

# Integrate Cisco Switch

### **Abstract**

This guide provides instructions to configure Cisco Switch to send the syslog events to EventTracker.

### Scope

The configurations detailed in this guide are consistent with **EventTracker** version 7.x and later, and **Cisco Switch 12.x** and **15.x**.

### Audience

Administrators, who are responsible for monitoring Cisco Switch devices using EventTracker Manager.

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## Overview

Switches are used to connect multiple devices together on the same network. In a properly designed network, LAN switches are responsible for directing and controlling the data the flow at the access layer to networked resources.

EventTracker compiles and inspects critical events to provide an administrator insight on user behavior, traffic anomalies, link flaps etc.

NOTE: Applicable to the following series of switch 2600,2800,1900,2900,3900,4500,6500 with IOS 12.x and 15.x

## Pre requisites

- EventTracker v7.x or later should be installed.
- Cisco Switch devices with software release version IOS 12.4 or higher.

## Configure Cisco Switch to send syslog to EventTracker

To enable and configure Cisco Switch for Syslog,

- 1. Enter global configuration mode and type the command Router# configure terminal
- 2. To specify syslog server, type the command -

#### Router(config)#logging host

It specifies the EventTracker Manager by IP address or host name.

3. To specify **Severity level**, type the command -

#### Router(config)# logging trap level

- Informational: 6
- 4. To specify facility level, type the command Router(config)# logging facility facility-level.

The default is local7. Possible values are local0, local1, local2, local3, local4, local5, local6 and local7.



## EventTracker Knowledge Pack (KP)

Once logs are received in to EventTracker; Alerts and Reports can be configured into EventTracker. The following Knowledge Packs are available in EventTracker to support Cisco Switch monitoring.

### Categories

- Cisco Switch: Access control list This category provides information related to access control list.
- Cisco Switch: Access information element This category provides information related to access information element.
- Cisco Switch: Accounting services This category provides information related to accounting services.
- Cisco Switch: Adapter messages This category provides information related to adapter messages.
- Cisco Switch: Adjacency subsystem This category provides information related to adjacency subsystem.
- Cisco Switch: Administration This category provides information related to administration.
- Cisco Switch: Advance integration module This category provides information related to advance integration module.
- **Cisco Switch: Advanced interface module** This category provides information related to advanced interface module.
- Cisco Switch: Airline protocol support This category provides information related to airline protocol support.
- **Cisco Switch: Alarm interface controller mgmt** This category provides information related to alarm interface controller management.
- Cisco Switch: Align messages This category provides information related to align messages.
- **Cisco Switch: Archive configuration** This category provides information related to archive configuration.
- Cisco Switch: Asynchronous security protocol This category provides information related to asynchronous security protocol.
- **Cisco Switch: ATM interface processor** This category provides information related to ATM interface processor.
- Cisco Switch: ATM line card This category provides information related to ATM line card.
- Cisco Switch: Attachment circuit This category provides information related to attachment circuit.
- **Cisco Switch: Authentication failure** This category provides information related to authentication failure.
- **Cisco Switch: Authentication proxy** This category provides information related to authentication proxy.
- **Cisco Switch: Automatic protection switching** This category provides information related to automatic protection switching.
- Cisco Switch: Cache messages This category provides information related to cache messages.
- Cisco Switch: Chassis alarm This category provides information related to chassis alarm.



- Cisco Switch: Ethernet devices This category provides information related to Ethernet devices.
- **Cisco Switch: Hardware device error** This category provides information related to hardware device error.
- Cisco Switch: HTTP subsystem This category provides information related to HTTP subsystem.
- Cisco Switch: Intrusion detection This category provides information related to intrusion detection.
- Cisco Switch: Networks This category provides information related to networks.

#### Alerts

- Cisco Switch: Interface down or detached This alert is generated when interface down or detached event occurs.
- Cisco Switch: Internal software error This alert is generated when internal software error occurs.
- Cisco Switch: Line protocol down This alert is generated when line protocol is down.
- Cisco Switch: Runaway processes This alert is generated when runaway processes occur.

### Reports

#### Cisco Switch -Configuration changed

This report provides information related to configuration changes which include Device Address, User Name, and Command Issued fields.

