使用OpenAPI檢索ISE 3.3上的ISE部署資訊

目錄

箇介

逍景

必要條件

憲求

採用元件

設定

網路圖表

ISE上的配置

Python示例

擬取建置在叢集中的所有節點清單

撤取已部署節點的詳細資訊

簡介

本文檔介紹使用openAPI管理思科身份服務引擎(ISE)部署的過程。

背景

在現代企業網路中,安全和管理變得越來越複雜和關鍵。為了應對這些挑戰,從Cisco ISE 3.1開始 ,OpenAPI格式提供較新的API,可提供強大的網路訪問控制和策略管理功能。管理員現在可以透 過OpenAPI更有效地檢查ISE部署,並主動採取行動,而不是等待終端使用者提交問題報告。

必要條件

需求

思科建議您瞭解以下主題:

- 思科身分辨識服務引擎(ISE)
- REST API
- Python

採用元件

- ISE 3.3
- Python 3.10.0

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。

設定

網路圖表



ISE上的配置

第1步:增加打開API admin帳戶

要增加API管理員,請導航到管理>系統>管理員訪問許可權>管理員>管理員使用者>增加。

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API管理

第2步:在ISE上啟用開放式API

預設情況下,在ISE上停用開放式API。要啟用該功能,請導航到管理>系統>設定> API設定> API服 務設定。切換「開啟API」選項。按一下Save。

啟用OpenAPI

第3步:探索ISE開放式API

導航到管理>系統>設定> API設定>概述。點選打開API訪問連結。

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訪問OpenAPI

Python示例

擷取建置在叢集中的所有節點清單

API會列出在叢集中部署的所有節點。

第1步:API呼叫的必要資訊。

|--|

URL	https:// <ise-pan-ip>/api/v1/deployment/node</ise-pan-ip>
憑證	使用Open API帳戶憑據
標頭	接受:application/json Content-Type: application/json

第2步:查詢用於檢索部署資訊的URL。

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(Cisco ISE API - Deployment (IDD) (ASS) tep://10.106.33.92.44240ups/V3heji-decc?tepubyment				
s [Servers https://10.106.33.92:44240 - Inferred Url 🗸				
	deployment-api-controller the deployment API			~	
	node-api-controller the node API			~	
	profile-api-controller the profile API			~	
	Node Deployment			^	
L L	GET /api/v1/deployment/node Retrieve the list of all the nodes that are deployed in the cluster.			∧ ≜	

API URI

第3步:以下是Python代碼的示例。複製並貼上內容。替換ISE IP、使用者名稱和密碼。另存為要執 行的python檔案。

確保ISE與運行python代碼示例的裝置之間保持良好的連線。

<#root>

...

}

)

from requests.auth import HTTPBasicAuth

```
import requests
requests.packages.urllib3.disable_warnings()
if __name__ == "__main__":
 url = "
https://10.106.33.92/api/v1/deployment/node
    headers = {
"Accept": "application/json", "Content-Type": "application/json"
    basicAuth = HTTPBasicAuth(
"ApiAdmin", "Admin123"
    response = requests.get(url=url, auth=basicAuth, headers=headers, verify=False)
    print("Return Code:")
```

print(response.status_code)
print("Expected Outputs:")
print(response.json())

以下是預期輸出的範例。

Return Code: 200 Expected Outputs: {'response': [{'hostname': 'ISE-BGL-CFME01-PAN', 'fqdn': 'ISE-BGL-CFME01-PAN.cisco.com', 'ipAddress': '192.168.20.240', 'roles': ['PrimaryAdmin'],

擷取已部署節點的詳細資訊

此API檢索特定ISE節點的詳細資訊。

第1步:API呼叫的必要資訊。

方法	取得
URL	https:// <ise-pan-ip>/api/v1/deployment/node/<ise- Node-Hostname></ise- </ise-pan-ip>
憑證	使用Open API帳戶慿據
標頭	接受:application/json Content-Type: application/json

第2步:查詢用於檢索特定ISE節點資訊的URL。

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deployment-api-controller the deployment API			~	
node-api-controller the node API			~	
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Node Deployment			^	
GET /api/vl/deployment/node Retrieve the list of all the nodes that are deployed in the cluster.			✓ ≜	
POST /api/vl/deployment/node Register a standakone node to the cluster			✓ ≜	
GET /api/vl/deployment/node/{hostname} Retrieve details of a deployed node.			^ ≜	
This API retrieves detailed information of the deployed node.				

步驟 3.以下是Python代碼的示例。複製並貼上內容。替換ISE IP、使用者名稱和密碼。另存為要執 行的python檔案。

確保ISE與運行python代碼示例的裝置之間保持良好的連線。

<#root>

from requests.auth import HTTPBasicAuth import requests

```
requests.packages.urllib3.disable_warnings()
```

```
if __name__ == "__main__":
    url = "
https://10.106.33.92/api/v1/deployment/node/ISE-DLC-CFME02-PSN
"
    headers = {
    "Accept": "application/json", "Content-Type": "application/json"
}
    basicAuth = HTTPBasicAuth(
"ApiAdmin", "Admin123"
)
    response = requests.get(url=url, auth=basicAuth, headers=headers, verify=False)
    print("Return Code:")
    print(response.status_code)
    print("Expected Outputs:")
    print(response.json())
```

以下是預期輸出的範例。

Return Code: 200 Expected Outputs: {'response': {'hostname': 'ISE-DLC-CFME02-PSN', 'fqdn': 'ISE-DLC-CFME02-PSN.cisco.com', 'ipAddress': '192.168.41.240', 'roles': [], 'services': ['Session'

疑難排解

若要疑難排解與開放式API相關的問題,請在偵錯日誌組態視窗中將theapiservicecomponent的日誌層級設定為DEBUG。

要啟用調試,請導航到操作>故障排除>調試嚮導>調試日誌配置> ISE節點> apiservice。

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API服務調試

要下載調試日誌,請導航到操作>故障排除>下載日誌> ISE PAN節點>調試日誌。

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下載調試日誌

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)。