



Using Python

ONTAP Automation

NetApp
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Using Python

Python is a popular programming language, especially for datacenter automation. You can access the ONTAP REST API using the native features of Python or through the NetApp Python client library.

NetApp ONTAP Python client library

Beginning with ONTAP 9.6, you have the option of using the Python client library to access the ONTAP REST API. The library provides a client-side development environment with several underlying services, such as connection management, asynchronous processing, exception handling, and error messages. After downloading and installing the ONTAP Python client library package, you can quickly create robust Python scripts to support the automation of your ONTAP deployments.



NetApp maintains a GitHub repository containing code samples and other helpful information. You can navigate to the *examples* folder to access samples using the Python client library.

Related links

[ONTAP REST Python GitHub repository](#)

Preparing to use the Python client library

You should prepare the environment before using the Python client library.

Basic requirements

You must use Python 3.5 or later. In addition, the following packages are also required:

- requests 2.22.1 or later
- requests-toolbelt 0.9.1 or later
- marshmallow 3.2.1 or later

Package name and version

The name of the Python client library package is **netapp-ontap**. The version associated with the package is a combination of the ONTAP major and minor version numbers the library was generated from, along with a minor version for the client within the ONTAP release. For example, valid version numbers include: 9.6.1, 9.6.2, and 9.7.1.

Installation

You must use pip to install the netapp_ontap package from the Python Package Index (PyPI) web site.

Documentation and additional resources

See the *NetApp Developer Network* for links to documentation and other resources.

Related links

Script to retrieve the cluster configuration

The following script provides a simple example of how to use the Python client library. You can run the script using Python 3 at the CLI to retrieve the ONTAP cluster configuration.

```

1 ##-----
2 #
3 # Description: Python script to retrieve the cluster configuration.
4 #
5 # Usage example:
6 #
7 # python3 get_cluster.py
8 #
9 #
10 # (C) Copyright 2020 NetApp, Inc.
11 #
12 # This sample code is provided AS IS, with no support or warranties of
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18 # provided that the above copyright notice appears in all copies and
19 # that the software application product is distributed pursuant to
    terms
20 # no less restrictive than those set forth herein.
21 #
22 ##-----
23 # Global configuration for the library
24 from netapp_ontap import config
25 # Support for the connection to ONTAP
26 from netapp_ontap import HostConnection
27 # Specific API needed for this script
28 from netapp_ontap.resources import Cluster
29 # Create connection to the ONTAP management LIF
30 conn = HostConnection("10.236.252.97", username="admin",
31 password="mypassword", verify=False)
32 # Set connection as the default for all API calls
33 config.CONNECTION = conn
34 # Create new cluster object
35 clus = Cluster()
36 # Issue REST API call
37 clus.get()
38 # Display the cluster configuration
39 print(clus)
40 ....

```

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