# 將SecureX與Firepower威脅防禦(FTD)整合並進 行故障排除

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簡介 必要條件 需求 採用元件 設定 授權 將您的帳戶連結到SSE並註冊裝置。 向SSE註冊裝置 <u>在SecureX上配置自定義儀表板</u> 驗證 <u>疑難排解</u> 檢測連線問題 DNS解析引起的連線問題 SSE門戶的註冊問題 驗證SSEConnector狀態 驗證傳送到SSE門戶和CTR的資料 影片

# 簡介

SecureXFirepower Firepower(FTD)

# 必要條件

## 需求

- Firepower Management Center (FMC)
- Firepower Threat Defense (FTD)

## 採用元件

•

- Firepower(FTD)- 6.5
- Firepower(FMC)- 6.5
- (SSE)
- SecureX

# 設定

.

#### 授權

虛擬帳戶角色:

只有虛擬帳戶管理員或智慧帳戶管理員有權將智慧帳戶與SSE帳戶連結。

步驟1。若要驗證智慧帳戶角色,請導覽至software.cisco.com,然後在Administration Menu下選擇 Manage Smart Account。



步驟2。若要驗證使用者角色,請導覽至**Users**,並驗證在「Roles」下,帳戶是否設為虛擬帳戶管 理員,如下圖所示。 Cisco Software Central > Manage Smart Account > Users

s							
ers	User Groups						
A	dd Users Remove Sele	Export Selected				_	
	User 🛧	Email	Organization	Account Access	Role	User Group	Actions
	danieben			•	•	•	
0	Daniel Benitez danieben	danieben@cisco.com	Cisco Systems, Inc.	All Virtual Accounts Mex-AMP TAC	Smart Account Administrator Virtual Account Administrator		Remove
					·		

#### 步驟3.確保選擇在SSE上鍊接的虛擬帳戶包含安全裝置的許可證,前提是不包含安全許可證的帳戶 連結在SSE上,安全裝置和事件沒有顯示在SSE門戶上。

na	rt Software Licensing					Feedback Support
ts	Inventory   Convert to Smart Licensing   Reports	Preferences   On-Prem Acco	ounts Activity			
tua	Account: Mex-AMP TAC -					Minor Hide Ale
Gent	ral Licenses Product Instances Ev	ent Log				
	Manage License Tage	Lissas Passarities	0		Seamh hu License	By Name   By Tag
0	License	Billing	Purchased	In Use	Balance Alerts	Actions
	FPR1010 URL Filtering	Prepaid	10	0	+ 10	Actions 👻
0	FPR4110 Threat Defense Malware Protection	Prepaid	1	0	+ 1	Actions +
	FPR4110 Threat Defense Threat Protection	Prepaid	1	0	+ 1	Actions +
	FPR4110 Threat Datense URL Filtering	Prepaid	1	0	+ 1	Actions 👻
	HyperFlex Data Platform Enterprise Edition Subscription	Prepaid	2	0	+ 2	Actions +
0	ISE Apex Session Licenses	Prepaid	1	0	+ 1	Actions +
	ISE Base Session Licenses	Prepaid	10	0	+ 10	Actions +
	ISE Plus License	Prepaid	10	0	+ 10	Actions 👻
	Threat Defense Virtual Melware Distortion	Prepaid	10	1	+ 9	Actions +
0	Theat Detense vitual Malware Protection					

### 步驟4.要驗證FMC是否已註冊到正確的虛擬帳戶,請導航到System>Licenses>Smart License:

Smart License Status			Cisco Smart Software Manager	
Usage Authorization:	Ø	Authorized (Last Synchronized On Jun 10 2020)		
Product Registration:	0	Registered (Last Renewed On Jun 10 2020)		
Assigned Virtual Account:		Mex-AMP TAC		
Export-Controlled Features:		Enabled		
Cisco Success Network:		Enabled (1)		
Cisco Support Diagnostics:		Disabled 🕕		

Smart Licenses

License Type/Device Name	License Status
> 🖓 Firepower Management Center Virtual (1)	0
> 🖓 Base (1)	0
> 🟳 Malware (1)	0
> 🖓 Threat (1)	0
> 💭 URL Filtering (1)	٢
> 🖓 AnyConnect Apex (1)	0
> 🖓 AnyConnect Plus (1)	٢
AnyConnect VPN Only (0)	