%FR\_VCB-5-UPDOWN: FR VC-Bundle NYKLAXLINK changed state to InActive

LogTime	Computer	Message	Facility Code
12/08/2016 05:05:27 PM	CISCO-IOS9	Controller server, changed state to Active due to unknown	CONTROLLER-5-DOWNDETAIL
12/08/2016 05:05:27 PM	CISCO-IOS9	Dot1x unable to start.	DOT1X-4-PROC_START_ERR

#### Cisco Switch -Access denied

This report provides information related to connection denial events occurring on router or switch which includes Source address, Source Port, Destination Address, Destination port and Packets Transferred fields.

Nov 7 12:20:08.139 EST: %SW\_DAI-4-ACL\_DENY: 1 Invalid ARPs (Res) on Gi1/3, vlan 1502.([001d.e513.8ef1/10.1.1.65/001d.e513.8ef1/10.1.1.65/12:20:07 EST Fri Nov 7 2008])



Computer	Source Address	Source Port	Destination Address	Destination Port	Protocol Type	Interface	VLAN Number	Packets Transferred	Reason
CISCO-IOS	192.168.10.112	4206	65.55.127.194	80					Access denied URL
									http://www.websense.com
CISCO-IOS	170.1.1.2		170.1.1.1			Gi3/31	100		9 Invalid ARPs (Req)
CISCO-IOS	192.168.10.112	4206	65.55.127.194	80					Access denied URL
									http://www.websense.com
CISCO-IOS	192.168.0.5		192.168.0.1			Fa0/5	100		1 Invalid ARPs (Req)
CISCO-IOS	192.168.1.3	1024	192.168.2.1	22	tcp			<b>ጎ</b>	list ACL-IPv4-E0/0-IN
CISCO-IOS	192.168.1.3	1024	192.168.2.1	22	tcp			1	list ACL-IPv4-E0/0-IN
	CISCO-IOS CISCO-IOS CISCO-IOS CISCO-IOS	CISCO-IOS 192.168.10.112 CISCO-IOS 170.1.1.2	CISCO-IOS 192.168.10.112 4206  CISCO-IOS 170.1.1.2  CISCO-IOS 192.168.10.112 4206  CISCO-IOS 192.168.0.5  CISCO-IOS 192.168.1.3 7024	CISCO-IOS 192.168.10.112 4206 65.55.127.194  CISCO-IOS 170.1.1.2 170.1.1.1  CISCO-IOS 192.168.10.112 4206 65.55.127.194  CISCO-IOS 192.168.0.5 192.168.0.1  CISCO-IOS 192.168.1.3 1024 192.168.2.1	CISCO-IOS 192.168.10.112	CISCO-IOS 192.168.10.112 4206 65.55.127.194 80  CISCO-IOS 170.1.1.2 170.1.1.1  CISCO-IOS 192.168.10.112 4206 65.55.127.194 80  CISCO-IOS 192.168.0.5 192.168.0.1  CISCO-IOS 192.168.1.3 1024 192.168.2.1 52 tep	CISCO-IOS 192.168.10.112	CISCO-IOS 192.168.10.112 4206 65.55.127.194 80  CISCO-IOS 170.1.1.2 170.1.1.1 GI3/31 100  CISCO-IOS 192.168.10.112 4206 65.55.127.194 80  CISCO-IOS 192.168.0.5 192.168.0.1 Fa0/5 100  CISCO-IOS 192.168.1.3 1024 192.168.2.1 22 tcp	CISCO-IOS 170.1.1.2 170.1.1.1 GI3/31 100  CISCO-IOS 192.168.10.112 4206 65.55.127.194 80  CISCO-IOS 192.168.0.5 192.168.0.1 Fa0/5 100  CISCO-IOS 192.168.1.3 1024 192.168.2.1 22 tcp 1

#### Cisco Switch -Port status change

This report provides information related to port status changed from UP to DOWN or vice versa which includes Device Address, Interface Name and Port Status fields.

#### 00:00:20: %LINEPROTO-5-UPDOWN: Line protocol on Interface Ethernet0/0, changed state to up

LogTime	Computer	Facility Code	Message
01/03/2017 12:07:06 PM	CISCO-IOS1	PM-4-ERR_DISABLE	psecure-violation error detected on Fa4/4, putting Fa4/4 in err-disable state
01/03/2017 12:07:06 PM	CISCO-IOS1	PM-4-ERR_DISABLE	psecure-violation error detected on Fa4/4, putting Fa4/4 in err-disable state

#### Cisco Switch -User logon success

This report provides information related to user logon success which includes User Name, Source Address and Source Port fields.

