

適用於Cisco Unified Intelligence Center (CUIC)的Citrix NetScaler負載平衡器配置

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簡介

本文檔介紹使用Citrix NetScaler load balancer for CUIC的配置步驟。

必要條件

需求

思科建議您瞭解以下主題：

- CUIC
- Citrix Netscaler

採用元件

本文中的資訊係根據以下軟體和硬體版本：

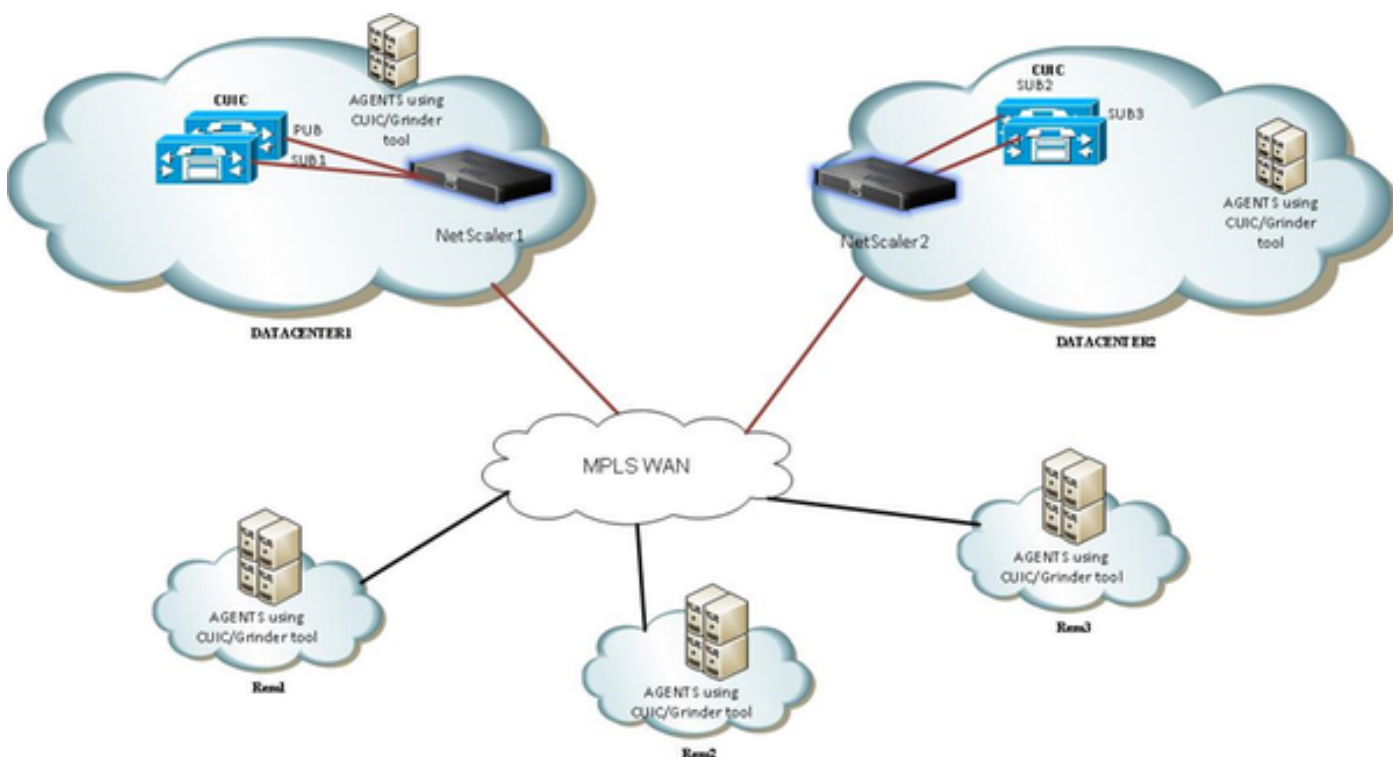
- CUIC 11.0(1)
- Citrix NS：裝置版：Citrix NetScaler 1000v（10.1內部版本125.8）

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。如果您的網路正在作用，請確保您已瞭解任何指令可能造成的影響。

背景資訊

CUIC是一個靈活且直觀的基於Web的報告平台，可提供您相關業務資料的報告。藉助CUIC，您可以建立全面的資訊門戶，在整個組織中開發和共用聯絡中心報告和控制台。在大型CUIC部署中，Citrix NetScaler 1000v（負載均衡器）用於對CUIC超文本傳輸協定(HTTP)和超文本傳輸協定安全(HTTPS)流量進行負載均衡。

