Illumio App for QRadar 1.3.0

Illumio ASP 21.2.1
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Document History

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Deployment Architecture

IBM QRadar SIEM is a network security management platform that provides situational awareness and compliance support. It collects, processes, aggregates, and stores network data in real time. IBM Security QRadar SIEM (Security Information and Event Management) is a modular architecture that provides real-time visibility of your IT infrastructure, which you can use for threat detection and prioritization.

The Illumio App for QRadar integrates with the Illumio Policy Compute Engine (PCE) to provide security insights into your Illumio secured data centre.

The following diagram shows the topology of data collection from Illumio PCE to QRadar

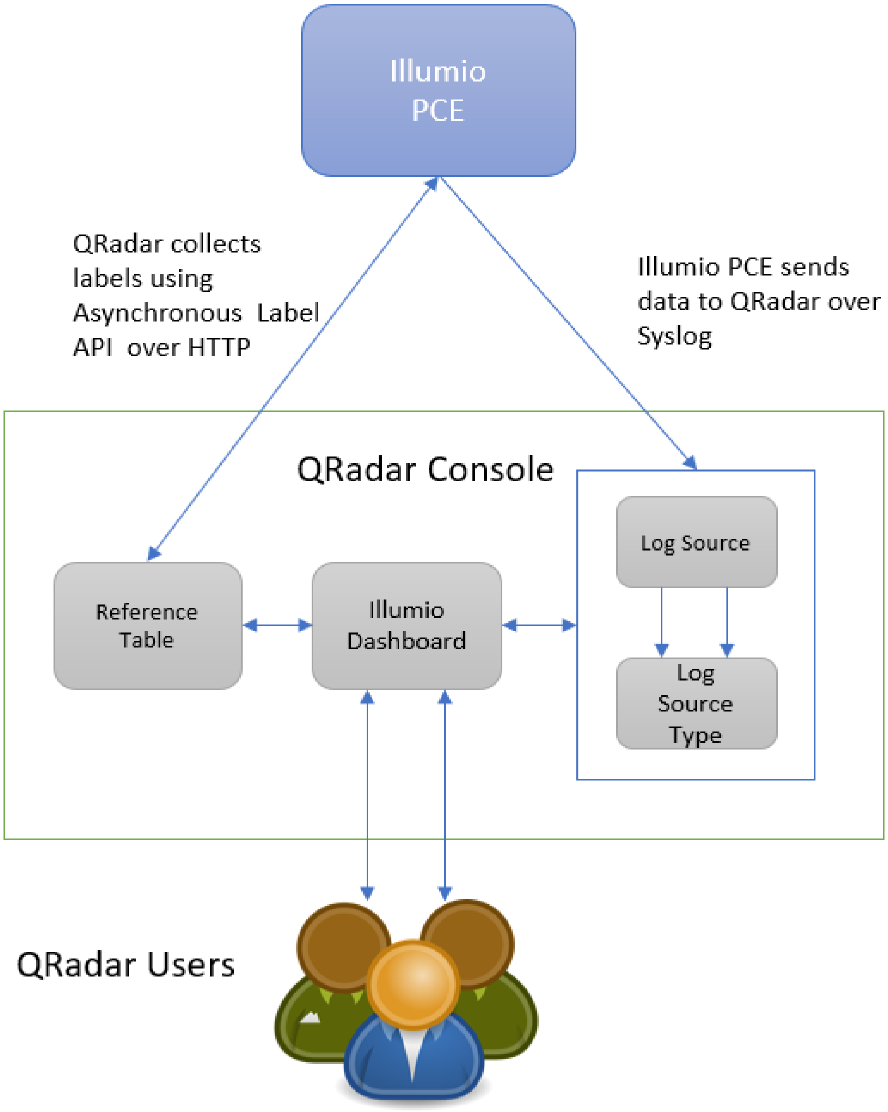

Illumio
PCE
QRadar collects labels using Asynchronous Label API over HTTP
Illumio PCE sends data to QRadar over Syslog
QRadar Console
Log Source
Reference Table
Illumio Dashboard
Log Source Type
QRadar Users

Figure 1: Illumio integration with IBM QRadar

The Illumio App for QRadar provides two dashboards which are integrated in the QRadar UI:

- With east-west traffic visibility on the Security Operations dashboard, you can pinpoint potential attacks and identify compromised workloads.
- The PCE Operations dashboard provides a comprehensive overview where you can monitor the health of all deployed and managed PCEs.

The Illumio App for QRadar is supported with PCE version 18.1.0, 18.2.0, 18.3.0, 19.1.0, 19.3.0,19.3.3, 20.1.0, 21.2.0, 21.2.1.

App Architecture

This section provides information about data collection, logs, and visualizations in the Illumio App for QRadar.

Data Collection

The app has two sources for receiving data:

- API
- Syslog Port

From the API, the app fetches labels and stores them in a reference table. The data is used to populate the labels filter on the dashboards. The app uses Asynchronous Label REST API calls to get data from the Illumio PCE server. These REST calls are made from Python scripts in the app, which are run on a schedule you can define.

QRadar parses the data it receives from the app using a suitable log source. The log source is made up of two components:

- APIs
- Protocols

APIs in Log Source

The following APIs are used to fetch label data.

- Asynchronous Labels API:

  ```
  https://<PCE_URL_DOMAIN>/api/v2/orgs/<ORG_ID>/labels
  ```

- Labels Location API:

  ```
  https://<PCE_URL_DOMAIN>/api/v2/orgs/<ORG_ID>/jobs/<LOCATION>
  ```

The Asynchronous Labels API fetches labels from each PCE that is configured and enabled at that instance.

Note: The PCE API v2 is used to implement the Asynchronous Labels API.

Following is an example response from the Asynchronous Labels API. This example returns two role labels, “Web” and “Database”:

```
[{
                   "href":
         "/orgs/1/labels/1", "key":
         "role",
                   "value": "Web",
                   "created_at": "2017-04-
         12T22:02:02.953Z", "updated_at": "2017-
         04-12T22:02:02.953Z",
                   "created_by": {
                               "href": "/users/0"
                   },
                   "updated_by": {
                               "href": "/users/0"
                   }
      }, {
                   "href":
         "/orgs/1/labels/2", "key":
         "role",
                   "value": "Database",
                   "created_at": "2017-04-
         12T22:02:02.960Z", "updated_at": "2017-
         04-12T22:02:02.960Z",
                   "created_by": {
                               "href": "/users/0"
                   },
                   "updated_by": {
```

After the app gets lists of labels using the Asynchronous Labels API, it saves the response in QRadar's Reference table in the following format:

```
{
            "https://<hostname>:8443/orgs/1/labe
         ls/1": { "updated_by": "{u'href':
         u'/users/0'}", "created_at":
         "1502975663000",
                  "updated_at": "1502975663000",
         "created_by": "{u'href': u'/users/0'}",
         "href": "/orgs/1/labels/1",
                  "value": "Web",
                  "key": "role"
      },
            "https://<hostname>:8443/orgs/1/labe
         ls/2": { "updated_by": "{u'href':
         u'/users/0'}", "created_at":
         "1502975663000",
                  "updated_at": "1502975663000",
         "created_by": "{u'href': u'/users/0'}",
         "href": "/orgs/1/labels/2",
                  "value": "Database",
                  "key": "role"
```

The primary key is `https://<hostname>:8443/orgs/1/labels/1`, the combination of the PCE link (hostname and port) and the href of the particular label. This primary key provides a unique identifier in the "labels" reference table for each PCE configured.

The `created_at` and `updated_at` timestamps are stored in epoch format, as required by QRadar.

Protocol in Log Source

The protocol defines how data is communicated to QRadar. Data is forwarded to the Syslog port of QRadar from the PCE.

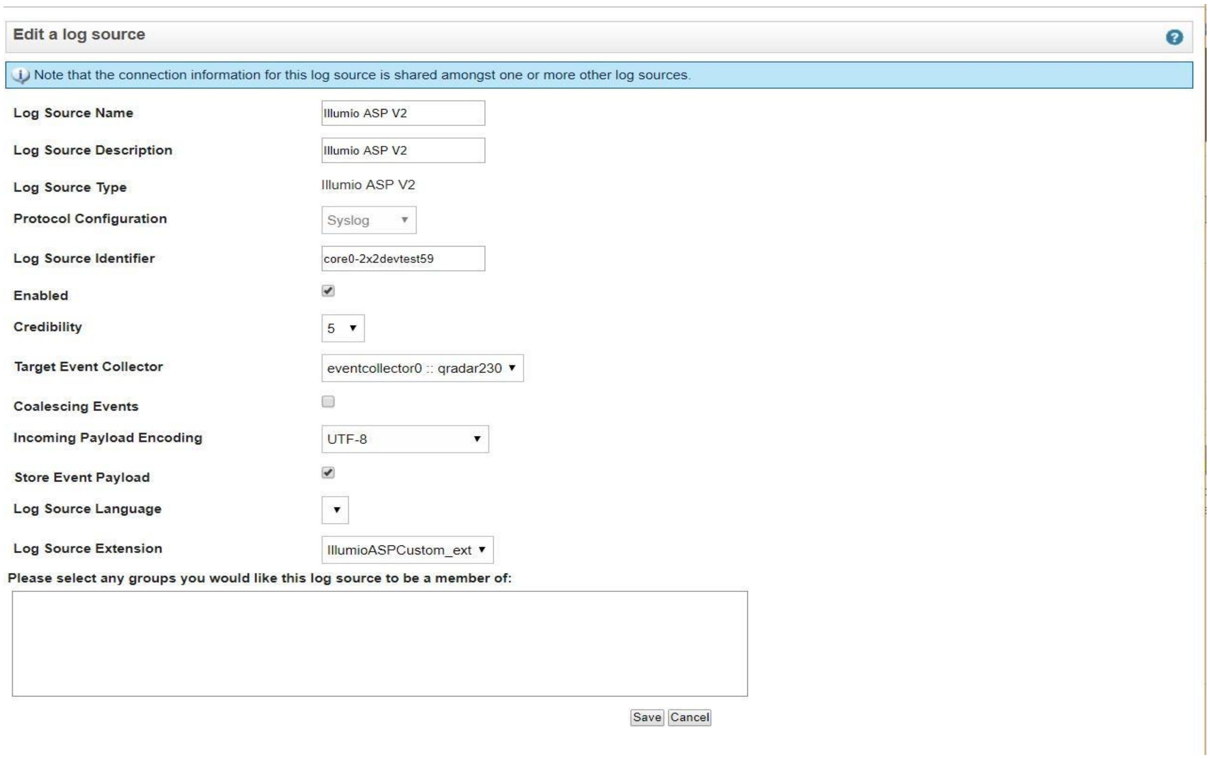
Log Sources

A log source named “Illumio ASP V2” is created automatically when the app is installed. All events that are sent from the app to QRadar include the log source as a prefix. For example:

Illumio ASP V2: core0-2x2devtest59

You can create multiple log sources with different names if you want to create more descriptive identifiers, such as to convey more information about the usage of the event. A separate log source needs to be created to collect data from each PCE.

The following illustration shows the Illumio ASP V2 log source that is included in the app.



Edit a log source

Note that the connection information for this log source is shared amongst one or more other log sources.

Log Source Name	Illumio ASP V2
Log Source Description	Illumio ASP V2
Log Source Type	Illumio ASP V2
Protocol Configuration	Syslog ▾
Log Source Identifier	core0-2x2devtest59
Enabled	☑
Credibility	5 ▾
Target Event Collector	eventcollector0 :: qradar230 ▾
Coalescing Events	☐
Incoming Payload Encoding	UTF-8 ▾
Store Event Payload	☑
Log Source Language	▾
Log Source Extension	IllumioASPCustom_ext ▾

Please select any groups you would like this log source to be a member of:

Figure 5 Log Source Type Illumio ASP V2

Log Source Types

The use of log source types helps in defining how data is parsed. Log Source Extension and Custom Event Properties can be attached to a log source to extend its capabilities. The log source type Illumio ASP V2 categorizes two types of events: Traffic Summary and Auditable Events.

Log Source Type	Event Data Type
Illumio ASP V2	Traffic Summary and Auditable Events (JSON + LEEF)

The log source type Illumio ASP V2 can be linked to different log sources, as described in Adding the PCE as a Log Source in QRadar.

Custom Property Extraction

The app performs extractions on the Audit Events and Traffic Summary Events received from Syslog on the QRadar instance. The app has a single Log Source Type which will perform both JSON and LEEF extractions.

The following table lists the extractions (both JSON and LEEF) performed by the app:

Custom Property Name	Custom Property Expressions	Enabled
Action Api Endpoint	`"?action"?[:=]\{.*?"api_endpoint":"?(.*?)"?[,}]`	FALSE
Action Api Method	`"?action"?[:=]\{.*?"api_method":"?(.*?)"?[,}]`	FALSE
Action Errors	`"action":.*?"errors":"?\[(.*?)\]"?`	FALSE

<table>
<tr><th>Custom Property Name</th><th>Custom Property Expressions</th><th>Enabled</th></tr>
<tr><td>Action HTTP Status Code</td><td>"?action"?[:=]\{.*?"http_status_code":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Action UUID</td><td>"?action"?[:=]\{.*?"uuid":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Agent Hostname</td><td>"?agent"?[:=]\{.*?"hostname":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Agent Href</td><td>"?agent"?[:=]\{.*?"href":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Created By Agent Href</td><td>"?created_by"?[:=]\{.*?"agent":\{.*?"href":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Created By User Href</td><td>"?created_by"?[:=]\{.*?"user":\{.*?"href":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Created By User Username</td><td>"?created_by"?[:=]\{.*?"user":\{.*?"username":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Destination Host Name</td><td>(\"dst_hostname\":\s*\"|dstHostname=)(.*?)(\"|\s)</td><td>TRUE</td></tr>
<tr><td>Destination Href</td><td>(\"dst_href\":\s*\"|dstHref=)(.*?)(\"|\s)</td><td>FALSE</td></tr>
<tr><td>Destination IPV4 or IPV6</td><td>dst=([\S]+?)((\s))</td><td>TRUE</td></tr>
<tr><td>Destination IPV4 or IPV6</td><td>"dst_ip":\"(.*?)\"</td><td>TRUE</td></tr>
<tr><td>Destination Labels App</td><td>(dstLabels=|\"dst_labels\":)\{[^\}]*?\"app\":\"(.*?)\"</td><td>TRUE</td></tr>
<tr><td>Destination Labels Environment</td><td>(dstLabels=|\"dst_labels\":)\{[^\}]*?\"env\":\"(.*?)\"</td><td>TRUE</td></tr>
</table>