Oct 16 09:32:37.657: %SEC\_LOGIN-5-LOGIN\_SUCCESS: Login Success [user: neteng] [Source: 0.0.0.0] [localport: 0] at 09:32:37 UTC Fri Oct 16 2009

LogTime	User Name	Source IP Address	Local Port
12/01/2016 05:14:43 PM	David	10.10.2.32	22

#### Cisco Switch -User logon failure

This report provides information related to user logon failure which includes User Name, Source Address, Source Port and Reason fields.

Feb 9 2015 18:34:38.236 MSK: %SEC\_LOGIN-4-LOGIN\_FAILED: Login failed [user: rrr] [Source: 10.0.10.169] [localport: 23] [Reason: Login Authentication Failed] at 18:34:38 MSK Mon Feb 9 2015

12/01/2016 05:14:43 PM David 10.10.2.32 22 Invalid	n	ort Reason	Local Port	Source IP Address	User Name	LogTime
	login	Invalid logi	22	10.10.2.32	David	12/01/2016 05:14:43 PM



#### Cisco Switch -Authentication failure

This report provides information related to authentication failure that is whenever the user tries to login into one of the Cisco Switch.

Sep 15 13:09:47.308: %GLBP-4-BADAUTH: Bad authentication received from 149.212.19.162, group

LogTime	Computer	Facility Code	Client	Message
01/03/2017 04:09:22 PM	CISCO-IOS8	GLBP-4-UNAVAILABLE	192.23.43.23	Bad authentication received from 192.23.43.23, group 2
01/03/2017 04:09:22 PM	CISCO-IOS8	CRYPTO-6-UNAVAILABLE		Authentication method 192.23.12.2 failed with host accel

#### Cisco Switch -Administrative account activity

This report provides information related to account activities that is done by the administrator.

#### %AAA-5-USER\_LOCKED: User michel locked out on authentication failure

LogTime	Computer	User Name	Reason	Admin Name
11/25/2016 07:12:17 PM	CISCO	Smith	locked out on authentication failure	
11/25/2016 07:12:17 PM	CISCO	Smith	failed attempts reset	Charles
11/25/2016 07:12:18 PM	CISCO	Smith	unlocked	Charles

#### Cisco Switch -VTP management

This report provides information related to activities that occur and are related to VTP.

%%VTP-2-MODE\_OFF\_PVLAN\_EXIST Format: VTP Mode changed to off as Private VLAN configuration exists

LogTime	Computer	Facility Code	Message
01/03/2017 04:40:38 PM	CISCO-IOS2	VTP-4- BAD_STARTUP_VLAN_CONFIG_FI LE Format	Failed to configure VLAN from startup-config. Fallback to use VLAN configuration file from non- volatile
01/03/2017 04:40:38 PM	CISCO-IOS2	SW_VLAN-3- VTP_PROTOCOL_ERROR	VTP protocol internal error: Version 1 device detected on Fa0/23



#### Cisco Switch-VLAN management

This report provides information related to activities that occurs which are related to VLAN.

%VLAN\_MGR-6-VLAN\_OPER\_STATUS\_CHG: VLAN 135367, status changed to Active

LogTime	Computer	Facility Code	VLAN Name	Message
01/03/2017 04:24:29 PM	CISCO-IOS	CDP-4-NATIVE_VLAN_MISMATCH		Native VLAN mismatch discovered on GigabitEthernet0/1 (1), with Cisco500 FastEthernet0/3(99).VTP
01/03/2017 04:24:20 PM	CISCO-IOS	VLAN_MGR-6- VLAN_OPER_STATUS_CHG	135367	VLAN 135367, status changed to Active
01/03/2017 04:24:29 PM	CISCO-IOS	VLAN_MGR-6-VLAN_CREATED Format	accel	VLAN accel

#### Cisco Switch-Port security

This report provides information related to port security violation.

