

Lenovo XClarity Integrator Content Pack for VMware vRealize Log Insight User Guide



Version 2.0.0

Note

Before using this information and the product it supports, read the information in Appendix A "Notices" on page 25.

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About this publication

The document provides a brief walkthrough of the installation and configuration of the Lenovo XClarity Integrator Content Pack for VMware vRealize Log Insight (hereafter called Content Pack for vRLI). In a nutshell, this document describes how to install and configure the plugin.

Conventions and acronyms

Conventions

Convention	Description
Bold	Indicates text on a window, besides the window title, it includes menus, menu options, buttons, fields, and labels. Example: Click OK .
Italic	Indicates a variable, which is a placeholder for the actual text provided by the user or system. Example: copy < <i>source-file></i> < <i>target-file></i> Note: Angled brackets (< >) are also used to indicate variables.
DIALOG BOX/ CODE	Indicates text displayed in the dialog box or if you have entered. For example: # PAIRDISPLAY -G ORADB
Note	These notices provide important tips, guidance, and advice.

Acronyms

LXCA	Lenovo XClarity Administrator		
LXCO	_enovo XClarity Orchestrator		
PFA	Predicted failure alerts		
vRLI	VMware vRealize Log Insight		
vSAN	Virtual storage area network		
XCC	Lenovo XClarity Controller		

Chapter 1. Content Pack for vRLI introduction

Content packs are read-only plug-ins to vRealize[™] Log Insight[™] (vRLI) that provide pre-defined knowledge about specific types of events such as log messages. In addition, a content pack creates a greater understanding of how a product, application, device works and troubleshoots the main problems, and pro-actively monitors the possible issues.

A content pack contains:

- Queries
- Extracted fields
- Dashboards
- Alerts
- · Agent Groups (only for content packs whose logs are collected via Log Insight Agent)

Content Pack for vRLI overview

This content pack provides analysis of events from the LXCA, LXCO, and the resources managed by LXCA. These insights can help systems administrators find potential problems in their environment.

- Monitoring of hardware events in a LXCA and LXCO-managed environment
 - Quickly identify trends based on hardware events received, including hardware failures, power/thermal
 thresholds that have been exceeded, and PFAs (predicted failure alerts). These events are also
 categorized by source, type of hardware surfacing the events, and whether service is required. This
 information can help identify issues in your data centers, so you can react before more serious issues
 occur.
 - Listing the common issues helps in understanding the hardware health status, systems that would need attention as they are going out of warranty, systems that are power on or off, have certificate issues, etc.
 - Listing the resource events helps in understanding the memory, CPU, and IO event count, etc.
- Auditing for security changes occurring within the LXCA.
 - Security events surfaced by LXCA can help identify if unauthorized personnel is trying to access your computing resources. This might include events showing that new users have been added/deleted, what IP addresses users are using to access the LXCA, the time and dates when they are accessing resources and any changes to the security settings of the LXCA (or user IDs on the LXCA).
 - Visual representations can show changes in these activities, which could identify if an attack is occurring.
 - The Security Logins help to list the unsuccessful authentications to LXCA and managed resources, grouped by the address of the user. The pie chart lists user IDs that have successfully logged in to LXCA. It further helps to list the number of changes done to the account security settings over time.
- Auditing for the provisioning of LXCA-managed resources, including:
 - Firmware updates
 - Configuration pattern deployment
 - Bare-metal OS deployments
- LXCA specializes in helping system administrators make desired changes on their computing resources. This includes updating the firmware of LXCA-managed resources, deploying configuration changes to groups of systems, and deploying operating systems to bare-metal systems. This can help identify how much change is occurring to the configuration of servers, and if the changes have been authorized.
- The Content Pack for vRLI utilizes the interactive analysis vRLI feature & displays the Predictive Analytics dashboard to leverage the LXCO alerts listing. The alerts are predefined alerts, user-defined custom alerts, and so on.
- Facilitates extending vSAN support to Content Pack for vRLI. It supports adding graphs for correlating Lenovo HW events for disk or storage with vSAN events disk or storage, and so on.

Prerequisites

Before you import the Content Pack for vRLI, verify that you have configured your environment according to the requirements in this section.

Supported server models

The following Lenovo ThinkAgile VX servers and ThinkSystem servers are supported.

System	Server	models
ThinkAgile VX Series appliances	 ThinkAgile VX1320 Certified (7Z58) ThinkAgile VX 1U Certified (7Y93) ThinkAgile VX 2U Certified (7Y94) ThinkAgile VX 2U4N Certified (7Y92) VX2320 (7Y13, 7Y93) VX3320 (7Y13, 7Y93) VX3520-G (7Y14, 7Y94) VX3720 (7Y12, 7Y92) 	 VX3720-N (7Y93) VX5520 (7Y14, 7Y94) VX7320 (7Y94) VX7520 (7Y14) VX7520-N (7Y14) VX7520 (7Y94) VX7820 (7Z12, 7Z13, 7Z14) VX-SR665 (7D43)
ThinkSystem servers	 SD530 (7X21) SD630 V2 (7D1K) SD650 V2 (7D1K) SD650 V2 (7D1M) SD650-N V2 (7D1N) SE350 (7D1X, 7D27, 7Z46) SR158 (7Y55) SR258 (7Y53) SR250 (7X01, 7X08) SR550 (7X03, 7X04) SR550 (7X03, 7X04) SR590 (7X98, 7X99) SR630 V2 (7Z70, 7Z71) SR635 (7Y98, 7Y99) SR645 (7D2X, 7D2Y) SR650 (7X05, 7X06) SR650 (7D4K) 	 SR650 V2 (7Z72, 7Z73) SR655 (7Y00, 7Z01) SR665 (7D2V, 7D2W) SR670 (7Y36, 7Y37, 7Y38) SR670 V2 (7Z22, 7Z23) SR850 (7X18, 7X19) SR850 V2 (7D31, 7D32, 7D33) SR850P (7D2H) SR850P (7D2F, 7D2G) SR860 (7X69, 7X70) SR860 V2 (7Z59, 7Z60, 7D42) SR950 (7X11, 7X12) SR950(7X13) ST250 (7Y45, 7Y46) ST258 (7Y47) ST550 (7X09, 7X10) ST558 (7Y15, 7Y16) ST650 V2 (7Z74, 7Z75)

Software requirements

Component	Supported version
VMware vCenter Server 6.7 & 7.0	
LXCA	3.1.0 and 3.2.0
LXCO	1.4.0
vRLI	8.2 and 8.3
Supported web browsers	Chrome (89.0 and above) and Firefox (83.0 and above)

Adding a vCenter server

You need to add the vCenter server that is utilized by the vSAN dashboards.

Procedure

To add a vCenter server, complete the following steps.

