

# 使用ERS API收集ISE支援套件

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## 簡介

本文檔介紹使用PostMan作為REST客戶端透過ERS API觸發和下載ISE支援捆綁的過程。

## 必要條件

### 需求

思科建議您瞭解以下主題：

- ISE
- 外部RESTful服務
- REST客戶包括Postman、REST、Insomnia等。

### 採用元件

本檔案中的資訊是根據以下軟體版本：

- Cisco ISE 3.1修補6
- Postman REST客戶端v10.17.4



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注意：此過程對於其他ISE版本和REST客戶端相似或相同。除非另有說明，否則您可以在所有2.x和3.x ISE軟體版本上使用這些步驟。

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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

### 啟用ERS（埠9060）

ERS API是僅適用於HTTPS的REST API，透過埠443和埠9060運行。埠9060預設關閉，因此需要首先打開。如果嘗試存取此連線埠的從屬端未先啟用ERS，就會出現伺服器逾時。因此，第一個要求是從思科ISE管理UI啟用ERS。

導航到Administration > Settings > API Settings並啟用ERS (Read/Write)切換按鈕。

- Client Provisioning
  - FIPS Mode
  - Security Settings
  - Alarm Settings
- Feature >
- Profiling
- Protocols >
- Endpoint Scripts >
  - Proxy
  - SMTP Server
  - SMS Gateway
  - System Time
- API Settings**
- Network Success Diagnostics >
  - DHCP & DNS Services
  - Max Sessions
  - Light Data Distribution
  - Interactive Help
  - Enable TAC Support Cases

## API Settings

Overview **API Service Settings** API Gateway Settings

### API Service Settings for Administration Node

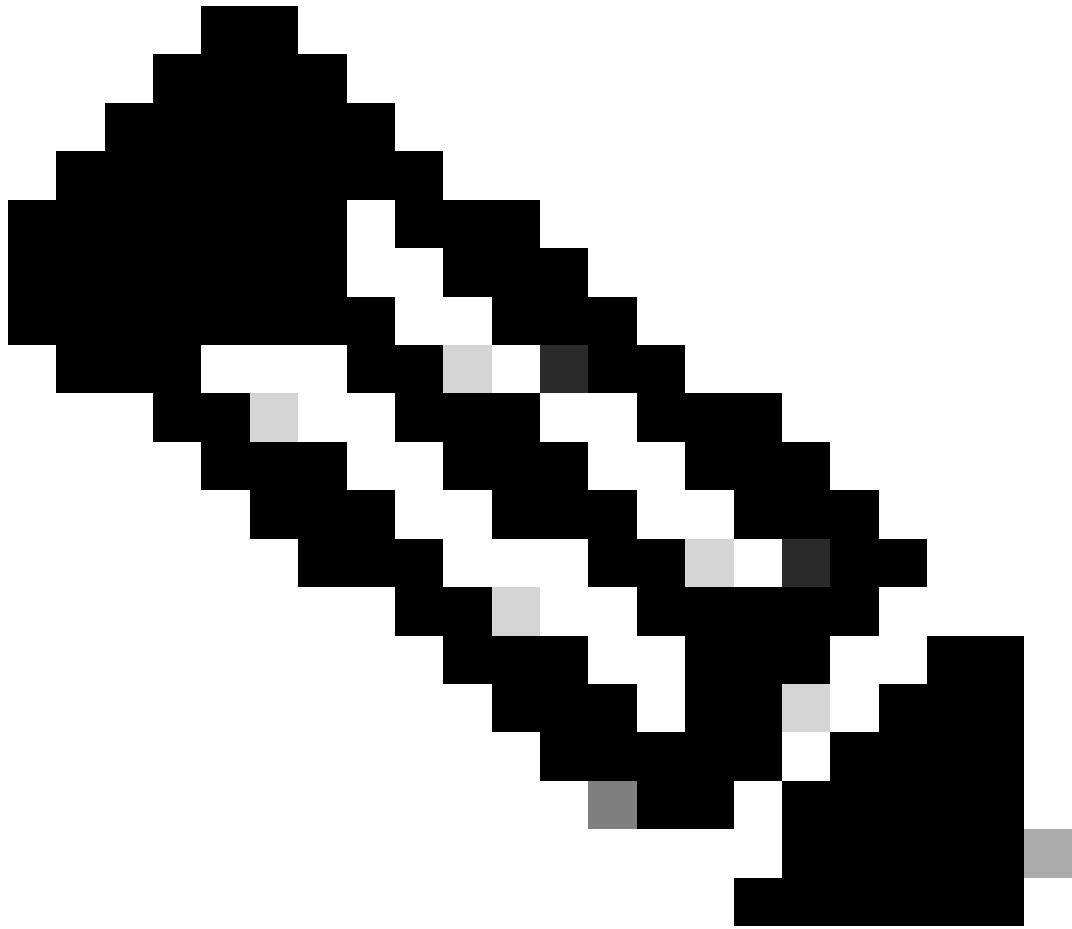
- ERS (Read/Write)** ←
- Open API (Read/Write)

### CSRF Check ( only for ERS Settings )

- Enable CSRF Check for Enhanced Security (Not compatible with pre ISE 2.3 Clients)
- Disable CSRF For ERS Request (compatible with ERS clients older than ISE 2.3)**

