

REPORTING INSIGHTS

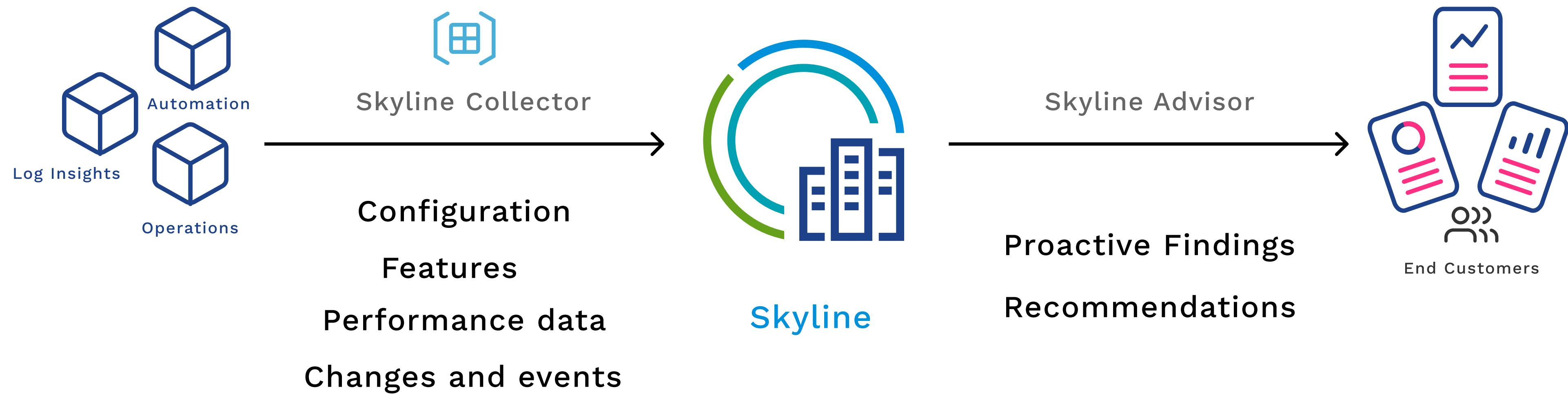
Helping VMware Support Managers deliver insightful reports using Skyline product to ensure reliability and stability in customers environment.

Team : 2 Designers, 1 PM, and 5 engineers

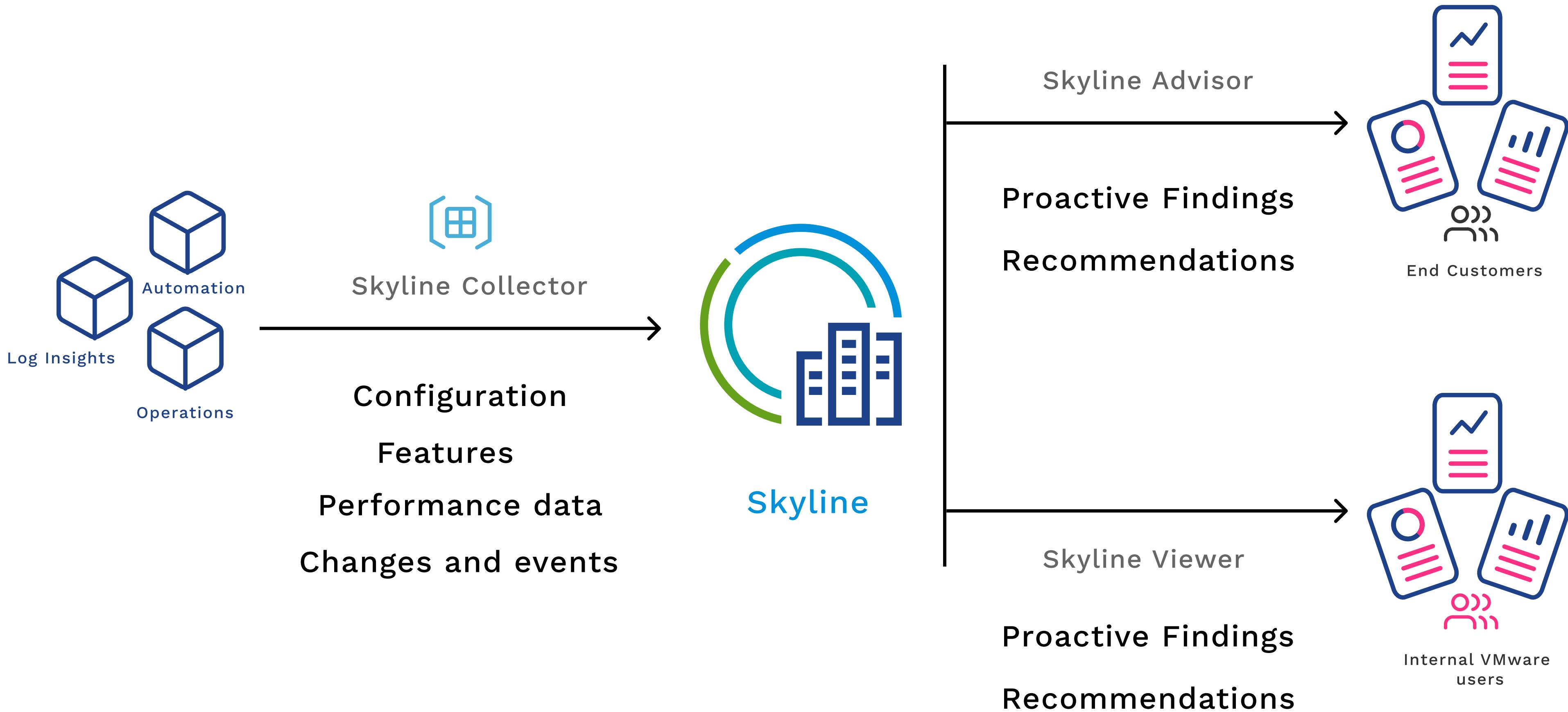
Duration : 3 Months



BACKGROUND



BACKGROUND



PROBLEM SPACE



Support Account Manager's (SAMs)

Dedicated account manager's for premier customers.

provide general guidance, manage critical remediations, help with support requests etc.

- Insights reports via email
- Highlight issues found by Skyline
- Personalised executive summary
- Provides recommendations

- Extract Finding CSVs from Skyline
- Use Inhouse built tool within Excel to create reports

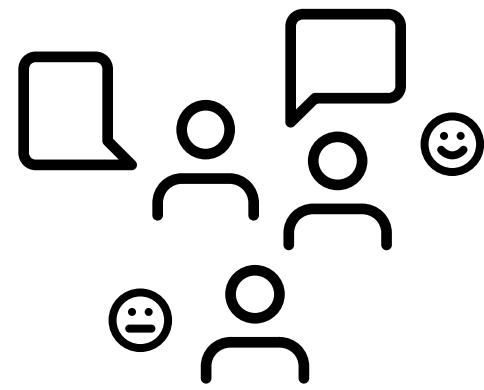
VISION

To power SAM team to generate and deliver Insights

report to Premier customers quickly by leveraging Skyline

as an always on source and automate the delivery.

