



Automate ONTAP Select deployments with Ansible

ONTAP Select

Barb Einarsen, David Peterson
November 20, 2019

This PDF was generated from https://docs.netapp.com/us-en/ontap-select/concept_automate_ansible.html on April 25, 2020. Always check docs.netapp.com for the latest.

Table of Contents

Automate ONTAP Select deployments with Ansible..... 1

 Roles..... 1

 Example Playbook 2

Automate ONTAP Select deployments with Ansible

Use Ansible roles and playbooks to automate ONTAP Select deployments.

An Ansible role is a logical collection of tasks, templates, handlers, and variables in a standardized file structure. Use these roles to facilitate, reuse, and modularize functionality that can be independently used. Include roles, and the list of hosts where you want them to run, in a playbook for execution. After you install Ansible, update the necessary modules, and understand playbooks, you are ready to download ONTAP Select (OTS) roles from NetApp GitHub to create and run your own playbook to deploy ONTAP Select clusters.

Roles

There are two roles available for ONTAP Select:

na_ots_deploy

This role downloads the installation file for ONTAP Select Deploy onto a vCenter or ESXi host. It then creates and runs the Deploy VM.

This role uses the following input values:

- vCenter or ESXi host credentials
- Deploy VM creation, including information such as:
 - IP address
 - Host name
 - Login
 - Password
 - Datastore
 - Network
- Local path to the OVA file

Make sure the installation file is available before running the playbook including the role).



The simplest way to provide these input values is through a global variables file in YAML format. Pass this YAML file in the playbook.

The role has a single task that imports the Deploy OVA file onto the host, creates the VM, and runs it. You can access and download this role from the NetApp Ansible GitHub here: [na_ots_deploy](#)

na_ots_cluster

This role uses the ONTAP Select Deploy APIs to create and deploy the ONTAP Select cluster. It assumes that the Deploy VM has been created and is up and running either manually or using the **na_ots_deploy** role. Also, the role assumes that the Select hosts are appropriately configured with the networking and storage required for ONTAP Select cluster.

The role uses the input values for the vCenter or ESXI credentials, and Deploy VM credentials to access the APIs and all the pertaining information required to create the ONTAP Select cluster and the node VM.

The role performs the following tasks:

- Adding (vcenter or esxi) host credentials
- Getting and registering the host IDs
- Validating the internal network (for multi-node clusters)
- Creating the cluster
- Configuring the nodes
- Configuring the network and storage pool
- Deploying the cluster

As a result, the role completes with the cluster VM up and running and the ONTAP Select cluster fully deployed. You can access and download this role from the NetApp Ansible GitHub here: [na_ots_cluster](#)

Example Playbook

The following is an example playbook that calls these two ONTAP Select roles. Note that the input variables are defined in YML files and passed in via “vars_files”. You can find more details in the README files in each of the roles.

```

-
  name: Create ONTAP Select deploy from OVA (ESXi)

  vars_files:

  vars_deploy.yml                                # All Variables
  vars_deploy_pwd.yml                            # host_password & deploy_password

  hosts: [{ target_vcenter_or_esxi_host }]        # Entry in Ansible hosts file

  gather_facts: false

  connection: local

  roles:

  na_ots_deploy

  name: Create ONTAP Select Cluster

  vars_files:

  vars_cluster_test.yml
  vars_cluster_pwd.yml

  hosts: localhost

  gather_facts: false

  roles:

  na_ots_cluster

```

After the ONTAP Select cluster is created and running using the above roles, you can leverage the rich set of ONTAP Ansible roles available to further automate ONTAP features and functionality. The available ONTAP roles can be accessed [here](#). In summary, the ONTAP Select Ansible roles along with ONTAP roles let you fully automate your end-to-end workflow to manage your storage with ONTAP Select.

Copyright Information

Copyright © 2019–2020 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.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

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.