<table>
<tr><th>Custom Property Name</th><th>Custom Property Expressions</th><th>Enabled</th></tr>
<tr><td>Destination Labels Location</td><td>(dstLabels=|\"dst_labels\":)\{[^\}]*?\"loc\":\"(.*?)\"</td><td>TRUE</td></tr>
<tr><td>Destination Labels Role</td><td>(dstLabels=|\"dst_labels\":)\{[^\}]*?\"role\":\"(.*?)\"</td><td>TRUE</td></tr>
<tr><td>Direction</td><td>(\"dir\":\s*\"|dir=)(.*?)(\"|\s)</td><td>TRUE</td></tr>
<tr><td>Event Href</td><td>event_href=([^\s\t]+)</td><td>TRUE</td></tr>
<tr><td>Event Href Data</td><td>"?eventHref"?[=:]"?([^\s\t,}"]+)"?</td><td>FALSE</td></tr>
<tr><td>Event Severity</td><td>sev=(.*?)\s+</td><td>TRUE</td></tr>
<tr><td>Event Severity</td><td>"?severity"?[=:]"?([^\s\t,}"]+)"?</td><td>TRUE</td></tr>
<tr><td>Hostname</td><td>(\s)(\S+?)(\s)illumio_pce</td><td>TRUE</td></tr>
<tr><td>Href</td><td>"?href"?[=:]"?([^\s\t,}"]+)"?</td><td>TRUE</td></tr>
<tr><td>Interval Sec</td><td>(intervalSec|"interval_sec"?)\s*[:=]?\s*(\d+(\.\d+)?)</td><td>FALSE</td></tr>
<tr><td>Notifications</td><td>"?notifications"?[:=]\[(.*)\]</td><td>FALSE</td></tr>
<tr><td>Outcome</td><td>outcome=([^\s\t]+)</td><td>FALSE</td></tr>
<tr><td>PCE FQDN</td><td>pce_fqdn=([^\s\t]+)</td><td>FALSE</td></tr>
<tr><td>PCE FQDN</td><td>"pce_fqdn":"?(.*?)"?[,}]</td><td>FALSE</td></tr>
<tr><td>Request Id</td><td>requestId=([^\s\t]+)</td><td>FALSE</td></tr>
<tr><td>Sec</td><td>sec=([^\s\t]+)</td><td>FALSE</td></tr>
<tr><td>Source Host Name</td><td>(\"src_hostname\":\s*\"|srcHostname=)(.*?)(\"|\s)</td><td>TRUE</td></tr>
</table>

Custom Property Name	Custom Property Expressions	Enabled
Source Href	(\"src_href\":\s*\"|srcHref=)(.*?)(\"|\s)	FALSE
Source IPV4 or IPV6	"src_ip":\"(.*?)\"	TRUE
Source IPV4 or IPV6	"data":.*"src_ip":\"(.*?)\"	TRUE
Source IPV4 or IPV6	src=([\S]+?)((\s))	TRUE
Source Labels App	(srcLabels=|\"src_labels\":)\{[^\}]*?\"app\":\"(.*?)\"	TRUE
Source Labels Environment	(srcLabels=|\"src_labels\":)\{[^\}]*?\"env\":\"(.*?)\"	TRUE
Source Labels Location	(srcLabels=|\"src_labels\":)\{[^\}]*?\"loc\":\"(.*?)\"	TRUE
Source Labels Role	(srcLabels=|\"src_labels\":)\{[^\}]*?\"role\":\"(.*?)\"	TRUE
State	"?state"?[=:]"?([^\s\t,}"]+)"?	TRUE
Status	"?status"?[=:]"?([^\s\t,}"]+)"?	TRUE
Total Bytes In	"?tbi"?[:=]"?(.*?)"?[,}]	FALSE
Total Bytes Out	"?tbo"?[:=]"?(.*?)"?[,}]	FALSE
Traffic Count	count=([\S]+?)((\s))	TRUE
Traffic Count	"count":(\d+)	TRUE
URL	url=([^\s\t]+)	FALSE
Version	"?version"?[=:]"?([^\s\t,}"]+)"?	TRUE

Event Mappings

An event mapping is an association between an event ID and category combination and a QID record (referred to as event categorization). Event ID and category values are extracted by DSMs from events and are then used to look up the mapped event categorization, or QID.

The following table shows which high-level and low-level categories are associated with each event.

Event Name	High Level Category	Low Level Category
Admin forced recalculation of policy	Audit	General Audit Event
Agent clone activated	Audit	General Audit Event
Agent cloned detected	Audit	General Audit Event
Agent compatibility check report updated	Audit	General Audit Event
Agent compatibility report updated	Audit	Update Activity Succeeded
Agent disconnected	Audit	General Audit Event
Agent existing IP tables uploaded	Audit	General Audit Event
Agent fetched policy	System	Host-Policy Created
Agent firewall tampered	Suspicious Activity	Content Modified By Firewall
Agent interactive users updated	Audit	Update Activity Succeeded
Agent interfaces updated	Audit	General Audit Event

Agent machine identifiers updated	Audit	General Audit Event
Agent missed heartbeats	Audit	General Audit Event
Agent paired	Audit	General Audit Event
Agent properties updated	Audit	General Audit Event
Agent refreshed token	Audit	General Audit Event
Agent reported a service not running	Audit	General Audit Event
Agent request upgraded	Audit	General Audit Event
Agent service report updated	Audit	General Audit Event
Agent support report request created	Audit	General Audit Event
Agent support report request deleted	Audit	General Audit Event
Agent support report request updated	Audit	General Audit Event
Agent support report uploaded	Audit	General Audit Event
Agent suspended	Audit	General Audit Event
Agent unpaired	Audit	General Audit Event
Agents unpaired	Audit	General Audit Event
Agent unsuspended	Audit	General Audit Event
Agent updated existing containers	Audit	Update Activity Succeeded
Agent updated existing iptables href	Audit	General Audit Event
Agent uploaded dev-alert logs	Audit	General Audit Event

Agent uploaded ops-alert logs	Audit	General Audit Event
Agents marked offline	Audit	General Audit Event
API key created	Audit	General Audit Event
API key deleted	Audit	General Audit Event
API key updated	Audit	General Audit Event
API request authentication failed	Access	Unauthorized Access Attempt
API request authorization failed	Access	Unauthorized Access Attempt
API request failed due to internal server error	Audit	General Audit Event
API request failed due to unavailable service	Audit	General Audit Event
API request failed due to unknown server error	Audit	General Audit Event
Authentication settings updated	Audit	General Audit Event
Blocked traffic event deleted	Audit	General Audit Event
Container cluster created	Audit	Create Activity Succeeded
Container cluster deleted	Audit	Delete Activity Succeeded
Container cluster services updated from Kubelink	Audit	Create Activity Succeeded

Container cluster updated	Audit	Update Activity Succeeded
Container workload profile created	Audit	Create Activity Succeeded
Container workload profile deleted	Audit	Delete Activity Succeeded
Container workload profile updated	Audit	Update Activity Succeeded
Container workload updated	Audit	General Audit Event
Creation of support report requested	Audit	General Audit Event
Domain created	Audit	General Audit Event
Domain deleted	Audit	General Audit Event
DB temp table cleanup completed	Audit	General Audit Event
DB temp table cleanup started	Audit	General Audit Event
Domain updated	Audit	General Audit Event
Enforcement boundary deleted	Audit	Delete Activity Succeeded
Enforcement boundary updated	Audit	Update Activity Succeeded
Enforcement instruction applied to a network device	Audit	General Audit Event
Enforcement instructions applied to multiple network devices	Audit	General Audit Event
Event pruning completed	Audit	General Audit Event

Event settings updated	Audit	Update Activity Succeeded
Existing or new unmanaged workload assigned to a network device	Audit	General Audit Event
First user created	Audit	General Audit Event
Flow Allowed	Flow	Misc flow
Flow Blocked	Flow	Misc flow
Flow Potentially Blocked	Flow	Misc flow
Flow Unknown	Flow	Misc flow
Event settings updated	Audit	Update Activity Succeeded
Global policy settings updated	Audit	General Audit Event
Ignored interfaces list updated	Audit	General Audit Event
Interservice call to login service to create LDAP config	Audit	Create Activity Succeeded
Interservice call to login service to delete LDAP config	Audit	Delete Activity Succeeded
Interservice call to login service to update LDAP config	Audit	Update Activity Succeeded
Interservice call to login service to verify connection to the LDAP server	Audit	Configure Activity Succeeded
IP list created	Audit	General Audit Event
IP list deleted	Audit	General Audit Event

IP list updated	Audit	General Audit Event
IP lists deleted	Audit	Delete Activity Succeeded
IP tables rules created	Audit	General Audit Event
IP tables rules deleted	Audit	General Audit Event
IP tables rules updated	Audit	General Audit Event
Label created	Audit	General Audit Event
Label deleted	Audit	General Audit Event
Label group created	Audit	General Audit Event
Label group deleted	Audit	General Audit Event
Label group updated	Audit	General Audit Event
Label updated	Audit	General Audit Event
Labels deleted	Audit	Delete Activity Succeeded
LDAP configuration created	Audit	Create Activity Succeeded
LDAP configuration deleted	Audit	Delete Activity Succeeded
LDAP configuration updated	Audit	Update Activity Succeeded
LDAP server connection verified	Audit	Configure Activity Succeeded

License deleted	Audit	General Audit Event
License updated	Audit	General Audit Event
Local user password changed	Authentication	Password Change Succeeded
Local user profile created	Audit	General Audit Event
Local user profile deleted	Audit	General Audit Event
Local user reinvited	Audit	General Audit Event
Login Proxy Authentication settings updated	Authentication	Policy Change
Login Proxy Password policy updated	Authentication	Policy Change
Login Proxy RADIUS config shared secret verified	System	Successful Configuration Modification
Login Proxy RADIUS configuration deleted	Authentication	Policy Change
Login Proxy RADIUS configuration updated	Authentication	Policy Change
Login Proxy RADIUS configurations created	Audit	General Audit Event

Login Proxy SAML configuration updated	Authentication	Policy Change
Login Proxy User accepted invitation	System	Successful Configuration Modification
Login Proxy User invited	System	Successful Configuration Modification
Login Proxy User reset password	System	Successful Configuration Modification
Login Proxy User updated	System	Successful Configuration Modification
Login resource created	Audit	General Audit Event
Login resource deleted	Audit	General Audit Event
Login resource updated	Audit	General Audit Event
Login user authenticated	Authentication	General Authentication Successful
Login user password changed	Authentication	General Authentication Successful
Lost agent found	Audit	General Audit Event

Lost agent updated	Audit	General Audit Event
Network deleted	Application	Network Management
Network device created	Audit	General Audit Event
Network device deleted	Audit	General Audit Event
Network device updated	Audit	General Audit Event
Network endpoint created	Audit	General Audit Event
Network endpoint deleted	Audit	General Audit Event
Network endpoint updated	Audit	General Audit Event
Network enforcement node acknowledgment of policy	Audit	General Audit Event
Network enforcement node activated	Audit	General Audit Event
Network enforcement node deactivated	Audit	General Audit Event
Network enforcement node policy requested	Audit	General Audit Event
Network enforcement node reports when switches are not reachable	Audit	General Audit Event
Network function controller created	Audit	General Audit Event
Network function controller deleted	Application	Network Management

Network function controller policy status	Audit	General Audit Event
Network function controller policy status update	Audit	General Audit Event
Network function controller SLB state updated	Audit	General Audit Event
Network function controller virtual servers discovered	Audit	General Audit Event
Network updated	Application	Network Management
Networks created	Application	Network Management
Org created from JWT	Audit	General Audit Event
Organization created	Audit	Create Activity Succeeded
Organization information updated	Audit	General Audit Event
Organization setting updated	Audit	General Audit Event
Pairing profile created	Audit	General Audit Event
Pairing profile delete all pairing keys	Audit	Delete Activity Succeeded
Pairing profile deleted	Audit	General Audit Event
Pairing profile pairing key created	Audit	Create Activity Succeeded

Pairing profile pairing key generated	Audit	General Audit Event
Pairing profile updated	Audit	General Audit Event
Pairing profiles deleted	Audit	Delete Activity Succeeded
Password policy created	Audit	General Audit Event
Password policy deleted	Audit	General Audit Event
Password policy updated	Audit	General Audit Event
PCE Application started	Audit	General Audit Event
PCE Application stopped	Audit	General Audit Event
PCE cluster created	Audit	General Audit Event
PCE cluster deleted	Audit	General Audit Event
PCE cluster updated	Audit	General Audit Event
PCE network interfaces reverted	Audit	General Audit Event
PCE software deleted	Audit	Delete Activity Succeeded
PCE syslog configuration update	Audit	Update Activity Succeeded
PCE system email tested	Audit	General Audit Event

Pairing profile pairing key generated	Audit	General Audit Event
Pairing profile updated	Audit	General Audit Event
Pairing profiles deleted	Audit	Delete Activity Succeeded
PCE system network interfaces restarted	Audit	Update Activity Succeeded
PCE system restarted	Audit	General Audit Event
PCE system shutdown	Audit	General Audit Event
PCE system software upgraded	Audit	Update Activity Succeeded
PCE system software verified	Audit	General Audit Event
PCE system SSL/TLS certificates discarded	Audit	Update Activity Succeeded
PCE system SSL/TLS certificates uploaded	Audit	Update Activity Succeeded
PCE system web console password updated	Audit	Update Activity Succeeded
PCE system web email configuration updated	Audit	Update Activity Succeeded
Pending security policy deleted	Audit	Delete Activity Succeeded

RADIUS auth challenge issued	Audit	General Audit Event
RADIUS config shared secret verified	Audit	General Audit Event
RADIUS configuration deleted	Audit	General Audit Event
RADIUS configuration updated	Audit	General Audit Event
RADIUS configurations created	Audit	General Audit Event
RBAC Auth Security Principal created	Audit	General Audit Event
RBAC auth security principal deleted	Audit	General Audit Event
RBAC auth security principal updated	Audit	General Audit Event
RBAC permission created	Audit	General Audit Event
RBAC permission deleted	Audit	General Audit Event
RBAC permission updated	Audit	General Audit Event
RBAC security principal bulk deleted	Audit	General Audit Event
RBAC security principal bulk updated	Audit	General Audit Event
RBAC security principal created	Audit	General Audit Event
RBAC security principals bulk created	Audit	Create Activity Succeeded
Remote Syslog destination not reachable	Audit	Monitor Activity Failed
Remote Syslog destination reachable	Audit	Monitor Activity Succeeded

Rule set create	Audit	General Audit Event
Rule set deleted	Audit	General Audit Event
Rule set projected vulnerability exposure score updated	Audit	General Audit Event
Rule set updated	Audit	General Audit Event
Rule sets deleted	Audit	Delete Activity Succeeded
Rules for organization recalculated	Audit	General Audit Event
Running container updated	Audit	General Audit Event
SAML assertion consumer services updated	Audit	General Audit Event
SAML configuration created	Audit	General Audit Event
SAML configuration deleted	Audit	General Audit Event
SAML configuration updated	Audit	General Audit Event
SAML Service Provider created	Audit	General Audit Event
SAML Service Provider deleted	Audit	General Audit Event
SAML Service Provider updated	Audit	General Audit Event
Secure connect gateway deleted	Audit	General Audit Event
Secure connect gateway updated	Audit	General Audit Event
SecureConnect gateway created	Audit	General Audit Event

Security policies deleted	System	Host-Policy Deleted
Security policy created	Authentication	Policy Added
Security policy restored	Audit	General Audit Event
Security policy rules created	Audit	General Audit Event
Security policy rules deleted	Audit	General Audit Event
Security policy rules updated	Audit	General Audit Event
Server load balancer created	Audit	General Audit Event
Server load balancer deleted	Audit	General Audit Event
Server load balancer updated	Audit	General Audit Event
Service binding created	Audit	General Audit Event
Service binding deleted	Audit	General Audit Event
Service bindings created	Audit	General Audit Event
Service bindings deleted	Audit	Delete Activity Succeeded
Service created	System	Service Started
Service deleted	System	Service Stopped
Service updated	Audit	Update Activity Succeeded
Services deleted	Audit	General Audit Event
SSL/TLS certificates applied	Audit	General Audit Event

