

# 配置Thousand Eyes - Enterprise Agent for ASR1k、ISR4k和Cat8k平台 ( Docker安裝 )

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## 簡介

本文說明如何在Cisco IOS-XE®平台上配置ThousandEyes。

## 必要條件

### 需求

思科建議在ThousandEyes文檔門戶驗證這些要求：

[支援清單Thousand Eyes](#)

### 採用元件

本檔案中的資訊是根據使用Cisco IOS-XE的路由器。

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。

## ISR4Ks Docker安裝

## 步驟 1.

從Cloud & Enterprise Agents > Agent settings > Add New Enterprise Agent > Cisco Application Hosting選單下的<https://app.thousandeyes.com>下載ThousandEyes代理：

The screenshot shows the ThousandEyes management console. The sidebar on the left has 'Agent Settings' selected. The main menu has 'Enterprise Agents' selected. The 'Add New Enterprise Agent' modal window is open, showing the 'Cisco Application Hosting' tab selected. Under this tab, the 'Routers' section is selected, and a 'Download - TAR' button is visible. The interface includes a search bar and a 'Copy' button for the Account Group Token.

## 步驟 2.

將.tar檔案複製到路由器的bootflash中。這可透過TFTP完成。或者，將檔案下載到USB快閃記憶體驅動器並將其複製到路由器引導快閃記憶體中。

```
<#root>
```

```
Router#
```

```
dir bootflash: | sec .tar
```

```
24577 -rw- 186705920 May 19 2022 16:26:31 +00:00 thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

## 步驟 3.

使用iox命令在路由器上啟用IOx守護程式並驗證服務狀態。

```
<#root>
```

```
Router(config)#
```

```
iox
```

```
*May 19 16:40:48.485: %UICFGEXP-6-SERVER_NOTIFIED_START: R0/0: psd: Server iox has been notified to sta  
Router#
```

```
show iox-service
```

```
IOx Infrastructure Summary:
```

```
-----  
IOx service (CAF)           : Not Running  
IOx service (HA)           : Not Supported  
IOx service (IOxman)       : Not Running  
IOx service (Sec storage)   : Not Supported  
Libvirtd 5.5.0             : Running
```

#### 步驟 4.

使用app-hosting install appid <agent\_name> package bootflash:<file.tar>命令安裝以前儲存在bootflash中的代理。

```
<#root>
```

```
Router#
```

```
app-hosting install appid ISR4k_Agent package bootflash:thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

```
Installing package 'bootflash:thousandeyes-enterprise-agent-4.2.2.cisco.tar' for 'ISR4k_Agent'. Use 'sh
```

#### 步驟 5.

使用show app-hosting list命令驗證代理是否已正確安裝。

```
<#root>
```

```
Router#
```

```
show app-hosting list
```

```
App id                               State  
-----  
ISR4k_Agent                           DEPLOYED
```

#### 步驟 6.

配置虛擬埠介面。

```
<#root>
```

```
interface VirtualPortGroup1  
ip address 192.168.2.254 255.255.255.0  
no mop enabled  
no mop sysid  
end
```

步驟 8.

為應用託管配置VNIC。

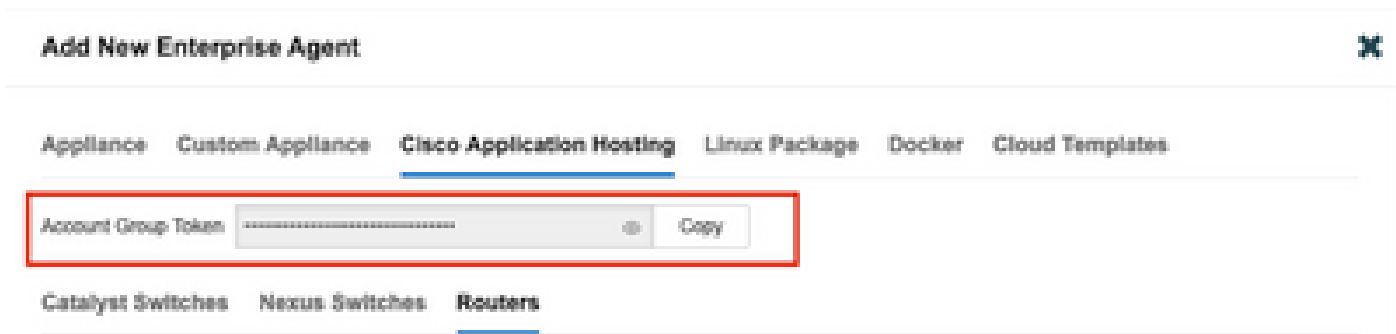
```
<#root>
```

```
Router(config)#  
app-hosting appid ISR4k_Agent  
Router(config-app-hosting)#  
app-vnic gateway1 virtualportgroup 1 guest-interface 1  
Router(config-app-hosting-gateway1)#  
guest-ipaddress 192.168.2.10 netmask 255.255.255.0  
Router(config-app-hosting-gateway#)#  
exit  
Router(config-app-hosting)#  
app-default-gateway 192.168.2.254 guest-interface 1  
Router(config-app-hosting)#  
name-server1 8.8.8.8  
Router(config-app-hosting)#  
end
```