%PORT\_SECURITY-2-PSECURE\_VIOLATION: Security violation occurred, caused by MAC address 0023.339c.e1cf on port FastEthernet4/4

LogTime	Computer	Facility Code	Message
01/03/2017 12:07:06 PM	CISCO-IOS1	PM-4-ERR_DISABLE	psecure-violation error detected on Fa4/4, putting Fa4/4 in err-disable state
01/03/2017 12:07:06 PM	CISCO-IOS1	PM-4-ERR_DISABLE	psecure-violation error detected on Fa4/4, putting Fa4/4 in err-disable state
01/03/2017 12:07:06 PM	CISCO-IOS1	PORT_SECURITY-2- PSECURE_VIOLATION	Security violation occurred, caused by MAC address 0023.339c.e1cf on port FastEthernet4/4.
01/03/2017 12:07:06 PM	CISCO-IOS1	PM-4-ERR_RECOVER	Attempting to recover from psecure-violation err-disable state on Fa4/4



## Import Cisco Switch Knowledge Pack into EventTracker

- 1. Launch EventTracker Control Panel.
- 2. Double click **Export Import Utility**, and then click the **Import** tab.

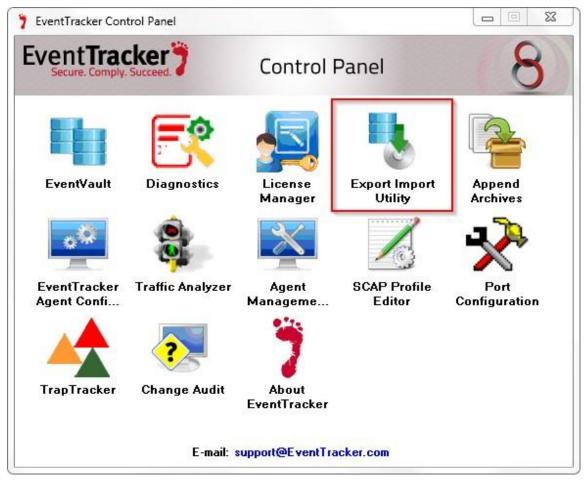


Figure 1

Import in the same order as mentioned:

Templates
Categories
Alerts

**Reports** as given below:



## Categories

1. Click Category option and then click the browse button.

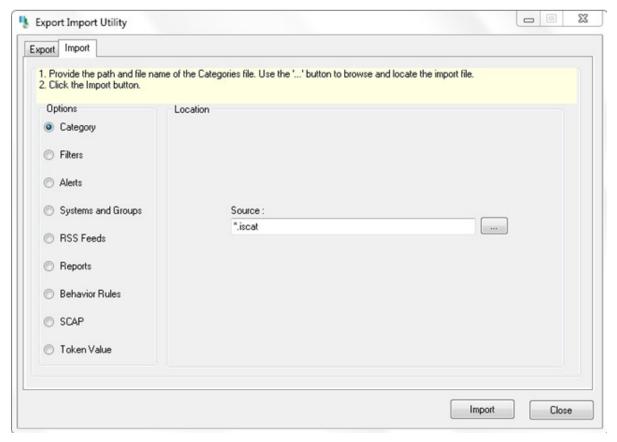


Figure 2

- 2. Locate **All Cisco Switch group of Categories.iscat** file, and then click the **Open** button.
- 3. To import the categories, click the **Import** button. EventTracker displays success message.



Figure 3

4. Click **OK**, and then click the **Close** button.



### **Alerts**

1. Click Category option and then click the browse button

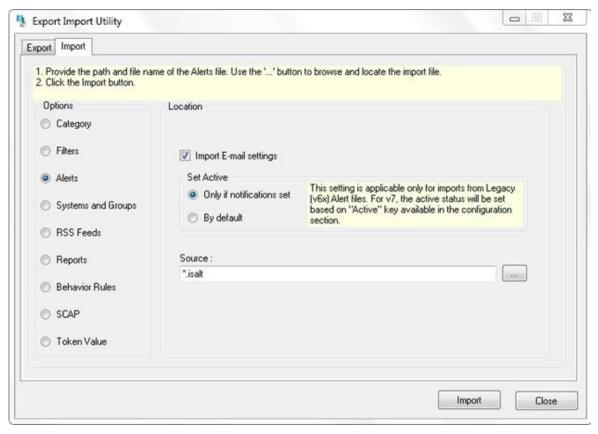


Figure 4

- 2. Locate All Cisco Switch group of Alerts.isalt file, and then click the Open button.
- 3. To import alerts, click the **Import** button. EventTracker displays success message.



