



Access with Python

ONTAP Select

NetApp
February 12, 2024

Table of Contents

- Access with Python 1
- Before you access the API using Python 1
- Understand the Python scripts 1

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

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.