Success or Failure to apply policy on VEN	Audit	Update Activity Attempted
Syslog destination created	Audit	General Audit Event
Syslog destination deleted	Audit	General Audit Event
Syslog destination updated	Audit	General Audit Event
syslog remote destination created	Audit	Create Activity Succeeded
syslog remote destination deleted	Audit	Delete Activity Succeeded
syslog remote destination updated	Audit	Update Activity Succeeded
System administrator deleted	Audit	General Audit Event
System administrators created	Audit	General Audit Event
TLS channel established	Audit	General Audit Event
TLS channel terminated	Audit	General Audit Event
Traffic collector setting created	Audit	Create Activity Succeeded
Traffic collector setting deleted	Audit	Delete Activity Succeeded
Traffic collector setting updated	Audit	Update Activity Succeeded
Upgrade started	Audit	General Audit Event
User authenticated	Authentication	General Authentication Successful

User created	Audit	General Audit Even
User deleted	Audit	General Audit Event
User entered expired password	Audit	General Audit Event
User failed authentication	Authentication	General Authentication Failed
User failed authorization	Access	Misc Authorization
User information updated	Audit	General Audit Event
User invitation accepted	Audit	General Audit Event
User invited	Access	Access Permitted
User local password updated	Audit	Update Activity Succeeded
User local profile created	Audit	Create Activity Succeeded
User local profile deleted	Audit	Delete Activity Succeeded
User local profile reinvited	Audit	General Audit Event
User logged in	Authentication	User Login Success
User logged out	Authentication	Misc Logout
User login session terminated	Access	Session Terminated
User logout from JWT	Audit	General Audit Event

User password reset	Authentication	Password Change Succeeded
User password updated	Audit	General Audit Event
User session terminated	Audit	General Audit Event
User Sign in	Authentication	User Login Success
User Sign out	Authentication	General Authentication Successful
VEN release created	Audit	General Audit Event
VEN release deleted	Audit	General Audit Event
VEN release deployed	Audit	General Audit Event
VEN release updated	Audit	General Audit Event
VEN software release created	Audit	Create Activity Succeeded
VEN software release deleted	Audit	Delete Activity Succeeded
VEN software release deployed	Audit	Deploy Activity Succeeded

VEN software release updated	Audit	Update Activity Succeeded
VEN software release upgraded	Audit	Update Activity Succeeded
Virtual server created	Audit	General Audit Event
Virtual server deleted	Audit	General Audit Event
Virtual server updated	Audit	General Audit Event
Virtual service bulk created	Audit	General Audit Event
Virtual service bulk updated	Audit	General Audit Event
Virtual Service created	Audit	General Audit Event
Virtual Service Deleted	Audit	General Audit Event
Virtual Service Updated	Audit	General Audit Event
Virtual services created in bulk	Audit	Create Activity Succeeded
Virtual services updated in bulk	Audit	Update Activity Succeeded
Vulnerability record created	Audit	Create Activity Succeeded
Vulnerability record deleted	Audit	General Audit Event
Vulnerability record updated	Audit	General Audit Event
Vulnerability report deleted	Audit	General Audit Event

Vulnerability report updated	Audit	General Audit Event
Workload added to network endpoint	Audit	General Audit Event
Workload apply pending policy	Audit	General Audit Event
Workload bulk deleted	Audit	General Audit Event
Workload bulk updated	Audit	General Audit Event
Workload created	Audit	General Audit Event
Workload deleted	Audit	General Audit Event
Workload flow reporting frequency changed	Audit	General Audit Event
Workload interface created	Audit	General Audit Event
Workload interface deleted	Audit	General Audit Event
Workload interface network created	Audit	General Audit Event
Workload interface updated	Audit	General Audit Event
Workload interfaces created	Audit	General Audit Event
Workload interfaces updated	Audit	General Audit Event
Workload labels applied	Audit	General Audit Event
Workload network redetected	Audit	General Audit Event
Workload policy recalculated	Audit	General Audit Event
Workload queried	Audit	General Audit Event

Workload service report updated	Audit	General Audit Event
Workload service reports updated	Audit	General Audit Event
Workload settings updated	Audit	Update Activity Succeeded
Workload soft deleted	Audit	General Audit Event
Workload undeleted	Audit	General Audit Event
Workload upgraded	Audit	General Audit Event
Workload was powered on or rejoined network	Audit	General Audit Event
Workloads bulk created	Audit	General Audit Event
Workloads created in bulk	Audit	Create Activity Succeeded
Workloads deleted in bulk	Audit	Delete Activity Succeeded
Workloads labels removed	Audit	Delete Activity Succeeded
Workloads policies applied	Audit	General Audit Event
Workloads unpaired	Audit	General Audit Event
Workloads updated	Audit	Update Activity Succeeded
Workloads updated in bulk	Audit	Update Activity Succeeded

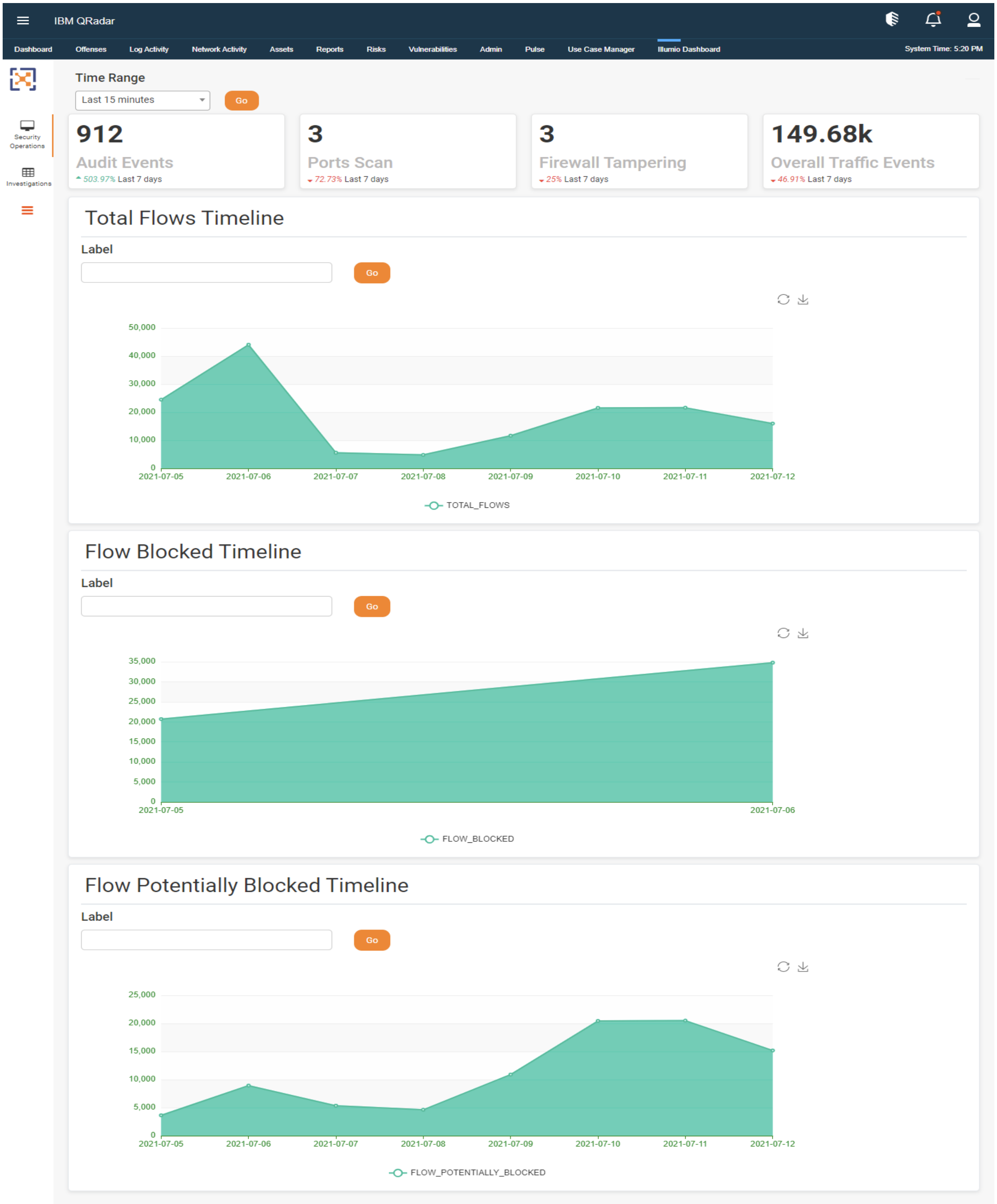
Visualizations

The Illumio App for QRadar provides two dashboards that are integrated into the QRadar UI. The dashboards consist of panels which plot specific metrics related to the events from the Illumio PCE. The data in all dashboards is populated from the log source type Illumio ASP V2.

Security Operations Dashboard

The Security Operations Dashboard provides overall visibility into the Illumio App deployment. It gives a count of overall traffic events including Audit Events, Ports Scan, and Firewall Tampering. You can filter the data for the entire dashboard by time range.

In each panel, you can also filter the data by label. The labels are grouped by type (app, env, role, or loc). If all the labels selected have the same type, the OR operator is applied. If the labels are of different types, the AND operator is applied. You can also use the Direction field to specify whether the labels are incoming or outgoing. If the value of the Direction field is I (Incoming), Destination labels are used in the filter. If the value of the Direction field is O (Outgoing), Source labels are used.



System Time: 5:20 PM

Time Range

Last 15 minutes

912
Audit Events
503.97% Last 7 days

3
Ports Scan
72.73% Last 7 days

3
Firewall Tampering
25% Last 7 days

149.68k
Overall Traffic Events
46.91% Last 7 days

Total Flows Timeline

Label

Flow Blocked Timeline

Label

Flow Potentially Blocked Timeline

Label

Figure 6: Security Operations Dashboard

Investigation Dashboard

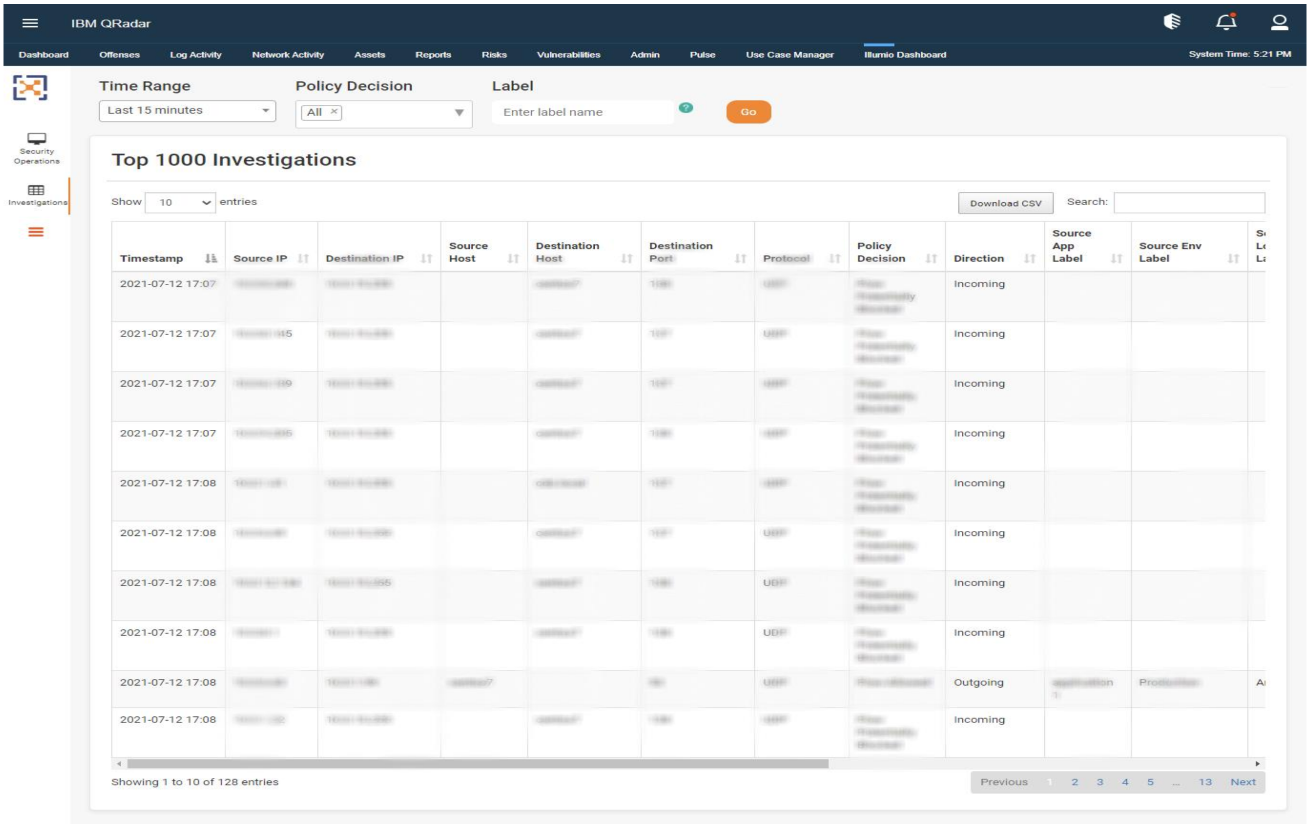
This dashboard is built to provide a list of Top 1000 Investigations sorted on the basis of Time. Filters used for this dashboard are Time Range, Policy and Label. For Label filter, user can select from drop-down as well as type label value. If user types the label value then, label value must be in following format. LabelCategory:LabelValue. E.g. app:abc

Label Categories can be any of “app”,”role”,”env”,”loc”.

Label Value	**Expected result**
app:	Top 1000 results in which Source Label Application or Destination Application label is not null.
app:Abc	Top 1000 results in which Source Label Application or Destination Application label is “Abc”

Note: User need to configure the account into configuration page in order to see the labels into label filter in dashboard. Do not use special characters while searching with label. Result may not be accurate.

The labels in this dashboard are from the fields `src_labels` and `dst_labels` in JSON (`srcLabels` and `dstLabels` in LEEF).