Figure 5

4. Click **OK**, and then click the **Close** button.



**NOTE**: You can select alert notification such as Beep, Email, and Message etc. Select the respective checkbox in the Alert management page, and then click the **Activate Now** button.

## **Templates**

- 1. Click the Admin menu, and then click Parsing rule.
- 2. Select **Template** tab, and then click on **I** '**Import**' option.

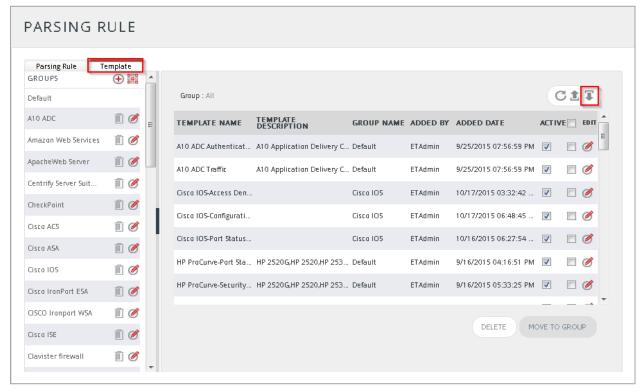


Figure 6

3. Click on Browse button.



Figure 7

4. Locate All Cisco Switch group of Template.ettd file, and then click the Open button





Figure 9

5. Now select the check box and then click on **I** '**Import**' option. EventTracker displays success message.



Figure 10

6. Click on **OK** button.

## Flex Reports

- 1. Click **Reports** option, and then click the 'browse' button.
- 2. Locate All Cisco Switch group reports.issch file, and then click the Open button.



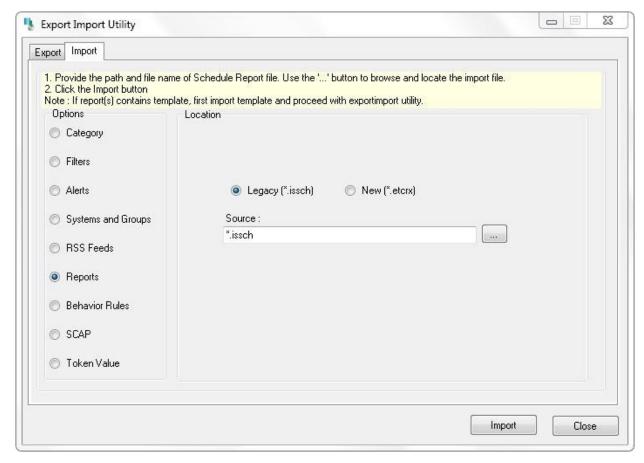


Figure 11

3. To import scheduled reports, click the **Import** button.

EventTracker displays success message.

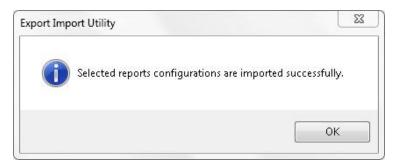


Figure 12

4. Click **OK**, and then click the **Close** button.



## Verify Cisco Switch knowledge pack in EventTracker

## Categories

- 1. Logon to EventTracker Enterprise.
- 2. Click the **Admin** menu, and then click **Categories**.
- 3. In the Category Tree, expand Cisco Switch group folder to view imported categories.

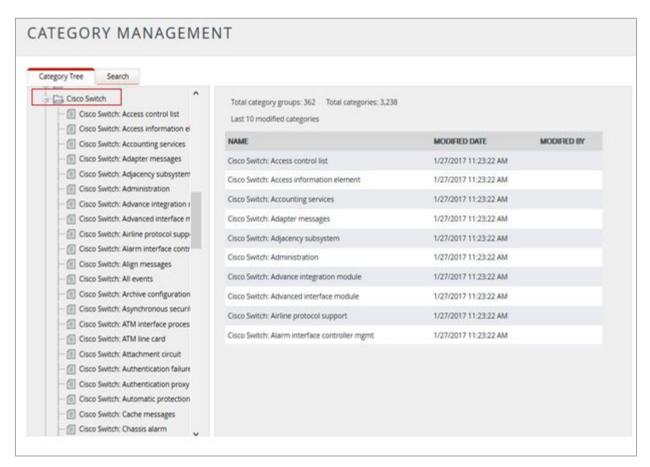


Figure 13

### **Alerts**

- Logon to EventTracker Enterprise.
- 2. Click the Admin menu, and then click Alerts.
- In Search field, type 'Cisco Switch', and then click the Go button.
   Alert Management page will display all the imported Cisco Switch alerts.



