

將安全終端私有雲與安全Web和電子郵件整合

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簡介

本文檔介紹將安全終端私有雲與安全Web裝置(SWA)和安全郵件網關(ESA)整合所需的步驟。

必要條件

思科建議您瞭解以下主題：

- [安全終端AMP虛擬私有雲](#)
- [安全網路裝置\(SWA\)](#)
- [安全電子郵件閘道](#)

採用元件

SWA (安全網路裝置) 15.0.0-322

AMP虛擬私有雲4.1.0_202311092226

安全電子郵件網關14.2.0-620



注意：此文檔對所有相關產品的物理和虛擬變體均有效。

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

進行整合前先進行驗證檢查

1. 驗證是否 Secure Endpoint Private Cloud/SWA/Secure Email Gateway 具有所需的許可證。您可以 SWA/Secure Email 在驗證功能金鑰或檢查智慧許可證是否已啟用。
2. 如果您計畫檢查HTTPS流量，則必須在SWA上啟用HTTPS代理。您需要解密HTTPS流量才能執行任何檔案信譽檢查。
3. 必須配置AMP私有雲/虛擬私有雲裝置和所有必需的證書。請參閱VPC證書指南進行驗證。

<https://www.cisco.com/c/en/us/support/docs/security/amp-virtual-private-cloud-appliance/214326-how-to-generate-and-add-certificates-tha.html>

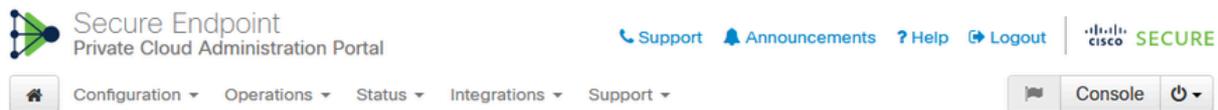
4. 產品的所有主機名必須是DNS可解析的。這是為了避免在整合期間出現任何連線問題或證書問題

。在安全終端私有雲上，Eth0介面用於管理員訪問，Eth1必須能夠與整合裝置連線。

程式

配置安全終端私有雲

1. 登入到Secure Endpoint VPC admin portal。
2. 轉至“Configuration” > “Services” > “Disposition Server”>複製處置伺服器主機名（這也可以從第三步獲取）。
3. 導航到“Integrations” > “Web Security Appliance”。
4. 下載“Disposition Server Public Key” & “Appliance Certificate Root”。
5. 導航到“Integrations” > “Email Security Appliance”。
6. 選擇ESA的版本並下載「Disposition Server Public Key」和「Appliance Certificate Root」。
7. 請保證證書和金鑰均安全。這必須稍後上傳到SWA/Secure Email。



Connect Cisco Web Security Appliance to Secure Endpoint Appliance

Step 1: Web Security Appliance Setup

1. Go to the Web Security Appliance Portal.
2. Navigate to `Security Services > Anti-Malware and Reputation > Edit Global Settings...`
3. Enable the checkbox for `Enable File Reputation Filtering`.
4. Click `Advanced > Advanced Settings for File Reputation` and select `Private Cloud` under `File Reputation Server`.
5. In the `Server` field paste the Disposition Server hostname: `disposition.vpc1.nanganath.local`.
6. Upload your Disposition Server Public Key found below and select the `Upload Files` button.