- 1. Log in to VMware Log Insight.
- 2. Navigate to the **Administration** tab.
- 3. In the left pane, click **vSphere**.

vm Log Insight	Dashboards Interactive Analytics	Content Packs	Administration	💍 admin 🗸
Vm Log Insight Management 22 System Monitor 11 Cluster & & Access Control 11 Q User Alerts 11 Hosts 12 Agents 22 Partitions ± Export <% Shared Dashboard URLs	Dashboards Interactive Analytics VSphere c × DELETE Hostname Image: stabslenovo.com + ADD VCENTER SERVER	Content Packs ▲ Collect Events Yes	ESXI hosts configured : Target : User t Yes (View details) 10.240.39.244	vCenter Servers: 1 @ ags • Collection Status • © Collecting
Integration				

4. To add a vCenter server, click **ADD VCENTER SERVER**.

+ ADD VCEN	TER SERVER		SAVE
Hostname		Collect vCenter Server events, tasks, and alarms	<i>i</i> ×
Username Password		Configure ESXI hosts to send logs to Log Insight	(i)
Tags	key1=value1, key2=value2,	Target 10.240.39.244 V	
	TEST CONNECTION		

- 5. Enter the vCenter hostname, vCenter username and password you want to add. To test the server you are adding, click **TEST CONNECTION**.
- 6. Click **SAVE** to add the vCenter server.

Chapter 2. Installing and configuring the Content Pack for vRLI

This chapter describes the following topics:

- "Downloading the Content Pack for vRLI" on page 5
- "Importing a content pack" on page 5
- "Configuring LXCA to forward logs to vRLI" on page 6
- "Configuring LXCO to forward logs to vRLI" on page 9

Downloading the Content Pack for vRLI

Download the VLCP file for VMware vRealize Log Insight for Lenovo XClarity from the marketplace. Save the VLCP file to a folder on your local system and ensure the following:

- vRLI 8.2 or 8.3 is installed and configured.
- You have the VLCP file.
- The prerequisites are met. For details, see "Prerequisites" on page 2.

Importing a content pack

You can import content packs to exchange user-defined information with other instances of vRealize Log Insight. You can import only Content Pack (VLCP) files.

Before you begin

- If you want to use it, install the content pack in the import method, verify that you are logged in to the vRealize Log Insight web user interface as a user with the Edit Admin permission. The URL format is https://log-insight-host, where *log-insight-host* is the IP address or hostname of the vRealize Log Insight virtual appliance.
- If you want to use Import into My Content, you can log in to the vRealize Log Insight web user interface with the level of permission.

Procedure

To import a content pack, complete the following steps.

- 1. Navigate to the **Content Packs** tab.
- 2. In the upper left corner, click IMPORT CONTENT PACK.
- 3. Select the import method.

Menu item	Description
Install as content pack	The content is imported as a read-only content pack that is visible to all users of the vRealize Log Insight instance. Note: Content pack dashboards are read-only. You cannot delete or rename them. However, you can clone content pack dashboards to your custom dashboard. You can clone whole dashboards or individual widgets.
Import into My Content	The content is imported as custom content to your userspace and is visible only to you. You can edit the imported content without having to clone it. Note: Content pack metadata, such as name, author, icon, and so on, are not displayed in this mode. Once imported into My Content, the content pack cannot be uninstalled as a pack. If you want to remove a content pack from My Content, you have to individually remove each of its elements, such as dashboards, queries, alerts, and fields.

4. Users can import content packs only in their own user spaces.

vm Log Insight D	ashboards Interactive Analytics	Content Pac	ks Administration	
IMPORT CONTENT PACK Content Pack Marketplace Marketplace Updates	General •- Version: 45 Author: Manespace Description: The Log	. Inc. www.ymware.com/p ware.loginsight.gen Insight General Co	roducts/vrealize-log-insight eral	
👸 Community Supported	Dashboards Queries Alerts	Agent Groups	import content Pack	
General	Overview		Select a content pack to import:	
10 VMware - vROps 6.7+	Widget Name	Widget Type N	BROWSE	
🗢 VMware - vSAN	Number of events by hostname	Chart Dette	Select how this content should be imported:	number of messages is seen on one or more devices then this may
Wware - vSphere	Number of events over time	Chart Tr	Install as content pack Content will be installed as a content pack. It will be read-only and visible to all users.	ons why the number of events would not be consistent over time:
읍 My Content		-	 Import into My Content Content will be imported into my user space. It will be editable but only visible to me. 	n a one-time increase in events would be expected ere is a problem happening. Check the error and warning widgets fo
-85 Shared Content		+1 	CANCEL IMPORT eck the unique count widget and vSphere integration for more infor	the number of devices sending events was intentional then a one-tim ts was unintentional then this would indicate a potential problem in tradicion.
	Unique event types	Chart No Th ty Ev	te: For performance reasons, it is recommended to run this query ov e number of event types should remain fairly consistent over time un ses may indicate changes to the environment or environmental issue ent types are unique message patterns that have been detected. Wi	ver a time range of 1 hour or less. Ness devices are added/removed from Log Insight or new events are ing 5. Nei devices often generate a large number of events, many events are v

- 5. Browse for the content pack that you want to import, and click **Open**.
- 6. Click IMPORT.
- 7. (Optional) If you selected to import the content pack as custom content, a dialog box appears and you are prompted to select what content to import. Select the content items and click **IMPORT** again.
- 8. (Optional) Some content packs require additional setup steps. Instructions for these steps appear after the import is finished. Complete these steps before you use the content pack.

The imported content pack is ready to use and appears in the Content Packs or the Custom Content list to the left.

Configuring LXCA to forward logs to vRLI

To forward events from the LXCA to VMware vRealize Log Insight, the Syslog forwarding capability of the LXCA must be configured.

Procedure

To configure LXCA, complete the following steps.

1. After signing in to the LXCA, hover to **Monitoring** on the banner near the top of the screen. Click **Event Forwarding**.

Monitoring 👻	Administration 👻
	Monitoring Alerts Event Logs Event Forwarding Jobs

2. From the Event Forwarding panel, click the New icon.

Event Forwarding

(7) This page is a list of all remote event recipients, you can define up to 12 unique recipients.

Ц	🌆 🕤 📝 👺 🍠 All Actions 👻				
	Name -	Notification Method			
	Log Insight test 1	Syslog			

3. Select **Syslog** as the event recipient type, and fill in the appropriate information in the dialog, including the TCP/IP address of the VMware Log Insight server. Click **Next**.

Change Event Forwarder

General	Devices	Events	Schedule	F		
Select an ev	vent forwarde	er type:				
Syslog			•			
* Name					Enable Looging	
LeMans v	RLI			?	Enabled	
* Host					 Disabled 	
10.240.39	.244			(?)	Timestamp Format	
* Port				0	Local time 👻	
			514			
* Poquest 1	Timoout (coco	nde)	Ŧ			
Request	Inneout (Seco	ilus)	30 🔺			
Description			*			
Description						
Protocol						
UDP			-			
Status						
Enable	this forwarde	۱r				
Disable	e this forwarde	er				
_						
					Output Format Allow Excluded Events	

4. Select the LXCA-managed Devices (and potentially the LXCA management server itself) to forward events from:

Change Event Forwarder

		The event forwarder.			
~	Entities	Туре	Support Contacts	UUID	
~	Management Server	Management Server		FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF	
~	vx01	Think Server		3A3E31A6F50711E79AF97ED30A.	
~	vx02	Think Server		242C06CAF54811E79A517ED30A.	
~	vx03	Think Server		D47DF10C91FC11E7AE407ED30.	
~	+ rpx-cmm1	Chassis		B50408EA067B4	49A69805B4BFA0

5. Select which event types you want to forward as VMware vRealize Log Insight. Then click **Create**. From this point, the selected event types will be forwarded to the VMware vRealize Log Insight server.