網路圖表



使用HTTP/HTTPS訪問統一情報中心報告

在CUIC伺服器中停用HTTP時，這是到不同埠的HTTP流。

Client

CUIC Server

Port 80	Port 8081	Port 8444
---------	-----------	-----------

GET /

302 Moved Temporarily
Location: <http://<cuic ip>:8081/<cuic>>

GET /<cuic>

302 Moved Temporarily
Location: <http://<cuic ip>:8081/<cuic/>>

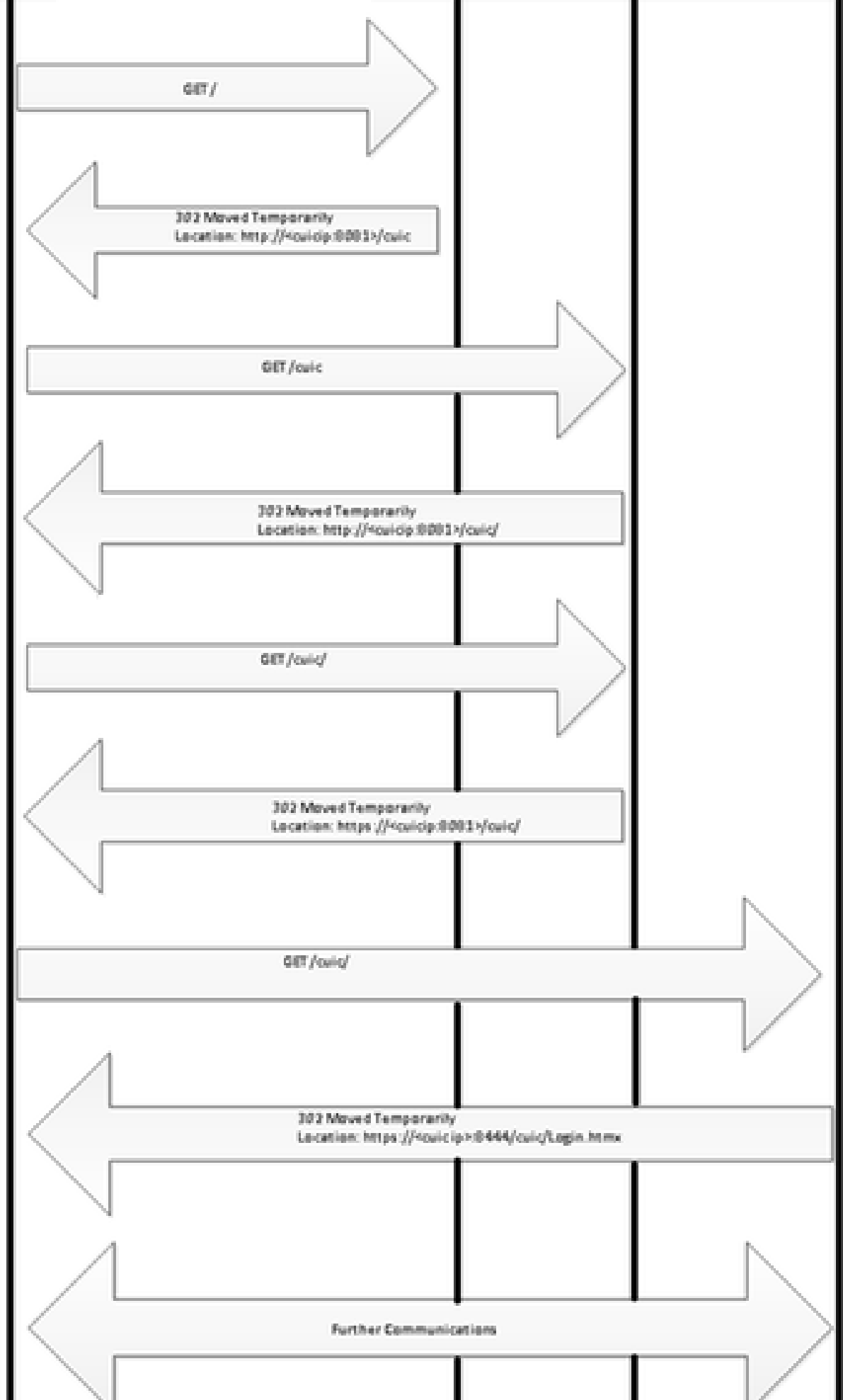
GET /<cuic/>

302 Moved Temporarily
Location: <https://<cuic ip>:8081/<cuic/>>

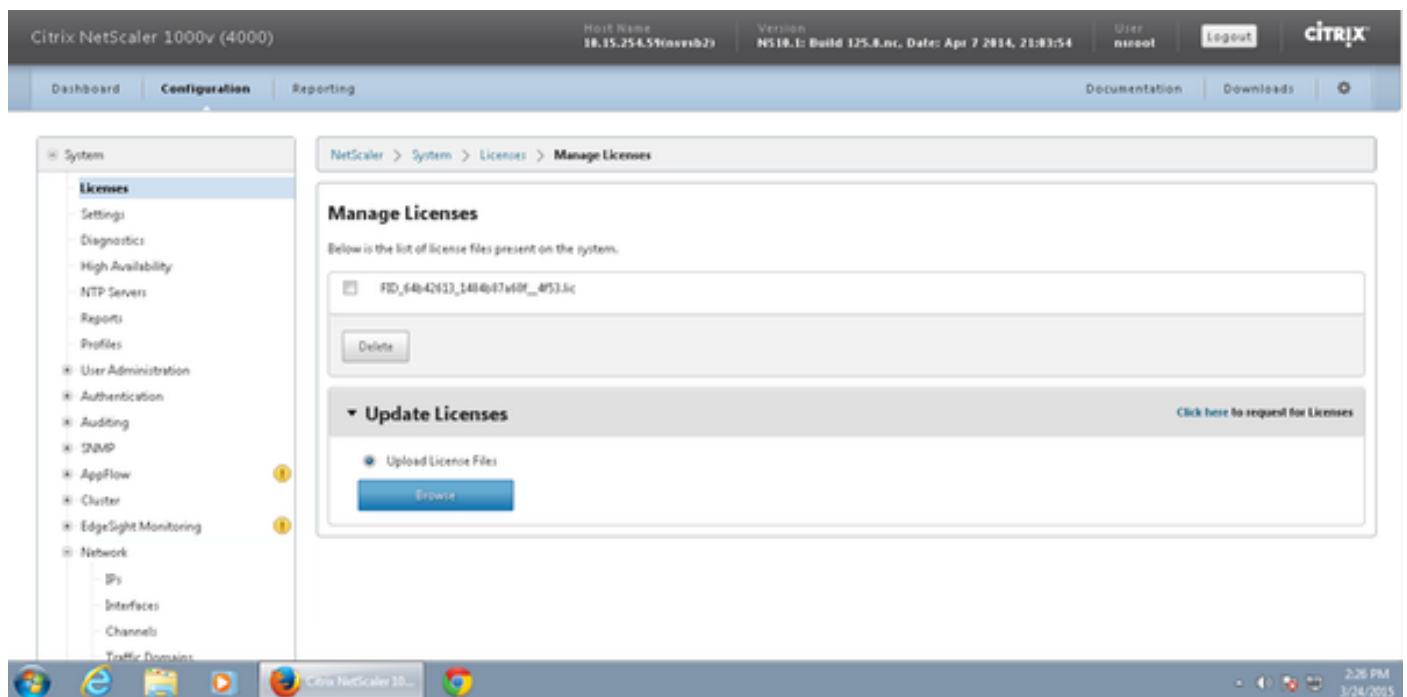
GET /<cuic/>

302 Moved Temporarily