Note: Container Instances of same blade share feature licenses

### 將您的帳戶連結到SSE並註冊裝置。

步驟1。當您登入您的SSE帳戶時,您必須將您的智慧帳戶連結到SSE帳戶,為此,您需要按一下工具圖示並選擇**連結帳戶**。

	*	Daniel Benitez 🗸
Link Smart/V	irtual Accoun	its
Link CDO Ac	count	
Downloads		
Downloads	count	

帳戶連結後,您會看到智慧帳戶及其上的所有虛擬帳戶。

### 向SSE註冊裝置

步驟1.確保您的環境中允許這些URL:

#### 美國地區

• api-sse.cisco.com

• eventing-ingest.sse.itd.cisco.com

#### 歐盟地區

- api.eu.sse.itd.cisco.com
- eventing-ingest.eu.sse.itd.cisco.com

亞太及日本地區

- api.apj.sse.itd.cisco.com
- eventing-ingest.apj.sse.itd.cisco.com

步驟2.使用此URL <u>https://admin.sse.itd.cisco.com登入SSE入口網站,</u>導覽至**Cloud Services**,並啟 用**Eventing**和**Cisco SecureX威脅響應**選項,如下圖所示:



步驟3.登入到Firepower管理中心並導航到System>Integration>Cloud Services,啟用Cisco Cloud Event Configuration,然後選擇要傳送到雲的事件:

Overview Analysis Policies Devices Objects AMP	Intelligence	Configuration Users Domains Integration	Deploy 01 System Help Updates Licenses Health Monitoring
Cloud Services Realms Identity Sources eStr	eamer Host Input Client Smart Software Satellite		
	URL Filtering	AMP for Networks Last Local Malware Detection Update: Nov 28, 2019 3:31 PM	
	Cached URLs Expire Never C Disoute URL, categories and reputations	Enable Automatic Local Malware Detection Updates     Share URI from Malware Events with Cisco     Use Legacy Port 32137 for AMP for Networks	
	Save	Save	
	Cisco Cloud Region	Cisco Cloud Event Configuration	
	Region us-east-1 (US Region) This setting determines where events are sent to, if configured to send to the cloud, as well as data generated by the Cisco Success Network and Cisco Support Diagnostics tools.	<ul> <li>Send high priority Connection Events to the cloud</li> <li>Send File and Malware Events to the cloud</li> <li>Send Intrusion Events to the cloud</li> <li>Click here to view your Cisco Cloud configuration. Click here to view your events in Cisco Threat Response.</li> </ul>	
	Save	Save	

步驟4.您可以返回SSE門戶並驗證現在是否可以看到在SSE上註冊的裝置:

cisco Security S	ervices Exchange	Devices Cloud Se	ervices Events Audit Log						
Devices for Sourcefire Support									
Y Q, mm X									
0 Rows Selected									
	55		Name A	Туре	Version	Status	Description		
	~	1	frepower	Cisco Firepower Threat Defense for VMWare	6.5.0	O Registered	27 frepower (FMC managed)		
	Created: 2020-0	5472e94713 6-10 19:51:46 UTC		P Address 27			Connector Version:		
	~	2	MEX-AMP-FINC	Cisco Firepower Management Center for VMW	6.5.0	Registered	24 MEX-AMP-FMC		
	Created: 2020-0	с88577612 6-10 20:17:37 UTC	•	P Address 24			Connector Version:		
Page Size: 25 ~	Total Entries: 2								

Events由FTD裝置傳送,請導覽至SSE入口網站上的**Events**,以驗證裝置傳送至SSE的事件,如下 圖所示:

cisco	Sec	urity Services	Exchange	Devices Cloud Serv	rices Events Audit Log					• *
Event Stream for Sourcefire Support										
,	▼ Q. Enter filter criteria ~ ) 🔳 08/04/2020, 18:50 - 08/05/2020, 18:50 ×									
0 F	lows Sel	ected								
		Talos Disposition	Incident	Destination IP	Event Time	Ingest Time	Message	Protocol	Reporting Device ID	Source IP
		Neutral	° No	252	2020-08-05 18:48:50 UTC	2020-08-05 18:48:51 UTC		tcp	09d441eedce5	100
		Neutral	° No	145	2020-08-05 18:47:38 UTC	2020-08-05 18:47:38 UTC		tcp	09d441eedce5	100
		Unknown	° No	.100	2020-08-05 18:47:30 UTC	2020-08-05 18:47:30 UTC		tcp	09d441eedce5	100
		Neutral	° No	252	2020-08-05 18:46:50 UTC	2020-08-05 18:46:50 UTC		tcp	09d441eedce5	100

