

HP Operations Orchestration

Software Version: 10.51

Windows and Linux Operating Systems

OO Shell (OOSH) User Guide

Document Release Date: December 2015
Software Release Date: December 2015



Legal Notices

Warranty

The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

The information contained herein is subject to change without notice.

Restricted Rights Legend

Confidential computer software. Valid license from HP required for possession, use or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Copyright Notice

© Copyright 2015 Hewlett Packard Enterprise Development LP

Trademark Notices

Adobe™ is a trademark of Adobe Systems Incorporated.

Microsoft® and Windows® are U.S. registered trademarks of Microsoft Corporation.

UNIX® is a registered trademark of The Open Group.

This product includes an interface of the 'zlib' general purpose compression library, which is Copyright © 1995-2002 Jean-loup Gailly and Mark Adler.

Documentation Updates

The title page of this document contains the following identifying information:

- Software Version number, which indicates the software version.
- Document Release Date, which changes each time the document is updated.
- Software Release Date, which indicates the release date of this version of the software.

To check for recent updates or to verify that you are using the most recent edition of a document, go to: **<https://softwaresupport.hp.com>**

This site requires that you register for an HP Passport and sign in. To register for an HP Passport ID, go to: **<https://hpp12.passport.hp.com/hppcf/createuser.do>**

Or click the **the Register** link at the top of the HP Software Support page.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

Support

Visit the HP Software Support Online web site at: <https://softwaresupport.hp.com>

This web site provides contact information and details about the products, services, and support that HP Software offers.

HP Software online support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support web site to:

- Search for knowledge documents of interest
- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

Most of the support areas require that you register as an HP Passport user and sign in. Many also require a support contract. To register for an HP Passport ID, go to:

<https://hpp12.passport.hp.com/hppcf/createuser.do>

To find more information about access levels, go to:


<https://softwaresupport.hp.com/web/softwaresupport/access-levels>

HP Software Solutions Now accesses the HPSW Solution and Integration Portal Web site. This site enables you to explore HP Product Solutions to meet your business needs, includes a full list of Integrations between HP Products, as well as a listing of ITIL Processes. The URL for this Web site is <http://h20230.www2.hp.com/sc/solutions/index.jsp>

Contents

Legal Notices	2
Warranty	2
Restricted Rights Legend	2
Copyright Notice	2
Trademark Notices	2
Documentation Updates	3
Support	4
Running HP OO Central Commands from the Command Line	6
Running Commands	7

Running HP OO Central Commands from the Command Line

 The Operations Orchestration Shell (OOSH) utility lets you run HP OO commands from the command line, instead of from the Central 10.x web interface. This enables you to create scripts to run commands, to automate your HP OO processes.

You can perform actions such as:

- Run flows
- Deploy content packs
- Manage files - import, upload, delete, and so on
- Display flow information
- Manage system configuration

```
Welcome to oosh. For assistance type "help" then hit ENTER.
oosh>connect --url http://16.59.62.205:8293/oo/
connected
oosh>finfo --uuid b1e8dfa0-b975-41c7-84ac-249565aa8dda

FlowInfo
-----

Flow ID <UUID>: b1e8dfa0-b975-41c7-84ac-249565aa8dda
Name           : Connectivity Test
Content pack   : HPOO-oo-base <1.0-SNAPSHOT>
Description    :
                Checks to see whether or not a connection exists, and if it exists check
s to see
                if it is adequately reliable.

Inputs:
host - The host to ping
from.
username - The username for host.
password - The password for
host.
lossThreshold - What percentage of packet loss you consider to be
acceptable for this connection.
latencyThreshold - How long <in milliseconds>
you consider to be an acceptable latency for this connection.
```

The OOSH utility is located under `<installation path>\central\bin` and `<installation path>\ras\bin`.

Note: Users invoking commands from the OOSH utility must have the relevant Central permissions (otherwise, they will face "Unauthorized" errors).

Note: If you used to work with **RSFlowInvoke** and **JRSFlowInvoke** with HP OO 9.x, note that this is the alternative for HP OO 10.x.