RESEARCH

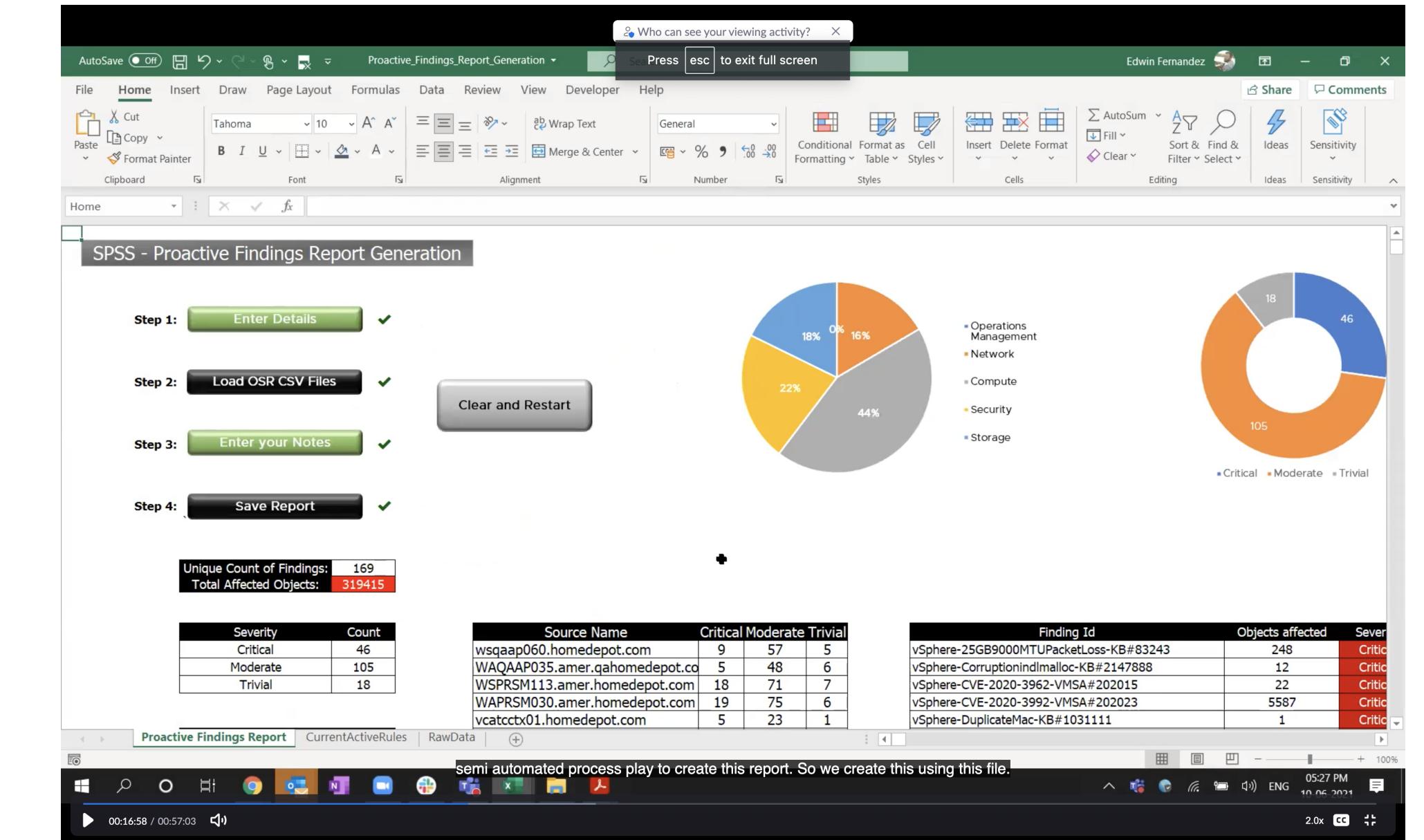


USER INTERVIEWS

with 3 users from SAM Team

“The processing of the report takes 20-30 mins. While the whole report creating takes upto 2-3 hours. If the process was easier we wont mind providing the report more than once a month.”

“Want to show how many findings are remediated so that it encourages them. eg, you have 247 findings and you have not done anything about them they have been like that 3 months. Or you remediated 10% findings, and these many hours saved.”



“There is a notion that Skyline provides Upgrade related recommendations. We want to break that and show them we are also providing findings related to Configuration.”

“We want to automate these insights provided.I know how to highlight issue and show impact, other person from my team might not know that, so want to automate it. The language used differs from person to person. Some sort of standardisation.”

RESEARCH

INSIGHTS

- ★ Skyline's active data can be used to **generate** the insights **report quickly**.
- ★ SAM's want to **encourage customers** to remediate more
- ★ Customers ask for **customized reports** based on specific categories.
- ★ Executive summary writing can differ from person to person, SAM's feel the **need to standardize** it.
- ★ SAM's wish to continue providing **support** post the delivery of the report and help in **remediation**.
- ★ Insight reports help in increasing the **awareness and consumption of Skyline**.

RESEARCH

UNDERSTANDING END CUSTOMERS



Anita - VI admin

ensures the stability of her virtual environment

Leads a team and looks after the workload management. Skyline provides her proactive recommendations about her products and helps her prevent incidents before hand and saves her a lot of time.



RESEARCH

- ✿ Anita manages her workload by **assigning findings to her team using excel tables**
 - ✿ It takes a lot of effort for her to **track remediation progress and issue resolution amongst her team.**
-
- ## INSIGHTS
- ✿ Anita provides her **expert comments in the excels to help the team remediate**
 - ✿ Not all the members of her team have **access to Skyline and depend solely on the excel details.**
 - ✿ Need **customised reports based on particular topics.**

USER STORIES



User Stories helped us detail out the 'why' of all the proposed features and get all the stakeholders onboard with the ideas.

USER STORIES



ANITA

VI Admin

As a VI admin I want to receive insights reports which help me to resolve critical findings related to my virtual infrastructure so, that my business critical applications are running without any hindrance

As a VI admin with premier entitlement, I want to be able to request the Skyline team or SPSS teams for a report based on my preferences and requirements. eg a report on my security related critical findings.

As a VI admin, I should be able to share the skyline findings and related reports with my team and provide my comments which my team can view while working on the finding. Want to be able to ensure my data is secure.

As a VI admin, I should be able to track the progress on the findings after delegating them to my team.

As a VI admin, I should be able to share reports with higher ups so that I can increase the visibility of my team and design future scope of workload.