Reset

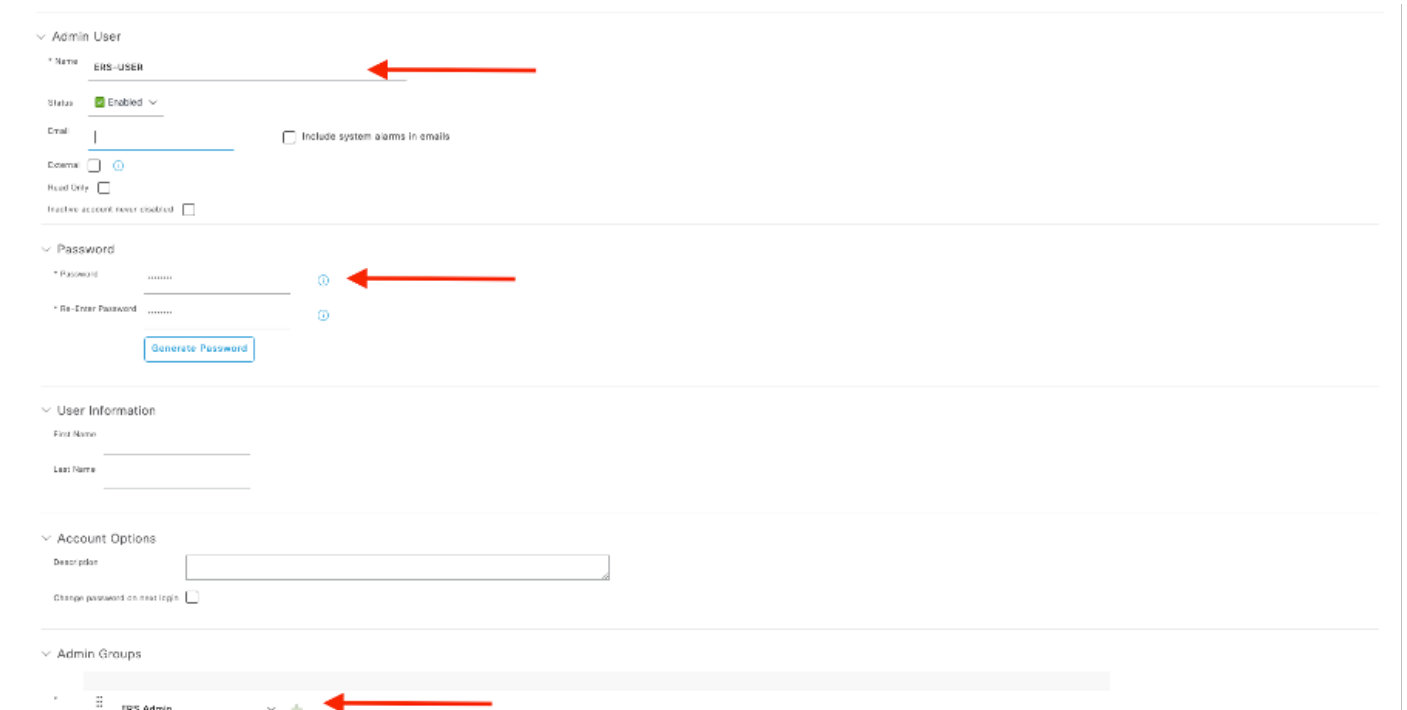
Save



註：ERS API支援TLS 1.1和TLS 1.2。ERS API不支援TLS 1.0，無論在思科ISE GUI的「安全設定」窗口(管理>系統>設定>安全設定)中啟用TLS 1.0。在「保安全性設定」視窗中啟用TLS 1.0僅與EAP通訊協定有關，且不會影響ERS API。

## 建立ERS管理員

建立思科ISE管理員，分配密碼，並將使用者作為ERS管理員增加到管理員組。您可以將配置的其餘部分留空。



The screenshot displays the configuration page for an Admin User in the Cisco ISE GUI. The page is organized into several sections:

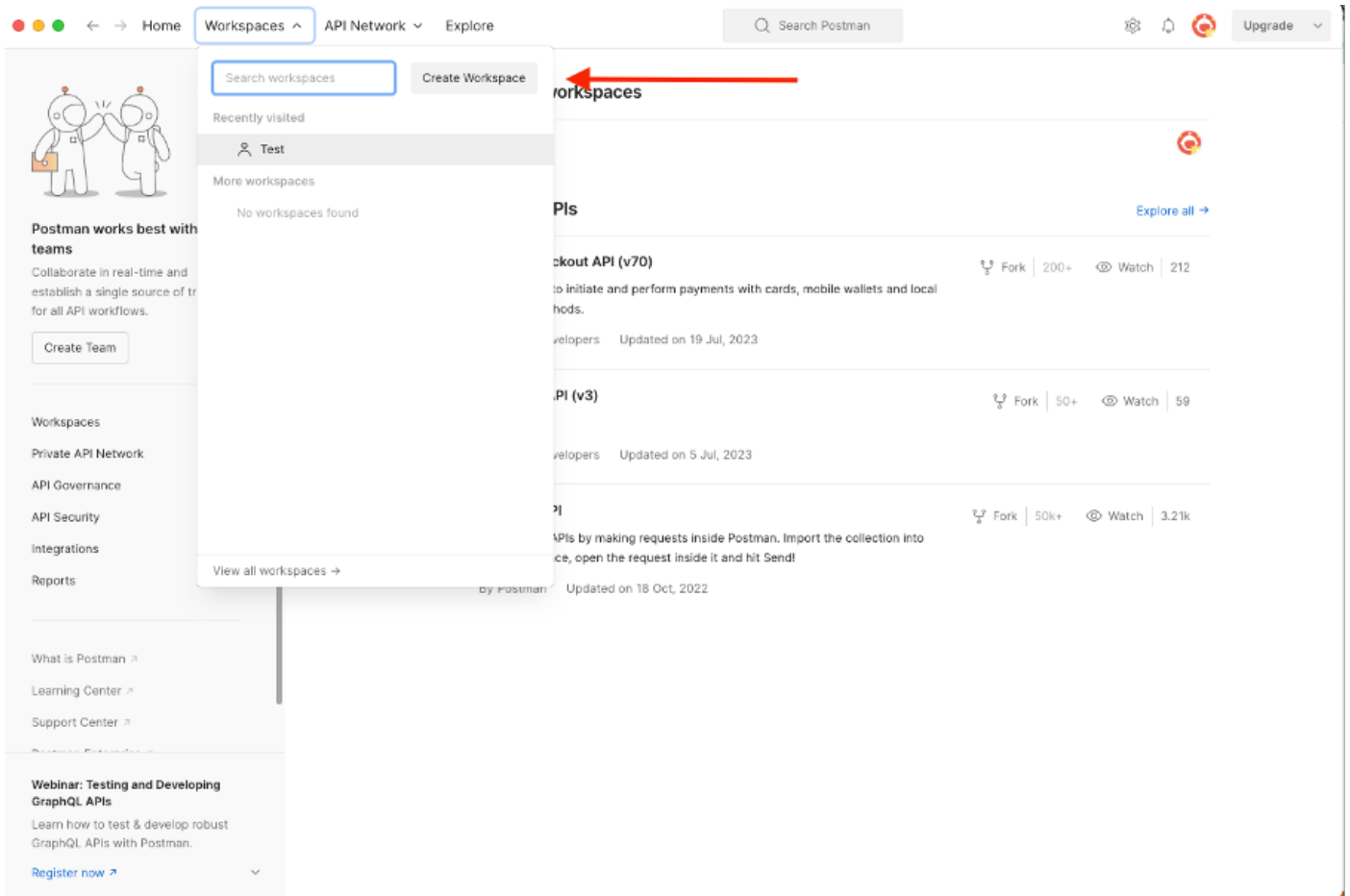
- Admin User:** The 'Name' field is set to 'ERS-USER'. The 'Status' is 'Enabled'. There are checkboxes for 'Include system alarms in emails', 'Domain', 'Reset Date', and 'Inactive account never created'.
- Password:** Fields for 'Password' and 'Re-Enter Password' are present, along with a 'Generate Password' button.
- User Information:** Fields for 'First Name' and 'Last Name' are available.
- Account Options:** A 'Description' field and a 'Change password on next login' checkbox are shown.
- Admin Groups:** A dropdown menu is set to 'ERS Admin'.