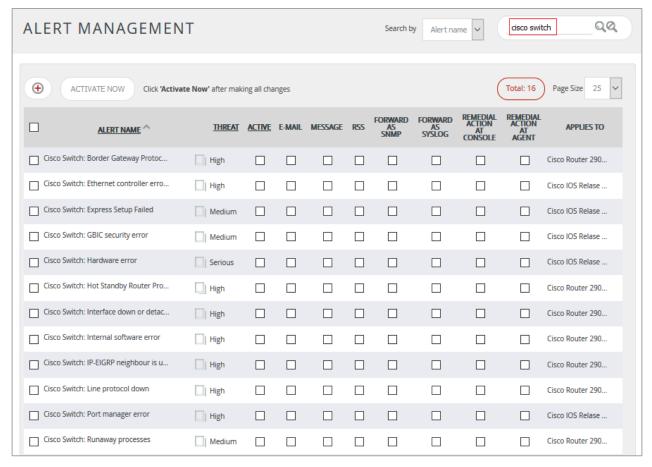


Figure 14

4. To activate the imported alerts, select the respective checkbox in the **Active** column. EventTracker displays message box.



Figure 15

5. Click **OK**, and then click the **Activate now** button.

**NOTE:** Please specify appropriate **systems** in **Alert configuration** for better performance.



## **Template**

- 1. Logon to EventTracker Enterprise web interface.
- 2. Click the **Admin** menu, and then click **Parsing Rules** and click **Template**.

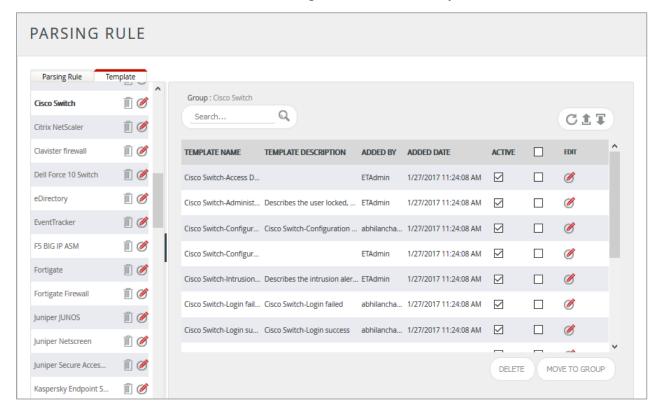


Figure 16

## Flex Reports

- 1. Logon to EventTracker Enterprise.
- 2. Click the **Reports** menu, and then **Configuration**.
- 3. Select **Defined** in report type.
- 4. In **Report Groups Tree** to view imported flex reports, scroll down and click **Cisco Switch** group folder. Imported reports are displayed in the Reports Configuration pane.