As a VI admin, I should be able to share reports with a non skyline user in a secure way

UNDERSTANDING FINDING RULES

Change No reboot

Goal - No down time when resolving the issues

Rule Type - Configuration, Troubleshooting

Object Impacted - ESX, NSX, NSX-T, VC, VSAN

Category - Compute, Network, Storage

Risk - BCDR Impacting, Configuration Limiting, Cosmetic Issue, Data Inconsistency, Environment Stability, Guest OS Stability, Incorrect Reporting, Infrastructure Stability, Performance Impacting, Potential ESXi host crash, Security Risk, Upgrade Blocker

Change with reboot

Goal - Inform user resolution may need more time and possible down time

Rule Type - Configuration, Troubleshooting, Upgrade

Object Impacted - ESX, NSX, NSX-T, VC, VSAN, Horizon View, vROps

Category - Compute, Network, Storage

Risk - BCDR Impacting, Configuration Limiting, Cosmetic Issue, Data Inconsistency, Environment Stability, Environmental Impacting, Guest OS Stability, Incorrect Reporting, Infrastructure Stability, Performance Impacting, Potential ESXi host crash, Security Risk, Upgrade Blocker

Patch Update

Goal - Findings that can be resolve with a update

Rule Type - Configuration, Upgrade

Object Impacted - ESX, NSX, NSX-T, VC, VSAN, Horizon, vROps

Category - Compute, Network, Storage, Security, Operations Management, End user compute

Risk - BCDR Impacting, Configuration Limiting, Cosmetic Issue, Data Inconsistency, Environment Stability, Environmental Impacting, Guest OS Stability, Incorrect Reporting, Infrastructure Stability, Performance Impacting, Potential ESXi host crash, Security Risk, Upgrade Blocker

Patch Update no reboot required workaround

Goal - Findings that can be resolve with a simple update without any reboot required (zero down time)

Rule Type - Configuration, Upgrade

Object Impacted - ESX, NSX, NSX-T, VC

Category - Compute, Network, Security, Storage

Risk - Service Stability, Security Risk, Potential ESXi host crash, Performance Impacting, Infrastructure Stability, Guest OS Stability, Environmental Stability, Data Inconsistency, Cosmetic Issue

Re-Architecture

Goal -

Rule Type - Configuration

Object Impacted - ESX, VC, VSAN

Category - Compute, Network, Storage

Risk - Guest OS Stability, Infrastructure Stability, Potential ESXi host crash, Upgrade Blocker

Version Update

Goal - Can be fixed with a simple version update

Rule Type - Upgrade

Object Impacted - ESX, VC, NSX

Category - Compute, Network

Risk - Cosmetic Issue, Environment Stability

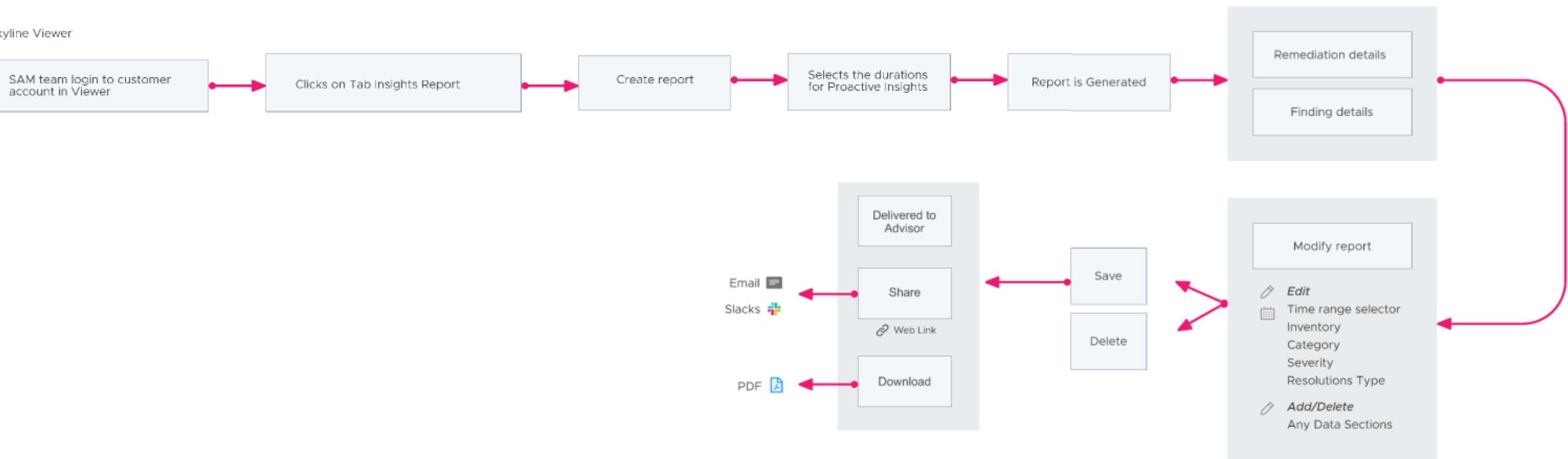
We analysed the finding rules and learnt that we can highlight the **Resolution types** and **Risks of findings** which might help the customers plan their remediation better

USER FLOWS

User flows helped us visualise the flow the customer might take when using insights reports.

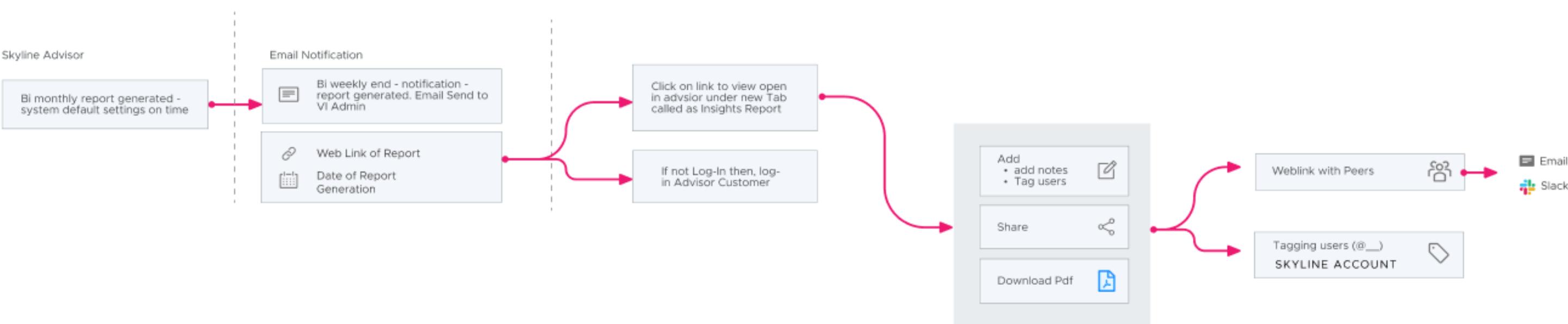
Viewer

Scenario : SAM team is planning to meet premier customer and want to share the performances of their infrastructure in the last 3 months and provide suggestions on how they can improve their performance.