Red arrows in the image highlight the 'Name' field, the 'Password' field, and the 'Admin Groups' dropdown menu.

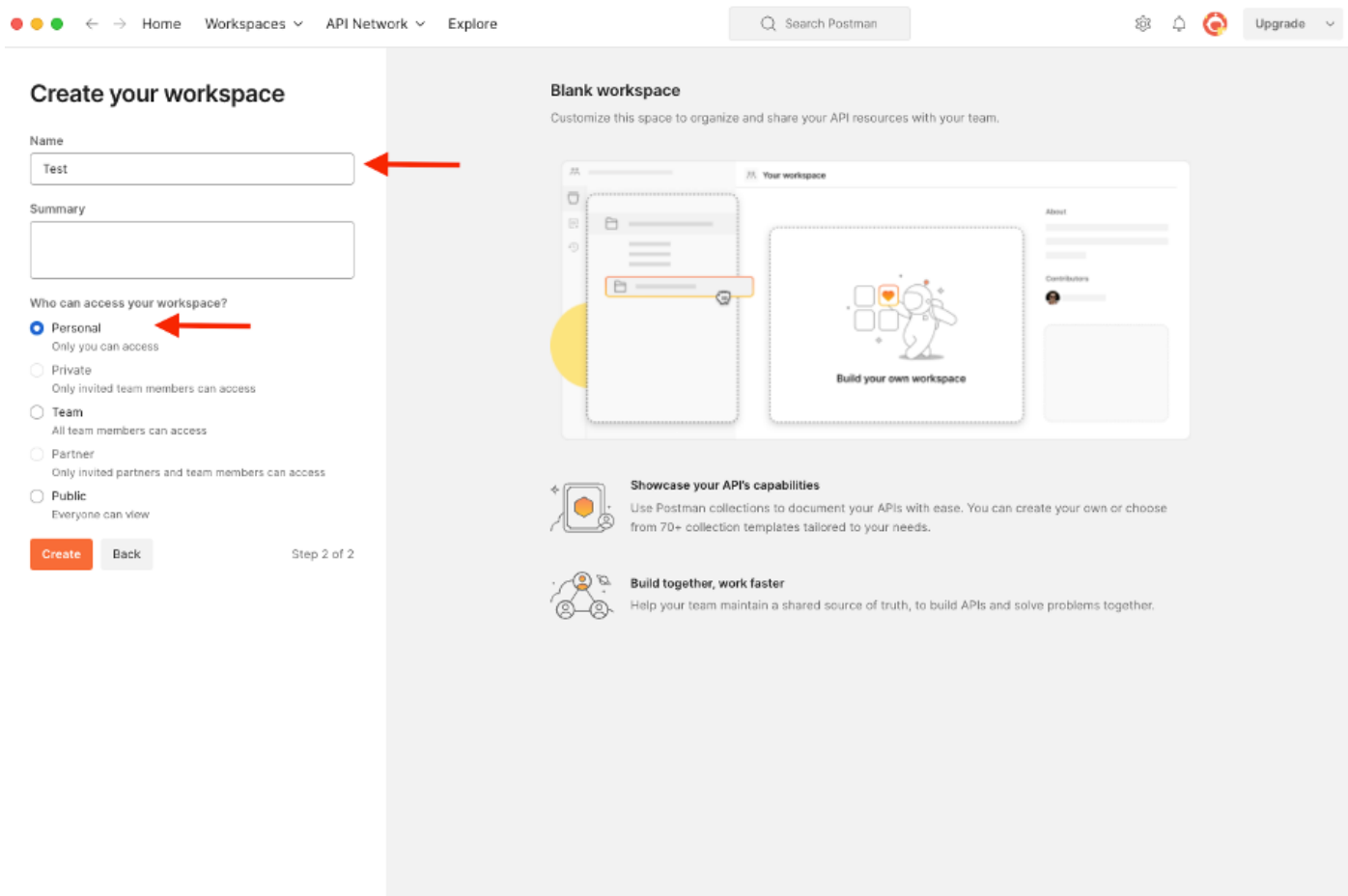
## 設定Postman

下載或使用線上版Postman。

1. 按一下「工作區」標籤底下的「建立工作區」來建立使用者和建立工作區。



2. 選擇空白工作區並為工作區分配名稱。您可以增加描述並將其公之於眾。在本示例中選擇了 Personalis。



建立工作區後，您現在可以配置我們的API呼叫。

## 觸發器支援套件

要配置任何呼叫，首先要訪問ISE ERS SDK ( 軟體開發套件 )。此工具編譯ISE可以執行的所有API呼叫清單：

1. 轉到`https://{ise-ip}/ers/sdk`
2. 使用您的ISE管理員憑證登入。
3. 展開API文檔
4. 向下滾動直至找到Support Bundle Trigger Configuration，然後按一下它。
5. 在此選項下，您現在可找到可在ISE上為此選項執行的所有可用操作。選擇建立。

External RESTful Services (ERS) Online SDK

Quick Reference

API Documentation

- Identity Group
- Identity Sequence
- Internal User
- My Device Portal
- Native Supplicant Profile
- Network Device
- Network Device Group
- Node Details
- PSN Node Details with Radius Se
- Portal
- Portal Theme
- Profiler Profile
- Pull Deployment Info
- Pxgrid Node
- Pxgrid Settings
- Radius Server Sequence
- RestID Store
- SMS Server
- SXP Connections
- SXP Local Bindings
- SXP Vpms
- Security Groups
- Security Groups ACLs
- Security Groups to Virtual Netwo
- Self Registered Portal
- Sponsor Group
- Sponsor Group Member
- Sponsor Portal
- Sponsored Guest Portal
- Support Bundle Download
- Support Bundle Status