Running Commands

You can run commands within the OOSH utility or from a normal prompt/shell.

1. Do one of the following:

- In an installation of HP OO, navigate to **<installation path>\central\bin** or **<installation path>\ras\bin**, and run the **oosh.bat** executable file for the Windows operating system or the **oosh.sh** executable file for the Linux operating system.
- To run commands from a normal prompt/shell, type: `c:\hpoo\central\bin> oosh.bat <command>`.

2. Type the command in the following format:

```
<commandName> --<parameterName1> <parameterValue1>  
--<parameterName2> <parameterValue2>
```

For example, when running commands from a normal prompt/shell, type:

```
c:\hpoo\central\bin> oosh.bat trigger --uuid ABC --user ABC --password ABC --url  
ABC
```

The sections below describe how to perform some common functions using OOSH. See the [reference](#) section for a complete list of commands that can be used with the OOSH utility and the options that can be used with each command.

Connect to a Central 10.x server

If you are running commands in the OOSH utility's shell interface, you can use the `connect` command to connect to the Central 10.x server.

If the connection is successful, consequent commands will use it (until you exit OOSH or the Central session times out).

All other commands support basic connection properties: `url`, `user`, `password`. This enables you to invoke them directly from the command line without using the `connect` command first.

Note: It is possible to specify the user name (with the `user` property) without specifying the password (with the `password` property). You will be prompted for the password upon making the connection.

Note also that in a multi-LDAP environment, you should enter the user name in the following format: **domain\username**. If you enter the user name without a domain, OOSH will try to authenticate the user with the default LDAP first and if this fails, will to authenticate within the HP OO internal domain.

The `connect` command has more options. It also allows connection via an HTTP proxy.

For a complete list of all the options you can use with the `connect` command, see the [reference](#) section or type `help connect` in the command line.

1. Double-click the `oosh.bat` batch file, to start the OOSH utility.
2. In the command line, type (for example):

```
connect --url <Central server URL>
```

3. Press the **Enter** key.

If the connection is successful, the command line displays:

```
Connected
```

Display information about a flow

1. In the command line of the OOSH utility, type:

```
finfo --uuid <the UUID of the flow>
```

Note: The UUID of the flow is displayed in the Flow Library information pane.

2. Press the **Enter** key.

The flow information is displayed in the command line.

Run a flow

With the `trigger` command, you can use the options `--user`, `--password`, `--url`, and so on. For a complete list of all the options you can use with the `trigger` command, see the [reference](#) section or type `help trigger` in the command line.

1. In the command line of the OOSH utility, type (for example):

```
trigger --uuid <the UUID of the flow>
```

2. Press the **Enter** key.

Deploy a content pack

This command will only work if there is an active connection to a Central 10.x server. For a complete list of all the options you can use with the `deploy` command, see the [reference](#) section or type `help deploy` in the command line.

1. In the command line of the OOSH utility, type (for example):

```
deploy --url <URL of OO Central> --files <comma-separated list of files to deploy>
```

2. Press the **Enter** key.

Display help about the OOSH utility

To display a list and description of all available commands in the OOSH utility, type:

```
help
```

To display help about a particular command, type:

```
help <command>
```

For example:

```
help trigger
```

Create a script to run HP OO commands from the OOSH utility

1. To create a script, write a simple text file with the OOSH commands that you want to run. Write each command on a separate line, in the sequence that you want the commands to run.
2. To run the script, either set OOSH as its parser (Linux only, see the details below), or use the script command in OOSH. For example:

```
script --file <path to script>
```

Add OOSH as the parser of an executable file

In Linux only, it is also possible to add OOSH as the parser of an executable file.

1. For example, create script-a:

```
#!/<install-dir>/oosh  
<command-sequence>
```

2. Chmod the file:

```
chmod 755 script-a
```

3. Run it from the command line:

```
./script-a
```

Configure how the X-Frame-Options response header is added to outgoing responses

This lets you configure whether or not a browser will be allowed to render a page in a <frame>, <iframe> or <object>. You can use this to avoid clickjacking attacks, by ensuring that your content is not embedded into other sites.