Disposition Server Public Key Download

Step 2: Proxy Setting

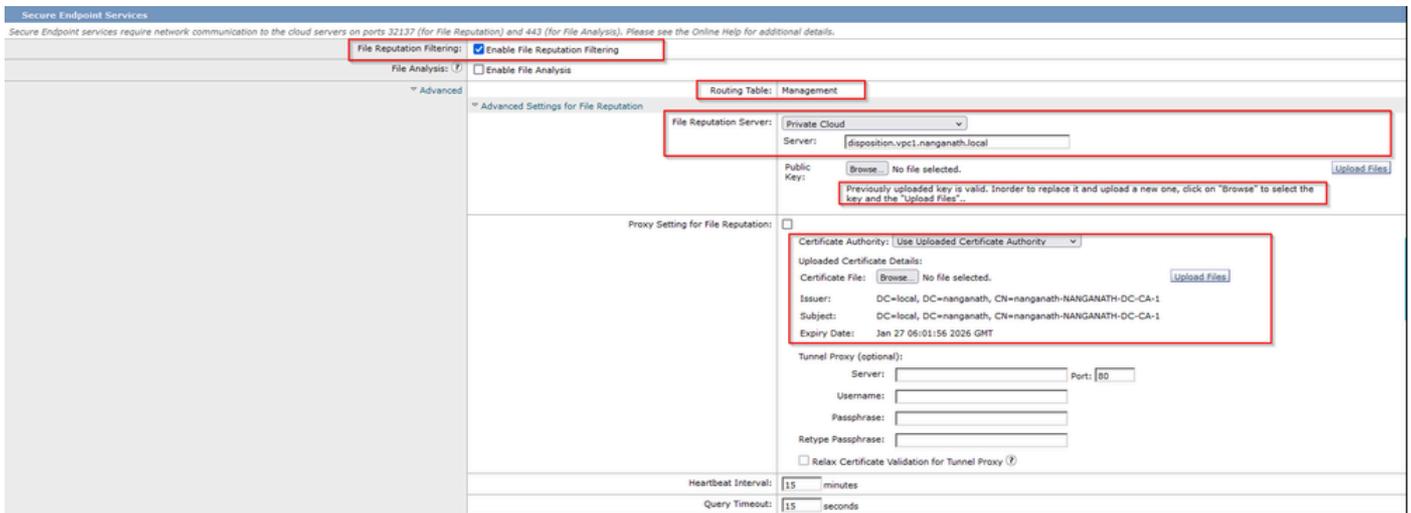
1. Continuing from Step 1 above, find the `Proxy Setting for File Reputation` section.
2. Choose `Use Uploaded Certificate Authority` from the `Certificate Authority` drop down.
3. Upload your `Appliance Certificate Root` found below and select the `Upload Files` button.
4. Click the `Submit` button to save all changes.

Appliance Certificate Root Download

配置安全網路裝置

1. 導覽至 SWA GUI > “Security Services” > “Anti-Malware and Reputation” > `Edit Global Settings`
2. 在「Secure Endpoint Services」部分，您可以看到「Enable File Reputation Filtering」選項，並且「Check」此選項顯示一個新欄位「Advanced」
3. 在檔案信譽伺服器中選擇「私有雲」。
4. 提供私有雲處置伺服器主機名作為「伺服器」。
5. 上傳您之前下載的公鑰。按一下「上傳檔案」。

6. 可以選擇上傳證書頒發機構。從下拉選單中選擇「Use Uploaded Certificate Authority」（使用上傳的證書頒發機構）並上傳您之前下載的CA證書。
7. 提交變更
8. 提交更改

