Instalación y desinstalación de UTD Engine en SD-WAN con CLI

Contenido

Introducción

Este documento describe el procedimiento para instalar y desinstalar Unified Threat Defence (UTD) a través de CLI en routers SDWAN.

Prerequisites

Requirements

Cisco recomienda que tenga conocimiento sobre estos temas:

- Red de área extensa definida por software de Cisco (SD-WAN)
- Interfaz de línea de comandos (CLI) de Cisco IOS® XE

Componentes Utilizados

Este documento se basa en las siguientes versiones de software y hardware:

- Router ISR4461/K9
- Versión del software 17.3.4

- Router en modo de controlador

La información que contiene este documento se creó a partir de los dispositivos en un ambiente de laboratorio específico. Todos los dispositivos que se utilizan en este documento se pusieron en funcionamiento con una configuración verificada (predeterminada). Si tiene una red en vivo, asegúrese de entender el posible impacto de cualquier comando.

Antecedentes

Estos pasos deben aplicarse cuando el cedge está en modo CLI o no hay ninguna conexión de control entre vManage y cedge.

Pero si tiene plano de control y su cedge está en modo vManage, entonces proceda a revisar este otro artículo .

Conceptos

Los requisitos específicos para este documento incluyen:

- Cisco vManage versión 20.3 o posterior.
- Routers de servicios integrados de Cisco versión 4431 17.3.4

Para obtener más información sobre las plataformas compatibles, acceda a UTD para las plataformas y restricciones compatibles con SDWAN.

Configurar

Desinstalar UTD

Comprobación previa

Este es un ejemplo de cómo el router cedge se parece a una desinstalación UTD anterior.

> * El dispositivo está en modo de controlador y no se ha adjuntado ninguna plantilla, pero se ha aplicado la configuración de UTD.

```
cedge#show sdwan system Viptela (tm) vEdge Operating System Software Copyright (c) 2013-2022 by
Viptela, Inc. Controller Compatibility: 20.3 Version: 17.03.04a.0.5574 Build: Not applicable
```

> **Nota**: La configuración de UTD debe eliminarse antes de que se pueda desinstalar.

Configuraciones

1. Detenga el servicio UTD.

```
cedge#config-transaction
cedge(config)# app-hosting appid utd
cedge(config-app-hosting)# no start
cedge(config-app-hosting)# commit
```

```
Commit complete.
```

Nota: El estado de UTD cambia de En ejecución a Desplegado una vez que **no** se aplica **ningún inicio**.

```
cedge#show app-hosting list App id State ----------------------------------------------------
-- utd DEPLOYED cedge#
```

2. Elimine la configuración de UTD.

```
cedge#config-transaction
cedge(config)# utd engine standard multi-tenancy
cedge(config-utd-multi-tenancy)# no policy utd-policy-vrf-1
cedge(config-utd-multi-tenancy)# commit
Commit complete.
cedge(config-utd-multi-tenancy)#
cedge#config-transaction
cedge(config)# utd multi-tenancy
cedge(config)# utd engine standard multi-tenancy
cedge(config-utd-multi-tenancy)# no threat-inspection whitelist profile Sig-white-list
cedge(config-utd-multi-tenancy)# no threat-inspection profile IPS-POLICY
cedge(config-utd-multi-tenancy)# exit
cedge(config)# commit
Commit complete.
cedge(config)# no utd engine standard multi-tenancy
cedge(config)# commit
Commit complete.
cedge(config)#
cedge#config-transaction
cedge(config)# no utd multi-tenancy
cedge(config)# commit
Commit complete.
cedge(config)#
cedge(config)# app-hosting appid utd
cedge(config-app-hosting)# no app-vnic gateway0 virtualportgroup 0 guest-interface 0
cedge(config-app-hosting)# no app-vnic gateway1 virtualportgroup 1 guest-interface 1
cedge(config-app-hosting)# no app-resource package-profile urlf-low
cedge(config-app-hosting)# commit
Commit complete.
cedge(config-app-hosting)#exit
cedge(config)# no app-hosting appid utd
cedge(config)# commit
Commit complete.
cedge(config)#
cedge(config)# no interface VirtualPortGroup0
cedge(config)# no interface VirtualPortGroup1
cedge(config)# commit
Commit complete.
cedge(config)#
cedge(config)# no iox
cedge(config)# commit
Commit complete.
cedge(config)#
```