注意：name-server命令的IP地址可以是內部或外部DNS伺服器。

步驟 7.

設定 Docker。所需令牌可在 <https://app.thousandeyes.com> 的選單 Cloud & Enterprise Agents > Agent settings > Add a New Enterprise Agent > Cisco Application Hosting 下獲得。



按一下小眼圖示。這將顯示未加密的令牌編號。複製該字串並繼續路由器上的安裝。

Docker安裝命令：

```
<#root>
```

```
Router(config-app-hosting)#
```

```
app-resource docker
```

```
Router(config-app-hosting-docker)#
```

```
prepend-pkg-opts
```

```
Router(config-app-hosting-docker)#
```

```
run-opts 1 "-e TEAGENT_ACCOUNT_TOKEN= EAGENT_ACCOUNT_TOKEN= xxxxxxxxxxxxxxxxxxxxxxxx"
```

```
Router(config-app-hosting-docker)#
```

```
run-opts 2 "--hostname ISR_Agent"
```

```
Router(config-app-hosting)#
```

```
start
```

```
Router(config-app-hosting)#
```

```
end
```

```
Router#
```

```
*May 30 20:10:00.282: %SYS-5-CONFIG_I: Configured from console by console
```

```
*May 30 20:10:06.980: %IM-6-START_MSG: R0/0: ioxman: app-hosting: Start succeeded: ISR_Agent started su
```

步驟 9.

使用show app-hosting list命令驗證代理是否處於活動狀態。

```
<#root>
```

```
Router#
```

```
show app-hosting list
```

App id	State
ISR_Agent	RUNNING

# ASR1K Docker安裝

## 步驟 1.

從Thousand Eyes網站下載agent .tar archive。

## 步驟 2.

將.tar檔案複製到路由器的bootflash中。這可透過TFTP完成。或者，將檔案下載到USB快閃記憶體驅動器並將其複製到路由器引導快閃記憶體中。

```
<#root>
```

```
Router#
```

```
dir bootflash: | sec .tar
```

```
16 -rw- 186705920 Sep 21 2022 15:02:21 +00:00 thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

## 步驟 3.

使用命令iox在路由器上啟用IOx守護程式並驗證服務狀態。

```
<#root>
```

```
Router(config)#
```

```
iox
```

```
Router#
```

```
show iox-service
```

```
IOx Infrastructure Summary:
```

```
-----  
IOx service (CAF)           : Running  
IOx service (HA)           : Not Supported  
IOx service (IOxman)       : Running  
IOx service (Sec storage)  : Not Supported  
Libvirtd 5.5.0             : Running
```

## 步驟 4.

使用app-hosting install appid <agent\_name> package bootflash:<file.tar>命令安裝以前儲存在bootflash中的代理。

```
<#root>
```

Router#

```
app-hosting install appid ASR_TE package bootflash:thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

Installing package 'bootflash:thousandeyes-enterprise-agent-4.2.2.cisco.tar' for 'ASR\_TE'. Use 'show ap  
\*Sep 21 16:10:12.900: %IOXCAF-6-INSTALL\_MSG: R0/0: ioxman: app-hosting: ASR\_TE installed successfully C

<#root>

Router#

```
show app-hosting list
```

App id	State
ASR1k_TE	DEPLOYED

步驟 5.

使用私有IP地址配置虛擬埠介面。

<#root>

```
interface VirtualPortGroup0
```

```
ip address 192.168.2.254 255.255.255.0  
no mop enabled  
no mop sysid  
end
```

步驟 6.