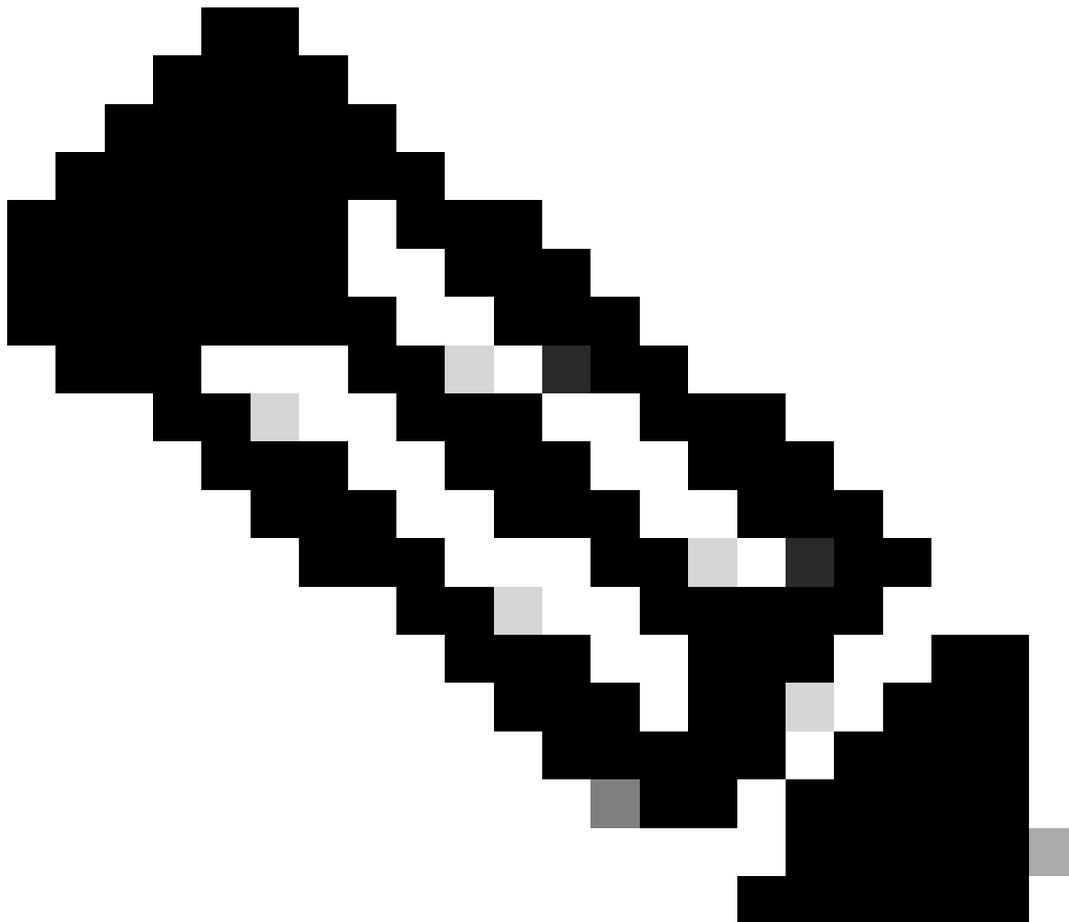


配置Cisco Secure Email

1. 瀏覽至 Secure Email GUI > Security Services” > “File Reputation and Analysis” > Edit Global Settings > “Enable” or “Edit Global Settings”
2. 在檔案信譽伺服器中選擇「私有雲」
3. 將私有雲處置伺服器主機名提供為「伺服器」。
4. 上傳我們之前下載的公鑰。按一下「上傳檔案」。
5. 上傳證書頒發機構。從下拉選單中選擇「Use Uploaded Certificate Authority」（使用上傳的證書頒發機構）並上傳您之前下載的CA證書。
6. 提交變更
7. 提交更改

Edit File Reputation and Analysis Settings

Advanced Malware Protection	
<i>Advanced Malware Protection services require network communication to the cloud servers on ports 443 (for File Reputation and File Analysis). Please see the Online Help for additional details.</i>	
File Reputation Filtering:	<input checked="" type="checkbox"/> Enable File Reputation
File Analysis: (?)	<input type="checkbox"/> Enable File Analysis
Advanced Settings for File Reputation	
File Reputation Server:	Private reputation cloud
Server:	disposition.vpc1.nanganath.local
Public Key:	<input type="button" value="Browse..."/> No file selected. <input type="button" value="Upload File"/>
A valid public key has already been uploaded. To upload a new one, click on "Browse" to select the key and then the "Upload File".	
SSL Communication for File Reputation:	Use SSL (Port 443)
Tunnel Proxy (Optional):	
Server:	<input type="text"/>
Port:	<input type="text"/>
Username:	<input type="text"/>
Passphrase:	<input type="text"/>
Retype Passphrase:	<input type="text"/>
<input type="checkbox"/> Relax Certificate Validation for Tunnel Proxy (?)	
Heartbeat Interval:	15 minutes
Query Timeout:	20 seconds
Processing Timeout:	120 seconds
File Reputation Client ID:	cb1b31fc-9277-4008-a396-6cd486ecc621
File Retrospective:	<input type="checkbox"/> Suppress the verdict update alerts (?)
Cache Settings	Advanced settings for Cache
Threshold Settings	Advanced Settings for File Analysis Threshold Score



注意：Cisco Secure Web Appliance和Cisco Secure Email Gateway基於AsyncOS，初始化檔案信譽時共用幾乎相同的日誌。AMP日誌可在安全Web裝置或安全郵件網關AMP日誌（兩台裝置中的類似日誌）中檢視。這僅表示服務已在SWA和安全郵件網關上初始化。它並不表示連線完全成功。如果存在任何連線或證書問題，則在「File Reputation initialized」（檔案信譽已初始化）消息後會顯示錯誤。它主要表示「無法連線錯誤」或「憑證無效」錯誤。