Time Range: Last 15 minutes

Policy Decision: All

Label: Enter label name

Top 1000 Investigations

Show 10 entries

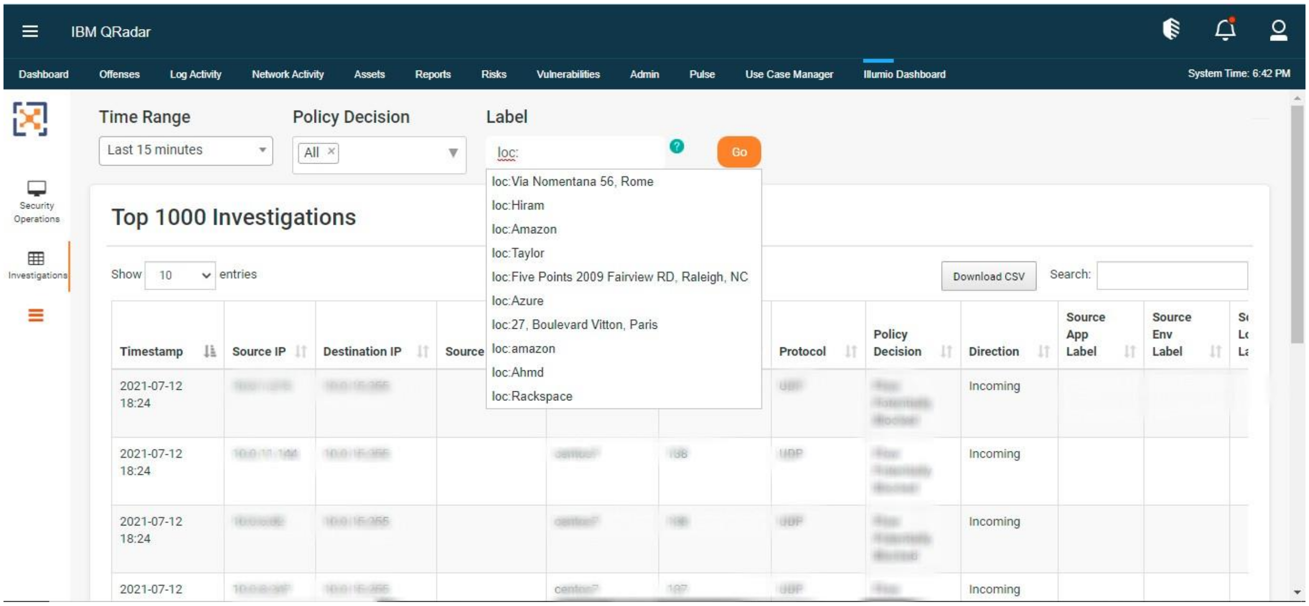
Search:

Timestamp	Source IP	Destination IP	Source Host	Destination Host	Destination Port	Protocol	Policy Decision	Direction	Source App Label	Source Env Label	Sc Lc La
2021-07-12 17:07	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:07	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:07	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:07	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:08	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:08	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:08	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:08	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 17:08	[redacted]	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	Outgoing	[redacted]	[redacted]	A
2021-07-12 17:08	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			

Showing 1 to 10 of 128 entries

Previous 1 2 3 4 5 ... 13 Next

Figure 7: Investigation Dashboard



Time Range: Last 15 minutes

Policy Decision: All

Label: loc:

loc:Via Nomentana 56, Rome
loc:Hiram
loc:Amazon
loc:Taylor
loc:Five Points 2009 Fairview RD, Raleigh, NC
loc:Azure
loc:27, Boulevard Vitton, Paris
loc:amazon
loc:Ahmd
loc:Rackspace

Top 1000 Investigations

Show 10 entries

Search:

Timestamp	Source IP	Destination IP	Source			Protocol	Policy Decision	Direction	Source App Label	Source Env Label	Sc Lc La
2021-07-12 18:24	[redacted]	[redacted]				[redacted]	[redacted]	Incoming			
2021-07-12 18:24	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12 18:24	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			
2021-07-12	[redacted]	[redacted]		[redacted]	[redacted]	[redacted]	[redacted]	Incoming			

Figure 7.1: Investigation dashboard with labels suggestion in label filter

Installation and Configuration

This section tells how to install the Illumio App for QRadar.

Prerequisites

The following are required to run Illumio App v1.3.0 on QRadar:

- Illumio App Bundle (v1.3.0)
- QRadar version 7.4.1 or later
- Access to Illumio PCE
- Illumio credentials to access labels from PCEs

Installation

The application installation requires access to the QRadar console through a web interface at https://<<QRadarconsoleIP>>/ For details about logging in to QRadar, see IBM QRadar documentation.*Figure 8: IBM QRadar 7.3.1 login screen*

1. Log in to the QRadar console.

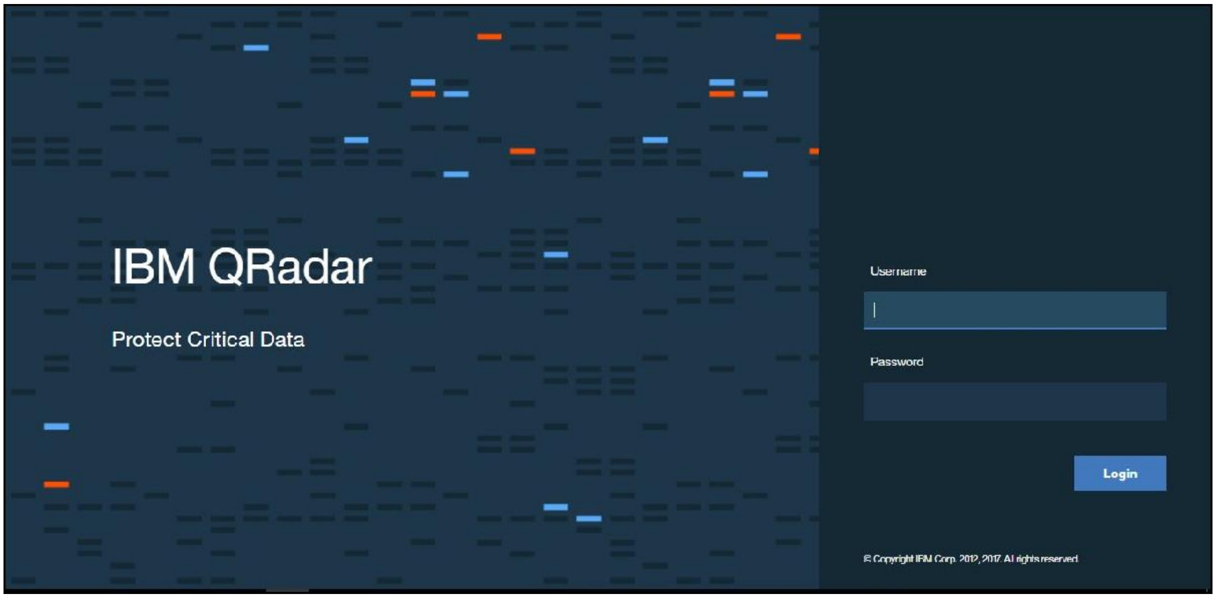
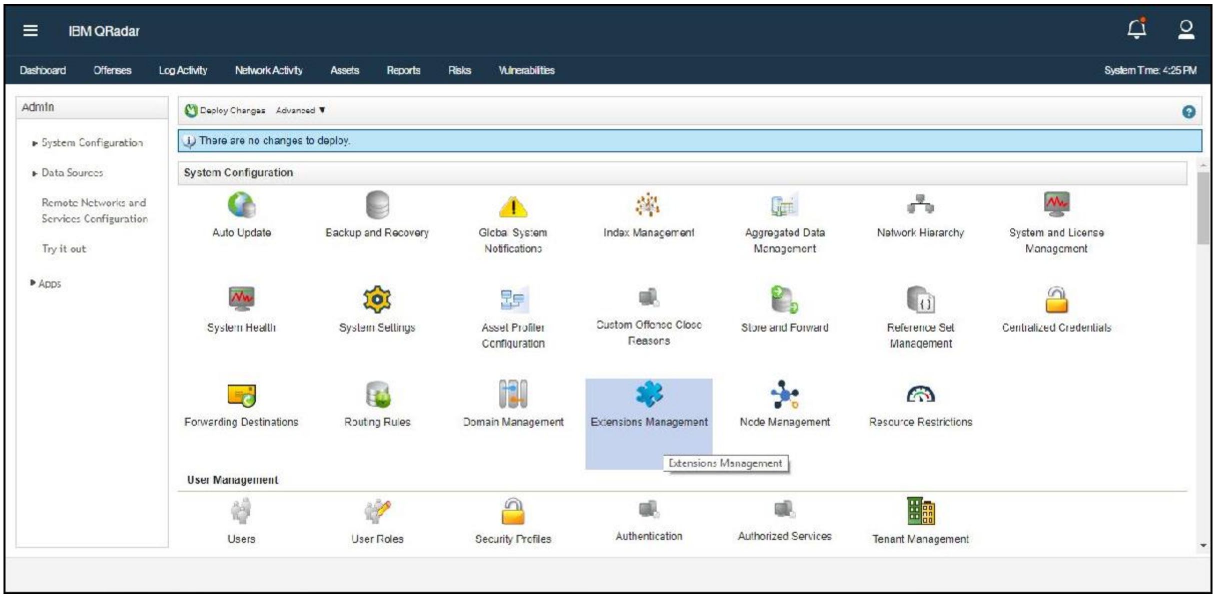


Figure 8: IBM QRadar 7.3.1 login screen

2. Go to Admin > Extension Management.



There are no changes to deploy.

Figure 9: IBM QRadar Admin Panel

3. Click Add and choose the downloaded Illumio App zip file.
   QRadar prompts with a list of changes being made by the app.

4. Click Install.
   After the Application is installed, it will create a Docker container in the backend.

5. Deploy changes on the Admin Panel.

6. Refresh the browser window.
   The configuration page is displayed.

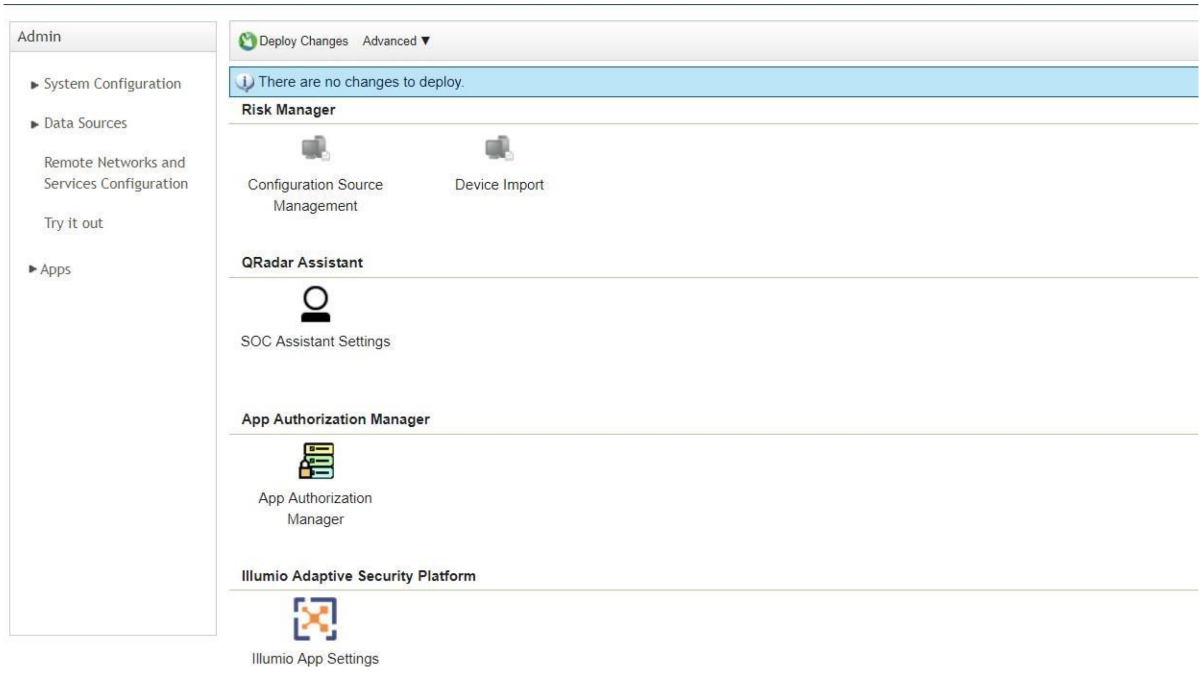
App Configuration

After completing the installation, you must configure the app to start data collection.

1. If you just finished installing using the steps above, you are already in the Configuration page. Skip to step 2.

If you need to get to the Configuration page:

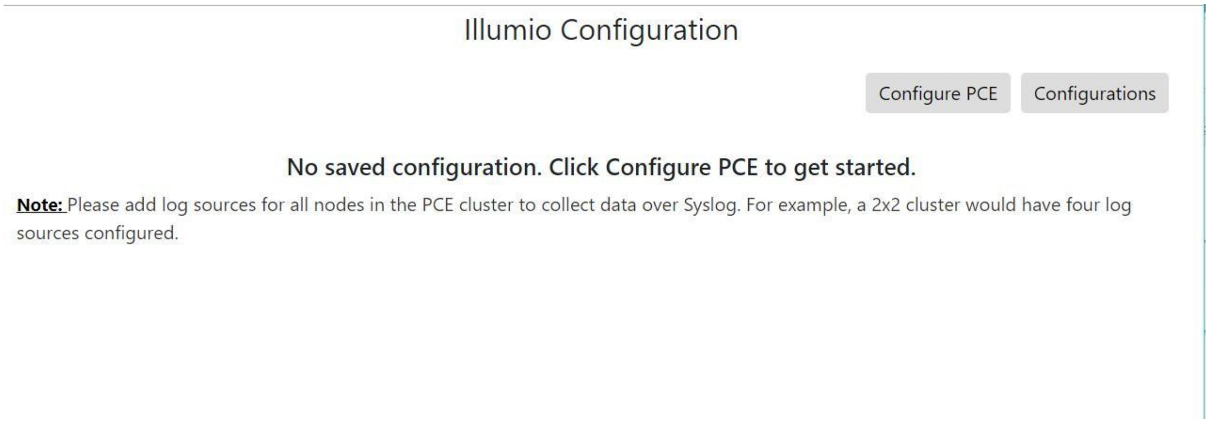
a) Find the installed app on the QRadar Admin Panel under Apps.



There are no changes to deploy.

Figure 10: Installed apps configuration page

b) Open the Illumio App configuration page.



Illumio Configuration

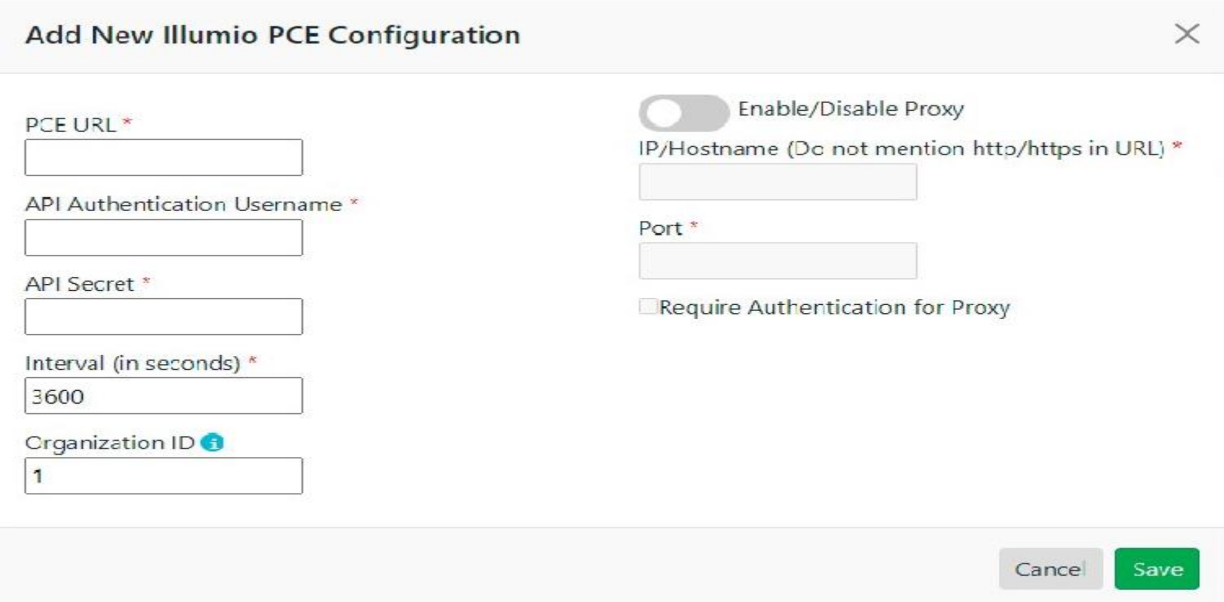
No saved configuration. Click Configure PCE to get started.

