Dell EMC OpenManage Ansible Modules

Version 1.0.4 User's Guide

DELL EMC

Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Dell EMC OpenManage Ansible Modules

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Overview

Dell EMC OpenManage Ansible Modules allows data center and IT administrators to use RedHat Ansible to automate and orchestrate the configuration, deployment, and update of Dell EMC PowerEdge Servers (12th generation of PowerEdge servers and later) by leveraging the management automation capabilities in-built into the Integrated Dell Remote Access Controller (iDRAC).

This user guide provides information about using **Dell EMC OpenManage Ansible Modules** and its different use cases.

In addition to dell.com/support, you can download Ansible modules from https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC. Modules that are downloaded from this GitHub location are supported by Dell EMC.

Topics:

Key Features

The key features in OpenManage Ansible Modules are:

- Export a server configuration profile (SCP) of Basic Input Output System (BIOS), Redundant Array of Independent Disks (RAID), Network Interface Controller (NIC), and so on, to a local file path or a network share.
- Import an SCP from a local file path or a network share.
- Support for configuration of BIOS, Integrated Dell Remote Access Controller (iDRAC), NIC, and RAID.
- Support for firmware update.
- Support for viewing firmware inventory details.
- Support for Windows, Linux, and ESXi operating system deployments.
- Support for configuring power controls, resetting iDRAC, viewing Lifecycle Controller (LC) job status, deleting LC job, deleting LC job queue, exporting LC logs, and configuring system lockdown mode.
- Retrieve the system inventory details.

NOTE: These features are supported only on iDRAC with enterprise license.

What's new?

- **dellemc_idrac_storage_volume** is added in the list of modules.
- **Check_mode** support for modules is enabled.
- **dellemc_configure_raid** module is deprecated.

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Getting Started

How OpenManage Ansible Modules works

OpenManage Ansible modules uses the Server Configuration Profile (SCP) for most of the configuration management, deployment, and update of PowerEdge Servers. An SCP contains all BIOS, iDRAC, Network and Storage settings of a PowerEdge server. You can apply them to multiple servers, enabling rapid, reliable, and reproducible configuration.

You can perform an SCP operation using any of the following methods:

- Export to or import from a remote network share via CIFS, NFS.
- Export or import via local file streaming (for iDRAC firmware 2.50.50.50 and above).

Setting up a local mount point for a remote network share

Mount the remote network share (CIFS or NFS) locally on the Ansible control machine where you want to run the playbook or modules. Local mount point should have read-write privileges in order for OpenManage Ansible modules to write an SCP file to remote network share that will be imported by iDRAC.

NOTE: Refer to Linux man pages for mounting an NFS or CIFS network share on Ansible control machine.

Running your first Playbook

To run a playbook:

1 Run the following command on the Ansible control machine:

```
ansible-playbook playbookname.yml
```

2 Press **Enter**.

With OpenManage Ansible Modules, you can construct a playbook with a set of modules resulting in a automation workflow for configuration, deployments, and updates of PowerEdge Servers.

To view the list of all available modules:

1 Run the following command on the Ansible control machine:

```
ansible-doc -l | grep "dellemc"
```

2 Press **Enter**.

List of the available modules is displayed.

To view the documentation of a module:

1 Run the following command on the Ansible control machine:

```
ansible-doc <module name>
```

2 Press **Enter**.

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Updating Firmware

You can maintain up-to-date firmware versions of Dell EMC server components to get better efficiency, security protection and enhanced features. Create update sources to do the firmware update.

Following are the tasks for the firmware update activities:

Topics:

Viewing Firmware Inventory

Command: dellemc_get_firmware_inventory

Synopsis

You can view the firmware inventory of a server using this module. This module displays components of a server and the corresponding firmware versions.

Check_mode support: No

Options

Table 1. dellemc_get_firmware_inventory

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_username	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port

Table 2. Return Values

Name	Description	Returned	Type	Sample
Firmware Inventory	• Components of a server and their firmware versions. • List of dictionaries, 1 dictionary per firmware.	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Examples

```
-name: Get Installed Firmware Inventory
   dellemc_get_firmware_inventory:
```

```
    idrac_ip:   "xx.xx.xx.xx"
    idrac_user: "xxxx"
    idrac_pwd:  "xxxxxxxx"
```

Installing Firmware

Command: dellemc_install_firmware

Synopsis

You can install the firmware from a repository on a network share (CIFS, NFS) to keep the system updated.

To install the firmware:

- Make sure the network share contains a valid repository of Dell Update Packages (DUPs) and a catalog file that consists the latest DUPs.
- All applicable updates contained in the repository are applied to the system.

Check_mode support: No

Options

Table 3. dellemc_install_firmware

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
job_wait	Yes	True	• True • False	• If the value is True, it waits for update JOB to get completed • If the value is False, it returns immediately with a JOB ID after queuing the update JOB in the job queue
catalog_file_name	No	Catalog.xml	NA	Catalog file name relative to the `I(share_name)`.
reboot	No	False	• True • False	• If the value is True, the system reboots after applying the updates • If the value is False, the system does not reboot after applying the updates
share_name	Yes	NA	NA	CIFS or NFS Network share
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is

				part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	Yes	NA	NA	Local mount path of the network share with read-write permission for ansible user. This option is mandatory for Network share.

Table 4. Return Values

Name	Description	Returned	Type	Sample
Firmware	Updates firmware from a repository on a network share (CIFS, NFS)	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Update firmware from a repository on a Network Share
   dellemc_install_firmware:
     idrac_ip:           "xx.xx.xx.xx"
     idrac_user:         "xxxx"
     idrac_pwd:          "xxxxxxxx"
     share_name:         "xx.xx.xx.xx:/share"
     share_user:         "xxxx"
     share_pwd:          "xxxxxxxx"
     share_mnt:          "/mnt/share"
     reboot:             "True"
     job_wait:           "True"
     catalog_file_name:  "Catalog.xml"
```

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Configuring PowerEdge Servers

Integrated Dell Remote Access Controller (iDRAC) with LC provide the ability to generate a human-readable representation of server configuration using Server Configuration Profile (SCP) feature. This file contains BIOS, iDRAC, LC, network, and RAID configuration settings. You can modify this file as per your need and apply to other servers.

The SCP feature is used in the Ansible module to automate the configuration activity of PowerEdge servers and their components.

NOTE: OpenManage Ansible Modules version 1.0.4 supports iDRAC firmware version 2.50.50.50 and later.

Topics:

Viewing LC Status

Module: dellemc_get_lcstatus

Synopsis

You can view the LC status on a PowerEdge server using this module. You must check the readiness of the LC before carrying out any configuration or update. This module returns the LC readiness as True or False and its status.

Check_mode support: No

Options

Table 5. dellemc_get_lcstatus

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port

Table 6. Return Values

Name	Description	Returned	Type	Sample
LC status	Displays the LC status on a PowerEdge server	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Get LC Status
   dellemc_get_lcstatus:
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxxxxx"
```

