Skyline Automation Toolkit - User Guide

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Introduction to Skyline Automation Toolkit

The Skyline Automation Toolkit is designed to save valuable time in remediating potential issues surfaced by Skyline Advisor to ensure stability, security and productivity. The Toolkit allows cloud admins and SREs to automate Skyline Advisor's Proactive Intelligence with their own tools and processes. It automates two main Skyline functions:

1. Remediation of Skyline's Proactive Findings
2. Install & configuration of the Skyline Collector with VMware product endpoints

The Toolkit leverages VMware Powershell modules to update and configure VMware infrastructure. VMware engineers build and test the Skyline Automaton Toolkit, however we recommended testing in a development environment before using in production. The Skyline Automation Toolkit is a VMware Fling. VMware Flings is a program in the Office of the CTO that enables anyone at VMware to release off-roadmap, experimental tools directly to customers via the Flings site. While Flings are not officially supported and should not be used in a production environment, Fling developers do appreciate feedback and requests through comments to release Fling updates.

Packages

1. **skyline-fixer** - This script reviews the Skyline Advisor CSV export(s) and implements the remediation steps
2. **skyline-comm** - This script sends Skyline findings to slack, jira, pagerduty, and other management/reporting services
3. **skyline-helper** - This script ensures proper connection between product endpoints and the Skyline Collector
4. **skyline-docker** - This script builds additional infrastructure to help support "Findings and Recommendations" beyond VMware suite

Installation

1. Pre-requisites

In order to install Skyline Automation Toolkit, all you need are:

1. A Windows machine (win10 or higher)
2. Powershell
3. Disable Powershell restriction
   a. "*set-executionpolicy unrestricted*"

2. Installation

1. open up Powershell as administrator
2. run "*install-module SkylineAutomationToolkit*"

In order for Skyline Automaton Toolkit to work with vSphere, vROPS, and NSX, a prep script needs to be run to install additional modules.

1. install powercli
    a. "*skyline-helper powercli-prep*"
2. install vROPS plugin
    a. "*skyline-helper nsx-prep*"
3. install NSX plugin
    a. "*skyline-helper vrops-prep*"
4. install skyline-prep
    a. "*skyline-helper skyline-prep*"

Configuration

Every installation requires custom attributes based on customers' environment. These can be the following examples (network: ntp, dns, IPs; vSphere: cluster, datastore). A configuration file is created called **c:\skyline\skyline.automation.toolkit.config.ps1** to hold these attributes. Every time a Skyline.Automation.Toolkit script runs, this file will be use to gather all needed configuration.

Here are some sample commands that uses this custom configurations:

- **skyline-fixer CSV Findings-xxxx.csv**
    - https://kb.vmware.com/s/article/1003736
    - https://kb.vmware.com/s/article/2003322
- **skyline-helper ova-prep**
- **skyline-helper ova-prep**
- **skyline-comm prep**
- **skyline-comm get-findings**
- **skyline-docker docker-prep**

How to Use Packages

3. skyline-fixer

The goal of **skyline-fixer** is just to fix customers' environment based on Skyline Findings CSV export. It serves no other purpose. There are hundreds of findings inside Skyline and more are added. Skyline.Automation.Toolkit does not provide solutions for all findings. In order to identify which findings it supports, you will need to run "skyline-kblist". More findings will be added when newer Skyline.Automation.Toolkit is release.

1. check to see which KBs have been added to skyline-fixer
    a. "**skyline-fixer kblist**"
2. impliment fixes
    a. "**skyline-fixer csv Finding.csv"**

4. skyline-helper

Skyline-helper looks at the settings at the endpoints to make sure all permissions and role are set. This helps identify why there is a connection issue from the endpoints to the Skyline Collector. It will help fix the problem when needed. Here are the sections of skyline-helper:

- client arg
- vCenter arg
- ESX arg

- Skyline arg
- NSX arg
- vROPS arg

4.1. client arg

In order to use Skyline.Automation.Toolkit, customers will need to have VMware.PowerCLI. Customers don't need to have VMware.PowerCLI installed ahead of time. This script will help install VMware.PowerCLI if not installed already.

1. install VMware.powercli
   a. "**skyline-helper powercli-prep**"

4.2. vCenter arg

Skyline-helper will check to ensure roles matches "**https://kb.vmware.com/s/article/59661**". It will check and fix if needed.

1. "**skyline-helper create-role VCENTER ROLENAME**"
   a. NOTE: VCENTER can be FQDN or IP
   b. NOTE: ROLENAME could be "skyline"
2. "**skyline-helper check-role VCENTER ROLENAME**"
3. "**skyline-helper add-2-role VCENTER ACCOUNT ROLENAME**"
4. "**skyline-helper check-account ACCOUNT**"

4.3. ESX arg

For some fixes, SSH needs to be enabled on ESX. This portion of the script will help start and stop ssh for the fixes to occur.