3. Validación.

Este es un ejemplo de cómo el router cedge se ve después de que se elimina la configuración UTD.

```
cedge#show running-config | section iox
```

```
cedge#show running-config | section VirtualPortGroup0
cedge#show running-config | section VirtualPortGroup1
cedge#show running-config | section utd
cedge#
cedge#show platform software utd global
UTD Global state
=========================
Engine : Standard
Global Inspection : Disabled
Operational Mode : Intrusion Detection
Fail Policy : Fail-open
Container technology : LXC
Redirect interface : Not specified
UTD interfaces
No interfaces are protected by UTD
<snipped>
```

Nota: Aunque se quitó la configuración, el UTD muestra instalado. Esto es de esperar.

```
cedge#show utd engine standard version
UTD Virtual-service Name: utd
IOS-XE Recommended UTD Version: 1.0.16_SV2.9.16.1_XE17.3
IOS-XE Supported UTD Regex: ^1\.0\.([0-9]+)_SV(.*)_XE17.3$
UTD Installed Version: 1.0.16_SV2.9.16.1_XE17.3

cedge#show virtual-service
Virtual Service Global State and Virtualization Limits:
Infrastructure version : 1.7
Total virtual services installed : 1
Total virtual services activated : 0
<snipped>

cedge#show app-hosting list
The process for the command is not responding or is otherwise unavailable >>>> Expected because
UTD config was removed but UTD engine remains installed

** Before to remove Configuration **
cedge#show virtual-service version name utd running
Virtual service utd running version:
Name : UTD-Snort-Feature
Version : 1.0.16_SV2.9.16.1_XE17.3

** After configuration is removed **
cedge#
cedge#show virtual-service version name utd running
Virtual service utd running version:
Name : UTD-Snort-Feature
Version : None
```

4. Retire el motor UTD.

Sugerencia: debe tener iox y app-hosting appid utd activados para desinstalar el motor UTD.

A continuación se muestra un ejemplo de lo que ocurre si se elimina UTD sin la activación de iBox y el alojamiento de aplicaciones.

```
cedge#app-hosting uninstall appid utd    >>>> No action is taken.
cedge#
```

Este es un ejemplo para desinstalar UTD exitosamente.

```
cedge#config-transaction
cedge(config)# iox
cedge(config)# app-hosting appid utd
cedge(config-app-hosting)# commit
Commit complete.
cedge(config-app-hosting)#
*Mar 3 20:25:24.889: %UICFGEXP-6-SERVER_NOTIFIED_START: R0/0: psd: Server iox has been notified
to start
*Mar 3 20:25:50.268: %IM-6-IOX_RECONCILE_INFO: R0/0: ioxman: App-hosting application reconcile
process start
*Mar 3 20:25:51.956: %IM-6-IOX_ENABLEMENT: R0/0: ioxman: IOX is ready.
cedge#
cedge#app-hosting uninstall appid utd
Uninstalling 'utd'. Use 'show app-hosting list' for progress.

cedge#
*Mar 3 20:26:31.653: %VIRT_SERVICE-5-INSTALL_STATE: Successfully uninstalled virtual service utd
*Mar 3 20:26:32.706: %IM-6-INSTALL_MSG: R0/0: ioxman: app-hosting: Uninstall succeeded: utd
uninstalled successfully
cedge#
```