Exporting Server Configuration Profile

Module: dellemc_export_server_config_profile

Synopsis

You can export **Server Configuration Profile (SCP)** with various components such as iDRAC, BIOS, NIC, RAID together or with one of these components. You can export SCP from iDRAC to a local or a network shared location. For shared location, make sure that a network share path is established.

Check_mode support: No

Options

Table 7. dellemc_export_server_config_profile

Parameter	Required	Default	Choices	Comments
export_format	No	XML	• JSON • XML	The output file format
export_use	No	Default	• Default • Clone • Replace	The type of server configuration profile (SCP) to be exported
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	NA	NA	iDRAC port
job_wait	Yes	NA	• True • False	• If the value is True, it waits for the SCP export job to finish and returns the job completion status • If the value is False, it returns immediately with a JOB ID after queuing the SCP export job in LC job queue
share_name	Yes	NA	NA	CIFS or NFS network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part

				of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
scp_components	No	ALL	• ALL • iDRAC • BIOS • NIC • RAID	Specify the hardware components configuration to be exported • If ALL, the module exports all components configurations in SCP file • If iDRAC, the module exports iDRAC configuration in SCP file • If BIOS, the module exports BIOS configuration in SCP file • If NIC, the module exports NIC configuration in SCP file • If RAID, the module exports RAID configuration in SCP file

Table 8. Return Values

Name	Description	Returned	Type	Sample
Export SCP	Exports the SCP to the provided network share or to the local path	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Export Server Configuration Profile (SCP)
   dellemc_export_server_config_profile:
     idrac_ip:      "xx.xx.xx.xx"
     idrac_user:    "xxxx"
     idrac_pwd:     "xxxxxxxx"
     share_name:    "xx.xx.xx.xx:/share"
     share_user:    "xxxx"
     share_pwd:     "xxxxxxxx"
     export_format: "XML"
     export_use:    "Default"
     job_wait:      "True"
```

Importing Server Configuration Profile

Module: dellemc_import_server_config_profile

Synopsis

You can import the SCP which was previously exported for that same server, or group of servers. Importing SCP is useful in restoring the configuration of the server to the state stored in the profile.

You can import SCP from a local or a remote share to iDRAC. For a remote share, make sure that a network share path and the file name are available. If the import file **Import.xml** specifies some configuration changes that require a server restart (such as in iDRAC, BIOS, NIC, or RAID configuration), you can use the **shutdown_type** parameter to specify whether a **Graceful** or a **Forced** shutdown of the server is required.

Check_mode support: No

Options

Table 9. dellemc_import_server_config_profile

Parameter	Required	Default	Choices	Comments
end_host_power_state	No	On	• On • Off	• If On, End host power is on • If Off, End host power is off
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
job_wait	Yes	NA	• True • False	• If the value is True, it waits for the SCP import job to finish and returns the job completion status • If the value is False, it returns immediately with a JOB ID after queuing the SCP import job in LC job queue
scp_components	No	ALL	• ALL • iDRAC • BIOS • NIC • RAID	• If ALL, the module imports all components configurations from SCP file • If iDRAC, the module imports iDRAC configuration from SCP file • If BIOS, the module imports BIOS configuration from SCP file • If NIC, the module imports NIC configuration from SCP file • If RAID, the module imports RAID configuration from SCP file
scp_file	Yes	NA	NA	Server Configuration Profile file name
share_name	Yes	NA	NA	Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
shutdown_type	No	Graceful	• Graceful • Forced • NoReboot	• If Graceful, it gracefully shuts down the server • If Forced, it forcefully shuts down the system • If NoReboot, it does not reboot the server

Table 10. Return Values

Name	Description	Returned	Type	Sample
Import SCP	Imports SCP from a network share or from a local file	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Import Server Configuration Profile
   dellemc_import_server_config_profile
```

```
    idrac_ip:        "xx.xx.xx.xx"
    idrac_user:      "xxxx"
    idrac_pwd:       "xxxxxxxx"
    share_name:      "xx.xx.xx.xx:/share"
    share_user:      "xxxx"
    share_pwd:       "xxxxxxxx"
    scp_file:        "scp_file.xml"
    scp_components: "ALL"
    job_wait:        "True"
```

Configuring iDRAC

Following are the modules responsible for configuring specific iDRAC attributes.

Configuring iDRAC Users

Module: dellemc_configure_idrac_users

Synopsis

This module configures the iDRAC user management activities.

Check_mode support: Yes

Options

Table 11. dellemc_configure_idrac_users

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
action	No	create	• create • delete • modify	This value decides whether to create or delete or modify iDRAC user
user_name	No	NA	NA	Provide the username to be created or deleted or modified

user_password	No	NA	NA	Provide the password for the user to be created or modified
privilege_users	No	NA	• NoAccess • Readonly • Operator • Administrator	Privilege user access is configurable
ipmilanprivilege_users	No	NA	• No_Access • Administrator • Operator • User	IPMI Lan Privilege user access is configurable
ipmiserialprivilege_users	No	NA	• No_Access • Administrator • Operator • User	IPMI Serial Privilege user access is configurable **NOTE: This parameter is not supported by PowerEdge Modular servers.**
enable_users	No	NA	• Enabled • Disabled	Enabling or Disabling the new iDRAC user
solenable_users	No	NA	• Enabled • Disabled	Enabling or Disabling SOL for iDRAC user
protocolenable_users	No	NA	• Enabled • Disabled	Enabling or Disabling protocol for iDRAC user
authenticationprotocol_users	No	NA	• T_None • SHA • MD5	Configuring authentication protocol for iDRAC user
privacyprotocol_users	No	NA	• T_None • DES • AES	Configuring privacy protocol for iDRAC user