從安全Web和電子郵件獲取AMP日誌的步驟

1. 登入到SWA/Secure Email Gateway CLI並鍵入命令 "grep"
2. 選取 "amp" or "amp_logs"
3. 保留所有其他欄位，並輸入「Y」以追蹤記錄檔。跟蹤日誌以顯示即時事件。如果您正在尋找舊事件，則可以在「正規表示式」中鍵入日期

```
Tue Feb 20 18:17:53 2024 Info: connecting to /tmp/reporting_listener.sock.root [try #0 of 20]
Tue Feb 20 18:17:53 2024 Info: connected to /tmp/reporting_listener.sock.root [try #0 of 20]
Tue Feb 20 18:17:53 2024 Info: File reputation service initialized successfully
Tue Feb 20 18:17:53 2024 Info: The following file type(s) can be sent for file analysis: Executables, Document,
Microsoft Documents, Database, Miscellaneous, Encoded and Encrypted, Configuration, Email, Archived and compress
ed. To allow analysis of new file type(s), go to Security Services > File Reputation and Analysis.
```

測試安全Web裝置和安全終端私有雲之間的整合。

沒有直接選項可用於測試SWA的連線。您必須檢查日誌或警報，以驗證是否存在任何問題。

為簡單起見，我們測試的是HTTP URL而不是HTTPS。請注意，您需要解密HTTPS流量以進行任何檔案信譽檢查。

配置在SWA訪問策略中完成，並強制執行AMP掃描。

注意：請檢視SWA[使用手冊](#)，瞭解如何在Cisco Secure Web裝置上配置策略。

Access Policies

Order	Group	Protocols and User Agents	URL Filtering	Applications	Objects	Anti-Malware and Reputation	HTTP ReWrite Profile	Clone Policy	Delete
1	AP.Users Identification Profile: ID.Users All identified users	(global policy)	(global policy)	Monitor: 342	(global policy)	Web Reputation: Enabled Secure Endpoint: Enabled Anti-Malware Scanning: Disabled	(global policy)		

Access Policies: Anti-Malware and Reputation Settings: AP.Users

Web Reputation and Anti-Malware Settings		
Define Web Reputation and Anti-Malware Custom Settings		
Web Reputation Settings		
<i>Web Reputation Filters will automatically block transactions with a low Web Reputation score. For transactions with a higher Web Reputation score, scanning will be performed using the services selected by Adaptive Scanning.</i>		
<i>If Web Reputation Filtering is disabled in this policy, transactions will not be automatically blocked based on low Web Reputation Score. Blocking of sites that contain malware or other high-risk content is controlled by the settings below.</i>		
<input checked="" type="checkbox"/> Enable Web Reputation Filtering		
Secure Endpoint Settings		
<input checked="" type="checkbox"/> Enable File Reputation Filtering and File Analysis		
<i>File Reputation Filters will identify transactions containing known malicious or high-risk files. Files that are unknown may be forwarded to the cloud for File Analysis.</i>		
File Reputation	Monitor	Block
<input checked="" type="checkbox"/> Known Malicious and High-Risk Files	<input type="checkbox"/>	<input checked="" type="checkbox"/>

試圖透過思科安全網路裝置從網際網路下載惡意檔案「Bombermania.exe.zip」。日誌顯示惡意檔案已阻止。

SWA訪問日誌

這些步驟可擷取存取記錄。

1. 登入SWA並鍵入命令 "grep"
2. 選取 "accesslogs"
3. 如果您想增加任何「正規表示式」（如客戶端IP），請加以說明。
4. 鍵入「Y」以跟蹤日誌

```
1708320236.640 61255 10.106.37.205 TCP_DENIED/403 2555785 GET
http://static1.1.sqspcdn.com/static/f/830757/21908425/1360688016967/Bombermania.exe.zip?token=gsF
- DEFAULT_PARENT/bg11-lab-wsa-2.cisco.com application/zip BLOCK_AMP_RESP_12-
AP.Users-ID.Users-NONE-NONE-NONE-DefaultGroup-NONE <"IW_comp" , 3.7,1 , "- , - , - , - , - ,
, - , 1 , "- , - , - , "- , - , - , - , - , - , - , "- , "- , - , - , "- , - , - , - , - , - , - , - , - , - , - , -
IW_comp」、-、「AMP高風險」、「電腦和網際網路」、「-」、「未知」、「未知」、「未知」、
「-」、333.79、0、-、「-」、「-」、「-」、37、「
Win.Ransomware.Protected : : Trojan.Agent.talos」、0、0、「Bombermania.exe.zip」、「
46ee42fb79a16 3763e8e34a047018bd16d8572f8d31c2cdecae3d2e7a57a8" , 3 , - , "-" , - , ->
```

