



The science behind the report:

Save valuable time managing rack servers with HPE OneView

This document describes what we tested, how we tested, and what we found. To learn how these facts translate into real-world benefits, read the report [“Save valuable time managing rack servers with HPE OneView.”](#)

We concluded our hands-on testing on November 27, 2018. During testing, we determined the appropriate hardware and software configurations and applied updates as they became available. The results in this report reflect configurations that we finalized on September 27, 2018 or earlier. Unavoidably, these configurations may not represent the latest versions available when this report appears.

System configuration information

The table below presents detailed information on the systems we tested.

Server configuration information	HPE ProLiant DL380 Gen10
BIOS name and version	HP U30 v1.00
Non-default BIOS settings	N/A
Operating system name and version/build number	VMware® ESXi™ 6.7 8169922
Date of last OS updates/patches applied	09/28/18
Power management policy	Performance
Processor	
Number of processors	2
Vendor and model	Intel® Xeon® Gold 6150
Core count (per processor)	18
Core frequency (GHz)	2.70
Stepping	H0

Server configuration information		HPE ProLiant DL380 Gen10
Memory module(s)		
Total memory in system (GB)	64	
Number of memory modules	8	
Vendor and model	Samsung® M393A1K43BB1-CTD6Q	
Size (GB)	8	
Type	DDR4-2666V 1Rx8	
Speed (MHz)	2,666	
Speed running in the server (MHz)	2,666	
Storage controller		
Vendor and model	HPE Smart Array P408i-a SR Gen10	
Cache size (GB)	2	
Firmware version	1.04	
Driver version	6.805.03.00	
Local storage (type A)		
Number of drives	2	
Drive vendor and model	HPE ST300MM0008	
Drive size (GB)	300	
Drive information (speed, interface, type)	10K, SAS, HDD	
Network adapter		
Vendor and model	HPE Ethernet 1Gb 4-port 331i	
Number and type of ports	4 x 1GbE	
Driver version	20.6.37	
Cooling fans		
Vendor and model	Sunon® VF60381BX-Q07U-Q9I	
Number of cooling fans	6	
Power supplies		
Vendor and model	HPE HSTNS-PL41	
Number of power supplies	2	
Wattage of each (W)	800	

How we tested

Manual (Total steps: 21)

Creating a two-disk RAID1 virtual drive and updating BIOS

1. Boot the server.
2. When prompted, to enter System Utilities, press F9.
3. Select System Configuration.
4. Select Embedded RAID 1: HPE Smart Array.
5. Select Array Configuration.
6. Select Create Array.
7. Check the boxes of the desired drives, and select Proceed to next Form.
8. Select desired RAID Level (we chose RAID1), and select Proceed to next Form.
9. Name your Logical Drive, change any settings necessary (we left all options default), and select Submit Changes.
10. At the Success window, select Back to Main Menu.
11. Select BIOS/Platform Configuration (RBSU).
12. Choose your desired BIOS settings.
13. To Save and Exit, press F12.
14. Exit, and reboot.

Updating firmware via iLO

1. Download the necessary System ROM Flash Binary components for your system from the HPE Support Center.
2. In a browser, go to the server's iLO address.
3. Enter your credentials, and log in.
4. In the left panel, select Firmware & OS Software.
5. In the right panel, select Update Firmware.
6. Under Local binary file, select Choose File, and browse to your desired update package.
7. To begin updating, click Flash.

HPE OneView (Total initial steps: 19, Total steps on additional servers: 5)

We assume that the environment already has HPE OneView installed. Note: For the first server, admins must complete steps 1 through 19. For additional servers, admins must complete only steps 15 through 19.

Creating a RAID1 virtual drive, updating BIOS settings, and updating firmware

Ensure that you download the most recent ProLiant Service Pack (SPP) or a custom firmware bundle before continuing.

1. In a browser, go to HPE OneView application IP.
2. Click the OneView drop-down. Under GENERAL, select Firmware Bundles.
3. Click Add Firmware Bundle.
4. Browse to the file location of your SPP ISO, click Open, and click OK.
5. Wait for the firmware bundle to be uploaded. There will be a success notification.
6. Click OneView drop-down. Under SERVERS, select Server Profile Templates.
7. Click Create server profile template (or, if you already have a server profile template, select it, click Actions, and click Edit).
8. Scroll down to Firmware. Click the Firmware baselinedrop-down, and select the Service Pack for ProLiant which you wish to upgrade to. Select your installation method and scheduling, and click OK.
9. Scroll down to Local Storage, and click the pencil icon next to Integrated storage controller.
10. Click the Manage integrated storage controller checkbox, and click Add logical drive.
11. Give your desired RAID a name; select RAID level, drive technology, and accelerator preferences; and click OK.
12. Scroll down to BIOS settings, and click the Manage BIOS checkbox.
13. Click Edit BIOS settings, choose your desired BIOS settings, and click OK.
14. Scroll to the bottom of the Create Server Profile Template box, and click Create. Note: For Ansible testing, this step is the last step to follow for OneView setup. Ansible completed the Sserver deployment process.
15. Click the OneView drop-down. Under SERVERS, select Server Profile.
16. Click + to Create Profile.
17. Give the profile a name, and select your previously created Server Profile Template.
18. Click to expand the Server hardware drop-down menu, and select the server you wish to apply the profile to.
19. Make sure the options match your desired profile, and click Create. The server will then be updated to match the server profile.

HPE OneView module for Ansible (Total initial steps:18, Total steps on additional servers: 0)

Note: Prior to configuring and testing with Ansible, we completed steps 1-14 of the previous section which are included in the step count. We assume that the environment already contains a functioning Ansible installation.

Configuring Ansible for HPE OneView

Note: These steps are not included in the step count as they are steps to configure Ansible for the environment and are only prerequisites for beginning the task of deploying a server.

1. Clone the Github repository by typing the following command:

```
git clone https://github.com/HewlettPackard/oneview-ansible.git
```
2. Configure the ANSIBLE_LIBRARY and ANSIBLE_MODULE_UTILS environmental variables by typing the following commands:

```
export ANSIBLE_LIBRARY=/path/to/oneview-ansible/library
export ANSIBLE_MODULE_UTILS=/path/to/oneview-ansible/library/module_utils/
```
3. Navigate into the oneview-ansible directory and copy the oneview_config-rename.json file by using the following command:

```
cp oneview_config-rename.json oneview_config.json
```
4. Modify the oneview_config.json file to include the IP address and login credentials of your HPE OneView appliance, and make sure that the api_version variable is set to 600.

Deploying server profiles with Ansible

1. Navigate to the oneview-ansible/examples directory and copy the oneview_server_profile.yml file by typing the following command:

```
cp oneview_server_profile.yml methodology.yml
```
2. Modify the methodology.yml file with the name of your profile template and server hardware type (e.g., DL 380 Gen10 1). Delete or comment out everything after the Create a Server Profile from a Server Profile Template section.
3. Create a shell script (we named it assign_servers.sh) with the following command in it:

```
until ansible-playbook ~/oneview-ansible/examples/test_profile.yml | grep -m 1 '"associatedServer": null'; do sleep 0.2 ; done
```
4. Run your newly created playbook by running the following command:

```
./assign_servers.sh
```

Note: If you want to target a specific server instead of just a server type, you need to add a new value in the data subsection of the Create a Server Profile from a Server Profile Template task. Insert a line after the other values of the data subsection with the variable name serverHardwareName. After that value you can write the name according to HPE OneView.

Read the report at <http://facts.pt/jq9dfgo> ▶

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