Table 12. Return Values

Name	Description	Returned	Type	Sample
iDRAC users	Configures the iDRAC users attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure the iDRAC users attributes
   dellemc_configure_idrac_users:
     idrac_ip:                    "xx.xx.xx.xx"
     idrac_user:                  "xxxx"
     idrac_pwd:                   "xxxxxxxx"
     share_name:                  "xx.xx.xx.xx:/share"
     share_pwd:                   "xxxxxxxx"
```

```
    share_user:                    "xxxx"
    share_mnt:                     "/mnt/share"
    action:                        "create"
    user_name:                     "username"
    user_password:                 "xxxxxxxx"
    privilege_users:               "Administrator"
    ipmilanprivilege_users:        "Administrator"
    ipmiserialprivilege_users:     "Administrator"
    enable_users:                  "Enabled"
    solenable_users:               "Enabled"
    protocolenable_users:          "Enabled"
    authenticationprotocol_users: "SHA"
    privacyprotocol_users:         "AES"
```

Configuring iDRAC Timezone

Module: dellemc_configure_idrac_timezone

Synopsis

This module configures the iDRAC timezone related attributes.

Check_mode support: Yes

Options

Table 13. dellemc_configure_idrac_timezone

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
setup_idrac_timezone	No	NA	NA	Configuring the timezone for iDRAC
enable_ntp	No	NA	NA	Whether to Enable or Disable NTP for iDRAC
ntp_server_1	No	NA	NA	NTP configuration for iDRAC
ntp_server_2	No	NA	NA	NTP configuration for iDRAC
ntp_server_3	No	NA	NA	NTP configuration for iDRAC

Table 14. Return Values

Name	Description	Returned	Type	Sample
iDRAC Timezone	Configures the iDRAC timezone attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure the iDRAC timezone attributes
   dellemc_configure_idrac_timezone:
     idrac_ip:              "xx.xx.xx.xx"
     idrac_user:            "xxxx"
     idrac_pwd:             "xxxxxxxx"
     share_name:            "xx.xx.xx.xx:/share"
     share_pwd:             "xxxxxxxx"
     share_user:            "xxxx"
     share_mnt:             "/mnt/share"
     setup_idrac_timezone: "UTC"
     enable_ntp:            "Enabled"
     ntp_server_1:          "x.x.x.x"
     ntp_server_2:          "x.x.x.x"
     ntp_server_3:          "x.x.x.x"
```

Configuring iDRAC Eventing

Module: dellemc_configure_idrac_eventing

Synopsis

This module configures iDRAC eventing related attributes.

Check_mode support: Yes

Options

Table 15. dellemc_configure_idrac_eventing

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.

share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
destination_number	No	None	NA	Destination number for SNMP Trap
destination	No	None	NA	Destination for SNMP Trap
snmp_v3_username	No	NA	NA	SNMP v3 username for SNMP Trap
snmp_trap_state	No	NA	· Enabled · Disabled	Whether to Enable or Disable SNMP alert
email_alert_state	No	NA	· Enabled · Disabled	Whether to Enable or Disable Email alert
alert_number	No	None	NA	Alert number for Email configuration
address	No	NA	NA	Email address for SNMP Trap
custom_message	No	NA	NA	Custom message for SNMP Trap reference
enable_alerts	No	NA	· Enabled · Disabled	Whether to Enable or Disable iDRAC alerts
authentication	No	NA	· Enabled · Disabled	Simple Mail Transfer Protocol Authentication
smtp_ip_address	No	NA	NA	SMTP IP address for communication
smtp_port	No	None	NA	SMTP Port number for access
username	No	None	NA	Username for SMTP authentication
password	No	None	NA	Password for SMTP authentication

Table 16. Return Values

Name	Description	Returned	Type	Sample
iDRAC eventing	Configures the iDRAC eventing attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure the iDRAC eventing attributes
   dellemc_configure_idrac_eventing:
     idrac_ip:            "xx.xx.xx.xx"
     idrac_user:          "xxxx"
     idrac_pwd:           "xxxxxxxx"
     share_name:          "xx.xx.xx.xx:/share"
     share_pwd:           "xxxxxxxx"
     share_user:          "xxxx"
     share_mnt:           "/mnt/share"
     destination_number: "xxxx"
     destination:         "xxxx"
     snmp_v3_username:    "xxxx"
```

```
    snmp_trap_state:    "xxxx"
    email_alert_state:  "xxxx"
    alert_number:       "xxxx"
    address:            "xxxxxxxxxx"
    custom_message:     "xxxx"
    enable_alerts:      "xxxxxx"
    authentication:     "xxxxxx"
    smtp_ip_address:    "x.x.x.x"
    smtp_port:          "xxxx"
    username:           "xxxx"
    password:           "xxxxxxxx"
```

Configuring iDRAC Services

Module: dellemc_configure_idrac_services

Synopsis

This module configures the iDRAC services related attributes.

Check_mode support: Yes

Options

Table 17. dellemc_configure_idrac_services

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
enable_web_server	No	NA	• Enabled • Disabled	Whether to Enable or Disable web server configuration for iDRAC
ssl_encryption	No	NA	• Auto_Negotiate • T_128_Bit_or_higher • T_168_Bit_or_higher	Secure Socket Layer encryption for web server

			• T_256_Bit_or_higher	
tls_protocol	No	NA	• TLS_1_0_and_Higher • TLS_1_1_and_Higher • TLS_1_2_Only	Transport Layer Security for web server
https_port	No	NA	NA	HTTPS access port
http_port	No	NA	NA	HTTP access port
timeout	No	NA	NA	Timeout value
snmp_enable	No	NA	• Enabled • Disabled	Whether to Enable or Disable SNMP protocol for iDRAC
snmp_protocol	No	NA	• All • SNMPv3	Type of the SNMP protocol
community_name	No	test	NA	SNMP community name for iDRAC
alert_port	No	None	NA	SNMP alert port for iDRAC
discovery_port	No	162	NA	SNMP discovery port for iDRAC
trap_format	No	None	NA	SNMP trap format for iDRAC

Table 18. Return Values

Name	Description	Returned	Type	Sample
iDRAC services	Configures the iDRAC services attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure the iDRAC services attributes
   dellemc_configure_idrac_services:
     idrac_ip:           "xx.xx.xx.xx"
     idrac_user:         "xxxx"
     idrac_pwd:          "xxxxxxxx"
     share_name:         "xx.xx.xx.xx:/share"
     share_pwd:          "xxxxxxxx"
     share_user:         "xxxx"
     share_mnt:          "/mnt/share"
     enable_web_server: "Enabled"
     http_port:          "80"
     https_port:         "443"
     ssl_encryption:     "Auto_Negotiate"
     tls_protocol:       "TLS_1_2_Only"
     timeout:            "1800"
     snmp_enable:        "Enabled"
     snmp_protocol:      "SNMPv3"
     community_name:     "test"
     alert_port:         "None"
     discovery_port:     "162"
     trap_format:        "None"
```

