



# VMware Skyline™

Proactive Intelligence

Another team member. Not another tool





# VMware Skyline

Matt Puthoff

Staff Technical Account Manager @ VMware



©2022 VMware, Inc.



# Agenda

What are you doing?

What is Skyline?

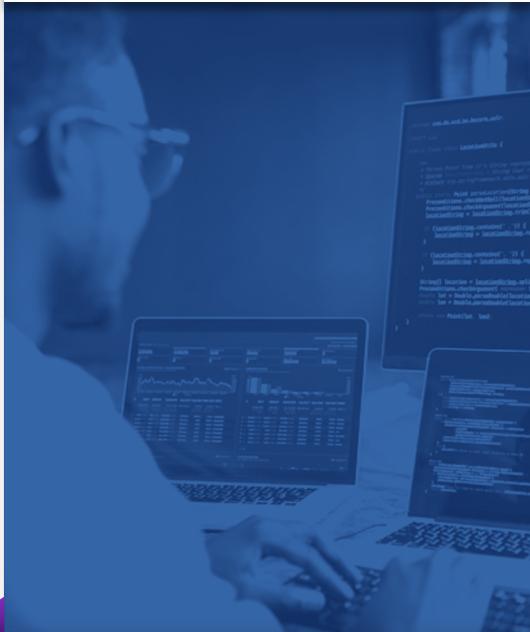
# What Are You Doing?

Hint: You don't have to put down your beer, but this is where you are allowed to interact with Matt.

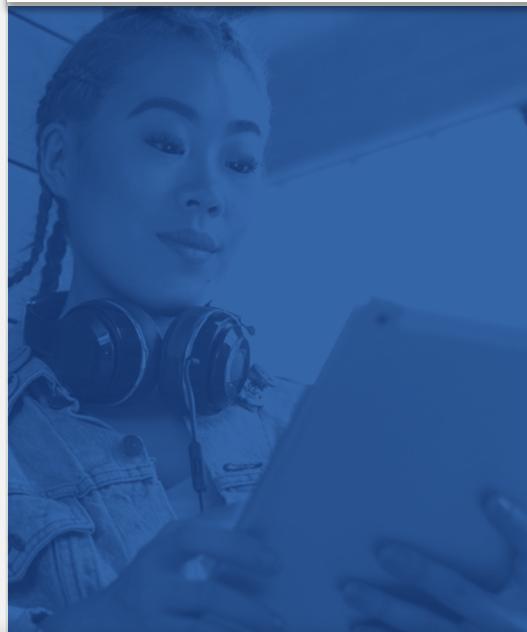
# VMware Skyline Proactive Intelligence

Avoid issues, streamline problem resolution

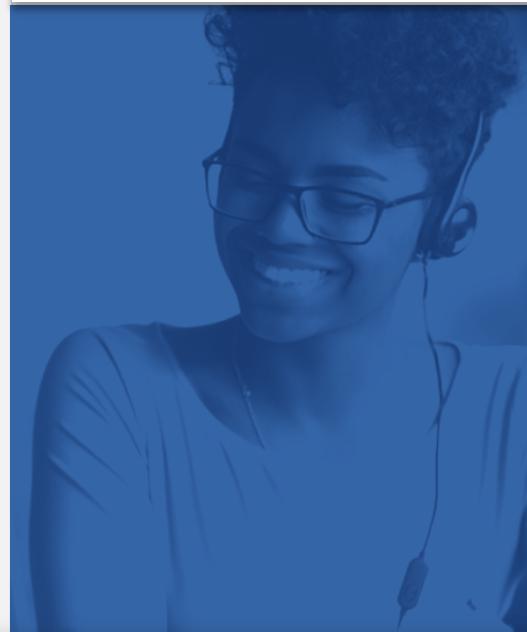
Proactively  
Avoid Issues  
Before They Occur



