databaseUrl=jdbc:oracle:thin:@127.0.0.1:1521:XE</code> where <code>&lt;host&gt;</code> is the name of the system on which the Oracle database server is installed.  Oracle (SSL not enabled, using an IPv6 address): <code>jdbc.databaseUrl=jdbc:oracle:thin:@[f000:253c::9c10:b4b4]:1521:XE</code>  Oracle (SSL enabled, HP CSA checks the database DN): <code>jdbc.databaseUrl=jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=&lt;host&gt;)(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=ORCL))(SECURITY=(SSL_SERVER_CERT_DN="CCN=abc,OU=dbserver,O=xyz,L=Sunnyvale,ST=CA,C=US")))</code> where <code>&lt;host&gt;</code> is the name of the system on which the Oracle database server is installed and the values for <code>SSL_SERVER_CERT_DN</code> are for the DN of the Oracle database server.  MS SQL (SSL not enabled): <code>jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=request</code>  MS SQL (SSL not enabled, using an IPv6 address): <code>jdbc.databaseUrl=jdbc:jtds:sqlserver://[::1]:1433/example;ssl=request</code>  MS SQL (SSL enabled): <code>jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate</code>  MS SQL (FIPS 140-2 compliant): <code>jdbc.databaseUrl=jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate</code>  PostgreSQL: <code>jdbc.databaseUrl=jdbc:postgresql://127.0.0.1:5432/csadb</code>



jdbc.username	User name for database
jdbc.password	Encrypted password for database (If entered as plain text, will be encrypted.)

## Communicating with the MS SQL or Oracle Database Using SSL

If SSL is enabled between CSA and MS SQL or the Oracle database, the URL property in the database properties file must be configured correctly, and additional command line options might be required when using an Oracle database.

**Important** The Content Archive Tool does not support DN verification at this time.

	Configuration options	Command line option(s)	jdbc.databaseUrl value
<b>Oracle</b>	CSA does not check the database DN, client authentication is enabled	-Djavax.net.ssl.keyStore ="<certificate_key_file>" -Djavax.net.ssl.keyStorePassword =<certificate_key_file_password> -Djavax.net.ssl.keyStoreType =<certifyicate_key_file_type>	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, client authentication is NOT enabled	<none>  where <certificate_key_file> is the same keystore file defined by the certificate-key-file attribute in the ssl element of the %CSA_HOME%\jboss-as-7.1.1.Final\standalone\configuration\standalone.xml file (for example, %CSA_HOME%\jboss-as-7.1.1.Final\standalone\configuration\keystore), <certificate_key_file_password> is the password to the keystore file (for example, changeit), and <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.
<b>MS SQL</b>	SSL is enabled	<none>	jdbc:jtds:sqlserver://127.0.0.1:1433/example;ssl=authenticate

## Command Line Options

Invoke the Provider Configuration Tool from the command line as follows:

```
java -jar provider-tool.jar <options>
```

```
Usage:  -h |
        -a <create|read|update|delete> [-c <config property file>] [-p <provider input
XML file>] [-v] [-t <provider type>] [-j <Oracle JARs>]
        -g
```

provider-tool - This tool provides a command line interface for managing service providers in HP Cloud Service Automation.

```
-a,--action <action type>      Action to perform: create|read|update|delete.
-c,--config <config property file>  Config property file name.
-g,--generate                  Generate sample input config properties file.
-h,--help                      Print this usage information.
-j, --jars <Oracle JARs>       Oracle JDBC Jars separated by space.
```

```
-p,--provider <provider info XML file> Provider info XML file.
-t,--type <provider type> Provider type: <AMAZON_EC2| HP_CLOUDOS| HP_MOE|
HP_NETWORK_AUTOMATION| HP_SA| HP_UCMDB| OPENSTACK| VMWARE_VCENTER>.
-v,--validate Validate access point info.
```

The command options and sub-options are shown in the following table.

**Table 4 Command Line Options**

Option	Option description	Sub-options associated with the option	Sub-option description
-h, --help	Display syntax and usage information.	none	
-a, --action <action type>	Action to perform. action type choices: create, read, update or delete.	-c, --config <config_filename>	Optional; configuration property filename. Default is config.properties in the working directory.
		-p, --provider <provider input XML file>	Optional; provider input file. Default is provider.xml in the working directory. Use with create, update and delete actions.
		-t, --type <provider type>	Required with read action. Valid provider types: AMAZON_EC2, HP_3PAR, HP_CLOUDOS, HP_MOE, HP_NETWORK_AUTOMATION, HP_SA, HP_UCMDB, OPENSTACK, or VMWARE_VCENTER. Use with read action only.
		-v, --validate	Optional; validate provider organization access point information. Use with create and update actions.
-j, --jars <jar filenames>			Optional; load Oracle JDBC JAR files. Note that jar filenames are separated by spaces.
-g, --generate	Generate sample database config.properties and provider properties files.	None	

## Examples

- Example 1: Display the Provider Configuration Tool usage/help.

```
java -jar provider-tool.jar -h
```

- Example 2: Generate a sample config.properties file. This can be modified for use as an input configuration file.

```
java -jar provider-tool.jar -g
```

- Example 3: Get provider information for provider type HP\_CLOUDOS. Use default provider properties file by not specifying -c option.

```
java -jar provider-tool.jar -action read -t HP_CLOUDOS
```

- **Example 4: Create provider using the provider information in HP\_CLOUDOS\_provider.xml.**

```
java -jar provider-tool.jar -a create -c config.properties -p
HP_CLOUDOS_provider.xml
```

- **Example 5: Update providers. Validate the Service Access Point URL specified for connecting to the provider. Use provider information in provider.xml, the default provider file, by not specifying -p option.**

```
java -jar provider-tool.jar -a update -c config.properties -v
```

- **Example 6: Delete providers using provider information in my\_providers.xml. Specify my\_config.properties for the configuration file.**

```
java -jar provider-tool.jar -action delete -c my_config.properties -p
my_providers.xml
```

## Sample config.properties files

### PostgreSQL config.properties example:

```
jdbc.driverClassName=org.postgresql.Driver
jdbc.dialect=org.hibernate.dialect.PostgreSQLDialect
jdbc.databaseUrl=jdbc:postgresql://127.0.0.1:5432/csadb
jdbc.username=csa
jdbc.password=ENC(UUV/PSwS9If1NURGsObYPQ==)
```

### Oracle config.properties example:

```
jdbc.driverClassName=oracle.jdbc.driver.OracleDriver
jdbc.dialect=org.hibernate.dialect.OracleDialect
jdbc.databaseUrl=jdbc:oracle:thin:@127.0.0.1:1521:XE
jdbc.username=csa4
jdbc.password=ENC(UUV/PSwS9If1NURGsObYPQ==)
```

### MSSQL Server config.properties example:

```
jdbc.databaseUrl=jdbc:jtds:sqlserver://csa-w2k8.cd1.local:1433/csa4
jdbc.username=csa
jdbc.password=ENC(X1bdc8AeLJwvJXyiPlIh9A\=\=)
jdbc.driverClassName=net.sourceforge.jtds.jdbc.Driver
jdbc.dialect=org.hibernate.dialect.SQLServerDialect
```

## Known Issues

None.



## For more information

HP software product manuals and documentation for HP CSA can be found at <http://h20230.www2.hp.com/selfsolve/manuals>. You will need an HP Passport to sign in and gain access. To register for an HP Passport ID, go to: <http://h20229.www2.hp.com/passport-registration.html>

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Table 5: Document revision history

Date or version	Changes
January 2014	HP CSA 4.00 release