- Support Bundle Trigger Configur
- System Certificate
- Tacacs Command Sets
- Tacacs External Servers
- Tacacs Profile
- Tacacs Server Sequence
- Telemetry Information
- Global Operations

Support Bundle Trigger Configuration

- Overview
- Resource definition
- Revision History
- Create
- Get Version

Overview

Support Bundle Trigger API allows clients to trigger support bundle provided the log settings are given using which the support needs to be generated.

*Please note that these examples are not meant to be used as is because they have references to DB data. You should treat it as a basic template and edit it before sending to server.*

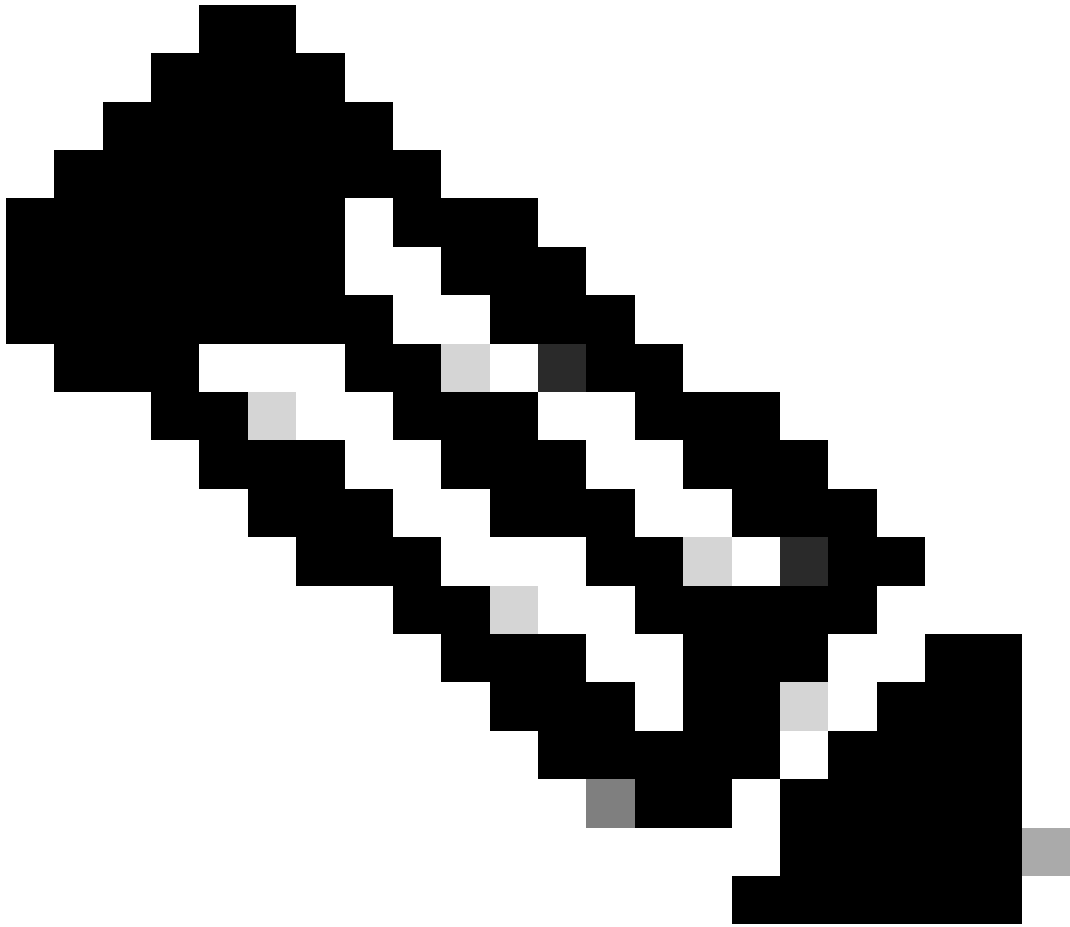
Resource definition

Attribute	Type	Required	Default value	Description
name	String	Yes		Resource name
id	String	No		Resource UUID, mandatory for update
description	String	No		
hostName	String	Yes		This parameter is hostName only, xxxx of xxxx.yyy.zz
supportBundleOptions	SupportBundleOptions	Yes		
includeConfigDB	Boolean	Yes	false	Set to include Config DB in Support Bundle
includeDebugLogs	Boolean	Yes	false	Set to include Debug logs in Support Bundle
includeLocalLogs	Boolean	Yes	false	Set to include Local logs in Support Bundle