## 在SecureX上配置自定義儀表板

步驟1。若要建立儀表板,請按一下**+新建儀表板**圖示,選擇要用於儀表板的名稱和磁貼,如下圖所 示:

Create Dashboard	×
Dashboard Name	
Test Dashboard	
Available Tiles	
> AMP Global Intelligence	
> AMP for Endpoints-mshukur (RO)	
>   Email Security Appliance	
> Email Security Appliance esa03	
> E FMC 6.5.0	
> E Firepower	
> E Firepower - Mosterbe	
> E Firepower CSSP	
Firepower danieben	
Event Summary A set of metrics summarizing Firepower event activity in your organization	0
Incident Promotion Reason A set of metrics summarizing Firepower incident activity in your	
organization	Ŭ
Taios IP Reputation	-
A set of metrics summarizing Talos disposition activity in your organization	
Intrusion Top Attackers	-
List of top attackers for intrusion events in your organization	
Intrusion Top Targets	_
List of top targets for intrusion events in your organization	•
	Save

### 第2步:在此之後,您可以看到從SSE填充的儀表板資訊,您可以選擇任何檢測到的威脅,然後啟動 SSE門戶,並在其上使用事件型別篩選器:

Dashboard Integrations Orchestration Administration									
Applications & Integrations K-	Firepower + New	Dashboard				Customize	Timeframe 🗸 🌒	News ->	
<ul> <li>Applications</li> </ul>	Event Summary   Firepo	wer danieben		Last 90 Days > II	Incident Promotion Reason   Firepower	r danieben	Last 90 Days > II	X Welcome to SecureX	
Tr Threat Response					Talos Disposition (0)			Maximize your experience by reviewing these key topics:	
	···· 5,831	≈ 5,813	≆18	<sup>112</sup> O	<ul> <li>User Promoted (0)</li> </ul>			About SecureX	
Sse Security Services Exchange	Total E	Intrusion ES Ma	Iware 🖾 Security	Intelligence 🖸	Category: IP (0)			Configure Integrations Configure Dashboards and Tiles	
~ My Integrations					Security Intelligence			Activate Orchestration	
AMD for Enderints					Category: DNS (0)	14		Navigate SecureX	
Amp Launch Links					Category: URL (0)			SecureX Ribbon	
					<ul> <li>Intrusion Rules Category (0)</li> </ul>			the Cisco Security	
Amp Launch Links					Malware Threat Score (0)			Securing the remote work	
					Custom IP Address (14)			As organizations adopt remote	
Amp Amp for Endpoints-mshukur (RO)								working, how should they evaluate their security posture? And what are the top threats they may face?	
AMP for Endpoints_sagararo								Talos Intelligence	
Amp Launch Links								Threat Boundup for May 1 to May 8	
	0	🗅 🔺	0	0	0 👛	A C	0	Today, Talos is publishing a glimpse	
Esa Email Security Appliance	Talos IP Reputation   Fin	repower danieben		Last 90 Days > I	Intrusion Top Attackers   Firepower dar	nieben	Last 30 Days > O E	into the most prevalent threats we've observed between May 1 and May 8. As with previous roundups, this post isn't meant to be an in	
Email Security Appliance - Pratham								Talos Intelligence	
Links	@0 «	17 ⊘1,8	19 🗸 0	+ 2,692					
	Poor El Questi	onable 🖸 👘 Neutra	El Favorable El	Good ES				execution vulnerabilities in Adobe	
Email Security Appliance esa03								Cisco Talos recently discovered two	
Links								vulnerabilities in Adabe Acrobat	
ENC 650								Reader. Acrobat supports a number of features, including the ability to	
F Links								::::: Cisco Security	
Secure X III Home							III 🖻 🖻 🤉 🕻 Inter lo	gs, IPs, domains, etc. 🛛 🗔 🗘 +	



驗證FTD是否生成事件(惡意軟體或入侵),對於入侵事件,請導航至 Analysis>Files>Malware Events,對於入侵事件,請導覽至Analysis>Intrusion>Events。

驗證在將裝置註冊到SSE 部分第4步中提到的在SSE門戶上註冊的事件.