Verificación

Ejecute los siguientes comandos para verificar si se ha eliminado UTD.

```
cedge#show app-hosting list
No App found

cedge#show virtual-service version name utd running
% Error: Virtual-service utd is not found

cedge#show utd engine standard version
IOS-XE Recommended UTD Version: 1.0.16_SV2.9.16.1_XE17.3
IOS-XE Supported UTD Regex: ^1\.0\.([0-9]+)_SV(.*)_XE17.3$

cedge#show virtual-service
Virtual Service Global State and Virtualization Limits:
Infrastructure version : 1.7
Total virtual services installed : 0
Total virtual services activated : 0
<snipped>
```

Configurar

Instalar UTD

Comprobación previa

Revise la versión admitida de UTD y descárguela en la memoria flash de inicialización.

```
cedge#
cedge#show utd engine standard version
IOS-XE Recommended UTD Version: 1.0.16_SV2.9.16.1_XE17.3
IOS-XE Supported UTD Regex: ^1\.0\.([0-9]+)_SV(.*)_XE17.3$
```

```
cedge#
cedge#dir bootflash: | i utd
36 -rw- 55050240 Mar 1 2022 01:08:29 +00:00 secapp-
utd.17.03.04a.1.0.16_SV2.9.16.1_XE17.3.x86_64.tar
cedge#
```

Configuraciones

1. Activar iox y el alojamiento de aplicaciones.

```
cedge#config-transaction
cedge(config)# iox
cedge(config)# app-hosting appid utd
cedge(config-app-hosting)# commit
Commit complete.
cedge(config-app-hosting)#
*Mar 3 20:25:24.889: %UICFGEXP-6-SERVER_NOTIFIED_START: R0/0: psd: Server iox has been notified
to start
*Mar 3 20:25:50.268: %IM-6-IOX_RECONCILE_INFO: R0/0: ioxman: App-hosting application reconcile
process start
*Mar 3 20:25:51.956: %IM-6-IOX_ENABLEMENT: R0/0: ioxman: IOX is ready.
cedge#
```

2. Instale el motor UTD.

```
cedge#app-hosting install appid utd package bootflash:secapp-
utd.17.03.04a.1.0.16_SV2.9.16.1_XE17.3.x86_64.tar
Installing package 'bootflash:secapp-utd.17.03.04a.1.0.16_SV2.9.16.1_XE17.3.x86_64.tar' for
'utd'. Use 'show app-hosting list' for progress.
cedge#
*Mar 3 21:07:43.529: %VMAN-5-PACKAGE_SIGNING_LEVEL_ON_INSTALL: R0/0: vman: Package 'secapp-
utd.17.03.04a.1.0.16_SV2.9.16.1_XE17.3.x86_64.tar' for service container 'utd' is 'Cisco
signed', signing level cached on original install is 'Cisco signed'
*Mar 3 21:07:56.332: %VIRT_SERVICE-5-INSTALL_STATE: Successfully installed virtual service utd
*Mar 3 21:07:56.922: %IM-6-INSTALL_MSG: R0/0: ioxman: app-hosting: Install succeeded: utd
installed successfully Current state is deployed
cedge#
```

3. Asegúrese de que el motor UTD está instalado. Ejecute los siguientes comandos.

> **Nota**: El estado *DEPLOYED* significa que *UTD está instalado pero no configurado*. *El* estado *RUNNING* significa *UTD instalado y configurado*.

```
cedge#show app-hosting list App id State ----------------------------------------------------------
-- utd DEPLOYED cedge#show virtual-service version name utd running Virtual service utd running
version: Name : UTD-Snort-Feature Version : None >>>> "None", it is expected due to the fact
that no config yet cedge#show utd engine standard version UTD Virtual-service Name: utd IOS-XE
Recommended UTD Version: 1.0.16_SV2.9.16.1_XE17.3 IOS-XE Supported UTD Regex: ^1\.0\.([0-
9]+)_SV(.*)_XE17.3$ UTD Installed Version: 1.0.16_SV2.9.16.1_XE17.3 >>>> UTD Package installed
cedge# cedge#show virtual-service Virtual Service Global State and Virtualization Limits:
Infrastructure version : 1.7 Total virtual services installed : 1 >>>> Installed 1 but Activated
0 as expected Total virtual services activated : 0
```