為應用託管配置VNIC。

<#root>

```
Router(config)#
```

```
app-hosting appid ASR1k_TE
```

```
Router(config-app-hosting)#
```

```
app-vnic gateway1 virtualportgroup 0 guest-interface 0
```

```
Router(config-app-hosting-gateway0)#
```

```
guest-ipaddress 192.168.2.1 netmask 255.255.255.0
```

```
Router(config-app-hosting-gateway0)#
```

```
exit
```

```
Router(config-app-hosting)#
```

```
app-default-gateway 192.168.2.254 guest-interface 0
```

```
Router(config-app-hosting)#  
name-server0 8.8.8.8  
Router(config-app-hosting)#  
app-resource docker  
Router(config-app-hosting-docker)#  
prepend-pkg-opts  
Router(config-app-hosting-docker)#  
run-opts 1 "--hostname ASR1kTE"  
Router(config-app-hosting-docker)#r  
un-opts 1 "-e TEAGENT_ACCOUNT_TOKEN=XXXXXXXXXXXXXXXXXXXX"  
Router(config-app-hosting-docker)#  
exit
```

## 步驟 7.

為引用的應用ID啟用應用託管。

```
<#root>
```

```
Router(config)#  
app-hosting appid ASR1k_TE  
Router(config-app-hosting)#  
start
```

## 步驟 8.

安裝ThousandEyes代理，並使用show app-hosting list命令驗證其處於活動狀態。

```
<#root>
```

```
Router#  
app-hosting install appid ASR1k_TE package bootflash:thousandeyes-enterprise-agent-4.2.2.cisco.tar  
Installing package 'bootflash:thousandeyes-enterprise-agent-4.2.2.cisco.tar' for 'ASR1k_TE'. Use 'show
```

```
<#root>
```

```
Router#  
show app-hosting list
```



App id	State
ASR1k_TE	RUNNING

## Catalyst 8K Docker安裝

### Catalyst 8200組態

#### 步驟 1.

從ThousandEyes-enterprise-agent-x.x.cisco.tar網站下載代理.tar檔案

#### 步驟 2.

將.tar檔案複製到裝置的硬碟上。

```
<#root>
```

```
C8200k#
```

```
dir harddisk:thousandeyes-enterprise-agent-4.3.0.cisco.tar
```

```
Directory of harddisk:/thousandeyes-enterprise-agent-4.3.0.cisco.tar
```

```
12      -rw-          123064320  Nov 12 2022 21:35:06 +00:00  thousandeyes-enterprise-agent-4.3.0.cisco.t
```

```
15239921664 bytes total (14280880128 bytes free)
```

```
C8200k#
```

#### 步驟 3.

使用命令iox在路由器上啟用IOx守護程式並驗證服務狀態。

```
<#root>
```

```
C8200k(config)#
```

```
iox
```

```
*Nov 12 21:46:51.539: %UICFGEXP-6-SERVER_NOTIFIED_START: R0/0: psd: Server iox has been notified to sta
```

```
*Nov 12 21:46:52.443: %SYS-5-CONFIG_I: Configured from console by console
```

```
*Nov 12 21:47:13.866: %IM-6-IOX_ENABLEMENT: R0/0: ioxman: IOX is ready.
```

```
C8200k#
```

```
show iox-service
```

#### I0x Infrastructure Summary:

```
-----  
I0x service (CAF)           : Running  
I0x service (HA)           : Not Supported  
I0x service (IOxman)       : Running  
I0x service (Sec storage)   : Not Supported  
Libvirt 5.5.0              : Running
```

#### 步驟 4.

配置平台資源應用程式負載。儲存配置更改並重新載入機箱。

```
<#root>
```

```
C8200k(config)#  
platform resource service-plane-heavy
```

```
C8200k(config)#
```

```
end
```

```
C8200k#
```

```
wr
```

```
C8200k#
```

```
reload
```

#### 步驟 5.

配置虛擬埠介面。

```
<#root>
```

```
interface virtualportgroup 0  
ip address 192.168.2.254 255.255.255.0  
exit
```

