Operations Orchestration

Software Version: 10.70

Windows and Linux Operating Systems

OO Shell (OOSH) User Guide

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Contents

Running HPE OO Central Commands from the Command Line

The Operations Orchestration Shell (OOSH) utility lets you run HPE 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 HPE 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 in two places:

- In HPE OO installations, under **<installation path>\central\bin** and **<installation path>\ras\bin**.

- In a standalone OOSH zip package, which is included in the HPE OO release zip.

Note:

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

- If you used to work with **RSFlowInvoke** and **JRSFlowInvoke** with version 9.x, note that this is the alternative for HPE OO 10.x.

- For HPE OO version 10.70, the OOSH utility has been changed to access HPE OO Central via the latest REST API (v2). This allows OOSH to also trigger CloudSlang flows.

Running Commands

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

1. Do one of the following:

   ○ Run the oosh executable file (oosh.bat on Windows). This will open the OOSH shell interface, where you can enter commands.

   ○ To run a command directly from the operating system's prompt/shell, change the directory to the location of the **oosh** executable file and enter: `oosh <command>`.

     If you want to run a sequence of commands automatically, it is recommended to use a script file (see "Running OOSH Script Files" on page 9).

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`

Common OOSH Tasks

The sections below describe how to perform some common functions using OOSH. See "OOSH Reference Material" on page 11 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, or from a script file, 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 HPE 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 "Connection to Central" on page 12 or type `help connect` in the command line.

The following steps are for running the `connect` command from the OOSH shell interface. The command can also be used in an OOSH script file (as the very first command).

1. Double-click the `oosh.bat` batch file (on Linux, run the `oosh` 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

Use the trigger command to run a flow via Central. For a complete list of all the options you can use with the `trigger` command, see "trigger" on page 16 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

Use the `deploy` command to deploy content packs in Central. For a complete list of all the options you can use with the `deploy` command, see 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
```

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 HPE OO will be allowed. This is the default value. If you are using HPE 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 the **ldap.trustAllCertificates** configuration item is true, 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 --value true
   ```

2. Press the **Enter** key.

Running OOSH Script Files

Create a script to run HPE 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
```

OOSH Reference Material

This section contains a list of all the OOSH commands organized into five categories:

Connection to Central

connect

Connects to an OO 10.x Central server.

Argument	Description	Default Value/Behavior	Required
--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 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

disconnect

Disconnects from the OO 10.x Central server.

show connection

Shows the connection properties.

Content Management

deploy

Deploys a content pack (requires an active connection).

Argument	Description	Default Value/Behavior	Required
--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

lcp, list-content-packs

Lists all currently deployed content packs in the connected server

finfo, flow-info

Displays information about a specific flow.

Argument	Description	Default Value/Behavior	Required
--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
--uuid	UUID of the flow. For example, `cd38b579-4220-4fa5-bafd-78d67f73eb6f`		Yes

Run Management

trigger

Runs a flow.

Argument	Description	Default Value/Behavior	Required
--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` You can include commas by repeating them. For example, `a,,b` results in `a,b`. **Note:** If the input value contains white spaces, and you are using a Windows command line, you need to use \" to escape the quotes. For example:		No

Argument	Description	Default Value/Behavior	Required

	`--inputs \"title=my title,message=my message\"`
	
	If you open the OOSH command line (by running oosh.bat without arguments), you can use regular quotes. For example:
	
	`--inputs "title=my title,message=my message"`		

--wait	Wait for the run to finish (synchronous mode)?	Do not wait (asynchronous mode)	No
--wait-limit	If running in synchronous mode, how long in seconds should oosh wait before giving up?	No limit	No

track

Shows information about a specific execution (tracking).

Argument	Description	Default Value/Behavior	Required
--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

Argument	Description	Default Value/Behavior	Required
--id	Execution id		Yes
--property	Displays a specific property (default: all). Available properties: `executionId, executionName, status, resultStatusType, resultStatusName`	all	No

System Configuration

ssc, set-sys-config

Sets the system configuration.

Argument	Description	Default Value/Behavior	Required
--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-LDAP 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	Lets you configure how the **X-Frame-Options** response header is added to outgoing responses. Available values: • **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 OO embedded in a browser, you may need to change this. • **DENY** • **NONE** - no **X-Frame-Options** response header will be used.

Key	Description
	• **ALLOW-FROM** - you can specify the specific URI from which the frames will be allowed, by using the **xframe.options.allow.from** key.
	> **Note:** Some versions of Chrome ignore the **ALLOW-FROM** value. Therefore, it is not recommended to use it.
	Examples:
	`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`
xframe.options.allow.from	If the value for **xframe.options.mode** is **ALLOW-FROM**, you must add the **xframe.options.allow.from** key to specify the URI.
	This value is considered only when the value for **xframe.options.mode** is **ALLOW-FROM**.
headless.interactivity	Lets you run flows interactively from other applications, such as BSM.
	For example, when the value is **true**, the user that invokes an OO flow from the BSM user infterface can run the flow interactively.
ldaps.trustAllCertificates.isEnabled	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**.
	When the value is **false**, you will need to add the certificates from the LDAP servers used for LDAP authentication to the **client.trustore**. Central will not trust them otherwise.
x509.principal.lookup.field	This controls which certificate field is used to extract the username.
	Possible values are:
	• `subjectDN` - represents the `Subject` field of the certificate, meaning that 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.

lsc, list-sys-config

Lists the system configuration.

Argument	Description	Default Value/Behavior	Required
--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.

Argument	Description	Default Value/Behavior	Required
--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.

Argument	Description	Default Value/Behavior	Required
--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

Upgrade from OO 9.x

historical-data-start-date

Sets the start date for the import of historical data.

Argument	Description	Default Value/Behavior	Required
--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.

import-historical-data

Imports the historical data of deployed content with the data defined in the 9.x server.

Argument	Description	Default Value/Behavior	Required
--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.

Argument	Description	Default Value/Behavior	Required
--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.

Argument	Description	Default Value/Behavior	Required
--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.

Argument	Description	Default Value/ Behavior	Required
--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.

Argument	Description	Default Value/ Behavior	Required
--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 OO 9.x to 10.x (earlier than 10.02), using the OO Shell Utility to migrate historical data will get the result "Resolved" instead of "RESOLVED", as required in OO 10.x. This causes duplicates in the results distribution on the Dashboard. If this occurs, upgrade to the latest version of OO 10.x.