Configuring iDRAC Network

Module: dellemc_configure_idrac_network

Synopsis

This module configures the iDRAC networking attributes.

Check_mode support: Yes

Options

Table 19. dellemc_configure_idrac_network

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
setup_idrac_nic_vlan	No	NA	NA	Configuring the VLAN-related setting for iDRAC
register_idrac_on_dns	No	NA	• Enabled • Disabled	Registering Domain Name System for iDRAC
dns_idrac_name	No	NA	NA	DNS Name for iDRAC
auto_config	No	NA	• Enabled • Disabled	Automatically creates the records for DNS
static_dns	No	NA	NA	Static configuration for DNS
vlan_id	No	None	NA	Configuring the VLAN ID for iDRAC
vlan_priority	No	None	NA	Configuring the VLAN priority for iDRAC
enable_nic	No	NA	• Enabled • Disabled	Whether to Enable or Disable Network Interface Controller for iDRAC
nic_selection	No	NA	• Dedicated • LOM1 • LOM2 • LOM3 • LOM4	Selecting Network Interface Controller types for iDRAC

failover_network	No	NA	• ALL • LOM1 • LOM2 • LOM3 • LOM4 • T_None	Failover Network Interface Controller types for iDRAC
auto_detect	No	NA	• Enabled • Disabled	Auto detect Network Interface Controller types for iDRAC
auto_negotiation	No	NA	• Enabled • Disabled	Auto negotiation of Network Interface Controller for iDRAC
network_speed	No	NA	• T_10 • T_100 • T_1000	Network speed for Network Interface Controller types for iDRAC
duplex_mode	No	NA	• Full • Half	Transmission of data Network Interface Controller types for iDRAC
nic_mtu	No	None	NA	NIC Maximum Transmission Unit
ip_address	No	NA	NA	IP Address needs to be defined
enable_dhcp	No	NA	NA	Whether to Enable or Disable DHCP Protocol for iDRAC
dns_from_dhcp	No	NA	• Enabled • Disabled	Specifying Domain Name System from Dynamic Host Configuration Protocol
enable_ipv4	No	NA	• Enabled • Disabled	Whether to Enable or Disable IPv4 configuration
static_dns_1	No	NA	NA	Specify Domain Name System Configuration
static_dns_2	No	NA	NA	Specify Domain Name System Configuration
static_gateway	No	None	NA	Interfacing the network with another protocol
static_net_mask	No	None	NA	Determine whether IP address belongs to host

Table 20. Return Values

Name	Description	Returned	Type	Sample
iDRAC network	Configures the iDRAC network attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure the iDRAC network attributes
   dellemc_configure_idrac_network:
   idrac_ip:               "xx.xx.xx.xx"
   idrac_user:             "xxxx"
```

