



FAQ

NetApp PowerShell Toolkit

November 2017

Abstract

This document is the FAQ for NetApp PowerShell Toolkit. The document covers frequently asked questions about the NetApp PowerShell Toolkit and its known issues

Version History

Version	Date	Document Version History
Version 1.0	Nov 2017	First Publishing

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1 Overview

What Is NetApp PowerShell Toolkit?

Answer: NetApp PowerShell Toolkit (PSTK) is a PowerShell module that provides end-to-end automation and enables storage administration of NetApp Storage controllers. PSTK is a unified package containing the PowerShell modules for ONTAP and SANtricity. The ONTAP module contains over 2170 cmdlets and helps administering FAS, AFF, commodity hardware and cloud. The SANtricity module contains over 300 cmdlets and helps administering the E-Series storage arrays and EF-Series flash arrays.

Where Would I Download This Tool from?

Answer: PSTK is available for download on the [NetApp Support site](#)

Does PSTK require a license?

Answer: PSTK does not require any license

Are There Any Usage Restrictions?

Answer: There are no specific usage restrictions for PSTK outside the standard restrictions outlined in the NetApp Usage and Licensing Agreement.

2 Technical Specifications

Which NetApp Platforms Does PSTK Support?

Answer: PSTK supports E-Series and FAS storage systems (running in either Data ONTAP 7-Mode or Cluster-Mode).

Which Platforms Does PSTK Run On?

Answer: PSTK is supported only on Windows® platforms and runs on Windows 7 and above and Windows Server 2008 and above.

Which NetApp storage OS does PSTK support?

Answer: PSTK supports ONTAP 7.3.x and above as well as SANtricity OS 11.30 and above for the E2800, E5700, and EF570 platforms. It also supports the SANtricity Web Services Proxy 1.4 and above.

Can PSTK be installed on a Linux, Mac, Android or iPhone?

Answer: None of these platforms is currently supported

Is there any prerequisite for the installation of PSTK?

Answer: PSTK requires Microsoft Windows PowerShell 3.0 and up and Microsoft .NET Framework 4.5.2 and up

What Is the Size of PSTK?

Answer: NetApp PSTK is fairly compact and takes up about 60MB of local storage.

3 Support

How do I Get Support for PSTK?

Answer: PSTK is supported through community discussions. You can post your queries on [ONTAP Community Discussions](#) and [SANtricity Community Discussions](#).

How do We Submit Enhancement Requests?

Answer: Please submit these requests using the community discussion described above.

4 Additional Resources

Where do I find additional resources for PSTK?

Answer: Following are the resources for PSTK

- [Getting Started with PSTK](#)
- [Making the most of PSTK](#)
- [PSTK Primer](#)
- [PSTK Best Practices](#)

5 Frequently Asked DataONTAP Questions

How do I use import PSTK module in PowerShell?

Answer: Use cmdlet *Import-Module DataONTAP*

How do I find help for PSTK?

Answer: Use the following cmdlets for help

- *Show-NcHelp* to view the full HTML help
- *Get-NcHelp* to view all the available PSTK cmdlets
- *Get-NcCommand* to view all the available PSTK cmdlets
- *Get-NcHelp -CategoryList* to view the available categories in PSTK
- *Get-NcCommand -Category <category>* to view all the cmdlets of a particular category
- *Get-Help <cmdlet_name> -full* to view full help for a particular cmdlet
- *Get-Help <cmdlet_name> -examples* to view example for a particular cmdlet

How do I connect to a NetApp storage using PSTK

Answer: Use cmdlet *Connect-NcController*

Can I connect to an SVM's management interface?

Answer: Yes. Use *-Vserver* parameter in cmdlet *Connect-NcController*

Can I connect to multiple controllers?

Answer: Yes. After connecting to multiple controllers, use *-Controller* parameter in every cmdlet to execute that cmdlet against a particular controller

How do I know which cmdlets to run against the controller and which cmdlets to run against Vserver?

Answer: Each cmdlet is associated with a Family (cluster or vservers). To view the Family for the cmdlets use Cmdlets Get-NcHelp or Get-NcCommand. If the family is 'cluster' for a cmdlet, then the cmdlet must be directed to the cluster. If the family is 'vservers' for a cmdlet, then the cmdlet must be directed to the vservers. If the family is 'cluster,vservers' for a cmdlet, then the cmdlet can be directed to both cluster and vservers.