Speed  
Support Request  
Resolution



Increase Security,  
Reliability and  
Productivity



Included with Success 360



← Operational Excellence | Risk Mitigation | Accelerate Outcomes →

# VMware Skyline - Product Line Overview

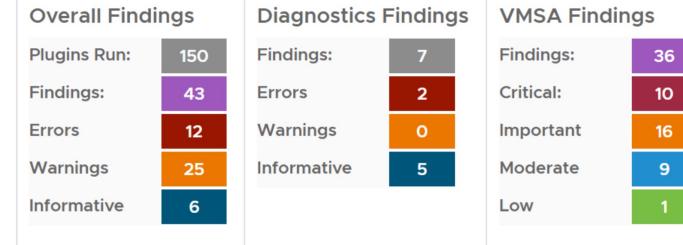


# Skyline Health Diagnostics

## Root cause vSphere issues with log diagnostics

### Summary of VMware Security Advisory Scanning

| Critical (10 findings from 10 advisories across 1 targets)                 |                           |  |
|--|---------------------------|--|
| <a href="#">VMSA-2018-0027.b: vmxnet3 uninitialized stack memory usage</a> |                           |  |
| Target Host  | Product/Version           | Desired Patch/Update (Minimum)                 |
| hostname.domain-name.com   | VMware ESXi 6.7.0-8169922 | VMware ESXi Server 6.7.0: ESXi670-201811401-BG |
| VMSA-2018-0027.a: vmxnet3 uninitialized stack memory usage                 |                           |  |
| Target Host  | Product/Version           | Desired Patch/Update (Minimum)                 |
| hostname.domain-name.com   | VMware ESXi 6.7.0-8169922 | VMware ESXi Server 6.7.0: ESXi670-201811401-BG |



Log Directory: **esx-localhost-2020-08-02--15.30-2103419**  
Hostname: **localhost**, Log Date: **2020-08-02T15:30:06**  
VMware ESXi 6.7.0-build-14320388 (ESXi 6.7 Update 3 released on 2019-08-20)

Plugins Run 150 Number of Findings 63 Informative 1 Warnings 0 Errors 6

| VCG/vSAN HCL Validation Summary |   |            |               |  |              |                  |   |                 |
|---------------------------------|---|------------|---------------|--|--------------|------------------|---|-----------------|
| Device                          | Description   | VCG Status | Driver Status | Current Driver/Version                   | VCG Driver   | Current Firmware | VCG Firmware                            | Forward Support |
| Server                          | HPE ProLiant DL380 Gen10                                  | Supported  | N/A           | N/A                                      | N/A          | U30              | HPE U30_2_22 UEFI Mode (Boot Mode:UEFI) | 6.7 U3, 7.0     |
| vminic0                         | NetXtreme BCM5719 Gigabit Ethernet (network)              | Supported  | Supported     | ntg3 4.1.3.2-lvmw.670.1.28.10302608      | 4.1.3.2-lvmw | 1.46             | N/A                                     | 6.7 U3, 7.0     |
| vminic1                         | NetXtreme BCM5719 Gigabit Ethernet (network)              | Supported  | Supported     | ntg3 4.1.3.2-lvmw.670.1.28.10302608      | 4.1.3.2-lvmw | 1.46             | N/A                                     | 6.7 U3, 7.0     |
| vminic2                         | NetXtreme BCM5719 Gigabit Ethernet (network)              | Supported  | Supported     | ntg3 4.1.3.2-lvmw.670.1.28.10302608      | 4.1.3.2-lvmw | 1.46             | N/A                                     | 6.7 U3, 7.0     |
| vminic3                         | NetXtreme BCM5719 Gigabit Ethernet (network)              | Supported  | Supported     | ntg3 4.1.3.2-lvmw.670.1.28.10302608      | 4.1.3.2-lvmw | 1.46             | N/A                                     | 6.7 U3, 7.0     |
| vminic4                         | 82599 10 Gigabit Dual Port Network Connection (network)   | Supported  | Not Latest    | ixgben 1.7.15-1OEM.670.0.0.8169922       | 1.8.7        | 0x8000091d       | N/A                                     | 6.7 U3, 7.0     |
| vminic5                         | 82599 10 Gigabit Dual Port Network Connection (network)   | Supported  | Not Latest    | ixgben 1.7.15-1OEM.670.0.0.8169922       | 1.8.7        | 0x8000091d       | N/A                                     | 6.7 U3, 7.0     |
| vhba0                           | Lewisburg SATA AHCI Controller (sata)                     | Supported  | Supported     | vmw_ahci 1.2.8-lvmw.670.3.73.14320388    | 1.2.8-lvmw   |                  | N/A                                     | 6.7 U3, 7.0     |
| vhba1                           | HPE P408i-a SR Gen10 (sas)                                | Supported  | Not Latest    | smartpq1 1.0.3.2309-1OEM.670.0.0.8169922 | 1.0.4.3017   | 1.99             | 2.92-[0]                                | 6.7 U3, 7.0     |
| vhba2                           | QLE2692 Dual Port 16Gb Fibre Channel to PCIe Adapter (fc) | Supported  | Not Latest    | qlnativefc 3.1.16.1-1OEM.670.0.0.8169922 | 3.1.31.0-1   | 8.08.220         | 8.08.xx                                 | 6.7 U3, 7.0     |
| vhba3                           | QLE2692 Dual Port 16Gb Fibre Channel to PCIe Adapter (fc) | Supported  | Not Latest    | qlnativefc 3.1.16.1-1OEM.670.0.0.8169922 | 3.1.31.0-1   | 8.08.220         | 8.08.xx                                 | 6.7 U3, 7.0     |