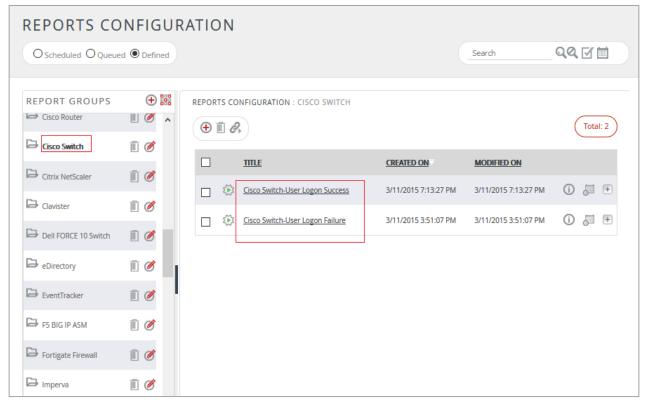


Figure 17

**NOTE:** Please specify appropriate **systems** in **report wizard** for better performance.

## Create Dashboards in EventTracker

## Schedule Reports

1. Open **EventTracker** in browser and logon.

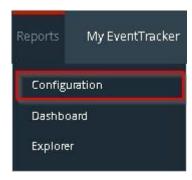


Figure 18

2. Navigate to **Reports>Configuration**.



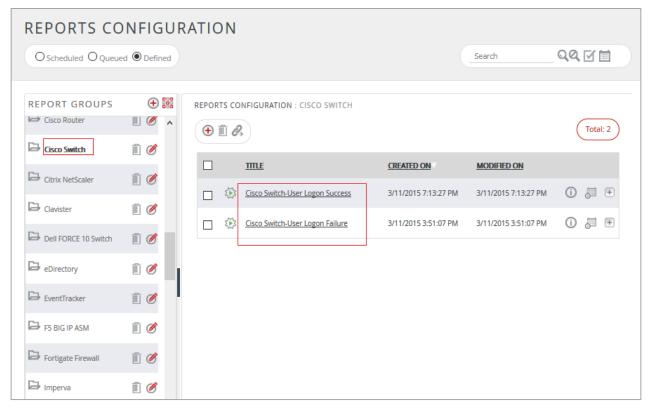


Figure 19

- 3. Select Cisco Switch in report groups. Check Defined dialog box.
- 4. Click on 'schedule' to plan a report for later execution.



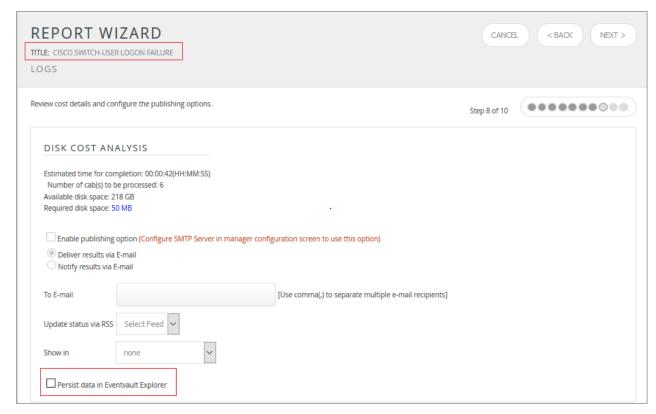


Figure 20

5. Choose appropriate time for report execution and in **Step 8** check **Persist data in EventVault explorer** box.



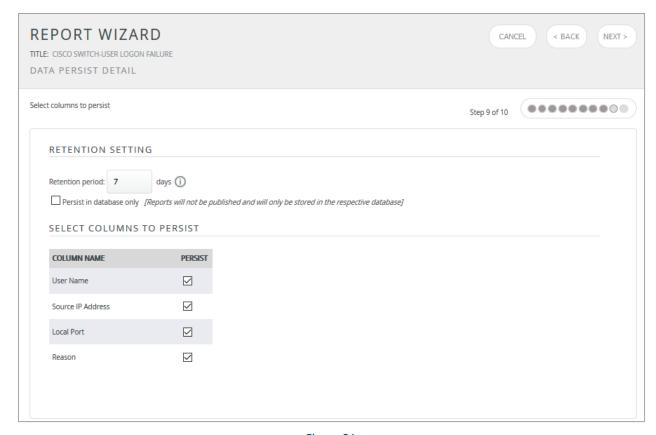


Figure 21

- 6. Check column names to persist using **PERSIST** checkboxes beside them. Choose suitable **Retention period**.
- 7. Proceed to next step and click **Schedule** button.
- 8. Wait for scheduled time or generate report manually.

### Create Dashlets

- 1. **EventTracker 8** is required to configure flex dashboard.
- 2. Open EventTracker in browser and logon.





Figure 22

Navigate to Dashboard>Flex.Flex Dashboard pane is shown.

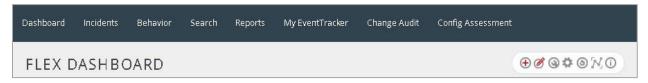


Figure 23

4. Click to add a new dashboard.
Flex Dashboard configuration pane is shown.

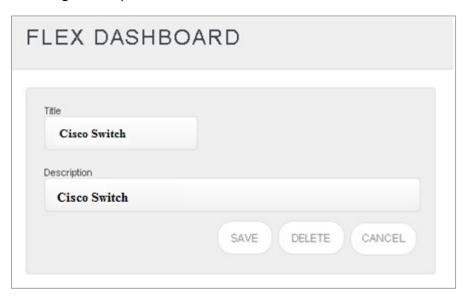


Figure 24



- 4. Fill fitting title and description and click **Save** button.
- 5. Click to configure a new flex dashlet.