Note: Please add log sources for all nodes in the PCE cluster to collect data over Syslog. For example, a 2x2 cluster would have four log sources configured.

Figure 11: Illumio App configuration page

2. Click **Configure PCE**.

Note: The app supports multiple accounts for PCE configurations.



Add New Illumio PCE Configuration

PCE URL *

API Authentication Username *

API Secret *

Interval (in seconds) *: 3600

Organization ID: 1

Enable/Disable Proxy

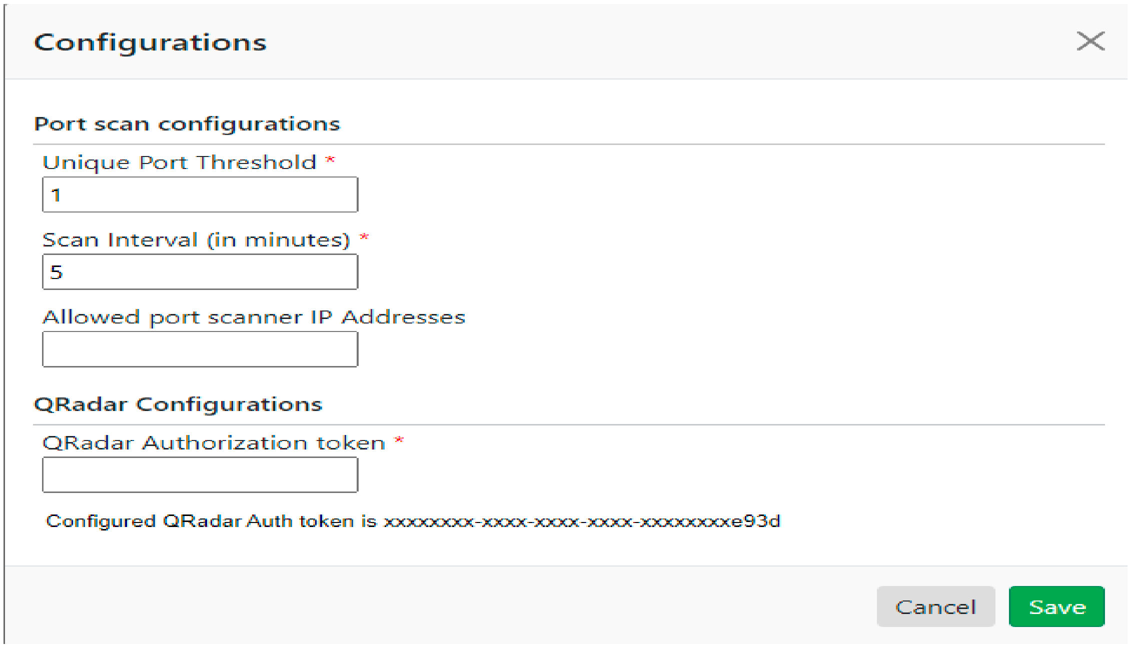
IP/Hostname (Do not mention http/https in URL) *

Port *

□ Require Authentication for Proxy

Figure 12: New PCE Configurations form

In the next screen, the Authorized Service Token is a value obtained from the QRadar App Authorization Manager.



Configurations

Port scan configurations

Unique Port Threshold *

1

Scan Interval (in minutes) *

5

Allowed port scanner IP Addresses

QRadar Configurations

QRadar Authorization token *

Configured QRadar Auth token is xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxe93d

Figure 13: General Configurations form

3. Configure the PCE URL and your Illumio credentials, and your data collection will start, If Illumio PCE contains self-signed or internal ca certificate, make sure that certificates are present in QRadar. If not, perform these steps to add certificate
4. Saved credentials are listed, and you can edit or delete them.
5. You can set proxy to fetch data from Illumio PCE configurations.

User Roles / Capabilities

QRadar supports ACL configurations for restricting access to different actions and dashboards. The Illumio App for QRadar adds a new capability, which controls access to the Illumio dashboards. To access the Illumio dashboards, a user must be assigned a role that has this capability. By default, admin users have access to all the capabilities.

To add a new QRadar role with Illumio dashboard capability, use the following steps.
Note: You can also add this capability to an existing role.

1. Log in to the QRadar console.
2. Go to Admin > User Roles.

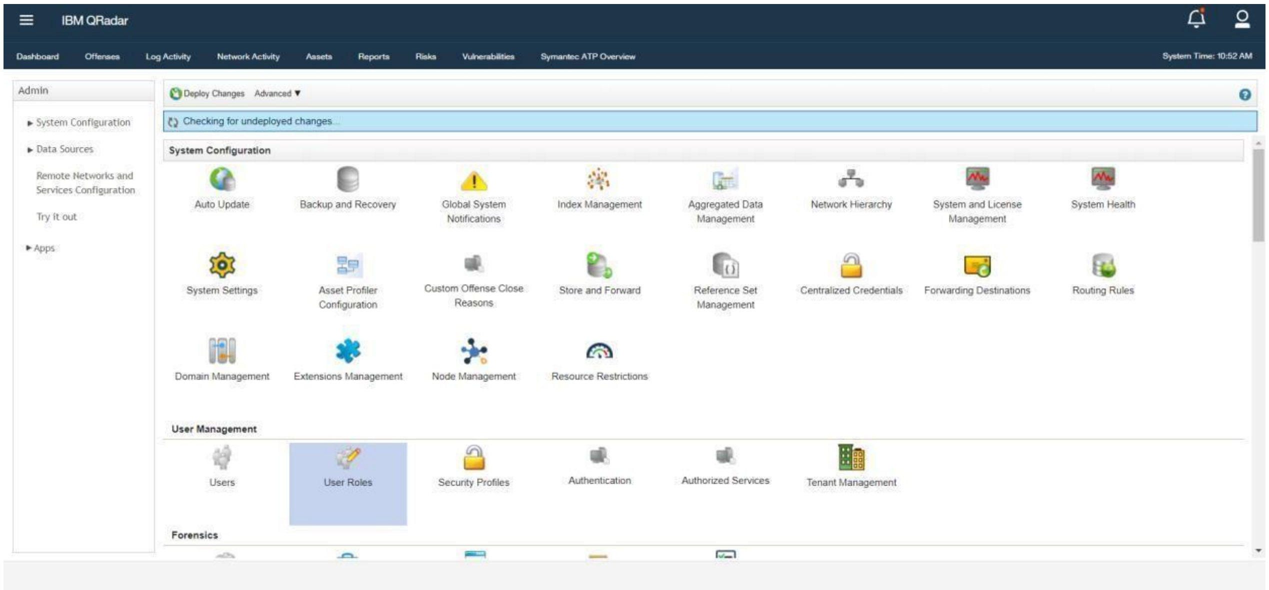
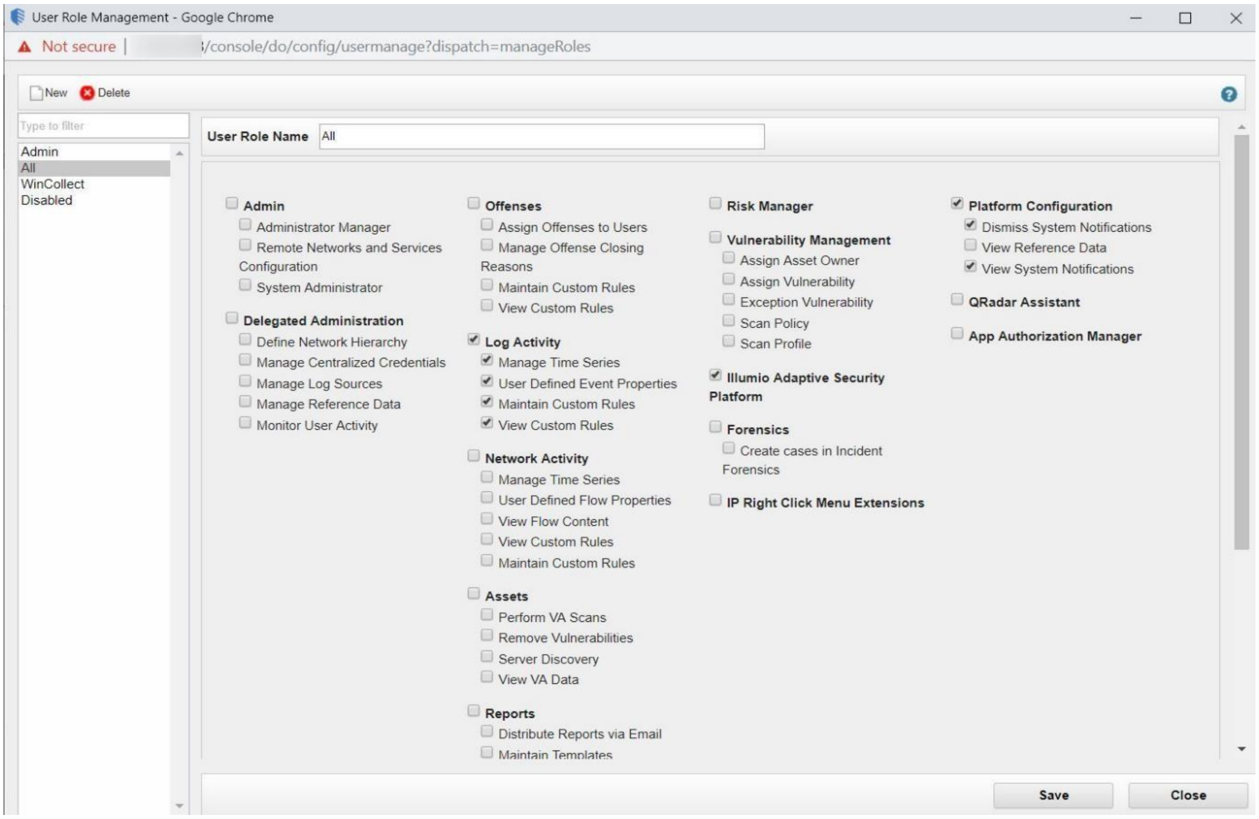


Figure 14: User Role

3. Click **New**.
4. Enter the name of the role.
5. Assign the Illumio Adaptive Security Platform capability, as shown in the screen shot.
6. Assign this role to Users who should be allowed to view Illumio dashboards.



User Role Management - Google Chrome
Not secure | :/console/do/config/usermanage?dispatch=manageRoles
New
Delete
Type to filter
Admin
All
WinCollect
Disabled
Save
Close

User Role Name: All

☐ **Admin**
- ☐ Administrator Manager
- ☐ Remote Networks and Services Configuration
- ☐ System Administrator

☐ **Delegated Administration**
- ☐ Define Network Hierarchy
- ☐ Manage Centralized Credentials
- ☐ Manage Log Sources
- ☐ Manage Reference Data
- ☐ Monitor User Activity

☐ **Offenses**
- ☐ Assign Offenses to Users
- ☐ Manage Offense Closing Reasons
- ☐ Maintain Custom Rules
- ☐ View Custom Rules

☑ **Log Activity**
- ☑ Manage Time Series
- ☑ User Defined Event Properties
- ☑ Maintain Custom Rules
- ☑ View Custom Rules

☐ **Network Activity**
- ☐ Manage Time Series
- ☐ User Defined Flow Properties
- ☐ View Flow Content
- ☐ View Custom Rules
- ☐ Maintain Custom Rules

☐ **Assets**
- ☐ Perform VA Scans
- ☐ Remove Vulnerabilities
- ☐ Server Discovery
- ☐ View VA Data

☐ **Reports**
- ☐ Distribute Reports via Email
- ☐ Maintain Templates

☐ **Risk Manager**

☐ **Vulnerability Management**
- ☐ Assign Asset Owner
- ☐ Assign Vulnerability
- ☐ Exception Vulnerability
- ☐ Scan Policy
- ☐ Scan Profile

☑ **Illumio Adaptive Security Platform**

☐ **Forensics**
- ☐ Create cases in Incident Forensics

☐ **IP Right Click Menu Extensions**

☑ **Platform Configuration**
- ☑ Dismiss System Notifications
- ☐ View Reference Data
- ☑ View System Notifications

☐ **QRadar Assistant**

☐ **App Authorization Manager**

Figure 15: Assign App Permissions

Adding the PCE as a Log Source in QRadar

To enable QRadar to receive events from the Illumio App, you must add the Illumio PCE to QRadar as a log source. A separate log source needs to be created to collect data from each PCE.