```
idrac_pwd:              "xxxxxxxx"
share_name:             "xx.xx.xx.xx:/share"
share_pwd:              "xxxxxxxx"
share_user:             "xxxx"
share_mnt:              "/mnt/share"
register_idrac_on_dns: "Enabled'
dns_idrac_name:         "None"
auto_config:            "None"
static_dns:             "None"
setup_idrac_nic_vlan:  "Enabled"
vlan_id:                "0"
vlan_priority:          "1"
enable_nic:             "Enabled"
nic_selection:          "Dedicated"
failover_network:       "T_None"
auto_detect:            "Disabled"
auto_negotiation:       "Enabled"
network_speed:          "T_1000"
duplex_mode:            "Full"
nic_mtu:                "1500"
ip_address:             "x.x.x.x"
enable_dhcp:            "Enabled"
dns_from_dhcp:          "Enabled"
enable_ipv4:            "Enabled"
static_dns_1:           "x.x.x.x"
static_dns_2:           "x.x.x.x"
static_gateway:         "None"
static_net_mask:        "None"
```

Configuring BIOS

Module: dellemc_configure_bios

Synopsis

This module hosts the BIOS configuration related tasks. The tasks are:

- **boot_mode**: Configures the boot mode to BIOS or Unified Extensible Firmware Interface (UEFI).
- **onetime_boot_mode**: Configures the one time boot mode setting such as **Disabled**, **OneTimeBootSeq**, **OneTimeCustomBootSeqStr**, **OneTimeCustomHddSeqStr**, **OneTimeCustomUefiBootSeqStr**, **OneTimeHddSeq**, and **OneTimeUefiBootSeq**.
- **nvme_mode**: Configures the NVMe mode.
- **secure_boot_mode**: Configures how the BIOS uses the Secure Boot Policy Objects.
- **boot_sequence**: Boot devices' FQDDs in the sequential order for BIOS or UEFI Boot Sequence.

Check_mode support: Yes

Options

Table 21. dellemc_configure_bios

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS network share or a local path

Parameter	Required	Default	Choices	Comments
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
boot_mode	No	NA	• Bios • Uefi	(deprecated) Configures the boot mode to BIOS or UEFI. **NOTE: This option has been deprecated, and will be removed in the later version. Please use the I(attributes) for BIOS attributes configuration instead.** **NOTE: I(boot_mode) is mutually exclusive with I(boot_sources).**
boot_sequence	No	NA	NA	(deprecated) Boot devices' FQDDs in the sequential order for BIOS or UEFI Boot Sequence. Provide the `I(boot_mode)` option to determine the appropriate boot sequence to be applied. **NOTE: This option has been deprecated, and will be removed in the later version. Please use the I(attributes) or I(boot_sources) for Boot Sequence modification instead.** **NOTE: I(boot_sequence) is mutually exclusive with I(boot_sources).**
nvme_mode	No	NA	• NonRaid • Raid	(deprecated) Configures the NVME mode in the 14th generation of PowerEdge servers. **NOTE: This option has been deprecated, and will be removed in the later version. Please use the I(attributes) for BIOS attributes configuration instead.** **NOTE: I(nvme_mode) is mutually exclusive with I(boot_sources).**
secure_boot_mode	No	NA	• AuditMode, • DeployedMode	(deprecated) Configures how the BIOS uses the Secure Boot Policy Objects in the 14th generation of PowerEdge servers.

Parameter	Required	Default	Choices	Comments
			• SetupMode • UserMode	**NOTE: This option has been deprecated, and will be removed in the later version. Please use the l(attributes) for BIOS attributes configuration instead.** **NOTE: l(secure_boot_mode) is mutually exclusive with l(boot_sources).**
onetime_boot_mode	No	NA	• Disabled • OneTimeBootSeq • OneTimeCustomBootSeqStr • OneTimeCustomHddSeqStr • OneTimeCustomUefiBootSeqStr • OneTimeHddSeq • OneTimeUefiBootSeq	(deprecated) Configures the one time boot mode setting. **NOTE: This option has been deprecated, and will be removed in the later version. Please use the l(attributes) for BIOS attributes configuration instead.** **NOTE: l(onetime_boot_mode) is mutually exclusive with l(boot_sources).**
attributes	No	NA	NA	Dictionary of BIOS attributes and value pair. Attributes should be part of the Redfish Dell BIOS Attribute Registry. Redfish URI to view BIOS attributes: (https://l(idrac_ip)/redfish/v1/Systems/System.Embedded.1/Bios). If deprecated options are given and the same are repeated in l(attributes) then values in l(attributes) will take precedence. **NOTE: l(attributes) is mutually exclusive with l(boot_sources).**
boot_sources	No	NA	NA	List of boot devices to set the boot sources settings. Boot devices are dictionary. While applying boot sequence, **Index** of at least one boot device should be 0. **NOTE: l(boot_sources) is mutually exclusive with l(attributes), l(boot_sequence), l(onetime_boot_mode), l(secure_boot_mode), l(nvme_mode), and l(boot_mode).**

Table 22. Return Values

Name	Description	Returned	Type	Sample
BIOS	Configures the BIOS configuration attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Examples

```
-name: Configure BIOS single attributes
   dellemc_configure_bios:
     idrac_ip:           "xx.xx.xx.xx"
     idrac_user:         "xxxx"
     idrac_pwd:          "xxxxxxxx"
     share_name:         "xx.xx.xx.xx:/share"
     share_pwd:          "xxxxxxxx"
     share_user:         "xxxxx"
     share_mnt:          "/mnt/share"
     boot_mode :         "xxxxx"
     nvme_mode:          "xxxxx"
     secure_boot_mode:   "xxxxxx"
     onetime_boot_mode:  "xxxxxx"
     boot_sequence:      "NIC.PxeDevice.x-x, NIC.PxeDevice.x-x"
```

```
- name: bios
    dellemc_configure_bios:
       idrac_ip:          "xx.xx.xx.xx"
       idrac_user:        "xxxx"
       idrac_pwd:         "xxxxxxxx"
       share_name:        "x.x.x.x:/share"
       share_pwd:         "xxxxxxxx"
       share_user:        "xxxx"
       share_mnt:         "/mnt/share"
       attributes:
            BootMode :    "Bios"
            BootSeqRetry: "Enabled"
```

```
-name: boot_sources
   dellemc_configure_bios:
      idrac_ip:    "xx.xx.xx.xx"
      idrac_user:  "xxxx"
      idrac_pwd:   "xxxxxxxx"
      share_name:  "x.x.x.x:/share"
      share_pwd:   "xxxxxxxx"
      share_user:  "xxxx"
      share_mnt:   "/mnt/share"
      boot_sources:
         - Name:   "NIC.Integrated.1-1-1"
           Enabled: True
           Index:   1
         - Name:   "NIC.Integrated.1-2-1"
           Enabled: True
           Index:   0
```

Configuring RAID

Module: dellemc_configure_raid

Synopsis

This module hosts the RAID configuration related attributes.

NOTE: This module is deprecated and replaced with dellemc_idrac_storage_volume.

Options

Table 23. dellemc_configure_raid

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username

idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
vd_name	No	NA	NA	Virtual disk name • Optional, if we perform create operations • Mandatory, if we perform remove operations
span_depth	No	1	NA	Span Depth
span_length	No	2	NA	Span Length
number_dedicated_hot_spare	No	0	NA	Number of Dedicated Hot Spare
number_global_hot_spare	No	0	NA	Number of Global Hot Spare
raid_level	No	RAID 0	• RAID 0 • RAID 1 • RAID 5 • RAID 6 • RAID 10 • RAID 50 • RAID 60	Provide the required RAID level
disk_cache_policy	No	Default	• Default • Enabled • Disabled	Disk Cache Policy
write_cache_policy	No	WriteThrough	• WriteThrough • WriteBack • WriteBackForce	Write cache policy
read_cache_policy	No	NoReadAhead	• NoReadAhead • ReadAhead • Adaptive	Read cache policy

stripe_size	No	65536	NA	Provide stripe size value in multiples of 64 * 1024
controller_fqdd	Yes	NA	NA	Fully Qualified Device Descriptor (FQDD) of the storage controller, for e.g. `RAID.Integrated.1-1`
media_type	No	HDD	• HDD • SSD	Media type
bus_protocol	No	SATA	• SAS • SATA	Bus protocol
state	Yes	NA	• present • absent	• If the value is 'present', the module will perform 'create' operations • If the value is 'absent', the module will perform 'remove' operations

Table 24. Return Values

Name	Description	Returned	Type	Sample
RAID configuration	Configures the RAID configuration attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure the RAID attributes
   dellemc_configure_raid:
     idrac_ip:        "xx.xx.xx.xx"
     idrac_user:      "xxxx"
     idrac_pwd:       "xxxxxxxx"
     share_name:      "xx.xx.xx.xx:/share"
     share_pwd:       "xxxxxxxx"
     share_user:      "xxxx"
     share_mnt:       "xxxxxx"
     controller_fqdd: "xxxxxxxx"
     vd_name:         "xxxxxx"
```

Configuring storage volume

Module: dellemc_idrac_storage_volume

Synopsis

This module hosts the RAID configuration related attributes.