驗證資訊是否顯示在SecureX控制面板上,或者檢查API日誌,以便檢視可能的API失敗的原因。

### 疑難排解

#### 檢測連線問題

可以從action\_queue.log檔案中檢測一般連線問題。在出現故障時,您可以看到檔案中存在以下日誌

ActionQueueScrape.pl[19094]: [SF::SSE::Enrollment] canConnect: System (/usr/bin/curl -s -connect-timeout 10 -m 20 -L --max-redirs 5 --max-filesize 104857600 --capath /ngfw/etc/sf/keys/fireamp/thawte\_roots -f https://api.eu.sse.itd.cisco.com/providers/sse/api/v1/regions) Failed, curl returned 28 at

/ngfw/usr/local/sf/lib/perl/5.10.1/SF/System.pmline 10477.

在這種情況下,退出代碼28表示操作超時,我們應該檢查與Internet的連線。您還可能看到退出代碼 6,這意味著存在DNS解析問題

#### DNS解析引起的連線問題

步驟1.檢查連線是否正常工作。

root@ftd01:~# curl -v -k https://api-sse.cisco.com

- \* Rebuilt URL to: https://api-sse.cisco.com/
- \* getaddrinfo(3) failed for api-sse.cisco.com:443
- \* Couldn't resolve host 'api-sse.cisco.com'
- \* Closing connection 0
- curl: (6) Couldn't resolve host 'api-sse.cisco.com'

上面的輸出顯示,裝置無法解析URL <u>https://api-sse.cisco.com</u>,在這種情況下,我們需要驗證是否 配置了正確的DNS伺服器,它可以通過專家CLI中的nslookup進行驗證:

root@ftd01:~# nslookup api-sse.cisco.com ;; connection timed out; no servers could be reached

上面的輸出顯示未到達配置的DNS,為了確認DNS設定,請使用**show network**命令:

Mode : Non-Autonegotiation MDI/MDIX : Auto/MDIX MTU : 1500 MAC Address : x:x:x:9D:A5 ------[ IPv4 ]------Configuration : Manual Address : x.x.x.27 Netmask : 255.255.255.0 Broadcast : x.x.x.255 ------[ IPv6 ]------Configuration : Disabled

> configure network dns x.x.x.11
重新測試此連線後,連線成功。

```
root@ftd01:~# curl -v -k https://api-sse.cisco.com
* Rebuilt URL to: https://api-sse.cisco.com/
* Trying x.x.x.66...
* Connected to api-sse.cisco.com (x.x.x.66) port 443 (#0)
* ALPN, offering http/1.1
* Cipher selection: ALL:!EXPORT:!EXPORT40:!EXPORT56:!aNULL:!LOW:!RC4:@STRENGTH
* successfully set certificate verify locations:
* CAfile: none
CApath: /etc/ssl/certs
* TLSv1.2 (OUT), TLS header, Certificate Status (22):
* TLSv1.2 (OUT), TLS handshake, Client hello (1):
* TLSv1.2 (IN), TLS handshake, Server hello (2):
* TLSv1.2 (IN), TLS handshake, Certificate (11):
* TLSv1.2 (IN), TLS handshake, Server key exchange (12):
* TLSv1.2 (IN), TLS handshake, Request CERT (13):
* TLSv1.2 (IN), TLS handshake, Server finished (14):
* TLSv1.2 (OUT), TLS handshake, Certificate (11):
* TLSv1.2 (OUT), TLS handshake, Client key exchange (16):
* TLSv1.2 (OUT), TLS change cipher, Client hello (1):
* TLSv1.2 (OUT), TLS handshake, Finished (20):
* TLSv1.2 (IN), TLS change cipher, Client hello (1):
* TLSv1.2 (IN), TLS handshake, Finished (20):
* SSL connection using TLSv1.2 / ECDHE-RSA-AES128-GCM-SHA256
* ALPN, server accepted to use http/1.1
* Server certificate:
* subject: C=US; ST=California; L=San Jose; O=Cisco Systems, Inc.; CN=api -sse.cisco.com
* start date: 2019-12-03 20:57:56 GMT
* expire date: 2021-12-03 21:07:00 GMT
* issuer: C=US; O=HydrantID (Avalanche Cloud Corporation); CN=HydrantID S SL ICA G2
* SSL certificate verify result: self signed certificate in certificate c hain (19), continuing
anyway.
>GET / HTTP/1.1
>Host: api-sse.cisco.com
>User-Agent: curl/7.44.0
>Accept: */*
<HTTP/1.1 403 Forbidden
<Date: Wed, 08 Apr 2020 01:27:55 GMT
<Content-Type: text/plain; charset=utf-8
<Content-Length: 9
```