Note: Some versions of Chrome ignore the **X-Frame-Options** response header.

Available values for the **xframe.options.mode** key are:

- **SAMEORIGIN** - only web pages containing iframes that come from the same URI as OO will be allowed. This is the default value. If you are using HP OO embedded in a browser, you may need to change this.
- **DENY**
- **NONE** - no **X-Frame-Options** response header will be used.
- **ALLOW-FROM** - you can specify the specific URI from which the frames will be allowed.

If the value for **xframe.options.mode** is **ALLOW-FROM**, you must also add the **xframe.options.allow.from** key to specify the URI.

Note: Some versions of Chrome ignore the **ALLOW-FROM** value. Therefore, it is not recommended to use it.

1. In the command line of the OOSH utility, type (for example):

```
set-sys-config --key xframe.options.mode --value DENY  
set-sys-config --key xframe.options.mode --value ALLOW-FROM --key  
xframe.options.allow.from --value http://www.example.com
```

2. Press the **Enter** key.

Enable flows to run interactively from other applications

This configuration item lets you run flows interactively from other applications, such as BSM.

1. In the command line of the OOSH utility, type (for example):

```
set-sys-config --key headless.interactivity --value true
```

2. Press the **Enter** key.

Tell Central whether to trust all valid certificates from secured LDAP servers

When this configuration item is enabled, Central will trust any valid certificate from a secured LDAP server. There will be no need for you to add it to the **client.truststore**.

When this is not enabled, you will need to add the certificates from the LDAP servers used for LDAP authentication to the **client.truststore**. Central will not trust them otherwise.

1. In the command line of the OOSH utility, type (for example):

```
set-sys-config --key ldaps.trustAllCertificates.isEnabled --value true
```

2. Press the **Enter** key.

Reference Material

Available commands for the OOSH utility

connect

Argument	Description	Default Value/Behavior	Required
	Connects to an OO 10.x Central server		
--url	URL of OO 10.x Central		Yes
--user	OO Central user name In a multi-LDAP environment, enter the user name in the format domain\username.	If you enter the user name without a domain, OOSH will try to authenticate the user with the default LDAP first, and if this fails, will try to authenticate within the HP OO internal domain.	No
--password	OO Central password		No
--proxyhost	http proxy host to connect through		No
--proxyport	http proxy port to connect through	8080	No
--proxyuser	http proxy user to connect with		No
--proxypassword	http proxy password to connect with		No

deploy

	Deploys a content pack (requires an active connection)		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No
--files	Comma-separated list of content packs to deploy		Yes

disconnect

	Disconnects from the OO 10.x Central server		
--	---	--	--

trigger

	Runs a flow		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

--uuid	UUID of the flow to run. For example, cd38b579-4220-4fa5-bafd-78d67f73eb6f		Yes
--inputs	Comma-separated key=value map of the flow inputs. For example, key1=value1,key2=value2 Note: If the input value contains white spaces, and you are using a Windows command, you need to use \" to escape the quotes. For example: <pre>--inputs \"title=my title,message=my message\"</pre> If you open the OOSH command line (by running oosh.bat without arguments), you can use regular quotes. For example: <pre>--inputs "title=my title,message=my message"</pre>		No

track

	Shows information about a specific execution (tracking)		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

--id	Execution id		Yes
--property	Displays a specific property (default: all). Available properties: executionId, executionName, status, resultStatusType, resultStatusName	all	No

info,flow-info

	Displays information about a specific flow run		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No
--property	Displays a specific property (default: all). Available properties: id, name, path, description, cpName, version	all	No

lcp, list-content-packs

	Lists all currently deployed content packs in the connected server		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command