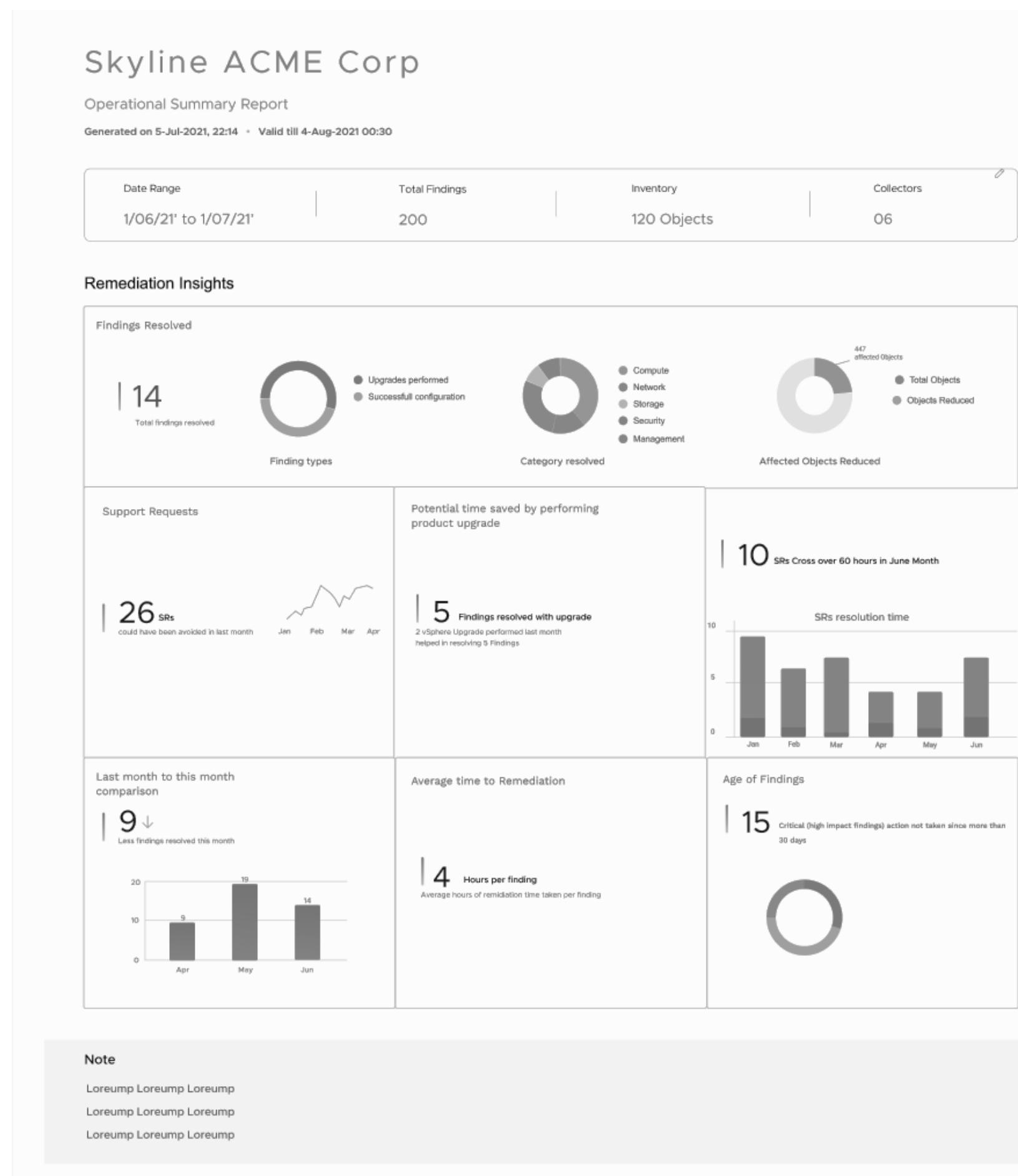


Advisor

Scenario 1 - Skyline VI Admin - Anita receives Email Notifications on the generated report. Anita reviews the report which highlights the Findings which are still not resolved.



IDEATION



IDEATION

Skyline Advisor

Dashboard Inventory Findings & Recommendations Insights Report Log Assist Integrations

MODIFY REGULAR REPORT CUSTOM REPORT Settings

Search by object name

All Reports

September 21 Part 1 Generated on 31 July 21 Shared with - 5 users

August 21 Part 2 Generated on 31 July 21 Shared with - 5 users

28th Jun to 12th Jul Created on 31 July 21 Type - Advanced Shared with - 5 users

August 21 Part 1 Generated on 31 July 21 Shared with - 5 users

June Report 21' Created on 31 July 21 Type - Advanced Shared with - 5 users

September Report 21' Generated on 31 July 21 Type - Advanced Shared with - 5 users

28th Jun to 12th Jul Created on 31 July 21 Type - Advanced Shared with - 5 users

September Report 21' Generated on 31 July 21 Type - Advanced Shared with - 5 users

August Report 21' Generated on 31 July 21 Type - Advanced Shared with - 5 users

28th Jun to 12th Jul Created on 31 July 21 Type - Advanced Shared with - 5 users

July Report 21' Generated on 31 July 21 Type - Advanced Shared with - 5 users

28th Jun to 12th Jul Created on 31 July 21 Type - Advanced Shared with - 5 users

Severity

Categories

Resolution Type

Related findings

Findings for 01/01/19

Finding ID	Severity	Affected Objects	Category	Export Finding Data
vSphere-PSODTcpInput-KB#2136430	Critical	145 objects	Compute	export
vSphere-LITerminalFault-VMSA#201820-2	Critical	12 objects	Storage	export
vSphere-PSODTcpInput-KB#2136430	Critical	6 objects	Security	export
vSphere-HostDisconnects-KB#2144799	Moderate	102 objects	Network	export
vSphere-LITerminalFault-VMSA#201820-2	Moderate	65 objects	End-User Compute	export
vSphere-PSODTcpInput-KB#2136430	Moderate	35 objects	Operational Management	export
vSphere-PSODTcpInput-KB#2136430	Moderate	22 objects	Compute	export
vSphere-LITerminalFault-VMSA#201820-2	Trivial	23 objects	Storage	export
vSphere-PSODTcpInput-KB#2136430	Trivial	11 objects	Security	export
vSphere-HostDisconnects-KB#2144799	Trivial	4 objects	Network	export

Risk

Most Affected Objects

Collector health

Top 10 Endpoints with maximum Findings

Critical: 0, Moderate: 0, Trivial: 0

Skyline Viewer

Modify Report

FedEx US OPS Organisation New Custom Report

Report Details

Findings Range 1/06/21 to 1/07/21 | Collectors 06 | Inventory 120 Objects | Total Findings 200

Summary Edit Summary goes here

Value Report

Resolution Type
14 Total Findings Resolved

Upgrade and Configurations

Finding Trends
9 Less Findings Resolved this Month

Age of Findings
15 Critical Findings that are not resolved Actions not taken since past 30 days

Total Affected Objects

Detailed Report

Severity

Category

Resolution Type

Top 10 Endpoints with maximum Findings

Findings

Collector details

Findings by end point

Executive Summary

Observation: NSX Edges are enabled with remote access
Impact : could cause the /var/log partition to be completely utilized.
Resolution :

Observation: It is important to ensure that a host does not exceed configuration maximums. One host running ESXi 6.0 has exceeded configuration maximums with the number of iSCSI HBAs 3.
Impact :
Resolution :

Observation: Out of the 238 findings, 52 findings can be remediated without a reboot.
Impact :
Resolution :

PRIORITISATION

As a team, understanding the impact and efforts required to deliver, we prioritized a few items for MVP while keeping others for future enhancements

 **Reporting Filtering options**

 **Requesting for custom report through advisor**

 **Finding Insights**

 **Remediation Insights**

 **Standardisation of executive summary**

 **Interactive charts**

 **Commenting**

 **Modifying Report widgets**

 **Secure the report with password**

 **Share and download**

SOLUTION

The report would be generated within Skyline viewer by SAM team and
delivered to customer in Skyline advisor twice a month. A reminder mail
would go out to all customers once they receive the report with a link to
the report. The interactive report can be viewed within Skyline and
downloaded as a PDF and shared.