4. Para tener el UTD en estado RUNNING, proceda a configurar IPS/URL. Este es un ejemplo del laboratorio.

```
cedge#config-transaction
```

```
cedge(config)# interface VirtualPortGroup0
cedge(config-if)# description Management interface
cedge(config-if)# vrf forwarding 65529
cedge(config-if)# ip address 192.168.1.1 255.255.255.252
cedge(config-if)# exit
cedge(config)# commit
Commit complete.
cedge(config)#
cedge(config)# interface VirtualPortGroup1
cedge(config-if)# description Data interface
cedge(config-if)# ip address 192.168.2.1 255.255.255.252
cedge(config-if)# exit
cedge(config)# commit
Commit complete.
cedge(config)#
cedge(config)# app-hosting appid utd
cedge(config-app-hosting)# app-vnic gateway0 virtualportgroup 0 guest-interface 0
cedge(config-app-hosting-gateway)# guest-ipaddress 192.168.1.2 netmask 255.255.255.252
cedge(config-app-hosting-gateway)# exit
cedge(config-app-hosting)# app-vnic gateway1 virtualportgroup 1 guest-interface 1
cedge(config-app-hosting-gateway)# guest-ipaddress 192.168.2.2 netmask 255.255.255.252
cedge(config-app-hosting-gateway)# exit
cedge(config-app-hosting)# app-resource package-profile urlf-low
cedge(config-app-hosting)# start
cedge(config-app-hosting)# commit
Commit complete.
cedge(config-app-hosting)#
cedge(config-app-hosting)# exit
cedge(config)# utd multi-tenancy
cedge(config)# utd engine standard multi-tenancy
cedge(config-utd-multi-tenancy)# threat-inspection whitelist profile Sig-white-list
cedge(config-utd-mt-whitelist)# generator id 3 signature id 22089
cedge(config-utd-mt-whitelist)# generator id 3 signature id 36208
cedge(config-utd-mt-whitelist)# exit
cedge(config-utd-multi-tenancy)# threat-inspection profile IPS-POLICY
cedge(config-utd-mt-threat)# threat detection
cedge(config-utd-mt-threat)# policy balanced
cedge(config-utd-mt-threat)# whitelist profile Sig-white-list
cedge(config-utd-mt-threat)# logging level alert
cedge(config-utd-mt-threat)# exit
cedge(config-utd-multi-tenancy)# commit
Commit complete.
cedge(config-utd-multi-tenancy)#
cedge(config-utd-multi-tenancy)# policy utd-policy-vrf-1
cedge(config-utd-mt-policy)# vrf 511
cedge(config-utd-mt-policy)# all-interfaces
cedge(config-utd-mt-policy)# fail close
cedge(config-utd-mt-policy)# threat-inspection profile IPS-POLICY
cedge(config-utd-mt-policy)# exit
cedge(config-utd-multi-tenancy)# commit
Commit complete.
cedge(config-utd-multi-tenancy)#
cedge(config-utd-multi-tenancy)# end
cedge#
```

5. Asegúrese de realizar la configuración.

```
cedge#show run | section utd
utd multi-tenancy
utd engine standard multi-tenancy
threat-inspection whitelist profile Sig-white-list
generator id 3 signature id 22089
generator id 3 signature id 36208
```

```
threat-inspection profile IPS-POLICY
threat detection
policy balanced
logging level alert
whitelist profile Sig-white-list
policy utd-policy-vrf-1
vrf 511
all-interfaces
threat-inspection profile IPS-POLICY
fail close
app-hosting appid utd
app-vnic gateway0 virtualportgroup 0 guest-interface 0
guest-ipaddress 192.168.1.2 netmask 255.255.255.252
app-vnic gateway1 virtualportgroup 1 guest-interface 1
guest-ipaddress 192.168.2.2 netmask 255.255.255.252
app-resource package-profile urlf-low
start
cedge#
```