Location: <https://<cuic ip>:8444/<cuic/>Login.html>

Further Communications

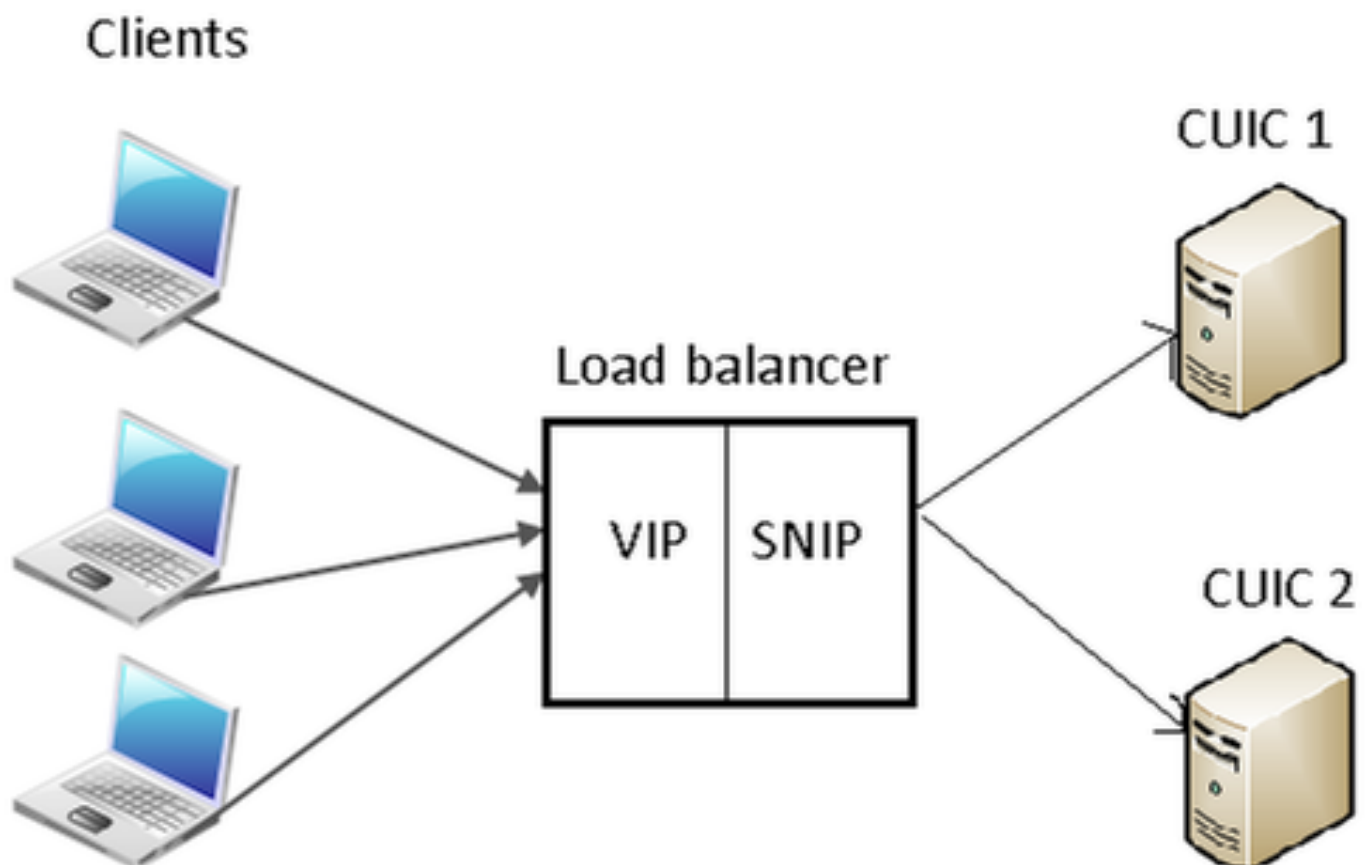


導航到系統>許可證>管理許可證>更新許可證



網路設定

客戶端透過虛擬IP (VIP)與負載平衡器通訊，負載平衡器透過其子網IP (SNIP)與CUIC通訊。



按一下System > Network > IPs > IPv4

IP Address	Traffic Domain ID	State	Type	Mode	ARP	ICMP	Virtual Server
10.15.254.59	0	Enabled	NetScaler IP	Active	ENABLED	ENABLED	-N/A-
10.10.2.58	0	Enabled	Subnet IP	Active	ENABLED	ENABLED	-N/A-
10.10.2.61	0	Enabled	Virtual IP	Active	ENABLED	ENABLED	ENABLED

建立子網IP

步驟 1. 按一下Add以增加IP地址，然後選擇Type作為Subnet IP。

步驟 2. 按一下Create建立所需的IP地址。

IP Address: 10 . 10 . 2 . 58 Netmask: 255 . 255 . 255 . 0

Type: Subnet IP Mode: Active

Virtual Router ID: ICMP Response*: NONE

ARP Response*: NONE Traffic Domain ID:

Options

ARP ICMP Virtual Server Dynamic Routing

Host Route

Enable

Gateway IP: Metric:

OSPF LSA Type

TYPE5 TYPE1 Area:

Vserver RHI Level

NONE ONE_VSERVER ALL_VSERVERS

Application Access Controls

Enable Management Access control to support the below listed applications.