\*\*Devices used for vSAN are checked against vSAN HCL. vSAN HCL check is currently limited only for the Storage IO Device  
#Firmware and BIOS versions are not validated. Please review the details for compatibility

# SOC 2 Compliance and Data Encryption at Rest

The screenshot shows the VMware Cloud website with the 'Compliance' tab selected. The page title is 'Existing Cloud Compliance Programs'. It features a search bar and navigation links for Overview, Security, Privacy, Compliance, Resiliency, and FAQs. Below the title, there's a section for 'Continually updated information on the compliance programs most relevant to you'. A link 'For information on VMware Product Compliance click here.' is present. The main content area displays three compliance programs: CSA, Cyber Essentials Plus, and SOC 2. Each program has a logo, a brief description, and a 'LEARN MORE' button.

| Region | Select Option                                      | Service  | VMware Skyline  |
|--------|--|--|---|
| CSA    | Cloud Security Alliance Controls<br>Region: Global | Cyber Essentials Plus<br>UK Government Information Assurance Framework<br>Region: EMEA | SOC 2<br>System and Organizational Controls for Service Organizations<br>Region: Global |

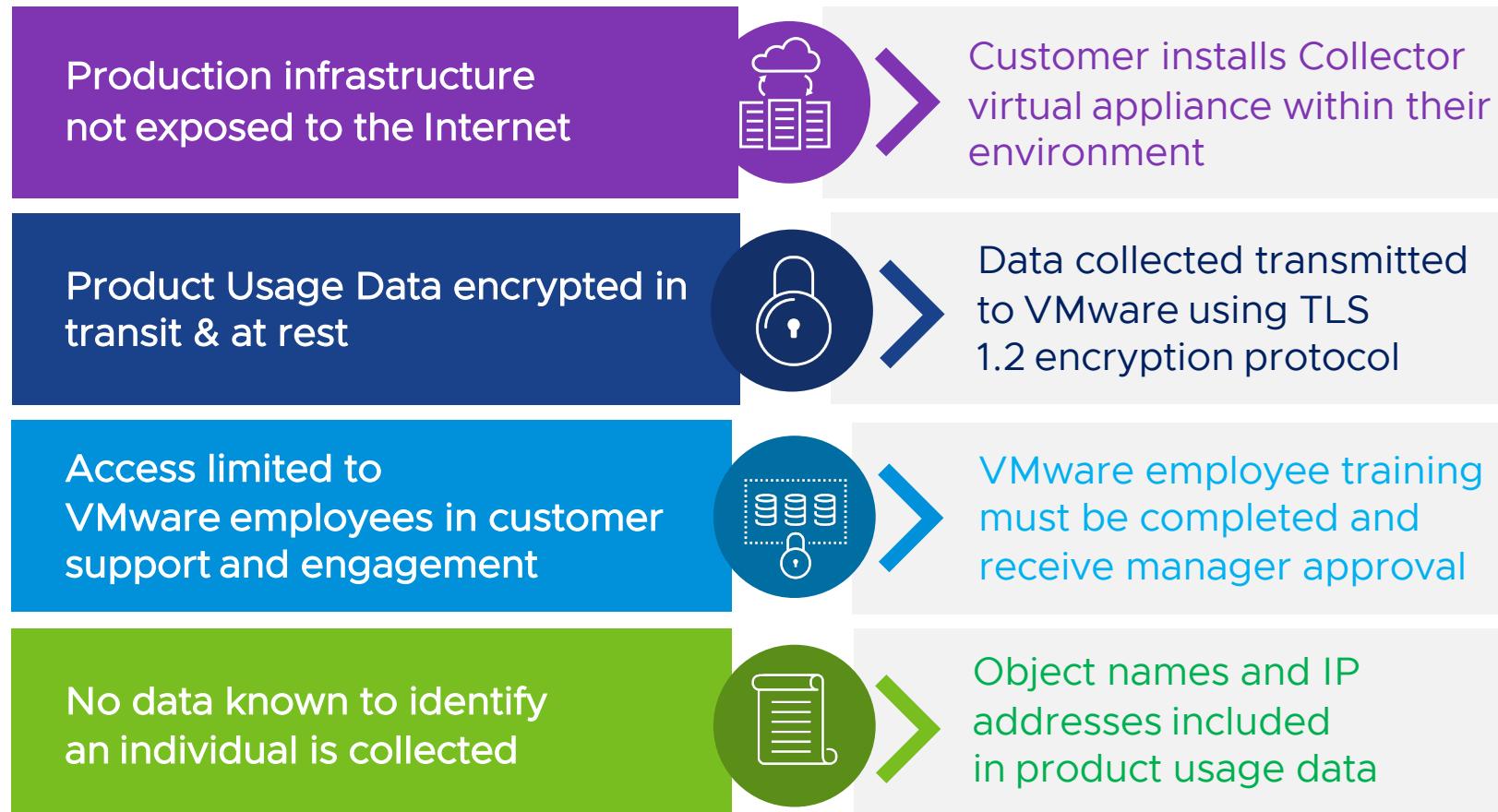
**Compliance Programs:**

- CSA**: Cloud Security Alliance Controls. Region: Global. Learn More.
- Cyber Essentials Plus**: UK Government Information Assurance Framework. Region: EMEA. Learn More.
- SOC 2**: System and Organizational Controls for Service Organizations. Region: Global. Learn More.