ONE CLICK REPORT GENERATION

Only provide the time and date range to generate the report. It considers all objects of customers inventory and all the findings.

The screenshot shows the Skyline Viewer interface with the following details:

- Header:** Skyline Viewer Pro, user john.doe@vmware.com, settings icon.
- Navigation:** Dashboard, Inventory, Findings & Recommendations, **Reports**, Log Assist, Integrations.
- Sub-navigation:** Reports tab is active, showing Skyline Summary Reports, Insights Reports (selected), and TAM reports.
- Filter Reports:** Date Range dropdown with options: Last 30 Days, Last 60 Days, Custom.
- Date Range:** Insights reporting provide an overview and analysis of your infrastructure. The reports based on defined criteria can be received with the help of your SAM or support team.
- Create Report:** A large blue button labeled "CREATE REPORT".
- Total Reports:** Total 18 reports listed.
- Report Cards:** A grid of six report cards, each showing an Executive Report with a specific date range, creation date, and creator (Priyanka K). Each card has download, share, and refresh icons.

Report Date Range	Created On	By
Apr 01 - Apr 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Mar 01 - Mar 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Feb 15 - Feb 28	Jul 30, 2021 9:41 AM IST	Priyanka K
Feb 01 - Feb 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Jan 15 - Jan 31	Jul 30, 2021 9:41 AM IST	Priyanka K
Jan 01 - Jan 15	Jul 30, 2021 9:41 AM IST	Priyanka K

[Back to All Reports](#)

john.doe@vmware.com

[SAVE](#)[DELETE](#)