Buttons: ? Create Close

建立VIP

步驟 1. 按一下Add以增加IP地址，然後選擇Type作為Virtual IP。

步驟 2. 按一下Create建立所需的IP地址。

Configure IP ✕

IP Address	10 . 10 . 2 . 61	Netmask	255 . 255 . 255 . 255
Type	Virtual IP	Mode	Active
Virtual Router ID		ICMP Response*	NONE
ARP Response*	NONE	Traffic Domain ID	

Options

ARP ICMP Virtual Server Dynamic Routing

Host Route

Enable

Gateway IP: 0 . 0 . 0 . 0 Metric: 0

OSPF LSA Type

TYPE5 TYPE1 Area:

Vserver RHI Level

NONE ONE_VSERVER ALL_VSERVERS

Application Access Controls

Enable Management Access control to support the below listed applications.

? Create Close

建立路由

如果需要，請建立HTTP/HTTPS請求進入負載均衡器的網路路由。

Configure Route ✕

Network	10 . 3 . 4 . 0
Netmask	255 . 255 . 255 . 0
Traffic Domain ID	<input type="text" value=""/>
NULL Route	<input type="radio"/> Yes <input checked="" type="radio"/> No
Gateway	10 . 10 . 2 . 1
Distance	1
Weight	1
Cost	0

Route Advertisement
Global State DISABLED

Over-ride Global

Protocol

OSPF
 RIP
 BGP
 ISIS

Monitored Static Route

?

Create

Close

按一下Create建立所需的路由。

HTTPS負載平衡配置

要建立虛擬伺服器條目（CUIC中每個埠一個），需要監控三個埠（HTTP埠80. 8081和HTTPS埠8444）。每個虛擬伺服器條目都是從客戶端接收HTTP流量（訪問CUIC報告）的IP和埠組合。

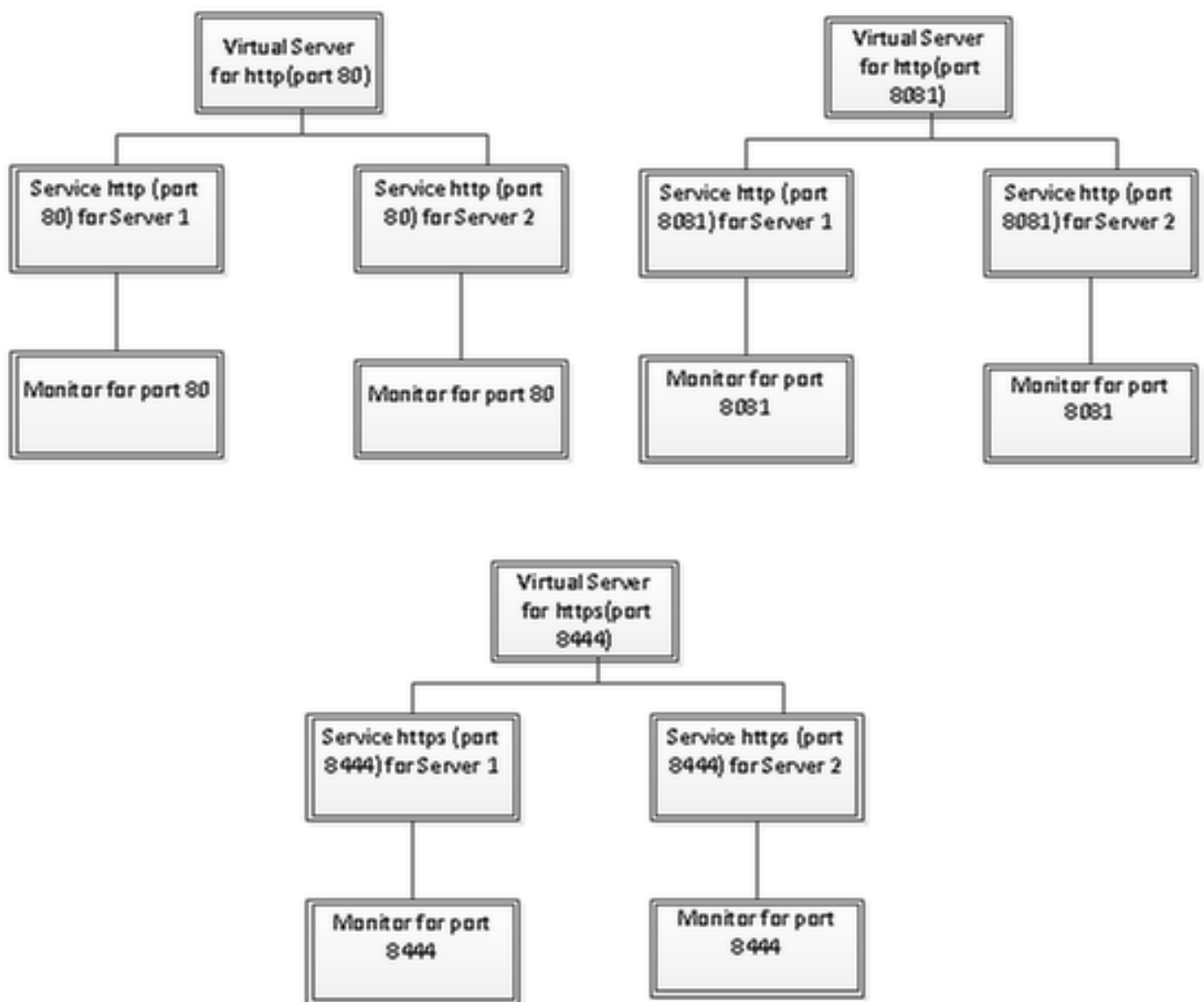
虛擬伺服器必須與伺服器連結，才能傳送其負載流量。若要檢查伺服器監視器的健全狀態，需要將它們指定給每個伺服器。使用監控器，負載會檢測伺服器(CUIC)故障，並將傳入流量重新分配到運行良好的伺服器以滿足請求。