The screenshot shows the 'my vmware' support page. The top navigation includes 'Products', 'Support', and 'Knowledge'. A question is displayed: 'Q. Is the data encrypted?'. The answer states: 'A. There are two data methods of data collection within Skyline. The first, product usage data, is collected to provide proactive findings, recommendations, and inventory. The second are support bundles which are collected and transmitted via Skyline Log Assist, as-part of troubleshooting an issue within an open Support Request with VMware Global Support Services (GSS). Product usage data collected by the Skyline Collector is transferred to VMware using TLS 1.2 cipher suite TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384. The product usage data that is transferred to Skyline's storage platform is encrypted-at-rest. Support bundles collected by the Skyline Collector, via Skyline Log Assist, are transferred to VMware's Technical Support systems using TLS 1.2 cipher suite TLS\_ECDHE\_RSA\_WITH\_AES\_256\_GCM\_SHA384. The support bundles are not stored within the Skyline storage platform. If a customer is utilizing an SSL inspection proxy, then the proxy determines the encryption method used to encrypt product usage data, and support bundles collected, in-transit.'

# Robust Privacy and Security Policy

Building trust with transparency



## Resources

[VMware Skyline FAQ](#)

[VMware Skyline Data Collection Examples](#)

[VMware Cloud Security Alliance](#)

[VMware Trust and Assurance](#)



# Features



# Released Today!

With the release of Skyline Collector 3.3 (download available February 17), the VMware Skyline Team is pleased to announce the latest features in Skyline Advisor Pro that include:

- Extending Skyline to Hyperscaler Provider Production Support (HPPS) and Authorized Service Providers (ASPs).
- Integration Aria Operations for Logs (formerly vRealize Log Insight)
- Enhancing Log Assist
- Restoring Deactivated Accounts