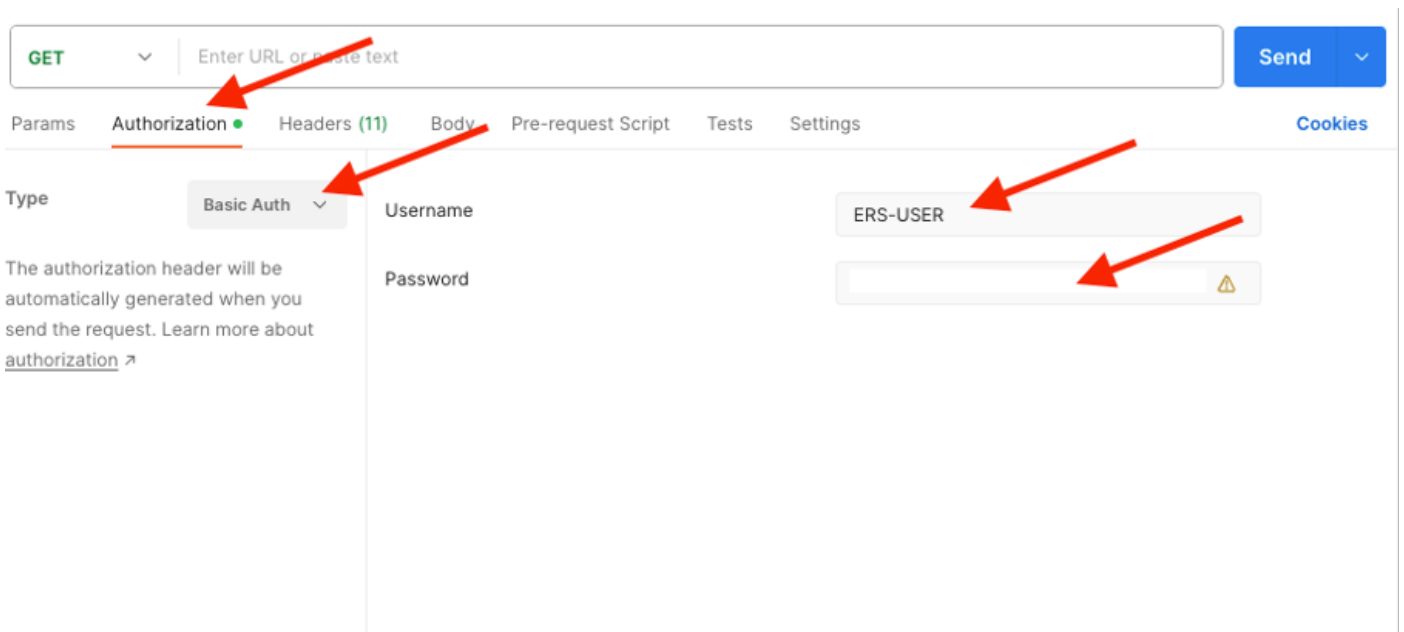
Back to top

6. 現在，您可以看到在任何Rest客戶端上使用XML或JSON執行API呼叫所需的配置以及預期響應示例。

7. 返回到Postman允許配置對ISE的基本身份驗證。在授權頁籤下，選擇基本身份驗證作為身份驗證型別，並增加以前在ISE上建立的ISE ERS使用者憑證。

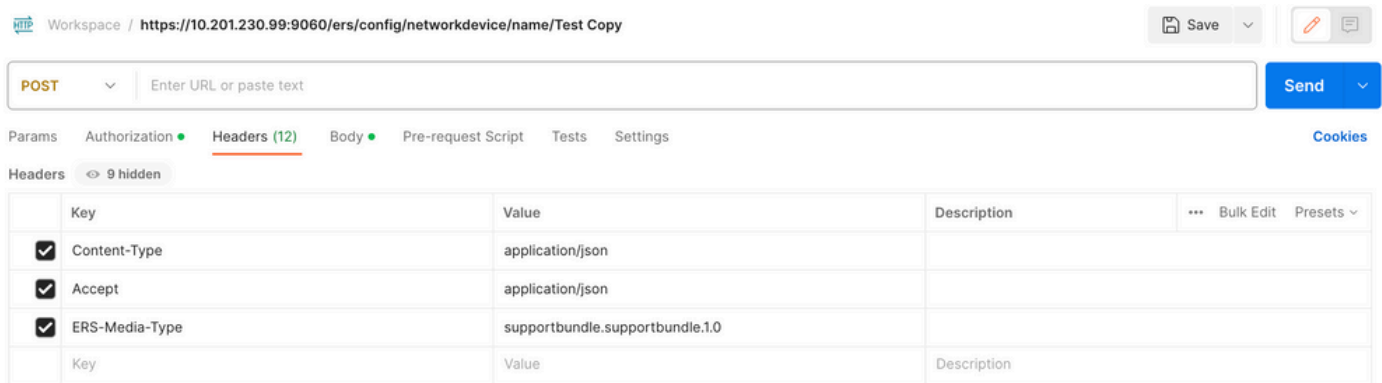


注意：除非在Postman上配置了變數，否則口令顯示為明文

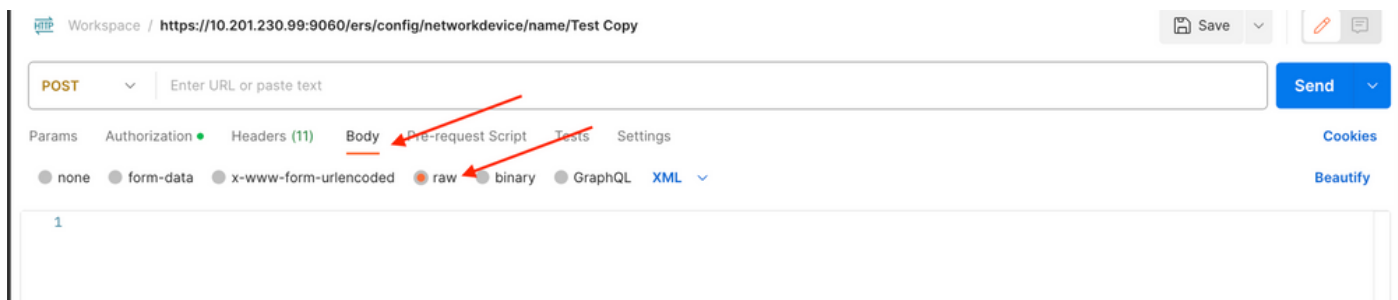




8. 在Postman中，轉到Headers頁籤，並使用SDK中的XML或JSON為API呼叫配置所需的標頭。本示例中使用JSON。報頭配置必須如下所示：



9. 移至「主體」表頭，然後選取「原始」。這允許我們貼上觸發支援捆綁包所需的XML或JSON模板。



10. 在正文部分貼上XML或JSON模板，根據需要更改值：

XML：

```
<?xml version="1.0" encoding="UTF-8"?> <ns0:supportbundle xmlns:ns0="supportbundle.ers.ise.cisco.com"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:ns1="ers.ise.cisco.com" xmlns:ers="ers.ise.cisco.com" description="Support Bundle
Generation" name="supportBundle"> <hostName>Node hostname the SB is being collected from </hostName>
<supportBundleIncludeOptions> <fromDate>mm/dd/yyyy</fromDate> <includeConfigDB>true|false</includeConfigDB>
<includeCoreFiles>true|false</includeCoreFiles> <includeDebugLogs>true|false</includeDebugLogs>
<includeLocalLogs>true|false</includeLocalLogs> <includeSystemLogs>true|false</includeSystemLogs> <mntLogs>true|false</mntLogs>
<policyXml>true|false</policyXml> <toDate>mm/dd/yyyy</toDate> </supportBundleIncludeOptions> </ns0:supportbundle>
```

JSON：

```
{ "SupportBundle": { "name": "supportBundle", "description": "Support Bundle Generation", "hostName": "node hostname the SB is being
collected from", "supportBundleIncludeOptions": { "includeConfigDB": true|false, "includeDebugLogs": true|false, "includeLocalLogs":
true|false, "includeCoreFiles": true|false, "mntLogs": true|false, "includeSystemLogs": true|false, "policyXml": true|false, "fromDate":
"mm/dd/yyyy", "toDate": "mm/dd/yyyy" } } }
```

11. 選擇POST作為方法，貼上<https://{ISE-ip}/ers/config/supportbundle>並按一下傳送。如果所有配置都正確，您應該看到「201 Created」消息，並且結果為空。

Workspace / https://10.201.230.99/ers/config/networkdevice/name/Test Copy

POST https://10.201.230.99/ers/config/supportbundle

Params Authorization Headers (13) Body Pre-request Script Tests Settings

none form-data x-www-form-urlencoded raw binary GraphQL JSON

```
2 SupportBundle : {
3   "name": "test",
4   "description": "Support Bundle Generation",