Check_mode support: Yes

Options

Table 25. dellemc_idrac_storage_volume

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address

idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
span_depth	No	1	NA	Span Depth
span_length	No	1	NA	Span Length
number_dedicated_hot_spare	No	0	NA	Number of Dedicated Hot Spare
volume_type	No	RAID 0	• RAID 0 • RAID 1 • RAID 5 • RAID 6 • RAID 10 • RAID 50 • RAID 60	Provide the required RAID level
disk_cache_policy	No	Default	• Default • Enabled • Disabled	Disk Cache Policy
write_cache_policy	No	WriteThrough	• WriteThrough • WriteBack • WriteBackForce	Write Cache Policy
read_cache_policy	No	NoReadAhead	• NoReadAhead • ReadAhead • AdaptiveReadAhead	Read Cache Policy
stripe_size	No	65536	NA	Provide stripe size value in multiples of 64 * 1024
controller_id	No	NA	NA	Fully Qualified Device Descriptor (FQDD) of the storage controller, for example: `RAID.Integrated.1-1` **NOTE: Controller FQDD is required for C(create) RAID configuration.**
volume_id	No	NA	NA	Fully Qualified Device Descriptor (FQDD) of the virtual disk, for example: `Disk.virtual.0:RAID.Slot.1-1` **NOTE: This option is used to get the virtual disk information.**
media_type	No	None	• HDD • SDD	Media type
protocol	No	None	• SAS • SATA	Bus protocol

state	Yes	view	• create • delete • view	• If C(create), the module will perform **create** operations • If C(delete), the module will perform **remove** operations • If C(view), the module will return storage view
volumes	No	NA	NA	A list of virtual disk-specific iDRAC attributes. This is applicable for C(create) and C(delete) operations. • For C(create) operation, name and drives are applicable options, other volume options can also be specified. **NOTE: The drives is a required option for C(create) operation and accepts either location (list of drive slot) or id (list of drive fqdd).** • For C(delete) operation, only name option is applicable.
capacity	No	NA	NA	Virtual disk size in GB
raid_reset_config	No	NA	NA	This option represents whether a Reset Config operation needs to be performed on the RAID controller. Reset Config operation deletes all the virtual disks present on the RAID controller.
raid_init_operation	No	None	• None • Fast	This option represents Initialization Configuration operation to be performed on the virtual disk.

Table 26. Return Values

Name	Description	Returned	Type	Sample
Storage volume configuration	Configures the RAID configuration related attributes	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC/tree/devel/samples

Examples

```
-name: Create single volume with default values
   dellemc_idrac_storage_volume:
     idrac_ip:        "xx.xxx.xx.xx"
     idrac_user:      "xxxx"
     idrac_pwd:       "xxxxxxxx"
     state:           "create"
     controller_id:   "RAID.Slot.1-1"
```

```
-name: Create multiple volume
   dellemc_idrac_storage_volume:
     idrac_ip:                  "xx.xxx.xx.xx"
     idrac_user:                "xxxx"
     idrac_pwd:                 "xxxxxxxx"
     raid_reset_config:         "True"
     state:                     "create"
     controller_id:             "RAID.Slot.1-1"
     volume_type:                "RAID 1"
     span_depth:                 1
     span_length:                2
```

```
    number_dedicated_hot_spare:  1
    disk_cache_policy:           "Enabled"
    write_cache_policy:          "WriteBackForce"
    read_cache_policy:           "ReadAhead"
    stripe_size:                  65536
    capacity:                     100
    raid_init_operation:         "Fast"
    volumes:
      - name:                    "volume_1"
        drives:
            id:                  ["Disk.Bay.1:Enclosure.Internal.0-1:RAID.Slot.1-1",
                                  "Disk.Bay.2:Enclosure.Internal.0-1:RAID.Slot.1-1"]
      - name:                    "volume_2"
        volume_type:             "RAID 5"
        span_length:              3
        span_depth:               1
        drives:
            location:            [7,3,5]
        disk_cache_policy:       "Disabled"
        write_cache_policy:      "WriteBack"
        read_cache_policy:       "NoReadAhead"
        stripe_size:              131072
        capacity:                 200
        raid_init_operation:     "None"
```

```
-name: View all volume details
   dellemc_idrac_storage_volume:
     idrac_ip:   "xx.xxx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxxxxx"
     state:      "view"
```

```
-name: View specific volume details
   dellemc_idrac_storage_volume:
     idrac_ip:         "xx.xxx.xx.xx"
     idrac_user:       "xxxx"
     idrac_pwd:        "xxxxxxxx"
     state:            "view"
     controller_id:    "RAID.Slot.1-1"
     volume_id:         "Disk.Virtual.0:RAID.Slot.1-1"
```

```
-name: Delete single volume
   dellemc_idrac_storage_volume:
     idrac_ip:    "xx.xxx.xx.xx"
     idrac_user:  "xxxx"
     idrac_pwd:   "xxxxxxxx"
     state:       "delete"
     volumes:
       - name:    "volume_1"
```

```
-name: Delete multiple volume
   dellemc_idrac_storage_volume:
     idrac_ip:    "xx.xxx.xx.xx"
     idrac_user:  "xxxx"
     idrac_pwd:   "xxxxxxxx"
     state:       "delete"
     volumes:
       - name: "volume_1"
       - name: "volume_2"
```

Configuring Collect System Inventory on Restart

Module: dellemc_idrac_lc_attributes

Synopsis

This module is responsible for enabling or disabling of **Collect System Inventory on Restart (CSIOR)** property for all iDRAC or LC jobs. When you enable the **CSIOR** property, hardware inventory and part configuration information are discovered and compared with previous system inventory information on every system restart.