Verificación

1. Ejecute **show logging** y asegúrese de tener registros similares como se muestra a continuación.

```
*Mar 3 23:17:17.573: %LINK-3-UPDOWN: Interface VirtualPortGroup0, changed state to up *Mar 3
23:17:18.094: %LINK-3-UPDOWN: Interface VirtualPortGroup1, changed state to up *Mar 3
23:17:18.572: %LINEPROTO-5-UPDOWN: Line protocol on Interface VirtualPortGroup0, changed state
to up *Mar 3 23:17:19.095: %LINEPROTO-5-UPDOWN: Line protocol on Interface VirtualPortGroup1,
changed state to up *Mar 3 23:17:25.630: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Tunnel2000000001, changed state to up *Mar 3 23:19:36.863: %VIRT_SERVICE-5-ACTIVATION_STATE:
Successfully activated virtual service utd *Mar 3 23:19:37.577: %IM-6-START_MSG: R0/0: ioxman:
app-hosting: Start succeeded: utd started successfully Current state is running *Mar 3
23:19:38.318: %ONEP_BASE-6-CONNECT: [Element]: ONEP session Application:utd_snort Host:cedge
ID:6633 User: has connected. *Mar 3 23:19:50.428: %IOSXE_UTD-4-MT_CONFIG_DOWNLOAD: UTD MT
configuration download has started *Mar 3 23:20:06.460: %IOSXE_UTD-4-MT_CONFIG_DOWNLOAD: UTD MT
configuration download has completed *Mar 3 23:20:08.389: %IOSXE-5-PLATFORM: R0/0: cpp_cp:
QFP:0.0 Thread:011 TS:00000780131568867961 %SDVT-5-SDVT_HEALTH_UP: Service node is up for
channel Threat Defense. Current Health: Green, Previous Health: Down
```

> **Nota**: El estado actual cambia de **Abajo** a **Verde** si la configuración se ha realizado correctamente.

2. Ejecute estos comandos para verificar la instalación de UTD.

```
cedge#show app-hosting list App id State ----------------------------------------------------
-- utd RUNNING >>> State change from Deployed to Running cedge#show utd engine standard version
UTD Virtual-service Name: utd IOS-XE Recommended UTD Version: 1.0.16_SV2.9.16.1_XE17.3 IOS-XE
Supported UTD Regex: ^1\.0\.([0-9]+)_SV(.*)_XE17.3$ UTD Installed Version:
1.0.16_SV2.9.16.1_XE17.3 cedge#show virtual-service version name utd running Virtual service utd
running version: Name : UTD-Snort-Feature Version : 1.0.16_SV2.9.16.1_XE17.3 >>>> Changed from
NONE to "1.0.16_SV2.9.16.1_XE17.3" after config. cedge# cedge#show virtual-service Virtual
Service Global State and Virtualization Limits: Infrastructure version : 1.7 Total virtual
services installed : 1 Total virtual services activated : 1 >>>>>>>>> Now it is activated
```

Troubleshoot

En esta sección encontrará información que puede utilizar para solucionar problemas de configuración.

Comandos útiles

```
show platform software device-mode
show app-hosting list
show virtual-service version name utd running
show utd engine standard version
show utd engine standard status
show virtual-service
```

Información Relacionada

- Guía de configuración de seguridad: Unified Threat Defence, Cisco IOS XE 17
- Guía de configuración de seguridad: Unified Threat Defence, Cisco IOS XE 16
- UTD para plataformas y restricciones compatibles con SDWAN.
- Instale UTD con vManage.

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