#### 步驟 6.

為應用託管配置VNIC。

```
<#root>
```

```
C8200k(config)#  
app-hosting appid TEcat8k  
C8200k(config-app-hosting)#
```

```
app-vnic gateway1 virtualportgroup 0 guest-interface 0

C8200k(config-app-hosting-gateway1)#
guest-ipaddress 192.168.2.10 netmask 255.255.255.0

C8200k(config-app-hosting-gateway1)#
exit

C8200k(config-app-hosting)#
app-default-gateway 192.168.2.254 guest-interface 0

C8200k(config)#
app-hosting appid TEcat8k

C8200k(config-app-hosting)#
app-resource docker

C8200k(config-app-hosting-docker)#
prepend-pkg-opts

C8200k(config-app-hosting-docker)#
run-opts 1 "-e TEAGENT_ACCOUNT_TOKEN=xxxxxxxxxxxxxxxxxxxxxxxx"

C8200k(config-app-hosting-docker)#
run-opts 2 "--hostname TEcat8k"

C8200k(config-app-hosting)#
name-server0 8.8.8.8

C8200k(config-app-hosting)#
end
```

步驟 7.  
為引用的應用ID啟用應用託管。

```
<#root>

C8200k(config)#
app-hosting appid TEcat8k

C8200k(config-app-hosting)#
start
```

## 步驟 8.

安裝ThousandEyes代理並驗證其正在運行。

```
<#root>
```

```
C8200k#
```

```
app-hosting install appid TEcat8k package harddisk:thousandeyes-enterprise-agent-4.3.0.cisco.tar
```

```
Installing package 'harddisk:thousandeyes-enterprise-agent-4.3.0.cisco.tar' for 'TEcat8k'. Use 'show ap
```

```
*Jan 21 21:30:17.194: %IM-6-INSTALL_MSG: R0/0: ioxman: app-hosting: Install succeeded: TEcat8k installed
```

```
*Jan 21 21:30:41.019: %IM-6-START_MSG: R0/0: ioxman: app-hosting: Start succeeded: TEcat8k started succ
```

```
C8200k#
```

```
show app-hosting list
```

App id	State
TEcat8k	RUNNING

## Catalyst 8300組態

### 步驟 1.

從Thousand Eyes-enterprise-agent-x.x.cisco.tar網站下載代理.tar檔案

### 步驟 2.

將.tar檔案複製到裝置的硬碟上。

```
<#root>
```

```
Router#
```

```
dir harddisk:thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

```
Directory of harddisk:/thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

```
12 -rw- 186705920 Sep 14 2022 19:02:02 +00:00 thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

### 步驟 3.

使用命令iox在路由器上啟用IOx守護程式並驗證服務狀態。

```
<#root>
```

```
Router(config)#
```

iox

\*Sep 5 17:48:31.952: %UICFGEXP-6-SERVER\_NOTIFIED\_START: R0/0: psd: Server iox has been notified to start

\*Sep 5 17:48:40.953: %IM-6-IOX\_ENABLEMENT: R0/0: ioxman: IOX is ready.

Router#

show iox-service

IOx Infrastructure Summary:

-----

IOx service (CAF)	: Running
IOx service (HA)	: Not Supported
IOx service (IOxman)	: Running
IOx service (Sec storage)	: Not Supported
Libvirtd 5.5.0	: Running

步驟 4.

配置虛擬埠介面。

<#root>

```
interface VirtualPortGroup1
```

```
ip address 192.168.2.254 255.255.255.0
```

```
no mop enabled
```

```
no mop sysid
```

```
end
```

步驟 5.

為應用託管配置VNIC。

<#root>

```
Router(config)#
```

```
app-hosting appid Cat8k_TE
```

```
Router(config-app-hosting)#
```

```
app-vnic gateway1 virtualportgroup 1 guest-interface 1
```

```
Router(config-app-hosting-gateway1)#
```

```
guest-ipaddress 192.168.2.1 netmask 255.255.255.0
```

```
Router(config-app-hosting)#
```

```
app-default-gateway 192.168.2.254 guest-interface 1
```

```
Router(config-app-hosting)#
```

```
app-resource docker
```

```
Router(config-app-hosting-docker)#
```

```
prepend-pkg-opts
```

```
Router(config-app-hosting-docker)#
run-opts 1 "--hostname C8k_TE"
Router(config-app-hosting-docker)#
run-opts 2 "-e TEAGENT_ACCOUNT_TOKEN=xxxxxxxxxxxxxxxxxxxxxxxx"
Router(config-app-hosting)#
name-server1 8.8.8.8
Router(config-app-hosting)#
start
```

步驟 6.  
配置start命令以啟動應用程式。

```
<#root>
Router(config)#
app-hosting appid Cat8k_TE
Router(config-app-hosting)#
start
```

步驟 7.  
安裝ThousandEyes代理並驗證是否已部署該代理。

