



# **Access with Python**

## **ONTAP Select**

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# Access with Python

## Before you access the API using Python

You must prepare the environment before running the sample Python scripts.

Before you run the Python scripts, you must make sure the environment is configured properly:

- The latest applicable version of Python2 must be installed.  
The sample codes have been tested using Python2. They should also be portable to Python3, but have not been tested for compatibility.
- The Requests and urllib3 libraries must be installed.  
You can use pip or another Python management tool as appropriate for your environment.
- The client workstation where the scripts run must have network access to the ONTAP Select Deploy virtual machine.

In addition, you must have the following information:

- IP address of the Deploy virtual machine
- User name and password of a Deploy administrator account

## Understand the Python scripts

The sample Python scripts allow you to perform several different tasks. You should understand the scripts before using them at a live Deploy instance.

### Common design characteristics

The scripts have been designed with the following common characteristics:

- Execute from command line interface at a client machine  
You can run the Python scripts from any properly configured client machine. See *Before you begin* for more information.
- Accept CLI input parameters  
Each script is controlled at the CLI through input parameters.
- Read input file  
Each script reads an input file based on its purpose. When creating or deleting a cluster, you must provide a JSON configuration file. When adding a node license, you must provide a valid license file.
- Use a common support module  
The common support module `deploy_requests.py` contains a single class. It is imported and used by each of the scripts.

### Create a cluster

You can create an ONTAP Select cluster using the script `cluster.py`. Based on the CLI parameters and contents of the JSON input file, you can modify the script to your deployment environment as follows:



- Beginning with ONTAP Select 9.10.1, you can no longer deploy a new cluster on the KVM hypervisor.
- Beginning with ONTAP Select 9.11.1, all manageability functionality is no longer available for existing KVM clusters and hosts, except for the take offline and delete functions.

- **Hypervisor**

You can deploy to ESXi or KVM (depending on the Deploy release). When deploying to ESXi, the hypervisor can be managed by vCenter or can be a standalone host.

- **Cluster size**

You can deploy a single-node or multiple-node cluster.

- **Evaluation or production license**

You can deploy a cluster with an evaluation or purchased license for production.

The CLI input parameters for the script include:

- Host name or IP address of the Deploy server
- Password for the admin user account
- Name of the JSON configuration file
- Verbose flag for message output

## Add a node license

If you choose to deploy a production cluster, you must add a license for each node using the script *add\_license.py*. You can add the license before or after you deploy the cluster.

The CLI input parameters for the script include:

- Host name or IP address of the Deploy server
- Password for the admin user account
- Name of the license file
- ONTAP user name with privileges to add the license
- Password for the ONTAP user

## Delete a cluster

You can delete an existing ONTAP Select cluster using the script *delete\_cluster.py*.

The CLI input parameters for the script include:

- Host name or IP address of the Deploy server
- Password for the admin user account
- Name of the JSON configuration file

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