因此，關聯為「虛擬伺服器」(Virtual Server)->「服務和伺服器」(Service and Server)->「監視器」(Monitor)。

配置摘要：

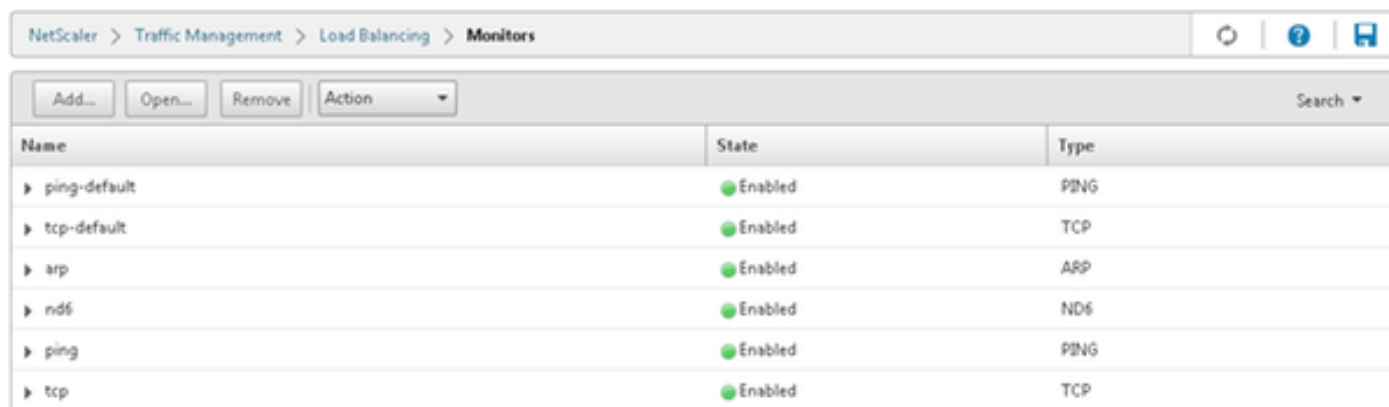
- 建立監視器
- 建立伺服器
- 建立具有伺服器關聯的服務
- 將每項服務連結到相應的監視器
- 建立虛擬伺服器
- 將對應服務與虛擬伺服器連結
- 建立永續性組並增加虛擬伺服器

