# Software tools

## ONTAP Automation

NetApp
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# Software tools

## Python client library

### Overview of the Python client library

The NetApp ONTAP Python client library is a package you can install and use to write scripts that access the ONTAP REST API. It provides support for several underlying services, including connection management, asynchronous processing, exception handling, and error messages. By using the Python client library, you can quickly develop robust code to support the automation of 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

### Prepare to use the Python client library

You should prepare the local runtime 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 information**

- PyPI: NetApp ONTAP 9.14.1
- NetApp PCL documentation for 9.14.1
- NetApp Developer Network: ONTAP RESTful API

### 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.

```python
##-----------------------------------------------------------------------
#
# Description: Python script to retrieve the cluster configuration.
#
# Usage example:
#
# python3 get_cluster.py
#
#
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#
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#
##-----------------------------------------------------------------------
# Global configuration for the library
from netapp_ontap import config
# Support for the connection to ONTAP
from netapp_ontap import HostConnection
# Specific API needed for this script
from netapp_ontap.resources import Cluster
# Create connection to the ONTAP management LIF
conn = HostConnection("10.236.252.97", username="admin",
password="mypassword", verify=False)
# Set connection as the default for all API calls
config.CONNECTION = conn
# Create new cluster object
clus = Cluster()
# Issue REST API call
clus.get()
# Display the cluster configuration
print(clus)
```

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