5   "hostName": "ise3-1test",
6   "supportBundleIncludeOptions": {
7     "includeConfigDB": true,
8     "includeDebugLogs": true,
9     "includeLocalLogs": true,
10    "includeCoreFiles": true,
11    "mntLogs": true,
12    "includeSystemLogs": true,
13    "policyXml": true,
14    "fromDate": "09/25/2023",
15    "toDate": "09/25/2023"
16  }
17 }
18 }
```

Body Cookies (2) Headers (19) Test Results

Status: 201 Created Time: 2.06 s Size: 1.19 KB Save as Example

Pretty Raw Preview Visualize JSON

1 |

### 檢查支援捆綁包狀態

您可以執行一系列GET呼叫來確認是觸發還是完成支援捆綁。



注意：支援捆綁包需要5-20分鐘才能完成，具體取決於從日誌收集的資訊量。

- 
- 在SDK上的**Support Bundle** Statustab `selectGet-All`下。您想要獲取ID以便運行下一個GET呼叫。如前所述，以下是執行呼叫所需的報頭以及預期響應。

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- Pxgrid Settings
- Radius Server Sequence
- RestID Store
- SMS Server
- SXP Connections
- SXP Local Bindings
- SXP Vpns
- Security Groups
- Security Groups ACLs
- Security Groups to Virtual Netwo
- Self Registered Portal
- Sponsor Group
- Sponsor Group Member
- Sponsor Portal
- Sponsored Guest Portal
- Support Bundle Download
- Support Bundle Status
- Support Bundle Trigger Configur
- System Certificate
- Threats Command Set

Support Bundle Status

Get-All

Request:

Method: GET

URI: https://10.201.230.99/ers/config/supportbundlestatus

HTTP 'Content-Type' Header: application/xml | application/json

HTTP 'Accept' Header: application/xml | application/json

HTTP 'ERS-Media-Type' Header (Not Mandatory): supportbundle.supportbundlestatus.1.0

HTTP 'X-CSRF-TOKEN' Header (Required Only if Enabled from GUI): fetch

Request Content: N/A

Response: (SearchResult)

HTTP Status: 200 (OK)

Content:

```
XML
<?xml version="1.0" encoding="UTF-8"?>
<ns0:searchResult xmlns:ns0="v2.ers.ise.cisco.com" xmlns:ns1="ers.ise.cisco.com" xmlns:ers-v2="ers-v2" total="2">
  <ns0:nextPage rel="next" href="link-to-next-page" type="application/xml"/>
  <ns0:previousPage rel="previous" href="link-to-previous-page" type="application/xml"/>
  <ns0:resources>
    <ns1:resource description="description1" id="id1" name="name1">
      <link rel="self" href="&lt;jurl to resource name1&gt;" type="application/xml"/>
    </ns1:resource>
  </ns0:resources>
</ns0:searchResult>
```