1. On the Admin tab in QRadar, select Log Sources > Add.

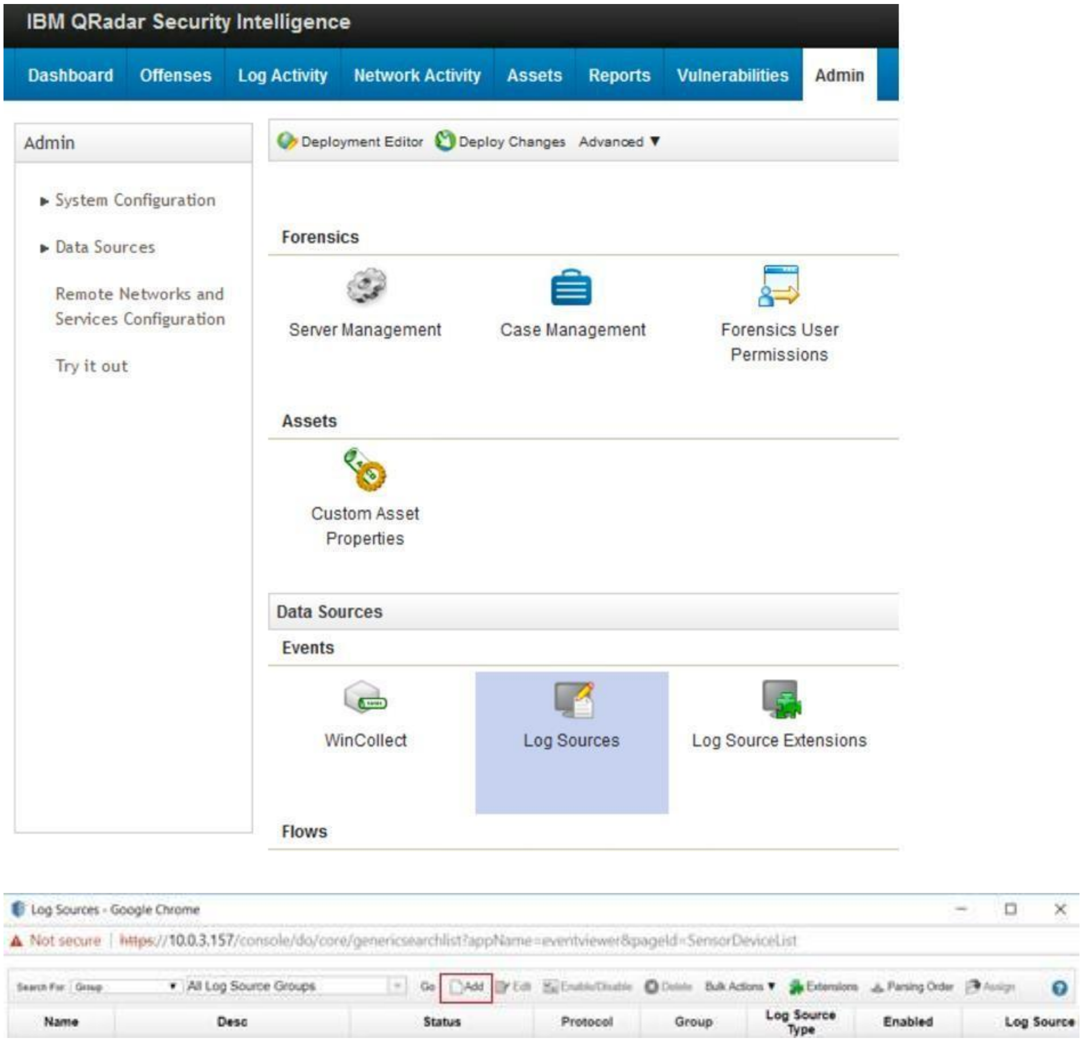
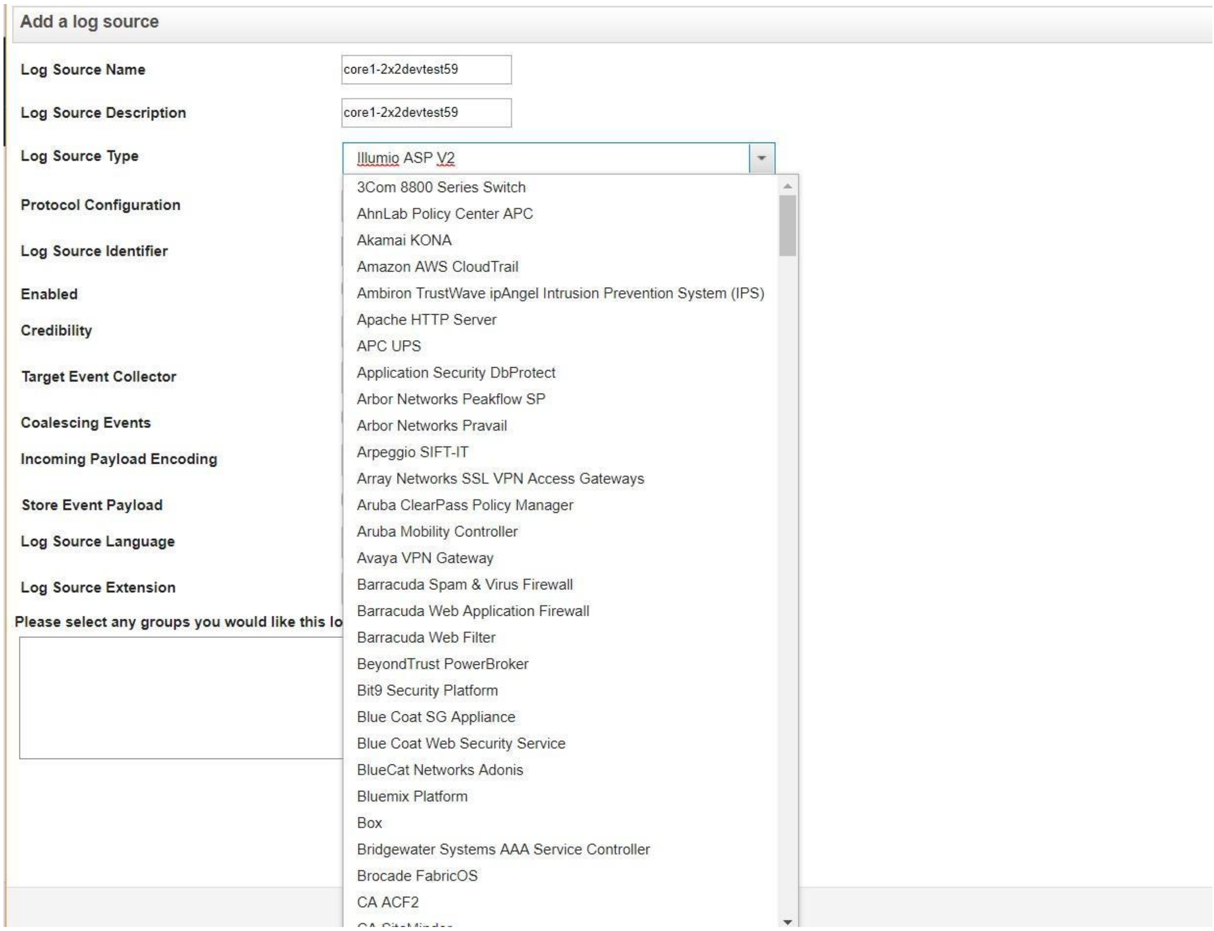


Figure 2 and 3 Adding a Log Source

2. Give the log source a suitable name for the PCE node. Add a description if desired.

3. In Log Source Type, select Illumio ASP V2.



Add a log source

Log Source Name: core1-2x2devtest59

Log Source Description: core1-2x2devtest59

Log Source Type: Illumio ASP V2

Figure 4 Selecting a Log Source Type as Illumio ASP V2

4. In Protocol Configuration, choose Syslog.
5. In Log Source Identifier, enter the log source identifier as set in the syslog header on the host. This is typically the hostname. For example, core1-2x2devtest59.
6. Be sure Enabled is selected.
7. In Coalescing Events, deselect the collector that receives the events.
8. In Incoming Payload Encoding, choose UTF-8.
9. In Log Source Extension, choose IllumioASPCustom_ext.
10. Click **Save**.
11. In the Admin tab, click **Deploy Changes**.

12. Repeat these steps for all other core and database nodes in the cluster (for example, core1, db1, db0).

Collecting Data from Amazon S3 bucket

Pre-requisite:

A log source with log source type “Illumio ASP V2” is required for collecting data from Amazon S3 bucket. If log source with “Illumio ASP V2” is not available then users can create it by following steps mention in Adding the PCE as a Log Source in QRadar section. Users can provide any valid log source identifier for log source type “Illumio ASP V2” if they are using it only for collecting data from Amazon S3 bucket.

QRadar can receive events from the Amazon S3 buckets in two ways:

- Using an SQS queue (recommended)
- Using directory prefix

SQS is simpler, but may accrue additional costs. Directory prefix is more complicated to set up.

With an SQS queue:

Users need to create a log source for collecting Illumio events from Amazon S3. Follow below steps :

1. On the Admin tab in QRadar, select Log Sources > Add.
2. Select a Log Source type: Amazon AWS CloudTrail
3. Select a protocol type: Amazon AWS S3 REST API
4. Name: Add a suitable name
5. Description: Add a suitable description
6. Enabled: True
7. Coalescing Events: False
8. Store Event Payloads: True
9. Log Source Identifier: Prefer to give same as Name to avoid confusion
10. Authentication Method: Access Key ID / Secret Key
11. Access Key ID: AWS S3 bucket access key ID
12. Secret Key: AWS S3 bucket Secret Key
13. S3 Collection Method: SQS Event Notifications
14. SQS Queue URL - URL of the created SQS Queue
15. Bucket Name: S3 bucket name
16. Event Format: LINEBYLINE

17. Use as A Gateway Log Source: True
    a. Log Source Identifier Pattern: Please enter (=.*) after Illumio log source identifier i.e.{ILLUMIO_LOG_SOURCE_IDENTIFIER}=.*
        - You can find log source identifier value from the “Illumio ASP v2” log source.
        - E.g.: If Illumio’s log source identifier is **core0-2x2devtest59** then enter **core0-2x2devtest59=. *** in this field.

    Note - With the help of Gateway log source we can collect events from Amazon S3 bucket and parse those events as “Illumio ASP V2” log source type events as we are using “Illumio ASP V2” log souce type’s identifier while configuring Gateway Log Source.
18. Show Advanced Options: True
    a. File Pattern: .*\.gz (To consume only .gz files from s3 bucket)
    b. File Pattern: .* (To consume all files from s3 bucket)
19. Automatically Acquire Server Certificate(s): Yes
20. Recurrence: How often the Amazon AWS S3 REST API Protocol connects to the Amazon cloud API, checks for new files, and if they exist, retrieve them. Every access to an AWS S3 bucket incurs a cost to the account that owns the bucket. The time interval can include values in hours (H), minutes (M), or days (D). For example: 2H = 2 hours, 15M = 15 minutes, 30 = 30 seconds
21. EPS Throttle: Maximum number of events per second (EPS) that this log source should not exceed. (default:5000)
22. In the Admin tab, click **Deploy Changes.**

With a directory prefix:

Users need to create a log source for collecting Illumio events from Amazon S3. Follow below steps:

1. On the Admin tab in QRadar, select Log Sources > Add.
2. Select a Log Source type: Amazon AWS CloudTrail
3. Select a protocol type: Amazon AWS S3 REST API
4. Name: Add a suitable name
5. Description: Add a suitable description
6. Enabled: True
7. Coalescing Events: False
8. Store Event Payloads: True
9. Log Source Identifier: Prefer to give same as Name to avoid confusion
10. Authentication Method: Access Key ID / Secret Key
11. Access Key ID: AWS S3 bucket access key ID
12. Secret Key: AWS S3 bucket Secret Key
13. S3 Collection Method: Use a Specific Prefix - Single Account/Region Only

14. Bucket Name: S3 bucket name
15. Directory Prefix: Root directory location on the AWS S3 bucket from which the files are retrieved. (directories are separated by '/'). Note: User needs to create a separate log source for each PCE log directory. For example, if the User's main directory is Illumio, with subdirctories "auditable_events" and "summaries", the User would create log sources with the prefixes Illumio/auditable_events and Illumio/summaries in order to collect the logs.
16. Signature Version: AWS Signature V2
17. Event Format: LINEBYLINE
18. Use as A Gateway Log Source: True
    a. Log Source Identifier Pattern: Please enter (=.*) after Illumio log source identifier i.e.{ILLUMIO_LOG_SOURCE_IDENTIFIER}=.*
        - You can find log source identifier value from the "Illumio ASP v2" log source.
        - E.g.: If Illumio's log source identifier is **core0-2x2devtest59** then enter **core0-2x2devtest59=. *** in this field.

    Note - With the help of Gateway log source we can collect events from Amazon S3 bucket and parse those events as "Illumio ASP V2" log source type events as we are using "Illumio ASP V2" log souce type's identifier while configuring Gateway Log Source.

19. Show Advanced Options: True
    a. File Pattern: .*\.gz (To consume only .gz files from s3 bucket)
    b. File Pattern: .* (To consume all files from s3 bucket)
20. Automatically Acquire Server Certificate(s): Yes
21. Recurrence: How often the Amazon AWS S3 REST API Protocol connects to the Amazon cloud API, checks for new files, and if they exist, retrieve them. Every access to an AWS S3 bucket incurs a cost to the account that owns the bucket. The time interval can include values in hours (H), minutes (M), or days (D). For example: 2H = 2 hours, 15M = 15 minutes, 30 = 30 seconds
22. EPS Throttle: Maximum number of events per second (EPS) that this log source should not exceed. (default:5000)
23. In the Admin tab, click **Deploy Changes.**

Note: After creating a log source make sure that SSL certificates of S3 buckets are present in the QRadar. If certificates are not present, then data from S3 bucket will not be collected.

Follow below steps to add certificates of S3 bucket.

1. Open QRadar via SSH
2. Run below command.

   ```
   /opt/qradar/bin/getcert.sh <bucket name>.s3.amazonaws.com
   ```

Uninstalling the App

To uninstall the application:

1. In QRadar, go to the Admin page.
2. Open Extension Management.
3. Select Illumio App for QRadar.
4. Click **Uninstall**.

Adding Illumio PCE SSL certificates in QRadar

In the Illumio app, we are collecting labels with SSL verification. If PCE contains self-signed or internal CA certificates, then user needs to perform below steps to add certificates in QRadar.

- Login into your QRadar console
- Go to admin panel
- Open configuration page of Illumio app.
- From configuration window of Illumio app, from above URL copy the app id, the number after /console/plugins/
  - E.g. suppose URL is: https://1.1.1.1/console/plugins/1062/app_proxy/index Copy "1062"

Perform below command on your QRadar instance via SSH.

- docker ps
- Find the Container id of Illumio App. (container id for Illumio app will be an image column containing a previous copied number. E.g. ...qapp-1062...)
- docker exec -it <container-id> /bin/bash (to go inside the docker)

Performed the following steps inside the docker container of the Illumio app v1.3.0:

- Copy/Move the certificate file of Illumio app from root to /etc/pki/ca-trust/source/anchors
- Run the commands given on page - https://www.ibm.com/docs/en/qsip/7.4?topic=sc-using-certificates-that-are-signed-by-internal-certificate-authority ,i.e.

```
/opt/qradar/support/all_servers.sh -p /etc/pki/ca-trust/source/anchors/<root_certificate> -r /etc/pki/ca-trust/source/anchors

/opt/qradar/support/all_servers.sh -C update-ca-trust
```

- Restart the docker container of the app.

Note: When a user reinstall the app or docker container of Illumio App gets restarted, these changes might get reverted. In this case, user need to reperform these steps.

Upgrade the Application to v1.3.0

To upgrade the application, the user needs to perform the following steps.

1. Remove all saved searches and custom properties associated with the log source type “Illumio ASP V2”
2. Go to Admin → Extension Management
3. Choose the downloaded zip file by clicking on **Add**.
4. The QRadar will prompt a list of changes being made by the app. Click on the install button. After the Application is installed it will create a Docker container in the backend.
5. “Deploy Full Configuration” in the Admin panel.
6. Clear cache of the browser and refresh and page.

Note: PCE filter functionality on dashboard is removed in Illumio App for QRadar v1.2.0. Users need to manually delete a reference table named “pce_nodes”, else it will always remain there in QRadar after upgrading the app.

QRadar Cloud Support

Illumio App for QRadar v1.3.0 supports all its functionalities on the QRadar cloud. If the PCE is installed on a port other than 443**,** contact IBM to open that port.

Release Notes

v1.3.0

- Migrated application from QRadar v1 to v2 and python2 to python3.
- Added support for PCE versions 21.2.0 and 21.2.1.
- Added feature to download Investigations details as csv file.
- Added drilldown from the single value panels in Security Operations Dashboard.
- Bug fixes.

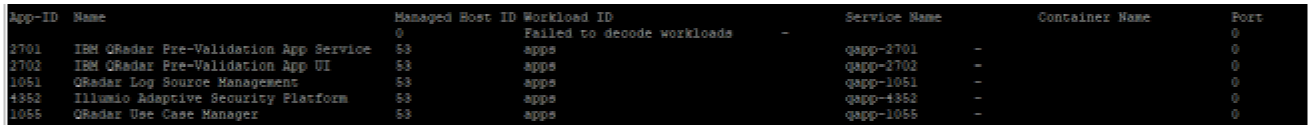
Checking logs of the Application

Users can see the application logs by accessing the application from the QRadar via SSH.