How do I gather basic info of controller?

Answer: Use cmdlets of category 'system'. Use cmdlet *Get-NcCommand -Category system* to list available cmdlets in this category

How do check the users of the controller?

Answer: Use cmdlet *Get-NcUser*

Can I send CLI commands to the controller from PSTK?

Answer: Yes. Use cmdlet *Invoke-NcSSH*

Can I call ONTAPI commands from PSTK?

Answer: Yes. Use cmdlet *Invoke-NcSystemApi*

How to format the output of cmdlet Invoke-NcSSH?

Answer: PSTK invokes SSH to execute CLI commands on the controller and can not act of formatting the output. Use regular expressions to match the pattern against the output and create a custom object to hold the output

Why does the size returned by Get-NcAggr, Get-NcVol and Get-NcLun differing while it displays on console and when it is exported to a CSV or stored in a local variable?

Answer: When these cmdlets outputs the size to console, it will be formatted. But when it is stored in a local variable or exported to csv format, the the size is returned in bytes. Use cmdlet *ConvertTo-FormattedNumber* to format the size as per your requirement

Does PSTK supports conversion of Dynamic VHD?

Answer: No. Only Fixed VHD is supported

How do I create a credential object?

Answer: Use the following cmdlets to create a credential object

```
$password = ConvertTo-SecureString -AsPlainText -Force <password>
```

```
$credential = new-object management.automation.pscredential <username>, $password
```

Use \$credential as the credential object to pass to the *-Credential* parameter in any cmdlet that supports this parameter

Can I download an older version of PSTK ?

Answer: No. You can download only the latest version of PSTK. The latest version always maintains 100% backward compatibility

6 Common Issues

While installing PSTK on Windows 10, I get an error saying “the application requires PowerShell 3.0 or above

Answer: Run the PSTK installer with admin privileges

While converting virtual hard disks using cmdlets `ConvertTo-NcVmdk` and `ConvertTo-NcVhd`, I get an error saying “source and destination offsets are not WAFL block-aligned”

Answer: The size of the disk must be a multiple of 4Kb. Resize the size of disk to a multiple of 4Kb using cmdlet `Resize-VHD`

While converting a dynamic VHD to VMDK using cmdlet `ConvertTo-NcVmdk`, I get an error saying “specified argument was out of the range of valid values. File is not a fixed-size VHD”

Answer: PSTK does not support dynamic VHD conversion. Convert the dynamic VHD to fixed using cmdlet `Convert-VHD`

While converting virtual disks whose size is greater than 128MB using cmdlets `ConvertTo-NcVhd` and `ConvertTo-NcVmdk` on ONTAP 9.0 and up, I get an error mentioning conversion failure

Answer: Follow the following steps to resolve this known issue

- Take a snapshot of the volume where the VHD or VMDK resides
- Pass the snapshot as a parameter to the cmdlet `ConvertTo-NcVhd` or `ConvertTo-NcVmdk`
- Delete the snapshot created after the conversion succeeds

Few of the cmdlets are throwing errors on older version of ONTAP saying “Unable to find API”, although the syntax for the cmdlet is proper

Answer: Some newer cmdlets are meant only for ONTAP 9.3 and they won't work for the earlier release of ONTAP. Please check the release notes for more information

While using filenames with non-ASCII characters in a volume, they are not handled correctly by the cmdlets

Answer: Use “UTF-8” instead

7 Known Issues

In SANtricity PSTK:

Get-NeAuditLog cmdlet – Fails with a return response of “Value cannot be null” referencing a parameter named disposition.

Workaround: Use the SANtricity Web Services API endpoint `Get /storage-systemc/{system-id}/audit-log`

Get-NeLocalUserInfo cmdlet – The returned value for `minimumPasswordLength` field is null. Future new releases of the SANtricity OS will return a valid value for the field.

Workaround: Upgrade to the next release of SANtricity OS when available.

Update-NeExternalKeyServerCertificateCsr cmdlet – An exception will be thrown only if required parameters are used for the cmdlet, no optional parameters.

Workaround: Use the cmdlet with all required and optional parameters.

Get-NeLdapRoles cmdlet – Typo in the synopsis statement on the get-help output for the cmdlet.

Update-NeSslconfigReset cmdlet Typo in the synopsis statement on the get-help output for the cmdlet.

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