General	Devices	Events	Scheduler					
Select the ev	rent filter ty	pes to be for	warded. Event ty	pe	s available are based on the system	ns s	elected.	
Filter Type	Mat	ch by event c	ategory	-				
Include A	II Audit even	ts (Audit ever	ts are not filtered	by	status level)			
Include V	/arranty ever	nts						
Include S	tatus Chang	e Events						
Include S	tatus Update	e Events						
	Critical				Warning		Informational	
Event Classe	s: 11 eve	ent classes se	elected	٣	11 event classes selected	*	11 event classes selected	*
Serviceability	3 eve	nt classes sel	ected	Ŧ				
Exclude eve	nts by event	t code(s)						
Event code(s)				(?)			

Configuring LXCO to forward logs to vRLI

To forward events from the LXCO to VMware vRealize Log Insight, the Syslog forwarding capability of the LXCO must be configured.

Procedure

To configure LXCO for log forwarding, complete the following steps.

1. After signing in to the LXCO, on the left pane, click **Monitoring** > **Forwarding** > **Data Forwarders**. The **Data Forwarders** screen is displayed.

XC	Clarity Orchestrator	/ Forwarding / Data Forv	varders			Selec	t Manager 👻 💄 userid 🖜
A	r Dashboard te	Data I	Forwarders	intions 💌			
۵	Resources 👻		Name:	Description :	Туре С	State 0	Exclude event 0
∿	Monitoring 🗸	0	vRLI	Not Available	SysLog Forwarder	Enabled Disable	No
	Alerts	0.Select	ed / 1 Total Rows per page: 10 💌				
	Events						
	Forwarding						
	Jobs						
ł	Provisioning –						
ø	Analytics -						

2. On the **Data Forwarders** page, click the + icon to configure the orchestrator by creating a forwarder. The **Add** wizard is displayed.

3. In the **Properties** section, enter the forwarder name, description, and select **SysLog Forwarder** as the event recipient type, and click **Next**.

1 Properties	
Forwarder Name *	
Description	
Description	
State Enabled Disabled	
Type * Svisl og Fonwarder	.

4. In the **Configuration** section, enter the TCP/IP address of the VMware Log Insight server and click **Next**.

Hostname or IP Address *		
Port *		
514		
Timeout		
30		
Protocol *		
UDP		
Time format		
ISO8601		

5. Exclude the events you do not want to consider for forwarding by selecting the respective checkbox and the radio button.

3	Filters									
	Exclude e	vent		No						
	The events will be forwarded if they match the selected filters. If no filter is selected, then all the events will be forwarded.									
		Name 0	Description 0	Туре 🗧						
	\checkmark	vRLI1	Not Available	Event Filter						
		vRLI Filter	Not Available	Event Filter						

6. In the **Access Control** section, select the required matching criteria and click **Create**. The data forwarder is created.

4 Access (Control			
Match E	Everything 🕐 🕕 Disabled			
C	All Actions 👻 Filters 👻		Search	Q X
	Name ~	Description 0		
No d	ata to display			
0 Total				
			Bac	ck Create

7. To create a data filter, navigate to Data Forwarder Filters and click the Create Filter icon.

Home / Monitoring / Forwarding / Data Forwarders	Home / Monitoring / Forwarding / Data Forwarder Filters Data Forwarders Dt Create filter)rder Filters						
↑↓ Data Forwarder Filters	C -	All Actions	▼ Filters ▼			Search Q X	
		Name ^	Creator 0	Privacy 0	Type 🗘	Description 0	
	0	vRLI1	userid	Public	Event Filter	Not Available	
	0	vRLI Filter	userid	Public	Event Filter	Not Available	
	0	vRealize 10.240.39.244	userid	Public	Event Filter	Match Everything	
	0	Croco test 2	userid	Public	Event Filter	Not Available	
	0 Selected	d / 4 Total 🛛 Rows per page: 10 💌					

8. Add an appropriate data filter name, description, and click **Next**.

Create Data Forwarder Filter

Fonuardor filtor namo *			
Description			
Description			
Type *			
Event Filter	*		
Privacy *			
Private	*		
Match by *			
Match by event properties	*		

×

9. Select the rules as required and click **Create**.

2 Rules	
The filter will match all events with severity:	
Informational Warning Critical	
and service:	
User Service None	
and event class:	>>
Adaptor Audit Blade Cooling Disks Expansion IO Module Analytics Memory	
Power Processors Switch System Test Unknown	
	Back Create

Chapter 3. Content Pack for vRLI specifications

After importing and configuring the Content Pack for vRLI, you can view the following:

- "Dashboards" on page 13
- "Viewing interactive analytics and alerts" on page 20
- "Fields" on page 21
- "Logs" on page 23

Dashboards

Dashboards provide a graphic representation of the status and relationships of selected objects. The standard dashboards are delivered as templates.

The Lenovo XClarity vRLI dashboards provide an overview of the predictive analytics, events, and common issues of LXCA resources. The dashboards enable you to view, monitor, and troubleshoot resources.

The following dashboards are supported in this content pack:

- Overview Dashboard
- Security Logins Dashboard
- Security Changes Dashboard
- Provisioning Dashboard
- Power and Thermal Dashboard
- Events Recommending Service
- Resource Events
- Common Issues
- Predictive Analytics Dashboard
- Lenovo HW and vSAN Events
- Security Login

Before you begin

From the vRLI main menu, select **Dashboards > All Dashboards**. The available dashboards are listed here.

Once the required dashboards are selected, it is listed in the navigation panel on the left.

Procedure

- 1. Log in to the vRLI UI using admin credentials.
- 2. Click Dashboards.
- 3. From the **All Dashboards** list, select the required dashboard.

Overview Dashboard

Provides a consolidated listing for all messages coming from LXCA servers (including events from LXCAmanaged resources).

vm Log Insight t	heshboards Interactive Analytics Content Packs. Administration	온 admin					
Custom Dashboards A My Dashboards AS Shared Dashboards Content Pack Dashboards	Custom time range \$1/9/2021, 07.09.45.870 \$6/12/2021, 00.00.00.000 \$6 Display legend on all widgets \$1 \$6/12/2021, 00.00.00.000 \$6 Isoport, loca, sweethy Contains \$1 \$6 \$1 Isoport, loca, sweethy Contains \$1						
General Lenovo - xClarity Overview Security - Logins Security - Changes Provisioning	Count of events grouped by Lenovo XClarity Administrator IP address.	Caria - C					
Power and Thermal Events recommending serv. Resource Events Common itsues Predictive Analytics Dashb. Lenovo HWr and VSAN even.	Count of IMM events over time	* i * 0					
Test Pack VMware - vROps 6.7+ VMware - vSAN VMware - vSphere	Count of ThinkServer events over time	t and and					