Released November 15, 2022

- Automated Endpoint Discovery (vRealize)

Released October 17, 2022

- Operational Summary Reports → Insight Summary Reports

Skyline Insights API

# Log Assist with SR Visibility For Teams

## #1 most-requested feature

The screenshot shows the Skyline Advisor interface with the 'Log Assist' tab selected. On the left, there are two filter sections: 'Inventory' and 'Status'. The 'Inventory' section includes a search bar and a tree view of objects like 'brm-nsx-manager.brmstorage.cc' and 'brm-prod-vc.brmstorage.com'. The 'Status' section lists 'Requested', 'Rejected', 'In Progress', 'Expired', 'Completed', and 'Failed'. The main area is titled 'Log Library' and contains a search bar and a table header with columns: Requested Date, Inventory, Associated SR, Entitlement Account, Requested By, Last Updated, Status, and Action. A message 'There is no data in Log library' is displayed. At the bottom are 'CLEAR ALL' and 'APPLY' buttons.

The screenshot shows the 'Advanced' settings page. It has tabs for 'Emails' and 'Advanced', with 'Advanced' selected. Under 'Support Requests', there is a toggle switch for 'View Support Requests Raised by Team Members' which is turned on. Below it, a note says: 'Enabling this setting allows you to see support requests opened by other team members and use Log Assist to transfer support bundles associated with those support requests.' Under 'Link Support Entitlement Accounts to your VMware Cloud Service Organization', it says: 'The level of Support Entitlement determines your Skyline Advisor experience. Support Requests opened under a Support Entitlement are only visible within Skyline Advisor if the Entitlement Account is linked to the Organization.' A table shows linked entitlement accounts: '112756162 - VMware' and '114392118 - VMware Inc.', both marked as 'Linked' with a 'UNLINK' button. A note at the bottom says '2 Entitlement Accounts'.

# Support for vRealize Automation

vRealize Automation v8.1 and above, and vRealize Lifecycle Manager v8.2 and above

The screenshot shows the VMware Skyline Advisor web interface. The top navigation bar includes the VMware logo, 'Skyline Advisor', a help icon, and the 'VMware Skyline' logo. Below the navigation is a horizontal menu with links: Dashboard, **Inventory**, Findings & Recommendations, OSR Library, Log Assist, and Integrations. The main content area is divided into two sections: a sidebar on the left and a main panel on the right. The sidebar contains a tree view with categories like vSphere, NSX-T, NSX-V, vRealize Suite Lifecycle Manager, vRealize Automation, vRealize Operations Manager, Horizon, and VMware Cloud Foundation. The 'vRealize Automation' node is currently selected. The main panel has a search bar at the top with the placeholder 'Search by Object Name and hit enter'. Below the search bar is a message 'Last Analysis: Jul 22, 2021 11:53 AM MDT'. A table lists five vRealize Automation objects:

| Inventory Type        | Name                                  | Version | Products Linked |
|-----------------------|---------------------------------------|---------|-----------------|
| > vRealize Automation | brm-vra-app.brmstorage.com            | 8.4.0   | 2 Products ▾    |
| > vRealize Automation | ipv4-91-50.sof-mbu.eng.vmware.com     | 8.4.0   | 1 Product ▾     |
| > vRealize Automation | soda.sof-mbu.eng.vmware.com           | 7.6.0   | 1 Product ▾     |
| > vRealize Automation | sof-vcac-vm302.sof-mbu.eng.vmware.com | 8.3.0   | 1 Product ▾     |
| > vRealize Automation | test-vra.brmstorage.com               | 8.3.0   | 1 Product ▾     |