TCP_DENIED/403 → SWA拒絕此HTTP GET請求。

BLOCK_AMP_RESP → HTTP GET請求由於AMP響應而被阻止。

Win.Ransomware.Protected : : Trojan.Agent.talos →威脅名稱

Bombermania.exe.zip →我們嘗試下載的檔名

46ee42fb79a161bf3763e8e34a047018bd16d8572f8d31c2cdecae3d2e7a57a8 → 檔案的SHA值

SWA AMP日誌

使用這些步驟可獲取AMP日誌。

1. 登入SWA並鍵入命令 "grep"

2. 選取 "amp_logs"

3. 保留所有其他欄位，並輸入「Y」以追蹤記錄檔。跟蹤日誌以顯示即時事件。如果您正在尋找舊事件，則可以在「正規表示式」中鍵入日期

「verdict_from」：「雲」對於私有雲和公共雲而言，這似乎是一樣的。不要將其混淆為公共雲的裁決。

```
2024年2月19日星期一 10:53:56除錯：調整後的裁決- {'category': 'amp', 'spyname': 'Win.Ransomware.Protected::Trojan.Agent.talos', 'original_verdict': 'MALICIOUS', 'analysis_status': 18, 'verdict_num': 3, 'analysis_score': 0, 'uploaded': False, 'file_name': 'Bombermania.exe.zip', 'Verdict_source': None, 'Exit_file_verdict_verdict': 'verdict_from': 'Cloud', 'analysis_action': 2, 'file_type': 'application/zip', 'score': 0, 'upload_reason': 'File type is not configured for sandboxing', 'sha256': '46ee42fb79a161bf3763e8e34a047018bd16d8572f8d31c2cdecae3d2e7a57a8', 'verdict_str': 'MALICIOUS', 'malicious_child': None}
```

安全端點私有雲事件日誌

事件日誌位於 /data/cloud/log

您可以使用SHA256或使用SWA的「檔案信譽客戶端ID」搜尋事件。SWA的AMP配置頁面中顯示「檔案信譽客戶端ID」。

```
[root@fireamp log]# pwd
/data/cloud/log
[root@fireamp log]# less eventlog | grep -iE "46ee42fb79a161bf3763e8e34a047018bd16d8572f8d31c2cdecae3d2e7a57a8"
ip": "10.106.39.144", "si": 0, "ti": 3, "tv": 6, "qt": 42, "pr": 1, "ets": 1708320235, "ts": 1708320232, "tsns": 707403179, "uu": "9a7a27a1-40aa-452f-a070-ed78e215b717", "al": 1, "aptus": 1344, "ptus": 975590, "spero": {"h": "00", "fa": "0", "ts": 0, "ft": 0, "hd": 1}, {"sha256": {"h": "46EE42FB79A161BF3763E8E34A047018BD16D8572F8D31C2CDECAE3D2E7A57A8", "fa": 0, "ts": 0, "ft": 0, "hd": 3}, "hord": 32, 4}, {"dn": "Win.Ransomware.Protected::Trojan.Agent.talos", "url": "http://static1.1.sqspcdn.com/static/7/630757/219084257138088010307/80b0c7ermania.exe.zip.t0xemq3r1k107L00mmy2AwU28pg31jKw2s30", "rd": 3, "ra": 2, "n": 0}
```

pv -協定版本，3表示TCP

ip -請忽略此欄位，因為無法保證此欄位指示執行信譽查詢的客戶端的實際IP地址

uu - WSA/ESA中的檔案信譽客戶端ID

檔案的SHA256 - SHA256

dn -檢測名稱

n - 1 (如果AMP以前從未見過檔案雜湊)，否則為0。

rd -回應處置。此處3表示DISP_MALICIOUS

- 1 DISP_UNKNOWN檔案性質未知。
- 2 DISP_CLEAN此檔案被認為是良性的。
- 3 DISP_MALICIOUS認為該檔案是惡意的。
- 7 DISP_UNSEEN檔案性質未知，這是我們第一次看到該檔案。
- 13 DISP_BLOCK不能執行檔案。
- 14 DISP_IGNORE XXX
- 15 DISP_CLEAN_PARENT認為該檔案是良性的，它建立的任何惡意檔案都必須視為未知。
- 16 DISP_CLEAN_NFM認為該檔案是良性的，但客戶端必須監控其網路流量。