Filters

Products
120 ObjectsFindings
220

Fedex US OPS Organisation

vmware®

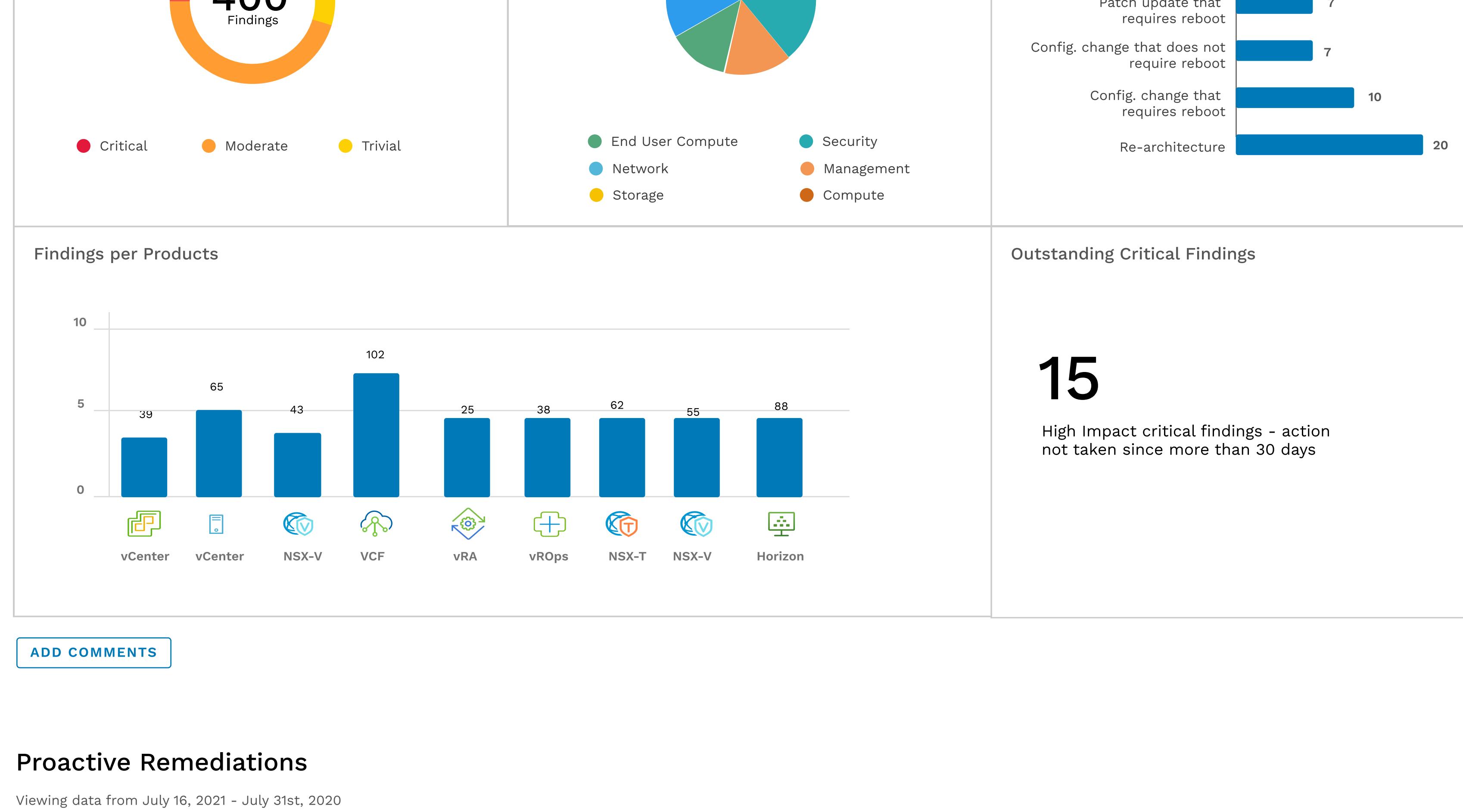
July 16 - July 31 Insights Report

Executive Summary

Summary goes here

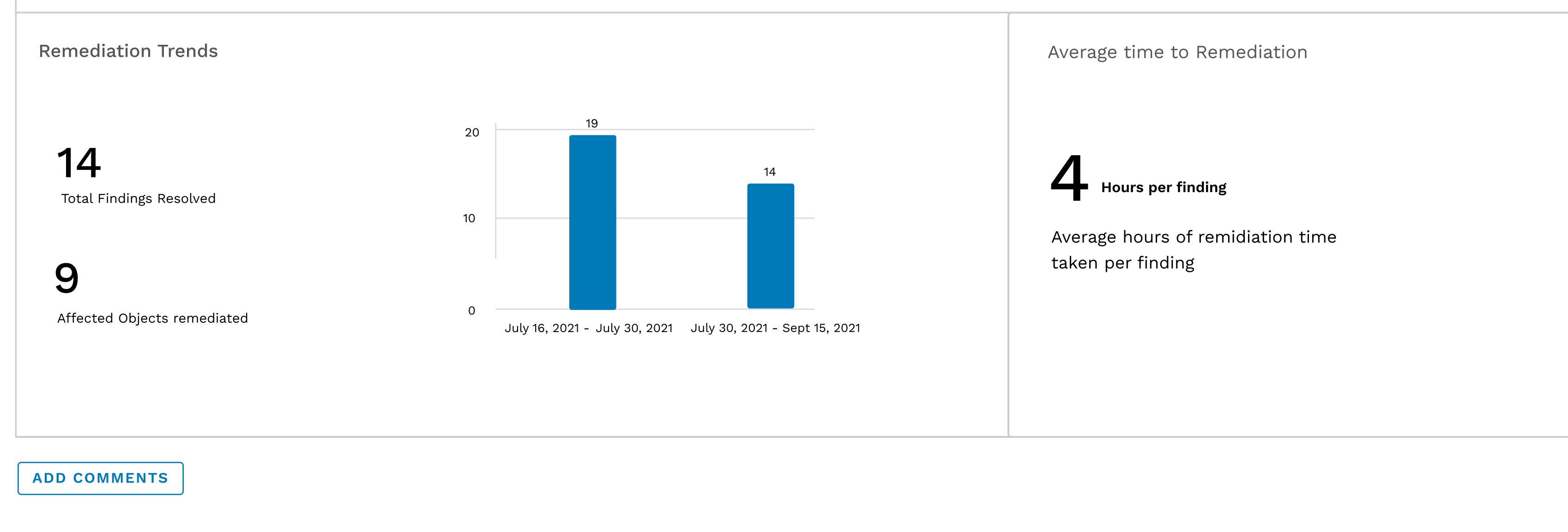
Maximum 3000 Characters

Findings Insights

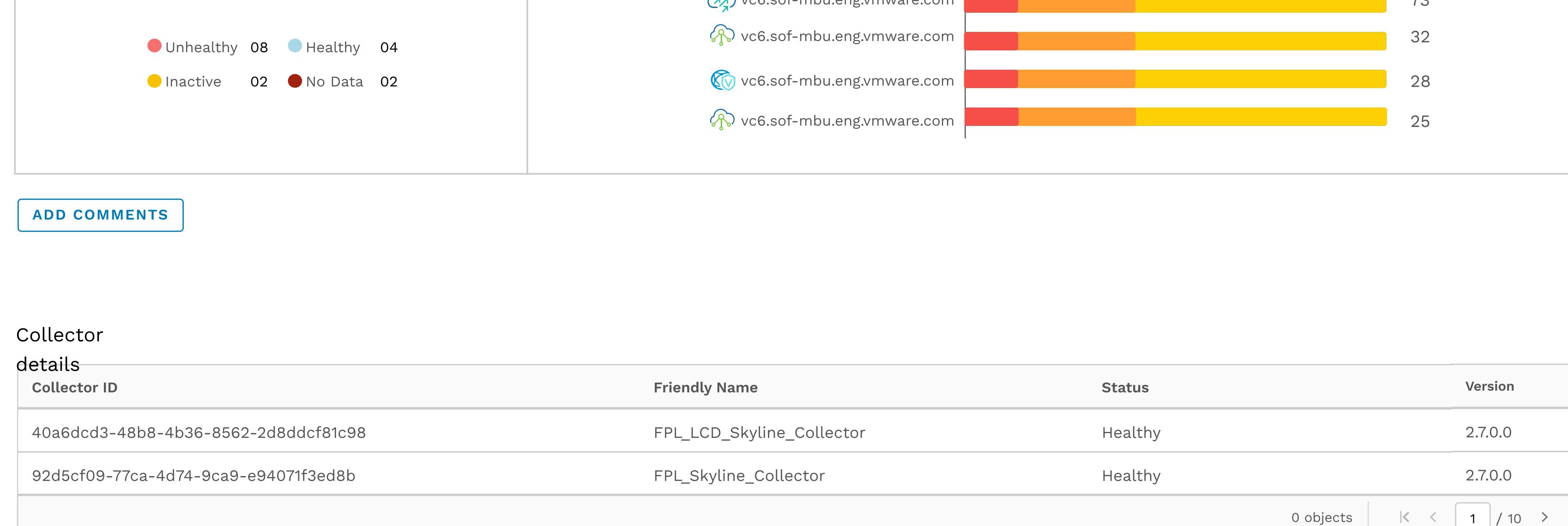
[ADD COMMENTS](#)

Proactive Remediations

Viewing data from July 16, 2021 - July 31st, 2020

[ADD COMMENTS](#)

Collector Health and Endpoints

[ADD COMMENTS](#)

Collector details

Collector ID	Friendly Name	Status	Version
40a6dc3-48b8-4b36-8562-2d8ddcf81c98	FPL_LCD_Skyline_Collector	Healthy	2.7.0.0
92d5cf09-77ca-4d74-9ca9-e94071f3ed8b	FPL_Skyline_Collector	Healthy	2.7.0.0

0 objects | < | 1 / 10 > |>

[ADD COMMENTS](#)

Findings

Finding ID	Category	Severity	Affected Objects
vSphere-PSODTcplInput-KB#2136430	Compute	Critical	145 objects
vSphere-L1TerminalFault-VMSA#201820-2	Storage	Critical	12 objects
vSphere-PSODTcplInput-KB#2136430	Security	Critical	6 objects
vSphere-HostDisconnects-KB#2144799	Network	Critical	102 objects
vSphere-L1TerminalFault-VMSA#201820-2	End-User Compute	Critical	65 objects
vSphere-PSODTcplInput-KB#2136430	Operational Management	Critical	22 objects
vSphere-PSODTcplInput-KB#2136430	Compute	Critical	22 objects
vSphere-L1TerminalFault-VMSA#201820-2	22 objects	Critical	23 objects
vSphere-PSODTcplInput-KB#2136430	Security	Critical	11 objects
vSphere-HostDisconnects-KB#2144799	Network	Critical	4 objects

Objects per page: 10 | 0 objects | < | 1 / 10 > |>

[ADD COMMENTS](#)