2. 移至 **Headers** 頁籤，為 API 呼叫配置所需的標頭，如 SDK 中所示。本示例使用 JSON。報頭配置必須如下所示：

Workspace / https://10.201.230.99:9060/ers/config/networkdevice/name/Test Copy

Save

GET Enter URL or paste text Send

Params Authorization Headers (12) Body Pre-request Script Tests Settings Cookies

Headers 9 hidden

Key	Value	Description	Bulk Edit	Presets
<input checked="" type="checkbox"/> Content-Type	application/json			
<input checked="" type="checkbox"/> Accept	application/json			
<input checked="" type="checkbox"/> ERS-Media-Type	supportbundle.supportbundlestatus.1.0			
Key	Value	Description		

3. 選擇 **GET** 作為方法，貼上 <https://10.201.230.99:9060/ers/config/supportbundlestatus>，然後按一下 **傳送**。如果已正確配置所有內容，您必須看到「200 OK」消息和觸發的最後一個支援捆綁包的相關資訊產生的結果。此呼叫不會告知我們是否成功完成支援捆綁。從此呼叫收集 ID，以便您下次進行 GET 呼叫時使用。

Workspace / <https://10.201.230.99:9060/ers/config/networkdevice/name/Test Copy> Save Send

GET <https://10.201.230.99/ers/config/supportbundlestatus> Send

Params Authorization Headers (13) Body Pre-request Script Tests Settings Cookies

Headers 10 hidden

Key	Value	Description	Bulk Edit	Presets
<input checked="" type="checkbox"/> Content-Type	application/json			
<input checked="" type="checkbox"/> Accept	application/json			
<input checked="" type="checkbox"/> ERS-Media-Type	supportbundle.supportbundlestatus.1.0			
Key	Value	Description		

Body Cookies (2) Headers (18) Test Results Status: 200 OK Time: 4.21 s Size: 1.48 KB Save as Example

Pretty Raw Preview Visualize JSON

```

1  {
2    "SearchResult": {
3      "total": 1,
4      "resources": [
5        {
6          "id": "ise3-1test",
7          "name": "ise3-1test",
8          "description": "Support Bundle Status api",
9          "link": {
10           "rel": "self",
11           "href": "https://10.201.230.99/ers/config/supportbundlestatus/ise3-1test",
12           "type": "application/json"
13         }
14       }
15     ]
16   }
17 }

```

4. 收集ID後，轉至支援捆綁包狀態表下的SDK，然後選擇Get-By-Id。如前所述，以下是執行呼叫所需的報頭以及預期響應。

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- Pull Deployment Info
- Pxgrid Node
- Pxgrid Settings
- Radius Server Sequence
- RestID Store
- SMS Server
- SXP Connections
- SXP Local Bindings
- SXP Vpms
- Security Groups
- Security Groups ACLs
- Security Groups to Virtual Netwo
- Self Registered Portal
- Sponsor Group
- Sponsor Group Member
- Sponsor Portal
- Sponsored Guest Portal
- Support Bundle Download
- Support Bundle Status
- Support Bundle Trigger Configur.
- System Certificate
- Taraze Command Gate

Support Bundle Status

Get-By-Id

Request:

Method: GET

URI: <https://10.201.230.99/ers/config/supportbundlestatus/{id}>

HTTP 'Content-Type' Header: application/xml | application/json

HTTP 'Accept' Header: application/xml | application/json

HTTP 'ERS-Media-Type' Header (Not Mandatory): supportbundle.supportbundlestatus.1.0

HTTP 'X-CSRF-TOKEN' Header (Required Only if Enabled from GUI): fetch

Request Content: N/A

Response: (SBStatus)

HTTP Status: 200 (OK)

Content:

```

XML
<?xml version="1.0" encoding="UTF-8"?>
<ns0:sbstatus xmlns:ns0="supportbundle.ers.ise.cisco.com" xmlns:x="http://www.w3.org/2001/XMLSchema" xmlns:ns1="ers.ise.cisco.com" xmlns:ers="ers.ise.cisco.com" id="ise3-1test"
<fileName>ise-support-bundle-pk-TestNode-admin-05-31-2019-06-37.tar.gpg</fileName>
<fileSize>535703</fileSize>
<hostName>TestNode</hostName>
<message>Support Bundle generation completed</message>
<startTime>Fri May 31 06:37:31 UTC 2019</startTime>
<status>complete</status>
</ns0:sbstatus>

```

5. 轉到Headers 頁籤，為API呼叫配置所需的標頭，如SDK中所示。本示例使用JSON。報頭配置必須如下所示：

Workspace / <https://10.201.230.99:9060/ers/config/networkdevice/name/Test Copy> Save Send

GET  Send

Params Authorization Headers (12) Body Pre-request Script Tests Settings Cookies

Headers 9 hidden

Key	Value	Description	Bulk Edit	Presets
<input checked="" type="checkbox"/> Content-Type	application/json			
<input checked="" type="checkbox"/> Accept	application/json			
<input checked="" type="checkbox"/> ERS-Media-Type	supportbundle.supportbundlestatus.1.0			
Key	Value	Description		

6. 選擇GET 作為方法，貼上 <https://{ISE-ip}/ers/config/supportbundlestatus/{id}> 並從步驟3收集的ID，最後按一下傳送。如果已正確配置所有內容，您必須看到「200 OK」消息和結果，其中含有關於完成還是未觸發最後一個支援捆綁包的資訊。記下來自此呼叫的 fileName，因為您需要PUT呼叫。

Workspace / <https://10.201.230.99:9060/ers/config/networkdevice/name/Test Copy> Save Send