Overview		
Widget Name	widget Type	Notes
Count of events grouped by Lenovo XClarity Administrator IP address	Chart	This chart shows what percentage of events are being surfaced by each Lenovo XClarity Administrator if there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator compared to the others, it may be a sign of potential problems. Reviewing the list of events surfaced by that Lenovo XClarity Administrator compared
Count of events over time grouped by severity	Chart	This chart shows how many events are flowing through al Lenovo Xclarity Administrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.
Count of IMM events over time	Chart	This graphs shows how many IMM events have been received over time. Viewing trends in IMM events may provide insight into issues with the managed servers in general. Look for spikes in the number of IMM events, and drill down into what types of events are occurring during those spikes.
Count of CMM events over time	Chart	This graph shows how many CMM events have been received over time. Viewing trends in CMM may provide insight into issues with the Flex chassis in the environment. Look for spikes in the number of CMM events, and drill down into what types of events are occurring during those spikes (Note that IC Module and IMM events from the Flex chassis are not counted here. There are separate graphs for these).
Count of ThinkServer events over time	Chart	This graphs shows how many ThinkServer events have been received over time. Viewing trends in ThinkServer events may provide insight into issues with the managed servers in general. Look for spikes in the number of ThinkServer events, and drill down into what types of events are occurring during those spikes.
Count of IO Module events over time	Chart	This graphs shows how many IO Module events have been received over time. Viewing trends in networking events may provide insight into issues with the overall network environment. Look for spikes in the number of IO Module events, and drill down into what types of events are occurring during those spikes.

Security - Logins Dashboard

Provides statistics on any security-related events, such as user logins or failures.

vm Log Insight	Dashboards Interactive Analytics Content Packs Administration	admin 🗸
Custom Dashboards & My Dashboards & Shared Dashboards	Custom time range v S/19/2020, 07:09:45:670 B 6/12/2021, 00:00:00:00 B c C Display legend on all widgets O ()	< 🗉
Content Puck Dasboards General Content Security - Logins Security - Changes Power and Themail Power an	+ABD FACES Unsuccessful authentications to Lenovo XClarity Administrator and managed res. 4 i 4 Unsub transport of the second s	2 f 10-
	Failed logins to Lenovo XClarity Administrator by attempted user ID	* i *
	All messages on nights and weekends	1 1 0 -

The following table lists the widget names and their details:

Security - Logins		
Widget Name	Widget Ty	pe Notes
Unsuccessful authentications to Lenovo XClarity. Administrator and managed resources, grouped by ad- dress of user	Chart	This graph shows the IP addresses of unsuccessful attempts to log in to a Lenovo XClarity Administrator, or a resource managed by a Lenovo XClarity Administrator. This may help in tracking down where the unautho- rized attempts were made from.
Count of unsuccessful authentications to Lenovo XClarity Administrator and managed resources	Chart	This graph shows how many unsuccessful attempts there were to log in to a Lenovo XClarity Administrator, or a resource managed by a Lenovo XClarity Administrator. A spike in the number of unsuccessful attempts to access these systems may indicate that unsubhorated users may be attempting to hack into the systems.
Failed logins to Lenovo XClarity Ad- ministrator by attempted user ID	Chart	This graph shows what user IDs attempted to authenticate to a Lenovo XClarity Administrator, but failed. Seeing which unauthorized user IDs were used to attempt access should be useful in system audits, finding out who is trying to access the systems.
Pie chart of user ids that have suc- cessfully logged in to XClarity Admin- istrator	Chart	This graph shows the user IDs that logged into the Lenovo XClarity Administrator and when. This may be helpful when auditing which users are accessing your environment over an extended period of time
All messages on nights and weekends	Chart	This graph shows any messages that were surfaced to Lenovo XClarity Administrator outside of normal business hours. This may help identify uncommon user account activity, such as someone changing system configu- ration in the middle of the right.
Count of Lenovo XClarity Administra- tor login attempts on nights and weekends ()	Chart	This graph shows how many login attempts occurred outside of normal business hours. This may help identify uncommon user account activity, like a large number of login attempts in the middle of the night or on a weekend.

Security - Changes Dashboard

Shows any security changes made to the LXCA, such as security policy changes, or changes for individual LXCA users.



The following table lists the widget names and their details:

ecurity - Changes					
Widget Name	Widget Type	Notes			
Number of user accounts created over time	Chart	This graph shows how many user accounts were created on the Lenovo XClarity Administrator over time. Spikes in the number of new accounts could help identify uncommon security activities for audit purposes.			
Number of Lenovo XClarity Adminis- trator user accounts deleted over time	Chart	This graph shows how many user accounts on the Lenovo XClarky Administrator have been deleted over time.			
Number of changes to user accounts over time	Chart	This graph shows how many changes to Lenovo XClarity Administrator user accounts have occurred over time. A spike in the number of changes to user accounts may be a sign of uncommon account activity			
Number of changes to security policy over time	Chart	This graph shows how many times a security policy on the Lenovo XClarity Administrator has changed over time			
Number of changes to account security settings over time	Chart	This graph shows how many times the Lenovo XClarity Administrator security settings have changed for accounts, such as password policies			
User accounts with security settings changed	Chart	This graph shows which Lenovo XClarity Administrator accounts have had their security settings changed. Lots of activity for an account could signal a security issue.			

Provisioning Dashboard

Shows events related to the provisioning of managed resources. LXCA can provision changes to managed resources, including updating firmware, pushing configuration changes, and deploying operating system images.



Provisioning		
Widget Name	Widget Type	Notes
Number of successful Configuration Pattern deploys	Chart	This graph shows the number of times that Configuration Patterns were deployed to Lenovo XClarity Administrator managed servers over time. This can help identify how much change is occurring to the configuration of servers.
Number of Configuration Patterns cre- ated ©	Chart	This graph shows how many Configuration Patterns were created on the Lenovo XClarity Administrator, over time. This can help identify how much change is occurring to the configuration of servers.
Number of successful firmware up- dates over time	Chart	This graph shows the number of successful firmware updates that have completed on Lenovo XClarity Administrator-managed servers. This can help identify how much change is occurring to the configuration of servers.
Number of successful OS deploy- ments via Lenovo XClarity Administra- tor over time 😄	Chart	This graph shows the number of times a successful OS deployment was completed from an Lenovo XClarity Administrator to servers that it is managing.
Number of OS imports over time 👳	Chart	This graph shows how many OS imports have occurred over time. This information may be helpful in auditing when OS images are being imported, that may be deployed to your managed servers.