<Connection: keep-alive <Keep-Alive: timeout=5 <ETag: "5e17b3f8-9" <Cache-Control: no-store <Pragma: no-cache <Content-Security-Policy: default-src 'self' <X-Content-Type-Options: nosniff <X-XSS-Protection: 1; mode=block <Strict-Transport-Security: max-age=31536000; includeSubdomains;

#### SSE門戶的註冊問題

FMC和FTD都需要連線到其管理介面上的SSE URL,要測試連線,請在具有根訪問許可權的 Firepower CLI上輸入以下命令:

curl -v https://api-sse.cisco.com/providers/sse/services/registration/api/v2/clients --cacert /ngfw/etc/ssl/connectorCA.pem curl -v https://est.sco.cisco.com --cacert /ngfw/etc/ssl/connectorCA.pem curl -v https://eventing-ingest.sse.itd.cisco.com --cacert /ngfw/etc/ssl/connectorCA.pem curl -v https://mx01.sse.itd.cisco.com --cacert /ngfw/etc/ssl/connectorCA.pem 可以使用以下命令繞過證書檢查: root@ftd01:~# curl -v -k https://api-sse.cisco.com \* Rebuilt URL to: https://api-sse.cisco.com/ \* Trying x.x.x.66... \* Connected to api-sse.cisco.com (x.x.x.66) port 443 (#0) \* ALPN, offering http/1.1 \* Cipher selection: ALL:!EXPORT:!EXPORT40:!EXPORT56:!aNULL:!LOW:!RC4:@STRENGTH \* successfully set certificate verify locations: \* CAfile: none CApath: /etc/ssl/certs \* TLSv1.2 (OUT), TLS header, Certificate Status (22): \* TLSv1.2 (OUT), TLS handshake, Client hello (1): \* TLSv1.2 (IN), TLS handshake, Server hello (2): \* TLSv1.2 (IN), TLS handshake, Certificate (11): \* TLSv1.2 (IN), TLS handshake, Server key exchange (12): \* TLSv1.2 (IN), TLS handshake, Request CERT (13): \* TLSv1.2 (IN), TLS handshake, Server finished (14): \* TLSv1.2 (OUT), TLS handshake, Certificate (11): \* TLSv1.2 (OUT), TLS handshake, Client key exchange (16): \* TLSv1.2 (OUT), TLS change cipher, Client hello (1): \* TLSv1.2 (OUT), TLS handshake, Finished (20): \* TLSv1.2 (IN), TLS change cipher, Client hello (1): \* TLSv1.2 (IN), TLS handshake, Finished (20): \* SSL connection using TLSv1.2 / ECDHE-RSA-AES128-GCM-SHA256 \* ALPN, server accepted to use http/1.1 \* Server certificate: \* subject: C=US; ST=California; L=San Jose; O=Cisco Systems, Inc.; CN=api -sse.cisco.com \* start date: 2019-12-03 20:57:56 GMT \* expire date: 2021-12-03 21:07:00 GMT \* issuer: C=US; O=HydrantID (Avalanche Cloud Corporation); CN=HydrantID S SL ICA G2 \* SSL certificate verify result: self signed certificate in certificate c hain (19), continuing anyway. >GET / HTTP/1.1 >Host: api-sse.cisco.com >User-Agent: curl/7.44.0 >Accept: \*/\*