```
<#root>
Router#
app-hosting install appid TEcat8k package harddisk:
thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

```
Router#
show app-hosting list
```

App id	State
Cat8k_TE	DEPLOYED

## Catalyst 8500L組態

步驟 1.  
從ThousandEyes-enterprise-agent-x.x.cisco.tar網站下載代理.tar檔案

## 步驟 2.

在裝置的硬碟上複製.tar檔案。

```
<#root>
```

```
Router#
```

```
dir harddisk:thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

```
Directory of harddisk:/thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

```
12 -rw- 186705920 Sep 14 2022 19:02:02 +00:00 thousandeyes-enterprise-agent-4.2.2.cisco.tar
```

## 步驟 3.

使用命令iox在路由器上啟用IOx守護程式並驗證服務狀態。

```
<#root>
```

```
Router#
```

```
conf t
```

```
Enter configuration commands, one per line. End with CNTL/Z.
```

```
Router(config)#
```

```
iox
```

```
Router(config)#
```

```
end
```

```
*Sep 15 15:41:23.992: %UICFGEXP-6-SERVER_NOTIFIED_START: R0/0: psd: Server iox has been notified to sta
```

```
*Sep 15 15:41:25.006: %SYS-5-CONFIG_I: Configured from console by console
```

```
*Sep 15 15:41:32.914: %IM-6-IOX_ENABLEMENT: R0/0: ioxman: IOX is ready.
```

```
Router#
```

```
show iox-service
```

```
IOx Infrastructure Summary:
```

```
-----
```

```
IOx service (CAF)           : Not Running
IOx service (HA)            : Not Supported
IOx service (IOxman)        : Not Running
IOx service (Sec storage)    : Not Supported
Libvirtd 5.5.0              : Running
```

## 步驟 4.

配置虛擬埠介面。

```
<#root>
```

```
interface VirtualPortGroup1

ip address 192.168.2.254 255.255.255.0
no mop enabled
no mop sysid
end
```

## 步驟 5.

為應用託管配置VNIC。

```
<#root>
```

```
Router(config)#

app-hosting appid Cat8500L_TE

Router(config-app-hosting)#

app-vnic gateway0 virtualportgroup 0 guest-interface 0

Router(config-app-hosting-gateway0)#

guest-ipaddress 192.168.2.1 netmask 255.255.255.0

Router(config-app-hosting-gateway0)#

exit

Router(config-app-hosting)#

guest-gateway 192.168.2.254 guest-interface 0

Router(config-app-hosting)#

app-resource docker

Router(config-app-hosting-docker)#prepend-pkg-opts
Router(config-app-hosting-docker)#

run-opts 1 "--hostname Cat8500L_TE"

Router(config-app-hosting-docker)#

run-opts 2 "-e TEAGENT_ACCOUNT_TOKEN=TEAGENT_ACCOUNT_TOKEN=xxxxxxxxxxxxxxxxxxxxxxxx"

Router(config-app-hosting)#

name-server1 8.8.8.8

Router(config-app-hosting)#

start
```

## 步驟 6.

配置平台資源應用程式負載。接下來，儲存配置更改並重新載入機箱。



```
<#root>
Router(config)#
platform resource app-heavy
Please reboot to activate this template
Router(config)#
exit
Router#
wr
Router#
reload
```

## 步驟 7.

安裝ThousandEyes代理並驗證是否已部署該代理。

```
<#root>
Router#
app-hosting install appid Cat8500L_TE package harddisk:thousandeyes-enterprise-agent-4.2.2.cisco.tar
Installing package 'harddisk:thousandeyes-enterprise-agent-4.2.2.cisco.tar' for 'Cat8500L_TE'. Use 'show
Router#
show app-hosting list
```

App id	State
Cat8500L_TE	DEPLOYED

**注意：NAT可以與ThousandEyes一起使用。**

虛擬埠介面可用作NAT的內部介面。

範例：

```
<#root>
Router(config)#
ip nat inside source list NAT interface gi0/0/0 overload
Router(config)#
ip access-list extended NAT
Router(config-ext-nacl)#
```

```
permit ip 192.168.2.0 0.0.0.255 any
```

```
interface VirtualPortGroup1
```

```
description ThousandEyes  
192.168.2.254 255.255.255.0  
ip nat inside
```

```
interface GigabitEthernet0/0/0
```

```
description WAN interface  
192.168.114.10 255.255.255.252  
ip nat outside
```

## 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）。