Check_mode support: Yes

Options

Table 27. dellemc_idrac_lc_attributes

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
csior	Yes	NA	• Enabled • Disabled	Whether to Enable or Disable Collect System Inventory on Restart (CSIOR) property for all iDRAC or LC jobs

Table 28. Return Values

Name	Description	Returned	Type	Sample
iDRAC CSIOR	Configures CSIOR property for all iDRAC or LC jobs	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Set up iDRAC LC Attributes
   dellemc_idrac_lc_attributes:
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxxxxx"
     share_name: "xx.xx.xx.xx:/share"
     share_user: "xxxxx"
     share_pwd:  "xxxxxxxx"
     share_mnt:  "/mnt/share"
     csior:      "xxxxxxx"
```

Configuring Syslog

Module: dellemc_setup_idrac_syslog

Synopsis

This module enables or disables syslog parameters for iDRAC.

Check_mode support: Yes

Options

Table 29. dellemc_setup_idrac_syslog

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
syslog	Yes	NA	• Enabled • Disabled	Whether to Enable or Disable iDRAC syslog

Table 30. Return Values

Name	Description	Returned	Type	Sample
iDRAC Syslog	Configures iDRAC Syslog parameters	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure iDRAC Syslog Parameters
   dellemc_setup_idrac_syslog:
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxxxxx"
     share_name: "xx.xx.xx.xx:/share"
     share_user: "xxxx"
     share_pwd:  "xxxxxxxx"
```

```
    share_mnt:  "/mnt/share"
    syslog:     "xxxxxxx"
```

5

Deploying operating system

To provision a bare metal server, it is essential to deploy the required operating system in the device before you start using it. This section describes the process of deploying the operating system on the PowerEdge servers using Ansible.

To automate the process of operating system deployment in an unattended manner using Ansible, the iDRAC's capability is utilized to transfer the customized ISO to iDRAC for boot.

To perform OS deployment, ensure:

- Operating system image is injected with required Dell drivers, and unattended response file.
- iDRAC is enabled, configured, and reachable.
- RAID is configured.

Boot to a Network ISO Image

Module: dellemc_boot_to_network_iso

Synopsis

This module facilitates the operating system deployment. You can run this module to boot the target system to a bootable ISO image on a CIFS or NFS share. This module looks for the customized ISO in the configured share location and transfers the image to iDRAC to load it. On the system reboot, the OS deployment begins.

Check_mode support: No

Options

Table 31. dellemc_boot_to_network_iso

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC password
idrac_port	No	443	NA	iDRAC port
iso_image	Yes	NA	NA	Network ISO name
share_name	Yes	NA	NA	CIFS or NFS Network share
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.

Table 32. Return Values

Name	Description	Returned	Type	Sample
Boot to Network ISO	Boots to a network ISO Image	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Boot to Network ISO
   dellemc_boot_to_network_iso:
     idrac_ip:    "xx.xx.xx.xx"
     idrac_user:  "xxxx"
     idrac_pwd:   "xxxxxxxx"
     share_name:  "xx.xx.xx.xx:/share"
     share_user:  "xxxx"
     share_pwd:   "xxxxxxxx"
     iso_image:   "uninterrupted_os_installation_image.iso"
```

6

Server Inventory

This section describes the process of retrieving the server inventory of the PowerEdge Servers using Ansible Modules.

Viewing the System Inventory

Module: dellemc_get_system_inventory

Synopsis

System inventory provides basic and component level detailed inventory information. You can run this module when you want to verify the asset, configured state, inventory, and health-related information for the system and its component.

Check_mode support: No

Options

Table 33. dellemc_get_system_inventory

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port

Table 34. Return Values

Name	Description	Returned	Type	Sample
System Inventory	Displays the PowerEdge Server System Inventory	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Get System Inventory
   dellemc_get_system_inventory:
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxxxxx"
```

7

Server Administration Tasks

This section describes the tasks that you can run using OpenManage Ansible Modules version 1.0.4.

NOTE: OpenManage Ansible Modules version 1.0.4 supports iDRAC firmware version 2.50.50.50 and later.

Topics:

Configuring the Power State on the PowerEdge Servers

Module: dellemc_change_power_state

Synopsis

This module configures the power control options on a PowerEdge server. You can run this module:

- To turn on the server.
- To turn off the server.
- To reboot the server.
- For hard reset of the server.

Check_mode support: Yes

Options

Table 35. dellemc_change_power_state

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
change_power	Yes	NA	• On • ForceOff • GracefulRestart	Desired power state

			• GracefulShutdown • PushPowerButton • Nmi	

Table 36. Return Values

Name	Description	Returned	Type	Sample
Power state of a server	Configures the power control options on a PowerEdge server	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Change Power State
   dellemc_change_power_state:
     idrac_ip:     "xx.xx.xx.xx"
     idrac_user:   "xxxx"
     idrac_pwd:    "xxxxxxxx"
     change_power: "xxxxxxx"
```

Resetting iDRAC to Factory Settings

Module: dellemc_idrac_reset

Synopsis

You can reset the iDRAC to its default factory settings using this module. This module deletes your current iDRAC configuration and resets it to the default settings.

Check_mode support: Yes

Options

Table 37. dellemc_idrac_reset

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port

Table 38. Return Values

Name	Description	Returned	Type	Sample
Reset iDRAC	Resets the iDRAC	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Reset iDRAC
   dellemc_idrac_reset:
     idrac_ip:   "xx.xx.xx.xx"
```

```
    idrac_user: "xxxx"
    idrac_pwd:  "xxxxxxxx"
    idrac_port: "xxx"
```

Viewing LC Job Status

Module: dellemc_get_lc_job_status

Synopsis

You can view the iDRAC or LC job status using this module. To view information about a job status, a job id is required. After a job is initiated, the system stages the job request information and sends a job id back to the system. You can query the progress and status of the job by using the job id.