# Bulk Product End Point Configuration

## Bulk insert and update

The screenshot shows the VMware Skyline Collector web interface. The top navigation bar includes tabs for 'System Status' and 'Configuration'. The left sidebar has sections for 'PRODUCTS' (vCenter Server, NSX-V, NSX-T, Horizon View, vRealize Operations, VMware Cloud Foundation), 'BULK PRODUCT OPERATIONS' (selected, showing 'Import & Update Products'), 'COLLECTOR' (Network Configuration, Auto-Upgrade, Collector Name, Active Directory), and 'SYSTEM' (Web Server Certificate, Root Password Expiration). The main content area is titled 'Import & Update Products' with the sub-instruction 'Add, Update, or Remove products in bulk using a CSV file.' It features a large icon of a CSV file with an 'X' and 'a,' and a 'Move' arrow pointing to it. Below this are instructions to 'Drag & Drop your CSV files here' or 'SELECT A FILE'. A section below provides links to download 'BLANK TEMPLATE' or 'PROBLEMATIC PRODUCTS'. At the bottom, a status message indicates 'Execution completed. All Operations were successful!' from a recent execution on Feb 8, 2021 at 11:18 AM.

# Skyline Proactive Findings Catalog

## Understand everything Skyline proactively identifies

The screenshot shows the Skyline Advisor application interface. At the top, there's a navigation bar with tabs: Dashboard, Inventory, Findings & Recommendations (which is currently selected), OSR Library, Log Assist, and Integrations. To the right of the tabs are user information (Joshua Lory, Skyline Demo COE) and a settings icon. Below the navigation bar is a sidebar titled "Filters" containing dropdown menus for Severity, Category, Finding Types, and Date Released. The main content area has tabs for Active Findings, Hidden Findings, Upgrade Recommendations, and Findings Catalog (which is also selected). A tooltip message states: "Skyline proactively analyzes your environment for all of the Findings listed below. Please use the Active Findings tab to view and action Findings that currently impact your environment." Below the tooltip is a search bar with the placeholder "Search by Finding ID or Description and hit enter". The main table displays a list of findings with columns: Severity, Category, Finding ID, Finding Types, Description, Risk if no action taken, and Date Released. The findings listed are:

| Severity | Category | Finding ID                        | Finding Types | Description                       | Risk if no action taken  | Date Released |
|----------|----------|-----------------------------------|---------------|-----------------------------------|--------------------------|---------------|
| Moderate | Storage  | vSphere-HBEsmartpqimemory-KB#6... | CONFIGURATION | HPE HBA driver smartqi report...  | Environmental Stability  | Jan 12, 2021  |
| Moderate | Compute  | vSphere-CiscoNexus1000V-KB#214... | CONFIGURATION | Discontinuation of third party... | Configuration Limiting   | Jan 12, 2021  |
| Critical | Network  | NSXv-ControllerLogDiskSpace-KB... | CONFIGURATION | NSX-v Controller /var/log part... | Infrastructure Stability | Jan 12, 2021  |
| Moderate | Storage  | vSphere-highstunrates-KB#77030    | UPGRADE       | High VM Stun time during snaps... | Guest OS Stability       | Jan 12, 2021  |
| Moderate | Compute  | vSphere-ESXinonresponsive-KB#8... | UPGRADE       | ESXi Hosts in an environment c... | Environmental Stability  | Jan 12, 2021  |
| Moderate | Storage  | vSphere-qlnativefcQIF-KB#80237    | CONFIGURATION | Qlogic "qlnativefc" driver rep... | Environmental Stability  | Jan 12, 2021  |

At the bottom left of the main content area are "CLEAR ALL" and "APPLY" buttons. On the far right, there are "SUPPORT" and "FEEDBACK" buttons.

# VMware Cloud Foundation and NSX-T Support

## Most-requested product adds

The screenshot shows two views of the VMware Skyline Advisor interface. The left view is the 'Findings & Recommendations' screen, displaying a list of findings for 'nsx-t'. The right view is a detailed view of a specific finding for 'VSAN-SmallDiskVMFailures-KB#2080503'.

**Findings & Recommendations Screen (Left):**

- Header:** vmw Skyline Advisor, Joshua Lory CMBU TMM, Settings.
- Tabs:** Dashboard, Inventory, Findings & Recommendations (selected), OSR Library, Log Assist.
- Filters:** Active Findings, Hidden Findings, Upgrade Recommendations, Findings Catalog (selected).
- Search:** nsx-t.
- Table:** A grid of findings with columns: Severity, Category, Finding ID, Finding Types, Description, Risk if no action taken, Date Released.
- Actions:** CLEAR ALL, APPLY.