1. Login into QRadar via SSH
2. lists all installed applications and their App-ID values using below command -

   `/opt/qradar/support/recon ps`

3. If no issues are detected, the recon command output might look like the following example:



```
App-ID  Name                                    Managed Host ID Workload ID                         Service Name           Container Name    Port
                                                0               Failed to decode workloads       -                                           0
2701    IBM QRadar Pre-Validation App Service   53              apps                             qapp-2701       -                           0
2702    IBM QRadar Pre-Validation App UI        53              apps                             qapp-2702       -                           0
1051    QRadar Log Source Management            53              apps                             qapp-1051       -                           0
4352    Illumio Adaptive Security Platform      53              apps                             qapp-4352       -                           0
1055    QRadar Use Case Manager                 53              apps                             qapp-1055       -                           0
```

4. Connect to the app container -

   `/opt/qradar/support/recon connect APP-ID`

   Note - For **`the above image App-ID is 4352 for Illumio app.`**

5. Go to log dir -

   `cd /opt/app-root/store/log`

6. Once inside the log directory, You can view them with a command like '*ls'* to list all files and *'cat'* to print log file content.

   `ls`

   `cat app.log`

app.log – Contains all the logs related to the configuration page and dashboard.

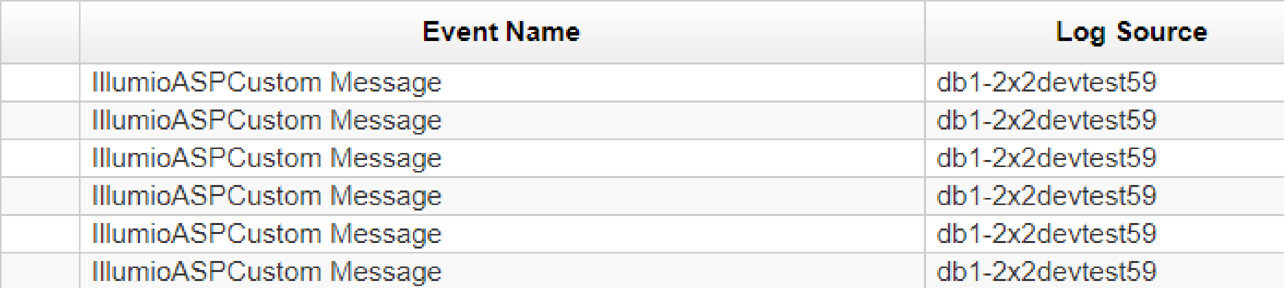
label_data_collect.log – Contains logs related to label collection from Illumio PCE.

Troubleshooting

This section describes the common issues that might happen when deploying or running the app and the steps to resolve the issues.

Events Displayed as Custom Message

Problem: Illumio events are named **IllumioASPCustom Message** rather than being identified with the correct QRadar category. This is seen in the Log Activity tab in QRadar when you might be searching for events pertaining to created log sources.



	Event Name	Log Source
	IllumioASPCustom Message	db1-2x2devtest59
	IllumioASPCustom Message	db1-2x2devtest59
	IllumioASPCustom Message	db1-2x2devtest59
	IllumioASPCustom Message	db1-2x2devtest59
	IllumioASPCustom Message	db1-2x2devtest59
	IllumioASPCustom Message	db1-2x2devtest59

Figure 16: Custom Message Issue

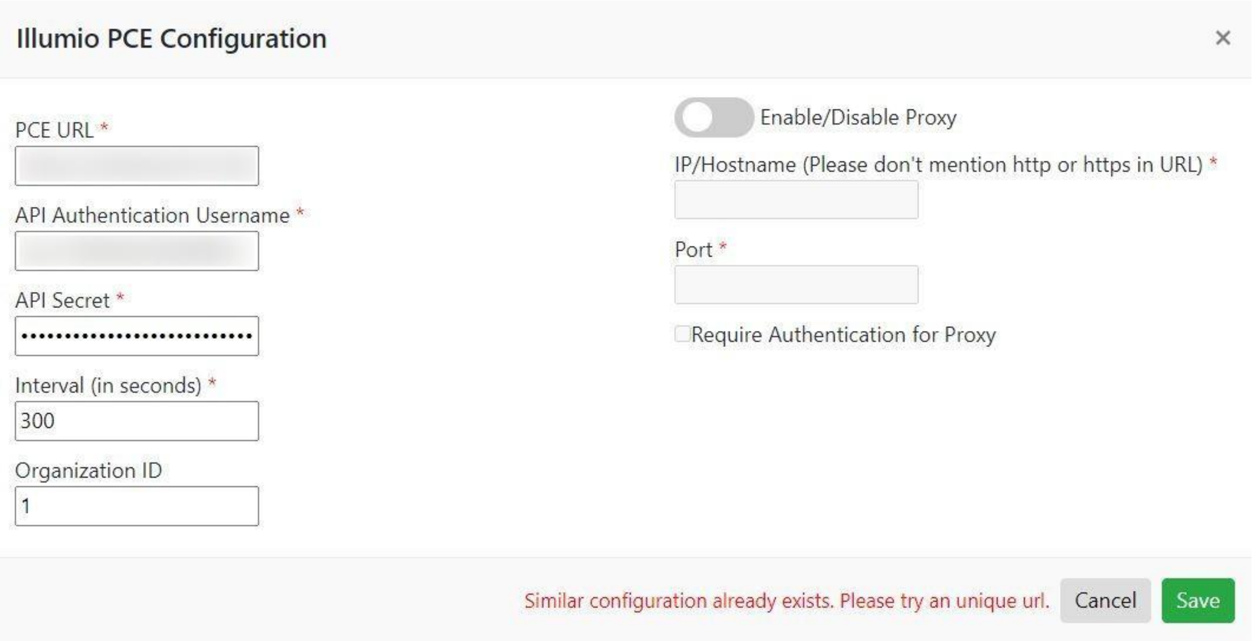
Cause: This issue can be caused by improper Event ID and Event Category extractions. If any new type of event appears in the Log Source and its Event ID or Event Category extractions are not written, then the value of that property will be empty.

Troubleshooting Steps:

1. Go to Log Activity.
2. In Filter Log Source Type, choose Illumio ASP V2.
3. In the Views filter, select Last 7 Days.
4. Right click on the event that has the IllumioASPCustom Message.
5. View in DSM editor.
6. Check the value of Event ID and Event Category under Log Activity Preview.
7. If Event ID and Event Category are unknown, create a support ticket with Illumio Support.

Configuration Fails: Configuration Exists

Problem: New configuration fails with error message “Same configuration already exists. Please try a unique url”.



Illumio PCE Configuration

PCE URL *
[redacted]

API Authentication Username *
[redacted]

API Secret *
•••••••••••••••••••••••••••

Interval (in seconds) *
300

Organization ID
1

Enable/Disable Proxy

IP/Hostname (Please don't mention http or https in URL) *

Port *

□ Require Authentication for Proxy

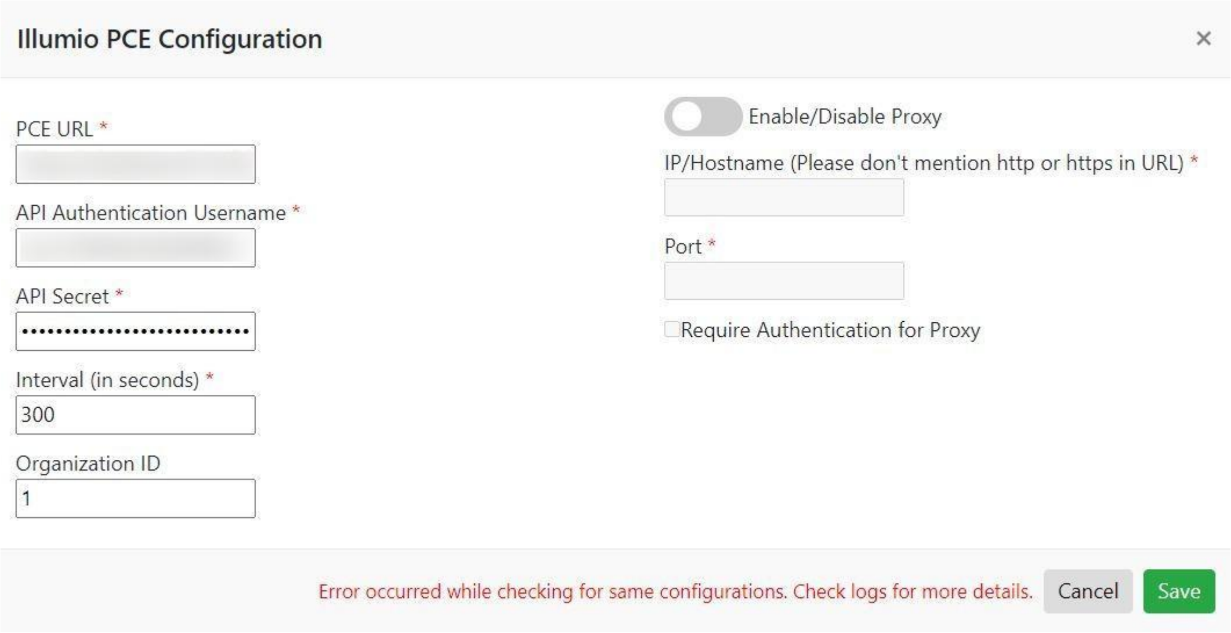
Similar configuration already exists. Please try an unique url.

Figure 17: Duplicate credentials error

Troubleshooting Steps: You might have entered an account which is already configured. Enter new credentials which have not already been provided.

Configuration Fails: Error Checking Configurations

Problem: Configuration of Illumio fails with error message “Error occurred while checking for same configurations. Check logs for more details.”



Illumio PCE Configuration

PCE URL *

API Authentication Username *

API Secret *

••••••••••••••••••••••••••

Interval (in seconds) *

300

Organization ID

1

Enable/Disable Proxy

IP/Hostname (Please don't mention http or https in URL) *

Port *

□ Require Authentication for Proxy

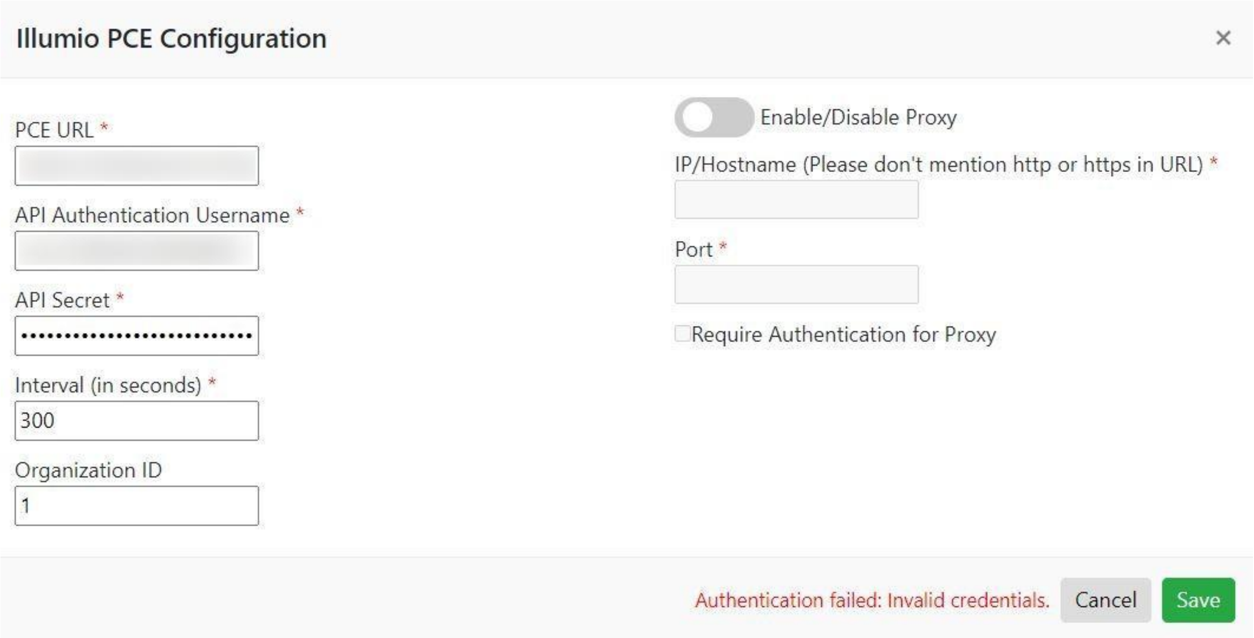
Error occurred while checking for same configurations. Check logs for more details.

Figure 18: Similar Configuration Check error

Troubleshooting Steps: This happens while the app is checking for similar configurations. Try the configuration once again. Check app.log log file for more details. To check logs, follow the steps of [Checking logs of the Application]

Configuration Fails: Authentication

Problem: New configuration fails with error message “Authentication failed. Invalid credentials”.



Illumio PCE Configuration

PCE URL *

API Authentication Username *

API Secret *
••••••••••••••••••••••••••••

Interval (in seconds) *
300

Organization ID
1

Enable/Disable Proxy

IP/Hostname (Please don't mention http or https in URL) *

Port *

□ Require Authentication for Proxy

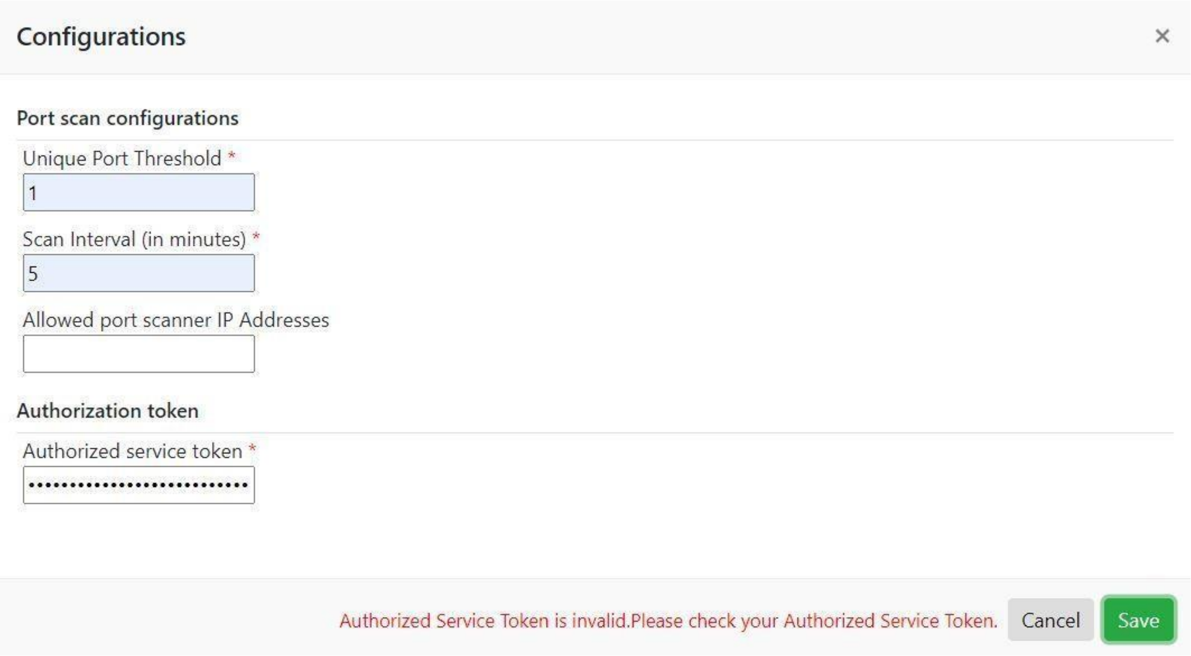
Authentication failed: Invalid credentials.