Power and Thermal Dashboard

Graphically depicts power/thermal thresholds. Any time power or thermal threshold is exceeded, the events associated with that situation are reflected in the graphs.

vm Log Insight	Interactive Analytics Content Packs Administration	e admin								
Custom Dashboards	Custom time range v 5//9/2021; 07:09:45:670 🔲 6//2/2021; 00:00:00:00 🔲 @	< 0								
은 My Dashboards	Display legend on all widgets 🔹 🕕 🛞									
伤 Shared Dashboards	kenved, kca, regent, ser. contains y. Use TAB or ID/TEP to separate multiple terms									
Content Pack Dashboards	+ ADD FLITER									
General										
- Lenovo - xClarity	Number of power threshold alerts over time	211.0-								
Overview										
Security - Logins	0									
Security - Changes										
Provisioning										
Power and Thermal										
Events recommending serv	Number or thermal thresholds that have been exceeded by any Lenovo Xclarity Administrator-managed resources	3119-								
Resource Events										
Common Issues	No results									
Predictive Analytics Dashb										
Lenovo HW and vSAN even	min min with with the second with the second with the second s	Jul 10								
💮 Test Pack										
VMware - vROps 6.7+	Count of low or failed battery events over time	告日祭								
O VMware - vSAN										
O VMware - vSphere	No results									
	หม่วย มาร	2 mill								

twee and Thermal						
Widget Name	Widget Ty	pe Notes				
Number of power threshold alerts over time O	Chart	This graph shows the number of times when a power threshold has been exceeded for any Lenovo XClarity Administrator-managed resources, over time. This can help identify environmental issues in the datacenter. If the exceeding of power thresholds caused power capping, this could also explain performance slow downs.				
Number or thermal thresholds that have been exceeded by any Lenovo XClarity Administrator-managed re- sources	Chart	This graph shows the number of Lenovo XClarity Administrator-managed resources that have posted a temperature alert, or have exceeded a temperature threshold. This can help identify cooling issues in the datacen- ter, or in the racks.				
Count of low or failed battery events over time	Chart	This chart shows the number of Lenovo XClanity Administrator-managed resources that have batteries that are low or that have failed. This can cause issues for these resources in the future, so it is recommended to replace these batteries.				

Events Recommending Service Dashboard

Displays events for resources that require attention by the System Administrator or the Support Center (or events predicting that these types of failures are imminent).



The following table lists the widget names and their details:

Events recommending service						
Widget Name	Widget Type	Notes				
Number of PEAs received by Lenovo XClarity Administrator over time	Chart	This graph shows how many predicted failure alerts (PFAS) occurred over time, PFAS can be an indication that hardware is more likely to experience a failure, but has not actually failed. A spike in these over multiple pieces of hardware can be an indication of an environmental issue. Compare this graph with the one above on serviceable events, to see how much delay there tends to be from a PFA event to a hard failure re- quiring service.				
Critical errors from managed hard- ware	Chart	This graph shows how many critical errors were reported by Lenovo XClarity Administrator-managed endpoints over time. A spike in these over multiple pieces of hardware can be an indication of an environmental issue. You may want to consider setting alerts for these types of events.				
Number of serviceable events, grouped by type of serviceability \odot	Chart	This graph shows the number of serviceable events received by Lenovo XClarity Administrators, grouped by whether the events are serviceable by the customer, or require the Support Centers assistance to service. This is useful in determining if there are any trends that show times where more hardware failures tend to accur.				

Common Issues Dashboard

Lists the widgets that help in understanding the hardware health status, systems that would need attention as they are going out of warranty, systems that are power on or off, and has certificate issues.

vm Log Insight	Dashboards Interactive Analytics Content Packs Administration			옩 admin ∽
Custom Dashboards 옷 My Dashboards 棇 Shared Dashboards	Custom time range 5/19/2021, 07:09:45:670 □ 6/12/2021, 00:00:00:000 □ ♂ Display legend on all widgets ① ② ③ ④ ● <			× 10
Content Pack Dashboards General Lenovo – xClarity	System hardware health status changes	đai¢-	Systems going out of warranty	소 i 호- ■ informational
Overview Security - Logins Security - Changes	50 		2 10 May 20 May 22 May 24 May	
Provisioning S Power and Thermal S	System Power On and Power Off	\$1 \$	Duplicate IP Address detected	tai¢- ∎warning
Events recommending serv	No results			
Predictive Analytics Dashb	Meg 20 Meg 22 Meg 24 Meg 26 Meg 28 Meg 10 Jan 1 Jan 3 Jan 5 Jan 7 Jan 9	ann	0	
Lenovo HW and vSAN even	Certificate Issues	\$1¢		
💿 VMware - vROps 6.7+	No results			
6 VMware - vSphere	Mey 20 Mey 22 Mey 24 Mey 28 Mey 28 Mey 30 Jun J Jun 3 Jun 3 Jun 7 Jun 9	an 1		

Common Issues		
Widget Name	Widget Type	> Notes
System hardware health status changes ©	Chart	This chart the Events releted to System hardware health status changes are flowing through all Lenovo XClarity Administrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.
Systems going out of warranty 🐑	Chart	This chart shows the Events releted to Systems going out of warranty flowing through all Lenovo XClarity Administrator instances, grouped by seventy. This is helpful in knowing if more serious events are starting to oc- cur, which could be a sign of an impending larger problem.
System Power On and Power Off	Chart	This chart shows the Events releted to System Power On and Power Off g through all Lenovo XClarity Administrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.
Duplicate IP Address detected	Chart	This chart shows the Events releted to Duplicate IP Address are flowing through all Lenovo xClarity Administrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.
Certificate issues	Chart	This chart shows the Events releted to Certificate issues through all Lenovo XClarity Administrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.

Predictive Analytics Dashboard

Lists the widgets that help in presenting the event analytics, events that are generated from predefined queries, user-defined alerts, and events that are triggered for known hardware issues.

vm Log Insight	Dashboards	Interactive Analytics	Content Packs	Administration			$\stackrel{\circ}{\simeq}$ admin \checkmark
Custom Dashboards 은 My Dashboards 종 Shared Dashboards Content Pack Dashboards	Custom 1 Display I + ADD FIL	time range v 5/19/20 egend on all widgets	21, 07:02:57.208	6/11/2021, 14:47:4	4.340 🔲 C		× 1
General	Total	analytic events ove	r time				\$1 i \$
🚍 Lenovo – xClarity	20k						informational warning critical
Overview	10k						Concor
Security - Logins	54						
Security - Changes	e o —	y 20 May 22 May 24	May 26 May 28	May 30 Jun 1	Jun 3 Jun 5	Jun 7 Jun 9 Jun 11	
Provisioning	54 J						
Power and Thermal	Even	ts from predefined o	queries	白言举	Events from use	r-defined custom aler	ts defin 🕼 i 🌣
Events recommending s	S			warrang	100		critical warning
Resource Events	100				20	_	
Common Issues	55		6 E -				
Predictive Analytics Das	o	May 24 May 31	Jun 7		0	May 31 Jun 7	
Lenovo HW and vSAN e							

The following table lists the widget names and their details:

Predictive Analytics Dashboard					
Widget Name	Widget T	/pe Notes			
Total analytic events over time	Chart	This chart shows the total analytic Events over time added to Xclarity flowing through all Lenovo XClarity Orchestrator instances, grouped by seventy. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.			
Events from predefined queries	Chart	This chart shows Event from predefined queries over time added to Xclarity flowing through all Lenovo XClarity Orchestrator instances, grouped by sevently. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.			
Events from user-defined custom alerts defined	Chart	This chart shows the Events from user-defined custom alerts over time added to xclarity flowing through all Lenovo XClarity Orchestrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.			