此影像描述三個虛擬伺服器專案及其關聯。



建立監視器

導航到流量管理>負載均衡>監控

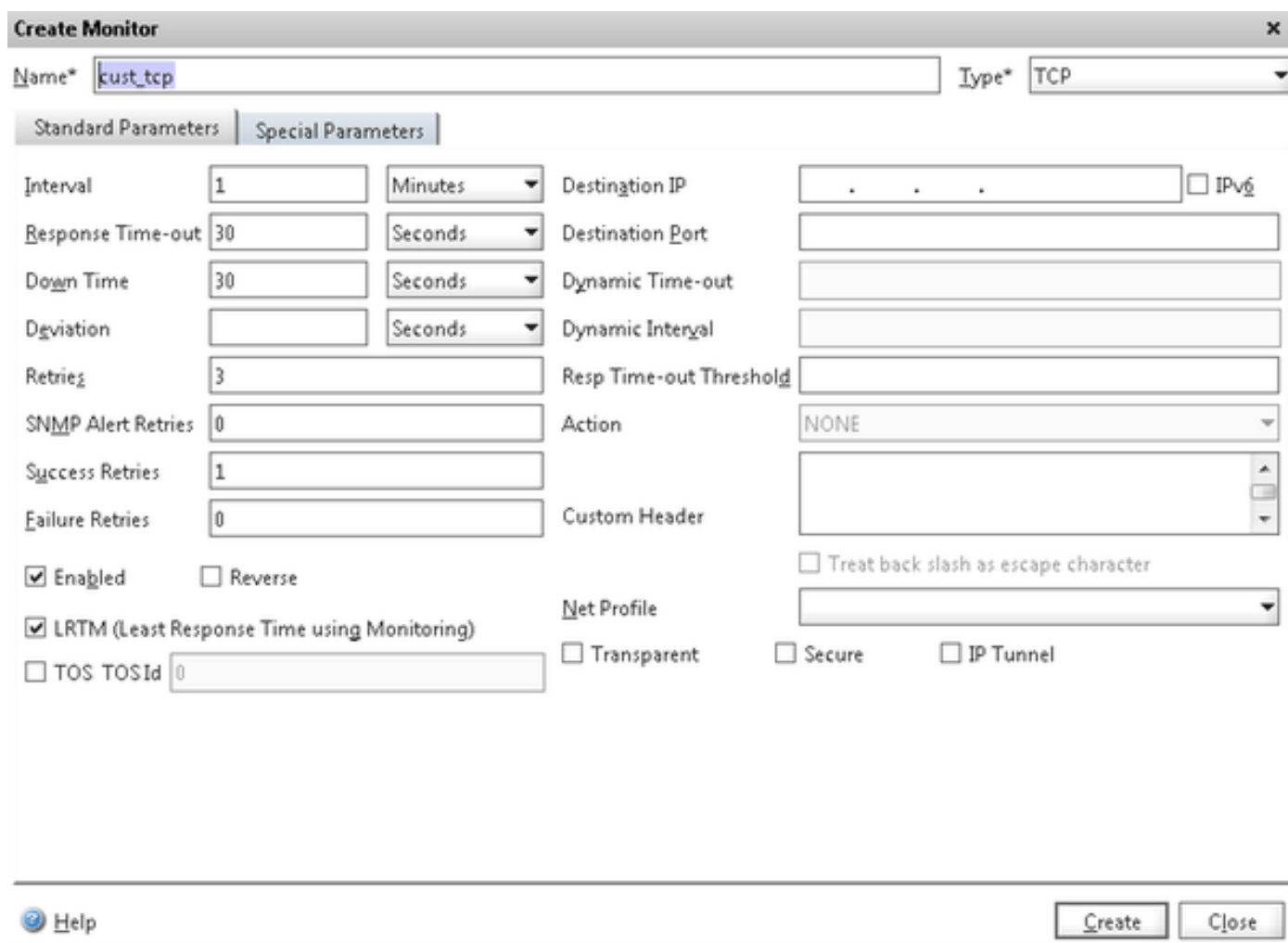


Name	State	Type
ping-default	Enabled	PING
tcp-default	Enabled	TCP
arp	Enabled	ARP
nd6	Enabled	ND6
ping	Enabled	PING
tcp	Enabled	TCP

要建立監控器，請導航到Traffic Management > Load Balancing > Monitor，點選Add按鈕。為埠80、8081和8444建立了三種型別的監視器。

為http埠80建立監視器

選擇TCP作為型別，並相應地指定Interval、Response Time-out、Down Time、Retries等。按一下Create建立監控器。對於HTTPS，需要建立兩個監控器（每台伺服器一個）。



Create Monitor

Name* Type*

Standard Parameters | Special Parameters

Interval	<input type="text" value="1"/> Minutes	Destination IP	<input type="text" value="."/> <input type="checkbox"/> IPv6
Response Time-out	<input type="text" value="30"/> Seconds	Destination Port	<input type="text"/>
Down Time	<input type="text" value="30"/> Seconds	Dynamic Time-out	<input type="text"/>
Deviation	<input type="text"/> Seconds	Dynamic Interval	<input type="text"/>
Retries	<input type="text" value="3"/>	Resp Time-out Threshold	<input type="text"/>
SNMP Alert Retries	<input type="text" value="0"/>	Action	<input type="text" value="NONE"/>
Success Retries	<input type="text" value="1"/>	Custom Header	<input type="text"/>
Failure Retries	<input type="text" value="0"/>	<input type="checkbox"/> Treat back slash as escape character	
<input checked="" type="checkbox"/> Enabled <input type="checkbox"/> Reverse		Net Profile	<input type="text"/>
<input checked="" type="checkbox"/> LRTM (Least Response Time using Monitoring)		<input type="checkbox"/> Transparent	<input type="checkbox"/> Secure <input type="checkbox"/> IP Tunnel
<input type="checkbox"/> TOS TOSId <input type="text" value="0"/>			