測試安全電郵與AMP私有雲之間的整合

從安全郵件網關測試連線沒有直接選項。您必須檢查日誌或警報，以驗證是否存在任何問題。

在Secure Email incoming mail策略中完成配置以實施AMP掃描。

Incoming Mail Policies

Find Policies									
		Email Address: <input type="text"/>		<input checked="" type="radio"/> Recipient <input type="radio"/> Sender		Find Policies			
Policies									
Add Policy...									
Order	Policy Name	Anti-Spam	Anti-Virus	Advanced Malware Protection	Graymail	Content Filters	Outbreak Filters	Advanced Phishing Protection	Delete
1	amp-testing-policy	Disabled	Disabled	File Reputation Malware File: Drop Pending Analysis: Deliver Unscannable - Message Error: Deliver Unscannable - Rate Limit: Deliver Unscannable - AMP Service Not	(use default)	(use default)	(use default)	(use default)	

Mail Policies: Advanced Malware Protection

Advanced Malware Protection Settings	
Policy:	amp-testing-policy
Enable Advanced Malware Protection for This Policy:	<input checked="" type="radio"/> Enable File Reputation <input checked="" type="checkbox"/> Enable File Analysis <input type="radio"/> Use Default Settings (AMP and File Analysis Enabled) <input type="radio"/> No
Message Scanning	
	<input checked="" type="checkbox"/> (recommended) Include an X-header with the AMP results in messages
Unscannable Actions on Message Errors	
Action Applied to Message:	Deliver As Is
Advanced	Optional settings for custom header and message delivery.
Unscannable Actions on Rate Limit	
Action Applied to Message:	Deliver As Is
Advanced	Optional settings for custom header and message delivery.
Unscannable Actions on AMP Service Not Available	
Action Applied to Message:	Deliver As Is
Advanced	Optional settings for custom header and message delivery.
Messages with Malware Attachments:	
Action Applied to Message:	Drop Message
Archive Original Message:	<input type="radio"/> No <input checked="" type="radio"/> Yes
Drop Malware Attachments:	<input checked="" type="radio"/> No <input type="radio"/> Yes
Modify Message Subject:	<input type="radio"/> No <input checked="" type="radio"/> Prepend <input type="radio"/> Append
	[WARNING: MALWARE DETECTED]
Advanced	Optional settings.
Messages with File Analysis Pending:	
Action Applied to Message:	Deliver As Is
Archive Original Message:	<input type="radio"/> No <input checked="" type="radio"/> Yes
Drop Message Attachments with File Analysis Verdict Pending : (?)	<input checked="" type="radio"/> No <input type="radio"/> Yes
Modify Message Subject:	<input type="radio"/> No <input checked="" type="radio"/> Prepend <input type="radio"/> Append
	[WARNING: ATTACHMENT(S) MAY CONTAIN
Advanced	Optional settings.