**Detailed Finding View (Right):**

- Header:** vmw Skyline Advisor, Joshua Lory Skyline Demo COE, Settings.
- Tabs:** Dashboard, Inventory, Findings & Recommendations (selected), OSR Library, Log Assist, Integrations.
- Filters:** Inventory.
- Details:** Finding ID: VSAN-SmallDiskVMFailures-KB#2080503, Severity: CRITICAL, Category: Storage, Finding First Observed: Jan 11, 2021.
- Description:** Using small magnetic disks for vSAN might result in VM failures.
- Risk:** Risk if no action taken, Guest OS Stability.
- VCF Recommendation & Affected Objects:**
  - Recommendations:**
    - Avoid this issue, adjust the default value of the ClomMaxComponentSizeGB parameter for each host in the vSAN cluster.
    - Browse to the host in the vSphere Web Client navigator.
    - Click the Manage tab and click Settings.
    - Under System, click Advanced System Settings.
    - Select the VSAN.ClomMaxComponentSizeGB option and click Edit.
    - Change the default value, so it does not exceed 80% of the smallest magnetic disk that you use in the vSAN cluster.
  - Helpful Links:** <https://kb.vmware.com/s/article/2080503>
  - Affected Objects (6):** [List of 6 objects]

# Upgrade Recommendations

## With compatibility checks

The screenshot shows the VMware Skyline Advisor interface. At the top, there's a navigation bar with tabs: Dashboard, Inventory, Findings & Recommendations (which is selected), OSR Library, Log Assist, and Integrations. On the right of the nav bar are user info (Joshua Lory, Skyline Demo COE) and settings icons.

The main content area displays a recommendation for upgrading vCenter. It says: "Upgrade vCenter vxrail-vcsa-04.vxrailqe.local to 6.7.0 U3 (Build Number: 15976714 or higher)" and notes "Current vCenter version is 6.7.0, Build Number: 12493910".

Below this, there's a section titled "Product Interoperability with vCenter 6.7.0 U3" with a note: "Skyline doesn't support all the products as of now. Interoperability is shown for products available in your environment and supported by Skyline. Refer Interoperability Matrix for more details."

The interoperability status for various components is listed:

- ESXi - (1): Shows a green checkmark and "ESXi Version - 6.7 U1" with a note: "Interoperable with vCenter 6.7.0 U3".
- NSX-T - (0): Shows a blue info icon and "NSX-T not linked with this vCenter Server".
- NSX-V - (0): Shows a blue info icon and "NSX-V not linked with this vCenter Server".
- vSAN - (0): Shows a blue info icon and "vSAN not linked with this vCenter Server".
- vRealize Operations Manager - (0): Shows a blue info icon and "vRealize Operations Manager not linked with this vCenter Server".
- Horizon - (0): Shows a blue info icon and "Horizon not linked with this vCenter Server".

On the right side of the interface, there are two vertical buttons: "SUPPORT" and "FEEDBACK".

Under "Helpful Links", there are three links: "Update sequence for vSphere 6.7", "Update sequence for vSphere 6.5", and "Update sequence for vSphere 6.0".

Under "Upgrade Impact", there's a summary table:

| Findings addressed | Critical Findings | Moderate Findings | Trivial Findings | Findings addressed | Critical Findings | Moderate Findings | Trivial Findings |
|--------------------|-------------------|-------------------|------------------|--------------------|-------------------|-------------------|------------------|
| 85.71%             | 7.14%             | 78.57%            | 0.00%            | 12/14              | 1                 | 11                | 0                |
| Findings addressed | Critical Findings | Moderate Findings | Trivial Findings | Findings addressed | Critical Findings | Moderate Findings | Trivial Findings |

# Download Skyline Today

---

## Download Skyline

<http://www.vmware.com/go/skyline/download>

## More Information

<http://vmware.com/go/skyline>

## Hands-On Lab

<http://vmware.com/go/skyline/hol>

## FAQs

<https://kb.vmware.com/s/article/55928>

## Skyline Community

<https://communities.vmware.com/community/vmtn/skyline>



Free vRealize  
Operations Cloud  
trial for all Skyline  
customers

vSphere & Skyline Resources



Thank You