--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

lsc, list-sys-config

	Lists the system configuration		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No
--key	Lets you request the value of a specific key only		No

license-file-import

	Install an enterprise license from a file		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No
--file	The full path to the license file, with "dat" extension		Yes

license-report

	Displays details of the current license. For example, the number of days left in a trial period.		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

ssc, set-sys-config

	Sets the system configuration		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No
--key	System configuration key See the keys in the table below.		Yes
--value	System configuration value	empty string	No

Some useful keys for the **ssc, set-sys-config** command:

Key	Description
xframe.options.mode	<p>Lets you configure how the X-Frame-Options response header is added to outgoing responses.</p> <p>Available values:</p> <ul style="list-style-type: none"> • SAMEORIGIN - only web pages containing iframes that come from the same URI as OO will be allowed. This is the default value. If you are using HP OO embedded in a browser, you may need to change this. • DENY • NONE - no X-Frame-Options response header will be used. • ALLOW-FROM - you can specify the specific URI from which the frames will be allowed, by using the xframe.options.allow.from key. <div style="background-color: #f0f0f0; padding: 10px; margin: 10px 0;"> <p>Note: Some versions of Chrome ignore the ALLOW-FROM value. Therefore, it is not recommended to use it.</p> </div> <p>Examples:</p> <pre>set-sys-config --key xframe.options.mode --value DENY set-sys-config --key xframe.options.mode --value SAMEORIGIN --key xframe.options.allow.from --value http://www.example.com</pre>
xframe.options.allow.from	<p>If the value for xframe.options.mode is ALLOW-FROM, you must add the xframe.options.allow.from key to specify the URI.</p> <p>This value is considered only when the value for xframe.options.mode is ALLOW-FROM.</p>
headless.interactivity	<p>Lets you run flows interactively from other applications, such as BSM.</p> <p>For example, when the value is true, the user that invokes an OO flow from the BSM user interface can run the flow interactively.</p>
ldaps.trustAllCertificates.isEnabled	<p>When the value is true, Central will trust any valid certificate from a secured LDAP server without you needing to add it to the client.truststore.</p> <p>When the value is false, you will need to add the certificates from the LDAP servers used for LDAP authentication to the client.truststore. Central will not trust them otherwise.</p>

Key	Description
x509.principal.lookup.field	<p>This controls which certificate field is used to extract the username.</p> <p>Possible values are:</p> <ul style="list-style-type: none"> subjectDN - represents the Subject field of the certificate, meaning that HP OO keeps its default behavior and attempts to extract the username from the Subject field. This is the default value. subjectAltNames.otherName.principalName - represents the User Principal Name contained in the Other Name entry of the Subject Alternative Names certificate extension. For CAC Authentication, it might be required to use the value of the User Principal Name, so you would use this value.

show connection

	Shows the connection properties		
--	---------------------------------	--	--

historical-data-start-date

	Sets the start date for the import of historical data		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No
--date	The date from which to start the import, in format dd/MM/yyyy		Yes

historical-data-status

	Gets the status of historical data import		
--	---	--	--

--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

import-historical-data

	Imports the historical data of deployed content with the data defined in the 9.x server		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

import-permissions

	Imports the permissions of deployed content with the permissions file		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command

--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

import-schedules

	Imports the schedules of deployed content with the schedules defined in the 9.x server		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

permissions-status

	Gets a list of all the permissions that were imported so far		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No

--output	Full path where the output should be written		No
----------	--	--	----

upload-permissions-file

	Uploads the permissions file created during content upgrade		
--url	URL of OO 10.x Central		Yes, unless already connected to Central with the connect command
--user	OO Central user name In a multi-LDP environment, enter the user name in the format domain\username.		No
--password	OO Central password		No
--file	The full path to the permissions file, which is in the Output folder of the Content Upgrade Utility		No

Note: : After an upgrade from HP OO 9.x to 10.x (earlier than 10.02), using the HP OO Shell Utility to migrate historical data will get the result "Resolved" instead of "RESOLVED", as required in HP OO 10.x. This causes duplicates in the results distribution on the Dashboard. If this occurs, upgrade to the latest version of HP OO 10.x.