1. "**skyline-helper start-ssh**"
2. "**skyline-helper stop-ssh**"

4.4. Skyline arg

Skyline-helper performs several tasks for Skyline.   If customer does not have Skyline Collector deployed yet, they can:

- download the collector ova
- placed in c:\skyline
- set variables in **c:\skyline\skyline.automation.toolkit.config.ps1**

1. "**skyline-helper ova-prep**"
2. "**skyline-helper ova-deploy**"

When Skyline Collector has been installed, customers can check to see if they are running the latest and great.

1. "**skyline-helper check-update COLLECTOR**"
2. "**skyline-helper install-update COLLECTOR**"
3. "**skyline-helper check-version COLLECTOR**"

Sometimes, Skyline Collector has been turned off by accident, customers can check to see if appliance is on. If off, the script

will turn on the appliance.

1. "**skyline-helper skyline-vm-check VCENTER COLLECTOR**"
2. "**skyline-helper skyline-vm-turnon VCENTER COLLECTOR**"

If not documented, the admin password for the Skyline Collector is forgotten. This script will help reset it back to default.

1. "**skyline-helper reset-adminpw COLLECTOR**"

4.5. NSX arg

Skyline-Helper will help identify account settings for NSX based on "**https://kb.vmware.com/s/article/59661**".

1. "**skyline-helper nsx-prep**"
2. "**skyline-helper check-nsxaccount**"
3. "**skyline-helper add-nsxaccount**" ***coming soon**

4.6. vROPS arg

Skyline-Helper will help identify account settings for vROPS based on "https://kb.vmware.com/s/article/59661".

1. "**skyline-helper vrops-prep**"
2. "**skyline-helper check-vropsaccount**"
3. "**skyline-helper add-vropsaccount**" ***coming soon***

5. skyline-docker ***coming soon***

Skyline-docker leverage docker container to stand up additional resources for Skyline.Automation.Toolkit to use. This script helps you install an additional PhotonOS appliance, install docker, and then deploy various containers.

Customer will need to prepare before performing the initial tasks:

- download the PhotonOS ova (https://github.com/vmware/photon/wiki/Downloading-Photon-OS)
- placed in c:\skyline
- set variables in **c:\skyline\skyline.automation.toolkit.config.ps1**

This portion of the script helps deploy the OVA into customers' environment.

1. "**skyline-docker docker-prep**"
2. "**skyline-docker docker-deploy**"

Here, the script enables docker inside the OVA.

1. "**skyline-docker docker-install**"

These are examples of containers that will be deployed.

1. **"skyline-docker docker-salt"**
2. **"skyline-docker docker-sftp"**

6. skyline-comm

Skyline-comm uses Skyline Pro Insights API and send the data to various communication suite. This automate the creation of messages and tickets to allow team members to work together on Skyline findings. In order for the script to work, you will need to set up the followings:

- configure Skyline API-User role, get Skyline API Token, and create Skyline Access Token
- add your Skyline Access Token into c:/skyline/SkylineUtils-config.ps1 (need to run "skyline-comm prep" first)
- create slackbot for slack with desired permisions
- create access token for slack, jira, pagerduty

1. **"skyline-comm prep"**
2. **"skyline-comm get-access-token"**
3. **"skyline-comm get-findings"**
   a. **"skyline-comm get-findings list"**
   b. **"skyline-comm get-findings category SECURITY|NETWORK|COMPUTE|STORAGE"**
   c. **"skyline-comm get-findings type CONFIGURATION|UPGRADE"**
   d. **"skylline-comm get-findings severity CRITICAL|MODERATE|TRIVIAL"**
4. **"skyline-comm convert-2-csv"**
5. **"skyline-comm send-2-slack"**
6. **"skyline-comm send-2-jira"** ***coming soon***
7. **"skyline-comm send-2-pagerduty"** ***coming soon***

FAQ

1. **Where to find Skyline.Automation.Toolkit scripts?**
   a. To make it very simple to find, all you have to do is "install-module Skyline.Automation.Toolkit". No Git, prep work, or configuration is necessary to install toolkit.
2. **How often does Skyline.Automation.Toolkit get updated?**
   a. skyline.automation.toolkit wil be update on a monthly bases.
3. **Can I run this on pwsh in Linux or Mac OS X?**
   a. Yes, you can install this module on Linux and Mac OS X running pwsh. However, it has limited capabilities due to lack of VMware.vimautomation.core components.

No labels