KEY FEATURES

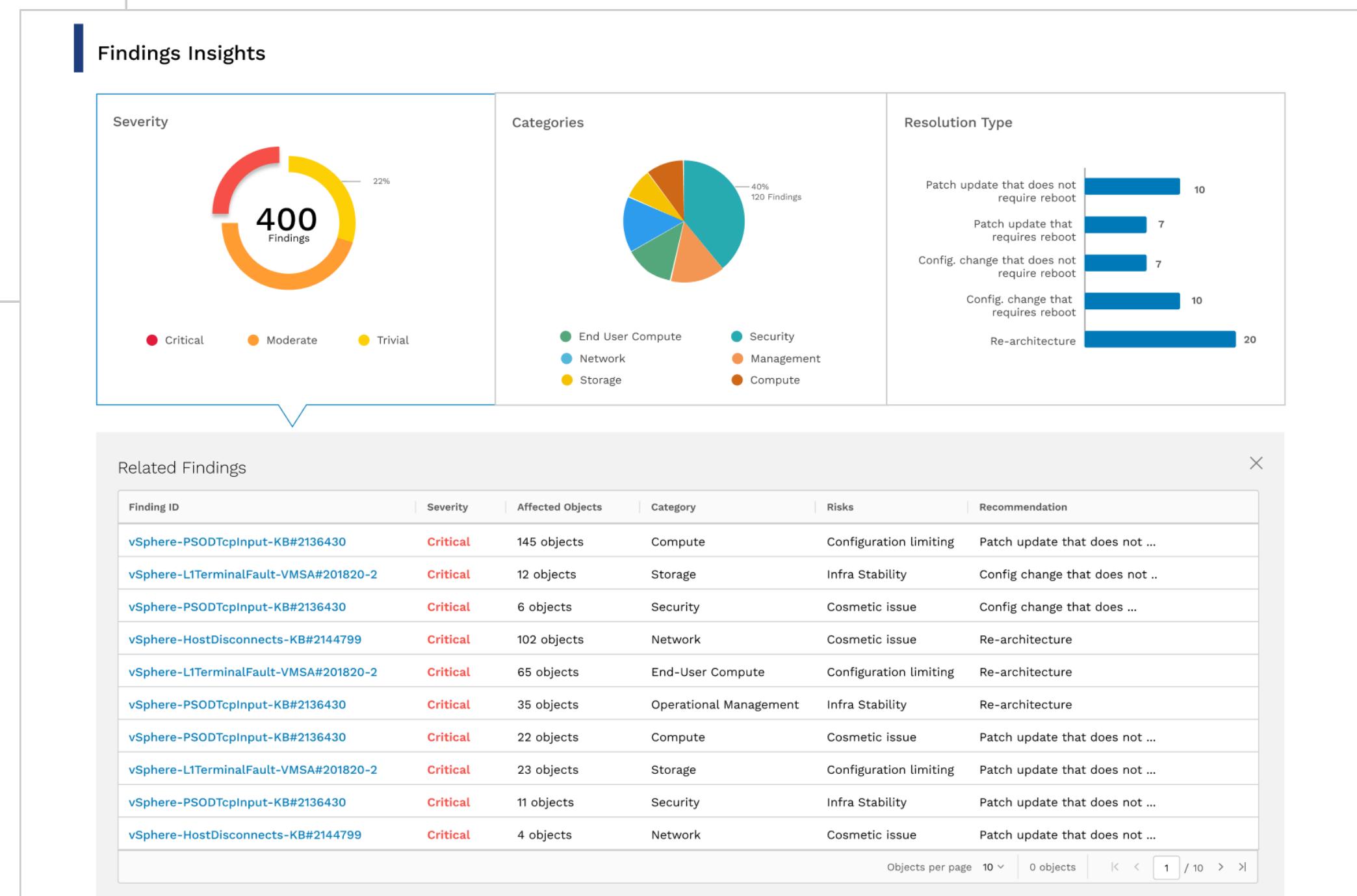
The screenshot shows the VMware Skyline Viewer interface. At the top, there's a header with the title "Skyline Viewer", a user dropdown for "john.doe@vmware.com", and a save/delete button. Below the header, there are two filter sections: "Products" (120 Objects) and "Findings" (220). A modal window titled "Select Products" is open, listing various VMware components like vSphere, NSX-V, vRealize Operations Manager, and Horizon, each with a checkbox and some items listed under them. The modal has "CANCEL" and "SAVE" buttons. The main area of the interface is titled "Findings Report" and contains a placeholder text "Maximum 3000 Characters".

Interactive Charts

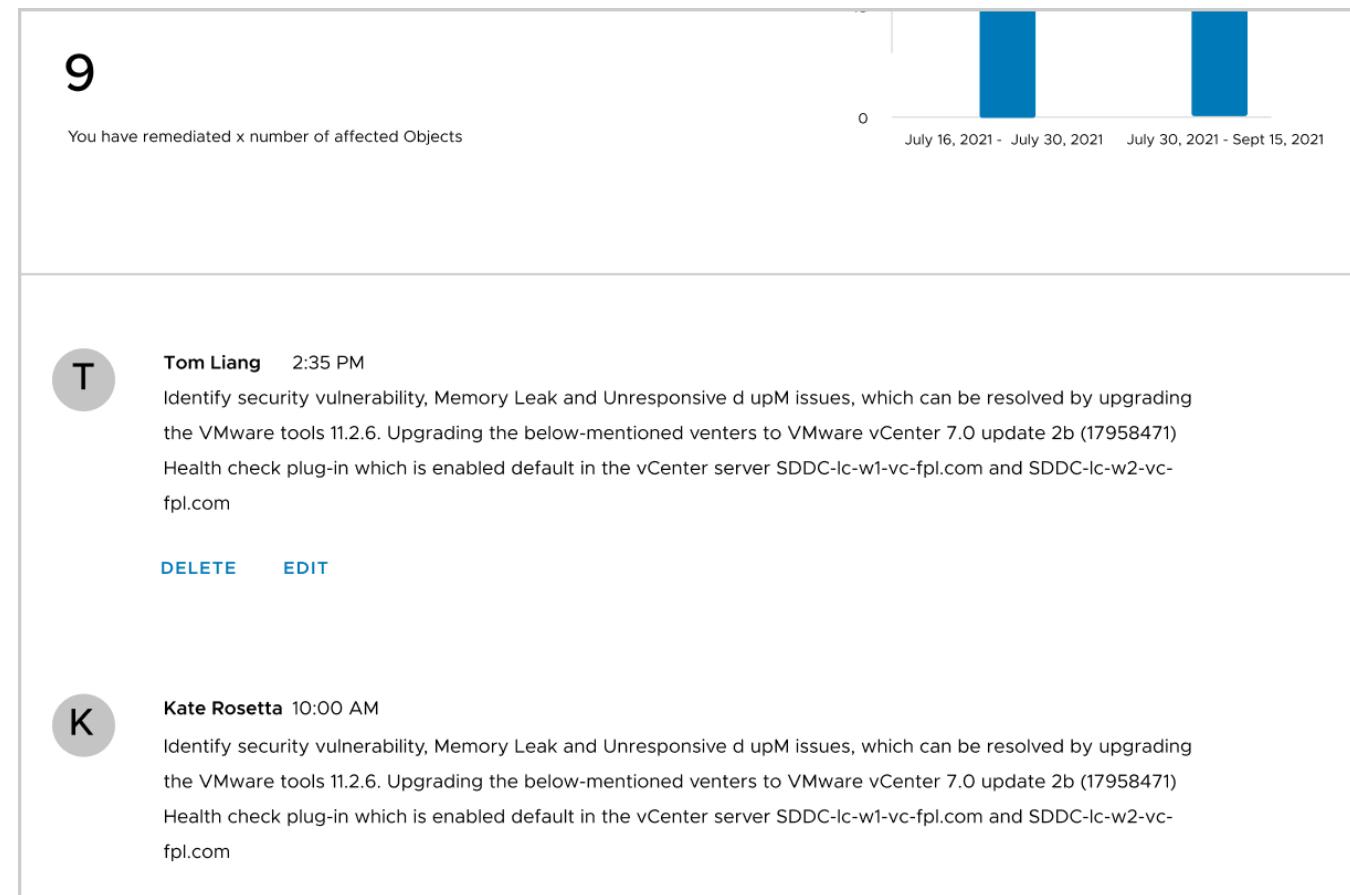
Each graph element on interaction provides related finding details.

Report Customization

Ability SAMs are now pick on the specific inventory objects and findings to create the report.



KEY FEATURES



Adding Notes and Tagging

In the findings details list Anita can now plan her workload distribution by tagging her team members and adding notes.

Commenting and Collaboration

Anita can now provide her comments in context and she and her team can collaborate within the report. Even the SAM team can provide comments post report delivery.