Figure 19: Incorrect Credentials error

Troubleshooting Steps: You have entered incorrect credentials, so authentication failed while saving the new configuration. Check the credentials and try again.

Configuration Fails: Service Token Invalid

Problem: New configuration of Illumio App fails with error message “Authorized Service Token is invalid. Please check your Authorized Service Token”.



Configurations

Port scan configurations

Unique Port Threshold * 1

Scan Interval (in minutes) * 5

Allowed port scanner IP Addresses

Authorization token

Authorized service token * ••••••••••••••••••••••••••

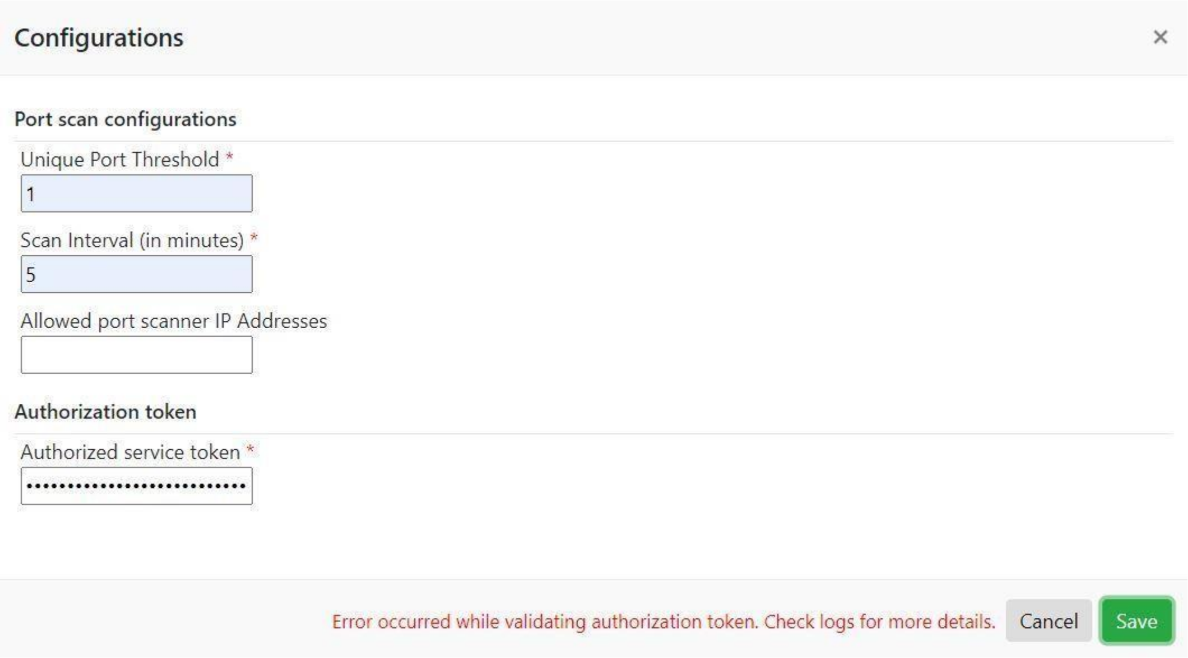
Authorized Service Token is invalid.Please check your Authorized Service Token.

Figure 20: Incorrect Authorized Service error

Troubleshooting Steps: You have entered an incorrect Authorized Service Token. Check the token and try again.

Configuration Fails: Error Validating Authorization Token

Problem: Configuration of Illumio App fails with error message “Error occurred while validating authorization token”.



Configurations

Port scan configurations

Unique Port Threshold *

1

Scan Interval (in minutes) *

5

Allowed port scanner IP Addresses

Authorization token

Authorized service token *

••••••••••••••••••••••••••••

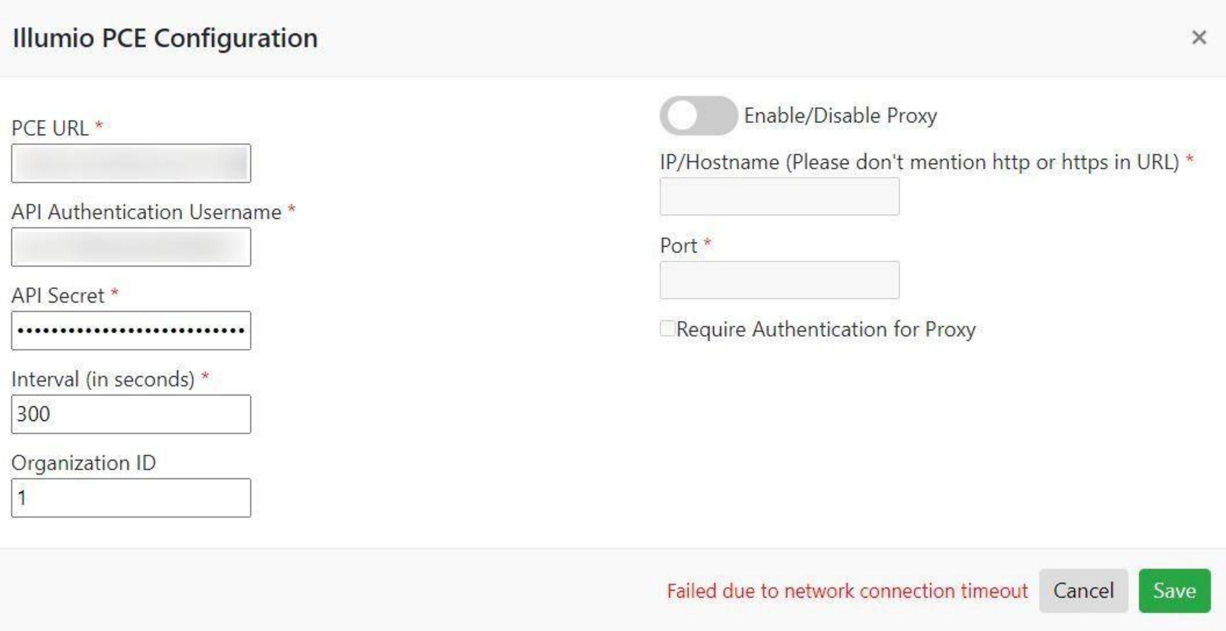
Error occurred while validating authorization token. Check logs for more details.

Figure 21: Authorized Service Token Check error

Troubleshooting Steps: This happens while the app is checking the Authorized Service Token. Try once again. Check app.log log file for more details. To check logs, follow the steps of Checking logs of the Application

Configuration Fails: Network Connection Timeout

Problem: Configuration of Illumio App fails with the error message “Failed due to network connection timeout”.



Illumio PCE Configuration

PCE URL *

API Authentication Username *

API Secret * ••••••••••••••••••••••••••••

Interval (in seconds) * 300

Organization ID 1

Enable/Disable Proxy

IP/Hostname (Please don't mention http or https in URL) *

Port *

□ Require Authentication for Proxy

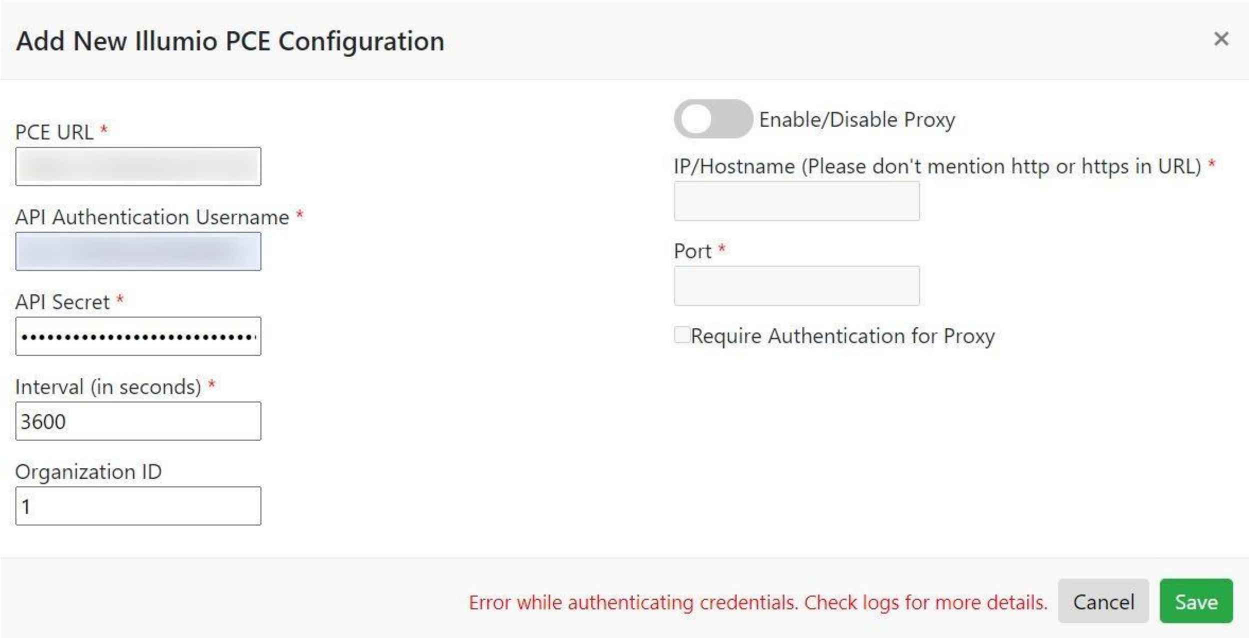
Failed due to network connection timeout

Figure 22: Network connection timeout error

Troubleshooting Steps: The app is not able to connect to the server. There might be a network issues. If you have proxy in your network, try to save credentials with proxy. Check app.log log file for more details. To check logs, follow the steps of Checking logs of the Application

Configuration Fails: Error while authenticating credentials

Problem: New configuration fails with error message “Error while authenticating credentials. Check logs for more details.”



Add New Illumio PCE Configuration

PCE URL *
[redacted]

API Authentication Username *
[redacted]

API Secret *
••••••••••••••••••••••••••••

Interval (in seconds) *
3600

Organization ID
1

Enable/Disable Proxy

IP/Hostname (Please don't mention http or https in URL) *

Port *

□ Require Authentication for Proxy

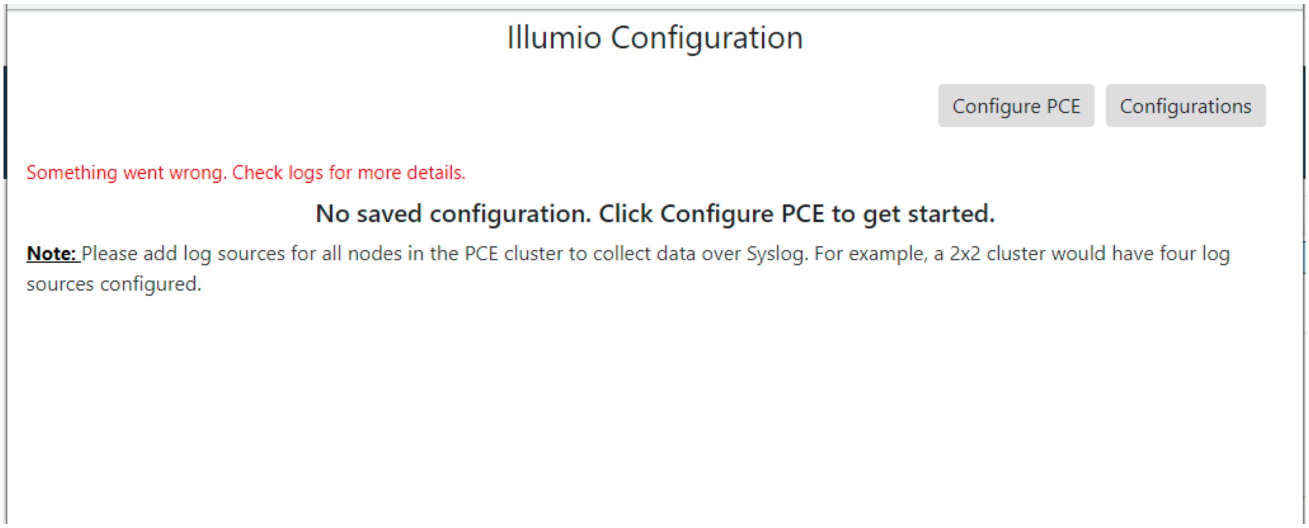
Error while authenticating credentials. Check logs for more details.

Figure 23: Connection error

Troubleshooting Steps: The app is not able to reach the PCE using the provided PCE URL or proxy credentials. There can be multiple reasons for this issue. Check app.log log file for more details. To check logs, follow the steps of Checking logs of the Application

Error message on configuration page

Problem: On opening the configuration page it shows an error message “Something went wrong. Check logs for more details.”



Illumio Configuration

Something went wrong. Check logs for more details.

No saved configuration. Click Configure PCE to get started.

Note: Please add log sources for all nodes in the PCE cluster to collect data over Syslog. For example, a 2x2 cluster would have four log sources configured.

Figure 24:Secret Data Error

Troubleshooting Steps: The app is not able to reach the PCE using the credentials stored in files. There can be multiple reasons for this issue. One possible issue is that files of secret data are tamere. Check app.log log file for more details. To check logs, follow the steps of Checking logs of the Application

Events Unknown

Problem: Illumio App events are shown in QRadar as Unknown.

Troubleshooting steps:

1. Go to Log Activity.
2. Set Filter Log Source Type to Illumio ASP V2.
3. In Views, select Last 7 Days.
4. If any events are shown as Unknown**:**
   a. Right click on the event.

b. View in DSM editor.
c. Check the value of Event ID and Event Category under Log activity Preview.
d. If Event ID and Event Category value are unknown, create a support ticket with Illumio

Data Not Collected

Problem: Data is not getting collected by the app.

Troubleshooting steps:

1. Follow the steps of General Troubleshooting

UI Issues

Problem: Any dashboard panel, configuration page, or chart shows errors or unintended behavior.

Troubleshooting Steps:

1. Clear the browser cache and reload the webpage.
2. Try reducing the time range of the filter and retry. QRadar queries might expire if too much data is being matched in the query.

Reinstalling the App

Problem: The application is exhibiting undesired behavior and troubleshooting steps have failed to fix the issue.

Troubleshooting Steps: To reinstall the app:

1. Remove all saved searches and custom properties associated with the log source type Illumio ASP V2.
2. Delete the log source associated with log source type Illumio ASP V2 by navigating to the Admin panel > Log Sources.
3. Uninstall the app. See Uninstalling the App.
4. Refresh the page and check to be sure the Dashboard tab of Illumio Overview is not seen after uninstallation.
5. Now install the app from Extension Management. See Installation.

General Troubleshooting

Problem: If you encounter a problem that is not described in this document, follow these steps:

1. Click on System and License Management in the Admin Panel.
2. Select the host on which the Illumio App is installed.
3. In the top panel, click Actions, and select Collect Log Files. The Log File Collection window opens.
4. Click Advanced Options.
5. Click these checkboxes:
   - Include Debug Logs
   - Application Extension Logs
   - Setup Logs (Current Version)
6. For data input, select 2 days.
7. Click Collect Log Files.
8. Click the link “Click here to download files.” This will download all the logs in a single zip file on your local machine.
9. Create a support case with Illumio and attach the zipped-up log files.

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