已使用非惡意檔案對ESA進行了測試。這是CSV檔案。

Secure Email mail_logs

```

Tue Feb 20 11:55:58 2024 Info: New SMTP ICID 43855 interface Management (10.106.39.193) address 10.110.172.122 reverse dns host unknown verified no
Tue Feb 20 11:55:58 2024 Info: ICID 43855 ACCEPT 5G UNKNOWNLIST match sbrs[none] SBRS rfc1918 country not applicable
Tue Feb 20 11:55:58 2024 Info: Start MID 660 ICID 43855
Tue Feb 20 11:55:58 2024 Info: MID 660 ICID 43855 From: <ajayra@gmail.com>
Tue Feb 20 11:55:58 2024 Info: MID 660 SDR: Domains for which SDR is requested: reverse DNS host: Not Present, helo: CSC0-W-PF253NKG, env-from: gmail.com, header-from: Not Present, reply-to: Not Present
Tue Feb 20 11:55:58 2024 Info: MID 660 SDR: Consolidated Sender Threat Level: Favorable, Threat Category: N/A, Suspected Domain(s) : N/A (other reasons for verdict). Sender Maturity: 30 days (or greater) for domain: gmail.com
Tue Feb 20 11:55:58 2024 Info: MID 660 ICID 43855 RID 0 To: <ajayra@cisisco.com>
Tue Feb 20 11:55:58 2024 Info: MID 660 Subject: testing amp private cloud
Tue Feb 20 11:55:58 2024 Info: MID 660 SDR: Domains for which SDR is requested: reverse DNS host: Not Present, helo: CSC0-W-PF253NKG, env-from: gmail.com, header-from: gmail.com, reply-to: Not Present
Tue Feb 20 11:55:58 2024 Info: MID 660 SDR: Consolidated Sender Threat Level: Favorable, Threat Category: N/A, Suspected Domain(s) : N/A (other reasons for verdict). Sender Maturity: 30 days (or greater) for domain: gmail.com
Tue Feb 20 11:55:58 2024 Info: MID 660 SDR: Tracker Header : 65d445f6_TdY46k/XzoIL66+HhA4cFJo0192j3QSDhLDnEkX9DPClxVhx3o3lC136to+TzXqIaVFP6hX+cND+S1Q=
Tue Feb 20 11:55:58 2024 Info: MID 660 ready 5467 bytes from <ajayra@gmail.com>
Tue Feb 20 11:55:58 2024 Info: MID 660 attachment: Training Details.csv
Tue Feb 20 11:55:58 2024 Info: MID 660 matches all recipients for per-recipient policy amp-testing-policy in the inbound table
Tue Feb 20 11:56:59 2024 Warning: graymail [RPC CLIENT] MID 660 Graymail scan timed out
Tue Feb 20 11:57:01 2024 Info: MID 660 AMP file reputation verdict : UNKNOWN (File analysis pending)
Tue Feb 20 11:57:01 2024 Info: MID 660 SHA-90381C261f80e3e9330710ab96647358c461f6834c0ca001408e40decdf19dbe filename Training Details.csv queued for possible file analysis upload
Tue Feb 20 11:57:01 2024 Info: MID 660 Outbreak Filters: verdict negative none
Tue Feb 20 11:57:01 2024 Info: MID 660 Message-ID : <99221a1xwesi.nanganath.local>
Tue Feb 20 11:57:01 2024 Info: MID 660 queued for delivery
Tue Feb 20 11:57:01 2024 Info: New SMTP ICID 542 interface 10.106.39.193 address 173.37.147.230 port 25
Tue Feb 20 11:57:02 2024 Info: Delivery start DCID 542 MID 660 to RID 0
Tue Feb 20 11:57:04 2024 Info: Message done DCID 542 MID 660 to RID 0
Tue Feb 20 11:57:04 2024 Info: MID 660 RID 0 Response: ok: Message 142767851 accepted
Tue Feb 20 11:57:04 2024 Info: Message finished MID 660 done
Tue Feb 20 11:57:09 2024 Info: DCID 542 close
Tue Feb 20 11:57:23 2024 Info: ICID 43855 lost
Tue Feb 20 11:57:23 2024 Info: ICID 43855 close
  
```

安全電子郵件AMP日誌

2024年2月20日星期二11:57:01 2024資訊：從Cloud收到檔案信譽查詢的響應。檔名= Training Details.csv，MID = 660，性質= FILE UNKNOWN，惡意軟體=無，分析得分= 0，sha256 = 90381c261f8be3e933071dab96647358c461f6834c8ca0014d8e40dec4f19dbe，upload_action =建議傳送檔案進行分析，verdict_source = AMP，可疑類別= None

安全端點私有雲事件日誌

```
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rd - 1個DISP_UNKNOWN。檔案性質未知。

發現導致整合失敗的常見問題

1. 在SWA或安全郵件中選擇錯誤的「路由表」。整合裝置必須能夠與AMP私有雲Eth1介面通訊。
2. VPC主機名在SWA或安全郵件中不可進行DNS解析，從而導致建立連線失敗。
3. VPC處置證書中的CN（通用名稱）必須與VPC主機名以及SWA和安全郵件網關中提到的主機名匹配。
4. 不支援使用私有雲和雲檔案分析。如果使用本地裝置，則檔案分析和信譽必須是本地伺服器。
5. 確保AMP私有雲與SWA、安全電子郵件之間不存在時間同步問題。
6. SWA DVS引擎對象掃描限制預設為32 MB。如果要掃描較大的檔案，請調整此設定。請注意，這是一個全局設定，會影響所有掃描引擎，如Webroot、Sophos等。

關於此翻譯

思科已使用電腦和人工技術翻譯本文件，讓全世界的使用者能夠以自己的語言理解支援內容。請注意，即使是最佳機器翻譯，也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準確度概不負責，並建議一律查看原始英文文件（提供連結）。