Lenovo HW and vSAN events Dashboard

List the widgets that help in understanding the LXCA events and health status of SSD, diskgroup, disks, etc.

vm Log Insight D	adhoards Interactive Analytics Content Packs Administration						
Custom Dashboards	Lader & thous of state w e Description of a strategiest C = 0						
Content Pack Deathcourds General Contents Contents Overview Security - Logins	LXCA disk related events	5 / 0- • 00000	Diskgroup announcement failure from vSAN	ta í O-			
	1						
Security - Changes Provisioning	The 2019 Ant New Sec Con New 2019 Ant offer see the SSD health change from VSAN	510	Diskgroup operation failure from VSAN	510			
Events recommending serv.	· · · · · · · · · · · · · · · · · · ·	and inviginity.	1	B reflättinginäte.			
Fredictive Analytics Depts.	5 BOD JAN BOD DO BOD JAN BOD DO		a and and and an an an an				
Certoso HW and vSAN every.	Disk health change from vSAN		s i e mathemapour.				
🖉 VMuare - vSphere	2		1. No. 1/0, 000 10 No. 1/4 000 100.				
	Disk offline from vSAN	\$ i 0-					
	nica ania ania dob ania dia tao ania ania ania ania ania ania	tiloo					
	Disk permanent error from vSAN	\$ (0- ■ 12554-00048.					
	10 *						

The following table lists the widget names and their details:

Lenovo HW and vSAN events for disk/storage				
Widget Name	Widget T	ype Notes		
LXCA disk related events	Chart	This chart shows total number disk releted events being surfaced by each Lenovo XClarity Administrator. If there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator compared to the others, it may be a sign of potential problems. Reviewing the fat of events surfaced by that Lenovo XClarity Administrator is recommended.		
Diskgroup announcement failure from	Chart	Total number of events for vGAN diskgroup announcement failures.		
		Note: Check the storage configuration and the state of the SSDs, HDDs and adapters associated with the vSAN Cluster.		
SSD health change from vSAN O	Chart	Total number of events for VSAN SSD health change events to a state other than healthy. An increase in the number of events indicates an issue with the SSDs belonging to the VSAN cluster.		
		Note: Check the storage configuration and the state of the SSDs, HODs and adapters associated with the VSAN Cluster.		
Diskgroup operation failure from	Chart	Total number of events for vSAN diskgroup operation failures. An increase in the number of events indicates an issue with the disks belonging to the diskgroup.		
VSAN		Note: Unless large and/or frequent spikes are seen for a long duration there is no need for concern.		
Disk health change from vSAN ()	Chart	Total number of events for VSAN disk health change events to a state other than healthy. http://bi.vmware.com/kb/2004684		
		Note: Check the storage configuration and the state of the SSDs, HDDs and adapters associated with the VSAN Cluster.		
Diskgroup recovery failure from vSAN	Chart	Total number of events for vSAN diskgroup recovery failures. Diskgroup recovery will be performed for vSAN disks that have already been stamped with the vSAN signature on reboot.		
Disk offline from vSAN 👛	Chart	Total number of events for VSAM disk going offline. Disks that go offline are no longer a part of the VSAN cluster. http://kb.vmware.com/kb/2004684		
		Note: Check the state of the adapters and disks associated with the VSAN cluster.		

Resource Events Dashboard

Lists the widgets that help in understanding the memory, CPU, and I.O event count.



Resource Events		
Widget Name	Widget Type	Notes
Count of Memory events	Chart	This charts hows total number of memory events being surfaced by each Lenovo XClarity Administrator. If there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator compared to the others. It may be a sign of potential problems. Reviewing the list of events surfaced by that Lenovo XClarity Administrator is recommended.
Count of Memory events over time by severity	Chart	This chart show how many events are flowing through all Lenovo XClarity Administrator instances, grouped by seventy. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem
Count of CPU events	Chart	This charts hows total number of CPU events being surfaced by each Lenovo XClarity Administrator. If there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator compared to the others, it may be a sign of potential problems. Reviewing the list of events surfaced by that Lenovo XClarity Administrator is recommended.
Count of CPU events over time by sevenity ()	Chart	This chart shows how many events are flowing through all Lenovo XClarity Administrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem
Count of I/O events	Chart	This chart shows total number of I/O events being surfaced by each Lenovo XClarity Administrator. If there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator compared to the others, it may be a sign of potential problems. Reviewing the list of events surfaced by that Lenovo XClarity Administrator is recommended.
Count of I/O events over time by severity	Chart	This chart shows how many events are flowing through all Lenovo XClarity Administrator instances, grouped by seventy. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem
Count of Power Supplies events	Chart	This chart shows total number of Power Supplies events being surfaced by each Lenovo XClarity Administrator. If there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator compared to the others, it may be a sign of potential problems. Reviewing the list of events surfaced by that Lenovo XClarity Administrator is recommended.
Count of PowerSupplies events over time by severity	Chart	This chart shows how many events are flowing through all Lenovo XClarity Administrator instances, grouped by sevenity. This is heipful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem
Count of Fan/Cooling events	Chart	This chart shows total number of Pan/Cooling events being surfaced by each Lenovo XClarity Administrator. If there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator com- pared to the others, it may be a sign of potential problems. Reviewing the list of events surfaced by that Lenovo XClarity Administrator is recommended.
Count of Fan/Cooling events over time by severity	Chart	This chart show how many events are flowing through all Lenovo XClarity Administrator instances; grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem
Count of Storage events	Chart	This chart shows total number of storage events being surfaced by each Lenovo XClarity Administrator. If there are a disproportionately large number of events surfaced by one Lenovo XClarity Administrator compared to the others, it may be a sign of potential problems. Reviewing the list of events surfaced by that Lenovo XClarity Administrator is recommended.
Count of Storage events over time by severity ()	Chart	This chart shows how many events are flowing through all Lenovo XClarity Administrator instances, grouped by severity. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem
Count of New VXsystem added to Xclarity ()	Chart	This chart shows the total number of Events releted to New VXsystem added to Xclarity flowing through all Lenovo Xclarity Administrator instances, grouped by seventy. This is helpful in knowing if more serious events are starting to occur, which could be a sign of an impending larger problem.

Viewing interactive analytics and alerts

The interactive analytics and alerts help you with information or warning messages. The alerts are triggered based on defined symptoms conditions such that when a metric value matches with a symptom, an alert is triggered. The alerts also include a short description of the alert.

Procedure

To view interactive analytics and alerts, complete the following steps.