<HTTP/1.1 403 Forbidden
<Date: Wed, 08 Apr 2020 01:27:55 GMT
<Content-Type: text/plain; charset=utf-8
<Content-Length: 9
<Connection: keep-alive
<Keep-Alive: timeout=5
<ETag: "5e17b3f8-9"
<Cache-Control: no-store
<Pragma: no-cache
<Content-Security-Policy: default-src 'self'
<X-Content-Type-Options: nosniff
<X-XSS-Protection: 1; mode=block
<Strict-Transport-Security: max-age=31536000; includeSubdomains;</pre>

**附註**:您會收到403 Forbidden報文,因為從測試傳送的引數不是SSE期望的,但這一點足以 驗證連通性。

#### 驗證SSEConnector狀態

您可以驗證聯結器屬性,如圖所示。

# more /ngfw/etc/sf/connector.properties
registration\_interval=180
connector\_port=8989
connector\_fqdn=api-sse.cisco.com
為了檢查SSConnector和EventHandler之間的連線,可以使用此命令,以下是連線錯誤的示例:

root@firepower:/etc/sf# netstat -anlp | grep EventHandler\_SSEConnector.sock unix 2 [ ACC ] STREAM LISTENING 3022791165 11204/EventHandler /ngfw/var/sf/run/EventHandler\_SSEConnector.sock

#### 在已建立的連線的範例中,可以看到串流狀態為已連線:

root@firepower:/etc/sf# netstat -anlp | grep EventHandler\_SSEConnector.sock unix 2 [ ACC ] STREAM LISTENING 382276 7741/EventHandler /ngfw/var/sf/run/EventHandler\_SSEConnector.sock unix 3 [ ] STREAM CONNECTED 378537 7741/EventHandler /ngfw/var/sf/run/EventHandler\_SSEConnector.soc

#### 驗證傳送到SSE門戶和CTR的資料

若要從FTD裝置傳送事件以瞭解TCP連線需要使用<u>https://eventing-ingest.sse.itd.cisco.com</u>建立 ,以下是SSE入口和FTD之間未建立連線的範例:

,以下是SSE人口和FTD之間木建立連線的軛例:

root@firepower:/ngfw/var/log/connector# lsof -i | grep conn connector 60815 www 10u IPv4 3022789647 0t0 TCP localhost:8989 (LISTEN) connector 60815 www 12u IPv4 110237499 0t0 TCP firepower.cisco.com:53426->ec2-100-25-93-234.compute-1.amazonaws.com:https (SYN\_SENT) 在connector.log日誌中:

time="2020-04-13T14:34:02.88472046-05:00" level=error msg="[firepower.cisco.com][events.go:90
events:connectWebSocket] dial tcp x.x.x.246:443: getsockopt: connection timed out"
time="2020-04-13T14:38:18.244707779-05:00" level=error msg="[firepower.cisco.com][events.go:90
events:connectWebSocket] dial tcp x.x.x.234:443: getsockopt: connection timed out"

time="2020-04-13T14:42:42.564695622-05:00" level=error msg="[firepower.cisco.com][events.go:90
events:connectWebSocket] dial tcp x.x.x.246:443: getsockopt: connection timed out"
time="2020-04-13T14:47:48.484762429-05:00" level=error msg="[firepower.cisco.com][events.go:90
events:connectWebSocket] dial tcp x.x.x.234:443: getsockopt: connection timed out"
time="2020-04-13T14:52:38.404700083-05:00" level=error msg="[firepower.cisco.com][events.go:90
events:connectWebSocket] dial tcp x.x.x.234:443: getsockopt: connection timed out"
time="2020-04-13T14:52:38.404700083-05:00" level=error msg="[firepower.cisco.com][events.go:90
events:connectWebSocket] dial tcp x.x.x.234:443: getsockopt: connection timed out"

#### **附註**:請注意,顯示的x.x.x.246和1x.x.x.246屬於<u>https://eventing-ingest.sse.itd.cisco.com</u>的 IP地址可能會更改,因此建議允許基於URL而非IP地址的流量進入SSE門戶。

如果此連線未建立,則事件不會傳送到SSE門戶。以下是FTD和SSE輸入網站之間已建立的連線的 範例:

root@firepower:# lsof -i | grep conn connector 13277 www 10u IPv4 26077573 0t0 TCP localhost:8989 (LISTEN) connector 13277 www 19u IPv4 26077679 0t0 TCP x.x.x.200:56495->ec2-35-172-147-246.compute-1.amazonaws.com:https (ESTABLISHED)