Check_mode support: No

Options

Table 39. dellemc_get_lc_job_status

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
job_id	Yes	NA	NA	JOB ID in the format "JID_123456789012"

Table 40. Return Values

Name	Description	Returned	Type	Sample
LC Job Status	Displays the status of an LC job	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Get LC Job Status
   dellemc_get_lc_job_status
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxxxxx"
     job_id:     "JID_1234567890"
```

Exporting LC Logs

Module: dellemc_export_lc_logs

Synopsis

LC logs provide records of past activities on a managed system. These log files are useful for the server administrators since they provide detailed information about recommended actions and some other technical information that is useful for troubleshooting purposes.

The various types of information available in LC logs are alerts-related, configuration changes on the system hardware components, firmware changes due to an upgrade or downgrade, replaced parts, temperature warnings, detailed timestamps of when the activity has started, severity of the activity, and so on.

Check_mode support: No

Options

Table 41. dellemc_export_lc_logs

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS Network share
share_user	No	NA	NA	Network share user in the format 'user@domain' or 'domain\user' if user is part of a domain else 'user'. This option is mandatory for CIFS Network share.
share_pwd	No	NA	NA	Network share user password. This option is mandatory for CIFS Network share.
job_wait	Yes	NA	• True • False	• If the value is True, it waits for the job to complete and returns the job completion status • If the value is False, it returns immediately with a JOB ID after queuing the job in LC job queue

Table 42. Return Values

Name	Description	Returned	Type	Sample
LC logs	Exports the LC logs to the given network share	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Export Lifecycle Controller Logs
   dellemc_export_lc_logs:
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxxxxx"
     idrac_port: "xxx"
     share_name: "xx.xx.xx.xx:/share"
     share_user: "xxxx"
     share_pwd:  "xxxxxxxx"
     job_wait:   "True"
```

Deleting LC Job

Module: dellemc_delete_lc_job

Synopsis

This module deletes an LC job for a given valid JOB ID from the job queue.

You can delete an LC job:

- after the job is completed.
- if you do not want to perform the job or if it is taking long to execute.

Check_mode support: Yes

Options

Table 43. dellemc_delete_lc_job

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
job_id	Yes	NA	NA	JOB ID in the format "JID_XXXXXXXXX"

Table 44. Return Values

Name	Description	Returned	Type	Sample
Delete LC job	Deletes an LC job for a given a JOB ID	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Examples

```
-name: Delete LC Job
   dellemc_delete_lc_job:
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxx"
     idrac_port: "xxx"
     job_id:     "JID_XXXXXXXX"
```

Deleting LC Job Queue

Module: dellemc_delete_lc_job_queue

Synopsis

You can delete all the jobs in the LC job queue using this module. All the jobs in the job queue are terminated when you delete a job queue.

Check_mode support: No

Options

Table 45. dellemc_delete_lc_job_queue

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port

Table 46. Return Values

Name	Description	Returned	Type	Sample
LC Job Queue	Deletes the LC job queue	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Delete LC Job Queue
   dellemc_delete_lc_job_queue:
     idrac_ip:   "xx.xx.xx.xx"
     idrac_user: "xxxx"
     idrac_pwd:  "xxxxx"
     idrac_port: "xxx"
```

Configuring System Lockdown Mode

Module: dellemc_system_lockdown_mode

Synopsis

System Lockdown Mode provides a mechanism to protect configuration from any unintentional or accidental changes after the system is provisioned to a certain level.

This module is responsible for enabling or disabling the lockdown mode of a system. When System Lockdown Mode is enabled, the system's configuration is locked and system cannot be configured or updated until the lockdown mode is disabled.

Check_mode support: No

Options

Table 47. dellemc_system_lockdown_mode

Parameter	Required	Default	Choices	Comments
idrac_ip	Yes	NA	NA	iDRAC IP Address
idrac_user	Yes	NA	NA	iDRAC username
idrac_pwd	Yes	NA	NA	iDRAC user password
idrac_port	No	443	NA	iDRAC port
share_name	Yes	NA	NA	CIFS or NFS network share or a local path
share_user	No	NA	NA	Network share user in the format 'user@domain' or user\domain if user is part of a domain else 'user'. This field is mandatory for CIFS Network Share.
share_pwd	No	NA	NA	Network share user password. This field is mandatory for CIFS Network Share.
share_mnt	No	NA	NA	Local mount path of the network share with read-write permission for Ansible user. This option is mandatory for Network share.
lockdown_mode	Yes	NA	• Enabled	Whether to Enable or Disable system lockdown mode

			• Disabled	

Table 48. Return Values

Name	Description	Returned	Type	Sample
System Lockdown Mode	Configures lockdown mode of the system	Success	String	https://github.com/dell/Dell-EMC-Ansible-Modules-for-iDRAC

Example

```
-name: Configure System Lockdown Mode
   dellemc_system_lockdown_mode:
     idrac_ip:      "xx.xx.xx.xx"
     idrac_user:    "xxxx"
     idrac_pwd:     "xxxxxxxx"
     share_name:    "xx.xx.xx.xx:/share"
     share_user:    "xxxx"
     share_pwd:     "xxxxxxxx"
     share_mnt:     "/mnt/share"
     lockdown_mode: "xxxxxxx"
```

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Troubleshooting

- While creating new iDRAC users, the provided values are not getting applied completely on 14G servers.

— In case the user is not created with all the required user settings, change the user setting with action option **modify** in the **dellemc_configure_idrac_users** module.

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Accessing documents from the Dell EMC support site

You can access the required documents using the following links:

- For Dell EMC Enterprise Systems Management documents — www.dell.com/SoftwareSecurityManuals
- For Dell EMC OpenManage documents — www.dell.com/OpenManageManuals
- For Dell EMC Remote Enterprise Systems Management documents — www.dell.com/esmmanuals
- For iDRAC and Dell EMC Lifecycle Controller documents — www.dell.com/idracmanuals
- For Dell EMC OpenManage Connections Enterprise Systems Management documents — www.dell.com/OMConnectionsEnterpriseSystemsManagement
- For Dell EMC Serviceability Tools documents — www.dell.com/ServiceabilityTools
- a Go to www.dell.com/Support/Home.

  b Click **Choose from all products**.

  c From **All products** section, click **Software & Security**, and then click the required link from the following:
  - **Enterprise Systems Management**
  - **Remote Enterprise Systems Management**
  - **Serviceability Tools**
  - **Dell Client Command Suite**
  - **Connections Client Systems Management**

  d To view a document, click the required product version.
- Using search engines:
  - Type the name and version of the document in the search box.