- 1. Log in to vRLI as an admin user.
- 2. To view alerts, click Interactive Analytics. The count of events is displayed in graphical format.

vm Log I	Insight	Dashboards	Interactive Analytics	Content Packs	Administration	e							0°	admin 🗸
4/20/2021 00:0												🙆 Snapshot	🖬 Add to Di	ashboard
22												information.		
• . <u> </u>														
Count of events	 + over time group 	4pr24	April April R									12 hours - Cha	rt Type 🔥 Col	umn - 1
									☆ - Custo	im time range	~ Q	*	"	₫-
± Matchall - of t	the following filters:								5/8/2021, 05:	30:00.000 to	5/8/2021, 17:29:59	.999		
× lenovo_ixo	ca_syslog_a_ 🗸	contains	V (LXCA)											
× lenovo_lxo	ca_mgmt_se 🗸	exists	×											
× lenovo_ixo	ca_severity 🗸	exists	~											
× lenovo_lxo	ca_event_id 🔍	contains	V (FQXHMDM0165F)(F	OXHMDM0165G FOXHM	DM0166K CROXHMD	M0167K FQXHMD	M0168G (FQ)	KHMDM0169	FOXHMDM0170					
× lenovo ixo	ca severity 🗸	contains	V (warning -)		70									
	N CLEAR ALL	EUTEDC												
CONTENT DAG	The second all for	ddw)												
CONTENT PAC	No Annual and an													
Events Fiel	id Table Event 1	Types Event Tri	ends						1 to 24 out (of 24 events View	 Sort: Newest First • 	Fields 🥒		94
●• 5/8/2021 16:29:25:584	May 8 86:59:28 lo sr=UNKNONN resource source event_type lenovo_kca_event_s	calhost <84> Sat Ma eIP=UNIONCHIN system lenovo_bca_time ource lenovo_bca_	ay es es:59:25 EDT 2021 [app] lame+MSCF3FC250878 : Power : hostname lenovo_lxca_weeks uuid lenovo_lxca_serial_numbe	I-LXCA service-NGNE severit Supply 04 : Eay 4 seq=44994 day lenovo_bxca_syslog_appi er lenovo_bxca_event_id len	y=NARNING class=SYSTEP 8 EventID=FQXHCM01656 cation lenovo_lxca_sen ovo_lxca_common_event	1 appladdr-10.240.35. 5 CommonEventID-FQUMMS viceable lenovo_kca_s t_id	18 user-UNKNOWN M01655 The devi eventy lenovo_	i src-Management ce health state Jxca_class lenou	Server uuid=89940 changed from nor ro_lxca_mgmt_serv	04378E2C4041SEA810 mai to warning. er_address lenow	13723716204 o_lxca_user_id	event_type hostname filenovo_ixca_c lenovo_ixca_c lenovo_	lass o more - re common_event	0
O+ 5/8/2021 16:17:40.346	Striccia Ny E 81-01-0 Doublect c46 Str Ny 08 81-01-0 Emony Data entrols Emony Data entrols						0							
	May 8 06:37:30 lo sr=UNKNOWN resource source event_type lenovo_lxca_event_s	calhost <84> Sat Ma eIP=UNONOWN system lenovo_ixca_time ource lenovo_ixca_t	y 08 06:37:30 EOT 2021 [app Ame+MISCF3FC250878 : Power : hostname lenovo_lxca_week auid lenovo_lxca_serial_numbs	I-LXCA service-NONE severit Supply 04 : Bay 4 seq=44982 day lenovo_kca_syslog_appi ar lenovo_kca_event_id len	y=NLRNING class=SYSTEP 2 EventID=FQNHOM01650 cation lenovo_lxca_sen ovo_lxca_common_event	t appladdr-10,240.35; S CommonEventID-FQXMM viceable [enovo_txca_s t_id	18 user-UNKNOWN MoldSG The devi eventy lenovo_	i arc-Management ce health state Jxca_class lenoi	Server uutd+89940 changed from nor lo_lxca_mgmt_sarv	04378E2C40419EA818 mal to warning. er_eddress lenow	83723718204 o_krca_user_id	 enovo_kca_s lenovo_kca_s lenovo_kca_s lenovo_kca_s lenovo_kca_s 	eventy therein yslog_applicati ime thereino - sc iser_id thereino and	000

Figure 1. Interactive analytics of total analytic events over time for LXCA

Count of events over 1	time grouped by lenovo_txco_	_severity		informational	
ziłas zińso zińs no jeco jseventy + Augery Rese	Jun 10 Odos et	00:10 00:15 002		informational	
22145 2250 2255 vo_toco_seventy + Accord Rese	Jun 10 odos et	ocia ocis oci		ainuto • Chart Type II Colum o	
vo_lxco_severity + Rese	et		1 lose - 1m	inute - Chart Type II Column	
			1 Dai - 1 10	Chart Type III Chart	*
		👷 * Custom time ra	ange 🗸 🔍	💉 📰 🔔 C	17-
(LXCO 3)		6/9/2021, 23:30:00.000	to 6/10/2021, 00:29:59.99	9	
vent Trends		1 to 50 out of 50+ events	View • Sort: Newest First • F	Fields /	
7. ('groups': [], 'acls': [], 'local': E06', 'componentD': ' <u>SF4284582045</u> een discovered successfully in the sp ['Unsequenced'], 'userid': None, 'act None, 'manger1D': None, 'failFRLVmd' 37F37', 'magID': 'Ohw0102', 'timestam n': 'S62333', 'details': None, 'devic rver', 'sourceType': 'Device', 'resou	: None, 'eventD': '08002184', BACA795000013778', 'mog': D pecified bay in the chassis.' inton: 'None', 'eventClass': mbers': '08072733', 'faiJFBU mp': '2021-06-09718:59: 0802 ce': ('name': 'rpx-c1-bv18', 'fru erretWame': 'rpx-c1-bv18', 'fru enty lenovo ixco component id enty enovo ixco component id enty enovo ixco component id	, 'severity': 'Informational', 'source' biscoveral device Node Bay In Node Bay I 'UserAction': 'Information only: no a Blade', args: C'Node Bay Blade', args: C'Node Bay Blade', args: C'Node Bay Blade', 'serailwate': 'Source', 'serailwate': 'ors' ufype': 'other', 'serailwate': 'ors' ufype': 'other', 'spaddress': '10:243.2 d-lenovo.kco.message lenovo.kco.use urce twoe lenovo kco in address	0': 0,CRC: 70A5E277.', E ction is required.', C 10', '70A5E277'], ('commonEventID': S00C'), 'resourceType': 2 300C'), 'resourceType': 2 .224', '_id': 25104, (action (hostname hostname honovo_kxco_common_event. lenovo_kxco_component_id (lenovo_kxco_event_date (m., lenovo_kxco_ip_address (moo, lenovo_kxco_message (moo, lenovo_kxco_ressage (moo,	
	vent Trends 57 ("groups": [], "acls": [], "local" 2864", "componentD": "groupsatestace been discovered successfully in the ("unsacence"], userid": None, "ac None, "nanagerD": None, "failFRUM 1973], "ango": "Chemica", "successful 1973], "ango": "Chemica", "successful 1974, "successful 1974	vent Trends 57 ("groups": [], 'acls': [], 'local': None, 'eventD': '@E002184' E864', 'cooponentD': 'BE02349522489442760008913975', 'neg'' Seen discovered successfully in the specifical bay in the chassis.' ('Insequencid'), 'userid': None, 'action': 'None', 'eventDass' None, 'neaegerD': None, 'failFRUNWbers'; '[2072733', 'failFRU 3773], 'neggi'. 'GentD': 'Nessease'; '220-467115:85 80 800 r'' discossing, 'seasil's None, 'heiger de chastis.'' ('near chastis', 'searchaste'; 'searchaste'; 'rearchaste'; 'rearchas	Vent Trends 1to 50 out of 50+ events 71 (groups): [], facls': [], 'local': None, 'event20': '@E002164', 'severity': 'Informational', 'source' 826', 'component20': '@E0023AFF2/2004ACATEBODONIDITES', 'mess?'. Toiscovered device Node 10 in Node Bay 1 9aen discovered successfully in the specified bay in the chessis.', 'userAction': 'Information only, no a 10masquered'], 'local': Node: 'severits': 'severits': 'Information only, no a 10masquered'], 'local': 'severits': 'severits': 'Information only, no a 10masquered'], 'local': 'nesting: 'severits': 'severits': 'Stade: 'args': 'Node: Bay 10mg'; 'severits': 'sever	Vent Trends 1to 50 out of 50+ events View* Sort: Newest Pirst* 77 ('groups': [], 'scls'; [], 'local': None, 'eventD': '95802184', 'severity': 'Informational', 'sourceID': 'severits': 'Informational', 'sourceID': 'source	Vent Trends 1to 50 put of 50+ events View - Sort Newest First- Fields 77 ("groups1: [], "acls1: [], 'local: ' None, 'eventD1': ''eE080784', 'sevenity': ''Informational', 'sourceTD': '''eenert discovered sevice Node 18 in Node Sev. Newest First- I''' event_type 80: "orono nentID': ''EE080784', 'sevenity': ''Informational', 'sourceTD': ''' I''''''''''''''''''''''''''''''''''''