Findings

Finding ID	Category	Severity	Affected Objects	Notes
vSphere-PSODTcplInput-KB#2136430	Compute	Critical	145 objects	@ssneha Please look into this on priority
vSphere-L1TerminalFault-VMSA#201820-2	Storage	Critical	12 objects	@Abhishek This is upgrade related issue
vSphere-PSODTcplInput-KB#2136430	Security	Critical	6 objects	-
vSphere-HostDisconnects-KB#2144799	Network	Critical	102 objects	-
vSphere-L1TerminalFault-VMSA#201820-2	End-User Compute	Critical	65 objects	@Abhishek This is upgrade related issue
vSphere-PSODTcplInput-KB#2136430	Operational Management	Critical	22 objects	-
vSphere-PSODTcplInput-KB#2136430	Compute	Critical	22 objects	-
vSphere-L1TerminalFault-VMSA#201820-2	22 objects	Critical	23 objects	-
vSphere-PSODTcplInput-KB#2136430	Security	Critical	11 objects	@Abhishek This is upgrade related issue
vSphere-HostDisconnects-KB#2144799	Network	Critical	4 objects	-
			22 objects	10 < 0 objects / 10 > >

KEY FEATURES

Share with

Invite

Shared with

Link to Share

https://my.report.co/view/68rg.3xw

COPY LINK

Sharing link to report

Ability to invite peers in the organisation to view the report and can also copy the unique link to the report

Collector Detail

Collector ID	Friendly Name	Status	Version
40a6dc3-48b8-4b36-8562-2d8ddcf81c98	FPL_LCD_Skyline_Collector	Healthy	2.7.0.0
92d5cf09-77ca-4d74-9ca9-e94071f3ed8b	FPL_Skyline_Collector	Healthy	2.7.0.0

0 objects | < 1 / 1 > |

T Tom Liang 2:35 PM
Last month you could have saved time by resolving so many findings.
Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.
Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.
Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

All Critical Findings

Finding ID	Category	Severity	Affected Objects
vSphere-PSODTcpInput-KB#2136430	Compute	Critical	145 objects
vSphere-L1TerminalFault-VMSA#201820-2	Storage	Critical	12 objects
vSphere-PSODTcpInput-KB#2136430	Security	Critical	6 objects
vSphere-HostDisconnects-KB#2144799	Network	Critical	102 objects
vSphere-L1TerminalFault-VMSA#201820-2	End-User Compute	Critical	65 objects
vSphere-PSODTcpInput-KB#2136430	Operational Management	Critical	22 objects

PDF Download with comments

While downloading the PDF of the report the already added notes/comments in the report would not be lost.

DESIGN HANDOVER

Annotations to help customers understand the nits of the experience.

The screenshot shows the 'Insights Report' section of the Skyline Advisor interface. The top navigation bar includes 'Dashboard', 'Inventory', 'Findings & Recommendations', 'Insights Report' (which is active), 'Log Assist', and 'Integrations'. The top right corner shows the user 'john.doe@vmware.com' and a 'Settings' icon. The main area displays a grid of reports. A summary at the top right says 'Total 18' with icons for filters, sort, and search. Below this, there are two rows of four report cards each. Each card contains a report title, creation date, and a note about its type (Standard or Custom). Each card also has download and share icons. Annotations with red circles and numbers are present throughout the interface:

- Skyline Insights Report - Standard (Left Column):**
 - 1** Title of Report
 - Org Name
 - Week and Date Report Name
 - Type of Report
 - Created On
 - 2** Interactive Graphs
 - Click on bar graphs to view related findings
 - Related findings are clickable to view the details
 - 3** Report details - Standard Report
 - Finding Status
 - Proactive Remediations
 - Other graphs
 - Findings
 - Collector

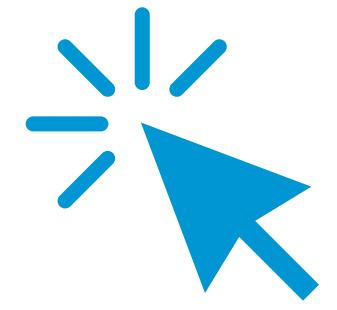
Skyline Insights Report - Standard (Middle Column):
 - 1** Interactive Charts:
 - Every entity of every chart in the **Finding status** section can be clicked upon and interacted with.
 - On click the selected part will move away 6 px and cast a shadow to standout.
 - 2** Once clicked on, the link to its related findings should show up below.
 - The square color indicating the selected section color

Skyline Insights Report (Main Grid):
 - 1** Reports By years
 - Customer will see last 6 months reports.
 - Retention policy - 6 months
 - 2** Report type 1 - Standard Reports
 - Standard reports and are system generated. Standard Report 15 days report - 2 week
 - 3** Report type 2 - Custom Reports
 - Custom Report no limitation - Days, week to Months
 - 4** Download PDF format of file
 - 5** Share
 - Opens share popup

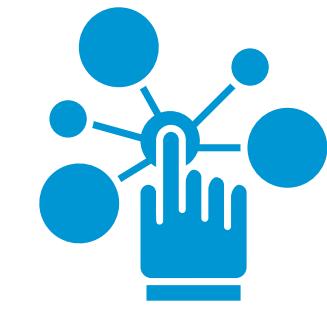
Filter Reports (Left Sidebar):
 - Date Range
 - Last 30 Days
 - Last 60 Days
 - Custom
 - Report Type
 - Standard Report
 - Custom Report
 - Month
 - February
 - March
 - April
 - May
 - June
 - July

Bottom Navigation:
 - BACK TO CONTENT
 - GO TO VIEWER
 - CLEAR ALL
 - APPLY
 - LOAD MORE

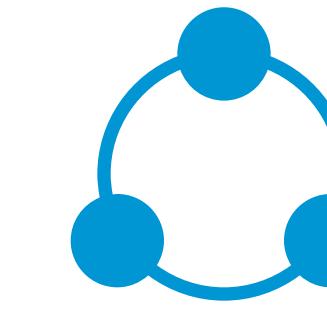
OUTCOME



On click report
generation



Interactive
report



Easy
Collaboration

NEXT STEPS

Skyline Viewer Pro

john.doe@vmware.com

Dashboard Inventory Findings & Recommendations Reports Log Assist Integrations Settings

Filter Reports

Date Range

- Last 30 Days
- Last 60 Days
- Custom

Report Type

- Executive Report
- Custom Report

Month

- February
- March
- April
- May
- June
- July

Skylne Summary Reports Insights Reports TAM reports

We are bringing Custom Reports Creation to you!

Empowering you and your team to create their own Insights reports, with extensive filtering options.

CREATE CUSTOM REPORT Know the Report Types Total 18

Report Type	Period	Created On	Created By
Custom Report	Apr 01 - Apr 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Custom Report	Mar 01 - Mar 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Executive Report	Feb 15 - Feb 28	Jul 30, 2021 9:41 AM IST	Priyanka K
Custom Report	Feb 01 - Feb 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Executive Report	Jan 15 - Jan 31	Jul 30, 2021 9:41 AM IST	Priyanka K
Executive Report	Jan 01 - Jan 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Custom Report	Apr 01 - Apr 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Custom Report	Mar 01 - Mar 15	Jul 30, 2021 9:41 AM IST	Priyanka K
Custom Report	Apr 01 - Apr 15	Jul 30, 2021 9:41 AM IST	Priyanka K

CLEAR ALL APPLY

LEARNINGS

- Holistic approach helped in identifying areas of opportunities.
- Knowing technical feasibility post ideation was key to estimate the efforts and prioritize

THANK-YOU