GET  Send

Params Authorization Headers (13) Body Pre-request Script Tests Settings Cookies

Headers 10 hidden

Key	Value	Description	Bulk Edit	Presets
<input checked="" type="checkbox"/> Content-Type	application/json			
<input checked="" type="checkbox"/> Accept	application/json			
<input checked="" type="checkbox"/> ERS-Media-Type	supportbundle.supportbundlestatus.1.0			
Key	Value	Description		

Body Cookies (2) Headers (19) Test Results Status: 200 OK Time: 713 ms Size: 1.72 KB Save as Example

Pretty Raw Preview Visualize JSON Copy Search

```

1  {
2    "SBStatus": {
3      "id": "ise3-1test",
4      "name": "ise3-1test",
5      "description": "Support Bundle Status api",
6      "fileName": "ise-support-bundle-pk-ise3-1test-external-09-26-2023-01-26.tar.gpg",
7      "fileSize": 438288962,
8      "hostName": "ise3-1test",
9      "message": "Support Bundle Removed successfully",
10     "startTime": "Tue Sep 26 01:26:44 UTC 2023",
11     "status": "complete",
12     "link": {
13       "rel": "self",
14       "href": "https://10.201.230.99/ers/config/supportbundlestatus/ise3-1test",
15       "type": "application/json"
16     }
17   }
18 }

```

## 下載支援捆綁包

確認支援捆綁包處於completed狀態後。您可以繼續下載。

- 在SDK上的Support Bundle Downloadtab 下，選擇Download SupportBundle。如前所述，以下是執行呼叫所需的標頭、XML和JSON模板，以及預期的響應。

External RESTful Services (ERS) Online SDK

Support Bundle Download

Method: PUT

URI: https://10.201.230.99/ers/config/supportbundledownload

HTTP 'Content-Type' Header: application/xml | application/json

HTTP 'Accept' Header: application/xml | application/json

HTTP 'ERS-Media-Type' Header (Not Mandatory): supportbundle.supportbundledownload.1.0

HTTP 'X-CSRF-TOKEN' Header (Required Only if Enabled from GUI): The Token value from the GET X-CSRF-TOKEN fetch request

Request Content:

```
XML
<?xml version="1.0" encoding="UTF-8"?>
<ns0:supportbundle xmlns:ns0="supportbundle.ers.ise.cisco.com" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:ns1="ers.ise.cisco.com" xmlns:ers="ers.ise.cisco.com">
  <fileName>Support bundle file name to be picked for download</fileName>
</ns0:supportbundle>
JSON
{
  "ErsSupportBundleDownload" : {
    "fileName" : "Support bundle file name to be picked for download"
  }
}
```

Response: (N/A)

HTTP Status: 200 (OK)

Content: [Response is returned as an Octet Stream representing a TAR.GPG file.]

2. 移至Headers 頁籤，為API呼叫配置所需的標頭，如SDK中所示。本示例使用JSON。報頭配置必須如下所示：

Workspace / https://10.201.230.99:9060/ers/config/networkdevice/name/Test Copy

GET Enter URL or paste text Send

Params Authorization Headers (12) Body Pre-request Script Tests Settings Cookies

Headers 9 hidden

Key	Value	Description	Bulk Edit	Presets
<input checked="" type="checkbox"/> Content-Type	application/json			
<input checked="" type="checkbox"/> Accept	application/json			
<input checked="" type="checkbox"/> ERS-Media-Type	supportbundle.supportbundledownload.1.0			
Key	Value	Description		

3. 移至「主體」表頭，然後選取原始。這允許我們貼上下載支援捆綁包所需的XML或JSON模板。

Workspace / https://10.201.230.99:9060/ers/config/networkdevice/name/Test Copy

POST Enter URL or paste text Send

Params Authorization Headers (11) Body Pre-request Script Tests Settings Cookies

none form-data x-www-form-urlencoded raw binary GraphQL XML

1

4. 在正文部分貼上XML或JSON模板，根據需要更改值。檔名將是從第6步收集的檔名(ise-support-bundle-pk-ise3-1test-external-09-26-2023-01-26.tar.gpg)：

XML

```
<?xml version="1.0" encoding="UTF-8"?> <ns0:supportbundle xmlns:ns0="supportbundle.ers.ise.cisco.com"
xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:ns1="ers.ise.cisco.com" xmlns:ers="ers.ise.cisco.com"> <fileName>Support bundle
file name to be picked for download</fileName> </ns0:supportbundle>
```

JSON :

```
{ "ErsSupportBundleDownload" : { "fileName" : "Support bundle file name to be picked for download" } }
```

5. 選擇PUT作為方法，貼上<https://{ISE-ip}/ers/config/supportbundledownload>，然後按一下**傳送**。如果已正確配置所有內容，則必須看到「200 OK」消息且檔案已下載。

## 驗證

如果能夠訪問API服務GUI頁，例如<https://{iseip} : {port}/api/swagger-ui/index.html>或<https://{iseip} : 9060/ers/sdk>，則表示API服務正在按預期工作。

## 疑難排解

- 所有REST操作都經過稽核，並且日誌記錄在系統日誌中。
- 要排除與打開API相關的問題，請在調試日誌配置窗口中將apiservice元件的日誌級別設定為調試。
- 要排除與ERS API相關的問題，請在調試日誌配置窗口中將ers元件的日誌級別設定為調試。要檢視此窗口，請導航到思科ISE GUI，點選選單圖示並選擇操作>故障排除>調試嚮導>調試日誌配置。
- 您可以從下載日誌窗口下載日誌。要檢視此窗口，請導航到Cisco ISE GUI，點選Menu圖示並選擇Operations > Troubleshoot > Download Logs。
- 您可以選擇從Support Bundle頁籤下載支援捆綁包(透過按一下頁籤下的Download按鈕)，或透過按一下api-service debug log日誌的Log File值從Debug Logs頁籤下載api-service debug logs。



## 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）。