Figure 2. Interactive analytics of total analytic events over time for LXCO

Fields

The following table lists the various LXCA fields that are used in the vRLI:

Field name	Regex	Notes
lenovo_lxca_class	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "class=" and " " and Additional context is "LXCA"
lenovo_lxca_common_event_id	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "CommonEventID=" and " " and Additional context is "LXCA"

Field name	Regex	Notes
lenovo_lxca_event_id	Any Character except whitespace and \S+	Pre and post context(regexes)are "EventID=" and " " and Additional context is "LXCA"
lenovo_lxca_event_source	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "src=" and " " and Additional context is "LXCA"
lenovo_lxca_mgmt_server_address	IP Address(v4) and \d{1,3}\.\d{1,3}\.\d {1,3}\.\d{1,3}	Pre and post context(regexes)are "appladdr=" and " " and Additional context is "LXCA"
lenovo_lxca_serial_number	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "sn=" and " " and Additional context is "LXCA"
lenovo_lxca_serviceable	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "service=" and " " and Additional context is "LXCA"
lenovo_lxca_severity	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "severity=" and " " and Additional context is "LXCA"
lenovo_lxca_syslog_application	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "appl=" and " " and Additional context is "LXCA"
lenovo_lxca_target_ipv6_address	IP Address(v6) and [A-Fa-f0-9]{0,4}: ([A-Fa-f0-9]{0,4}:){1,6}[A-Fa-f0-9]{1,4}	Pre and post context(regexes)are "address " and " " and Additional context is "LXCA"
lenovo_lxca_time	Custom Regex and [0-9]{2}:[0-9]{2}: [0-9]{2}	Pre and post context(regexes)are " " and " " and Additional context is "LXCA"
lenovo_lxca_user_id	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are " user" and " " and Additional context is "LXCA"
lenovo_lxca_uuid	Hexadecimal and [A-Fa-f0-9]+	Pre and post context(regexes)are " uuid" and " " and Additional context is "LXCA"
lenovo_lxca_weekday	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are "(<86> <83> <84>) " and " " and Additional context is "LXCA"

The following table lists the various LXCA fields that are used in the vRLI:

Field name	Regex	Notes
lenovo_lxco_common_event_id	Letters, Digits, and Underscores and \w+	Pre and post context(regexes)are 'commonEventID': ' and ', and Additional context is LXCO
lenovo_lxco_event_id	Letters, Digits, and Underscores and \w+	Pre and post context(regexes) are 'eventID': ' and ', and Additional context is LXCO
lenovo_lxco_component_id	Hexadecimal and [A-Fa-f0-9]+	Pre and post context(regexes) are 'componentID': ' and ', and Additional context is LXCO

Field name	Regex	Notes
lenovo_lxco_event_date	Any character except Whitespace and \S+	Pre and post context(regexes) are 'eventDate': ' and ', and Additional context is LXCO
lenovo_lxco_ip_address	IP address(v4) and \d{1,3}\.\d{1,3}\.\d {1,3}\.\d{1,3}	Pre and post context(regexes) are 'ipAddress': ' and ', and Additional context is LXCO
lenovo_lxco_message	Custom regex and [A-Za-z0-9 .]+	Pre context(regexes) is 'msg': ' and Additional context is LXCO
lenovo_lxco_severity	Letters, Digits, and Underscores and \w+	Pre and post context(regexes) are 'severity': ' and ', and Additional context is LXCO
lenovo_lxco_resource_name	Custom regex and .[A-Za-z0-9 .]+	Pre context(regexes) is 'resourceName': ' and Additional context is LXCO
lenovo_lxco_user_action	Custom regex and [A-Za-z0-9 ./;]+	Pre context(regexes) is 'userAction': ' and Additional context is LXCO
lenovo_lxco_sequence_number	Letters, Digits, and Underscores and \w+	Pre and post context(regexes) are 'sequenceNumber': ' and ', and Additional context is LXCO
lenovo_lxco_source_type	Letters, Digits, and Underscores and \w+	Pre and post context(regexes) are 'sourceType': ' and ', and Additional context is LXCO

Logs

LXCA receives events from different types of managed resources. It transforms them into a common format so that the log output from XClarity Administrator looks similar. The general format is:

<Severity code><Date/Time stamp> [appl=LXCA service=<serviceability> severity=<log severity> class= <type of event> appladdr=<IPaddress of LXCA> src=<type of endpoint> uuid=<unique identifier> sn=<serial number> seq=<sequence number> EventID=<event ID>] <Message>

Where

- <Severity code> depicts the code specifying the error, warning, or information.
- <Date/Time stamp> depicts the date and time when the message was surfaced.
- appl=LXCA depicts that the event came from an XClarity Administrator.
- service=<serviceability> depicts if this is a Serviceable event or not.
- severity=<log severity> depicts Error, Warning, or Informational.
- class=<type of event> depicts categorization of the type of endpoint.
- appladdr=<IPaddress of LXCA> depicts the IP address of the XClarity Administrator.
- src=<type of endpoint> depicts the general type of endpoint.
- uuid=<unique identifier> depicts a unique identifier for the managed endpoint.
- sn=<serial number> depicts the serial number of the managed endpoint
- seq=<sequence number> depicts the sequence number of the event from the endpoint. You can use this number to determine if an event is missing.
- EventID=<event ID> depicts the Event ID.
- <Message> depicts the text describing the specific event that occurred.

Here is an example for LXCA:

<84> Sat May 08 06:59:25 EDT 2021 [appl=LXCA service=NONE severity=WARNING class=SYSTEM appladdr= 10.240.39.218 user=UNKNOWN src=ManagementServer uuid=B994D4378E2C40419EA81B372371B2D4 sn=UNKNOWN resourceIP=UNKNOWN systemName=MM5CF3FC25D87B : Power Supply 04 : Bay 4 seq=449948 EventID= FQXHMDM0165G

CommonEventID=FQXHMDM0165G The device health state changed from normal to warning.

Here is an example for LXCO:

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