Widget configuration pane is shown.

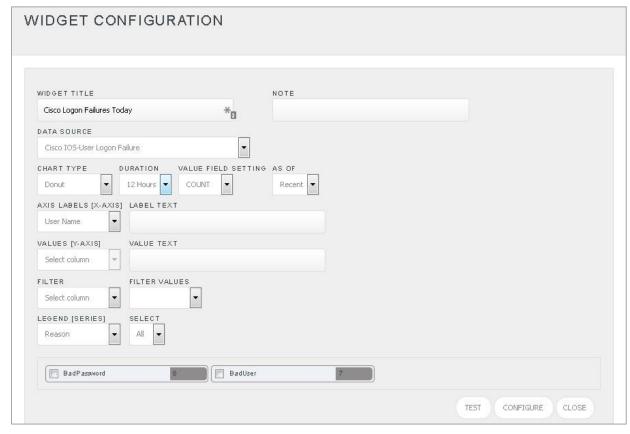


Figure 25

- 6. Locate earlier scheduled report in **Data Source** dropdown.
- 7. Select **Chart Type** from dropdown.
- 8. Select extent of data to be displayed in **Duration** dropdown.
- 9. Select computation type in Value Field Setting dropdown.
- 10. Select evaluation duration in As Of dropdown.
- 11. Select comparable values in **X Axis** with suitable label.
- 12. Select numeric values in Y Axis with suitable label.
- 13. Select comparable sequence in **Legend**.
- 14. Click **Test** button to evaluate. Evaluated chart is shown.



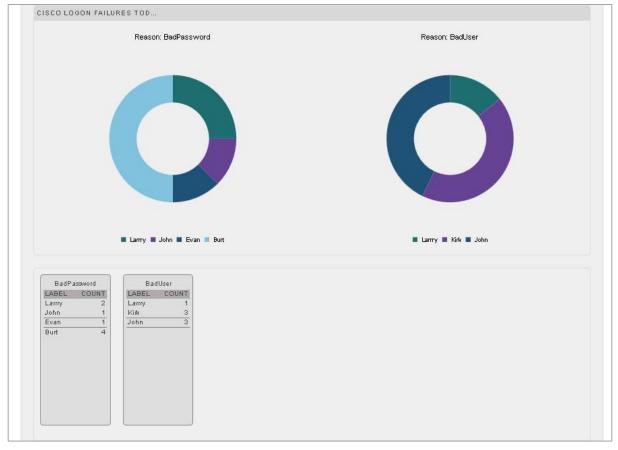


Figure 26

15. If satisfied, click **Configure** button.

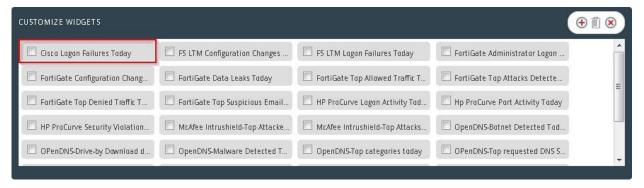


Figure 27

- 16. Click 'customize' (a) to locate and choose created dashlet.
- 17. Click to add dashlet to earlier created dashboard.



## Sample Dashboards

#### 1. Cisco Logon Failures Today

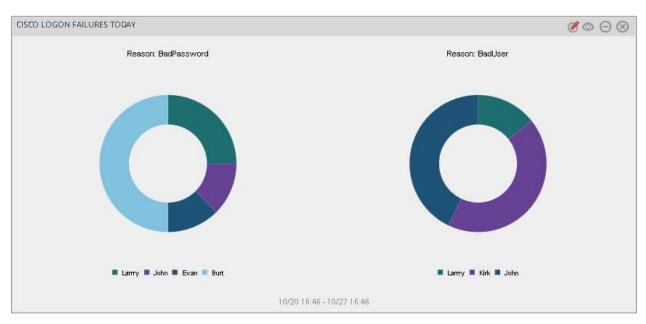


Figure 28