Create Monitor [X]

Name* Type* HTTP

Standard Parameters | Special Parameters

Interval Destination IP IPv6

Response Time-out Destination Port

Down Time Dynamic Time-out

Deviation Dynamic Interval

Retries Resp Time-out Threshold

SNMP Alert Retries Action

Success Retries Custom Header

Failure Retries Treat back slash as escape character

Enabled Reverse

LRTM (Least Response Time using Monitoring)

TOS TOSId Net Profile

Transparent Secure IP Tunnel

Help

對於HTTPS型別監視器，配置特殊引數部分。如果對HTTP請求的響應為200或302，此監視器將報告成功。

在CUIC中停用HTTP時，應輸入302，否則為200。為了處理這兩類情況，第200和302段都包括在內。

Configure Monitor



Name*

http_8081

Type HTTP

Standard Parameters

Special Parameters

HTTP Request

HEAD /cuic

Treat back slash as escape character

Response Codes

200

302

Add

Remove

Create Monitor [X]

Name* Type* HTTP-ECV

Standard Parameters | Special Parameters

Interval	<input type="text" value="10"/>	Seconds	Destination IP	<input type="text" value=". . ."/>	<input type="checkbox"/> IPv6
Response Time-out	<input type="text" value="9"/>	Seconds	Destination Port	<input type="text"/>	
Down Time	<input type="text" value="30"/>	Seconds	Dynamic Time-out	<input type="text"/>	
Deviation	<input type="text"/>	Seconds	Dynamic Interval	<input type="text"/>	
Retries	<input type="text" value="3"/>		Resp Time-out Threshold	<input type="text"/>	
SNMP Alert Retries	<input type="text" value="0"/>		Action	NONE	
Success Retries	<input type="text" value="1"/>		Custom Header	<input type="text"/>	
Failure Retries	<input type="text" value="2"/>			<input type="checkbox"/> Treat back slash as escape character	
<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Reverse		Net Profile	<input type="text"/>	
<input checked="" type="checkbox"/> LRTM (Least Response Time using Monitoring)			<input type="checkbox"/> Transparent	<input checked="" type="checkbox"/> Secure	<input type="checkbox"/> IP Tunnel
<input type="checkbox"/> TOS	TOSId <input type="text" value="0"/>				

Help [Create] [Close]

對於HTTPS型別監視器，配置特殊引數部分。僅當響應包含字串In Service時，此監視器才會報告成功。

Configure Monitor



Name*

Type HTTP-ECV

Standard Parameters

Special Parameters

Send String

Treat back slash as escape character

Receive String

Treat back slash as escape character

Create Monitor x

Name* Type*

Standard Parameters | Special Parameters

Interval	<input type="text" value="10"/>	<input type="text" value="Seconds"/>	Destination IP	<input type="text" value=". . ."/>	<input type="checkbox"/> IPv6
Response Time-out	<input type="text" value="9"/>	<input type="text" value="Seconds"/>	Destination Port	<input type="text"/>	
Down Time	<input type="text" value="30"/>	<input type="text" value="Seconds"/>	Dynamic Time-out	<input type="text"/>	
Deviation	<input type="text"/>	<input type="text" value="Seconds"/>	Dynamic Interval	<input type="text"/>	
Retries	<input type="text" value="3"/>		Resp Time-out Threshold	<input type="text"/>	
SNMP Alert Retries	<input type="text" value="0"/>		Action	<input type="text" value="NONE"/>	
Success Retries	<input type="text" value="1"/>		Custom Header	<input type="text"/>	
Failure Retries	<input type="text" value="2"/>			<input type="checkbox"/> Treat back slash as escape character	
<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Reverse		Net Profile	<input type="text"/>	
<input checked="" type="checkbox"/> LRTM (Least Response Time using Monitoring)			<input type="checkbox"/> Transparent	<input checked="" type="checkbox"/> Secure	<input type="checkbox"/> IP Tunnel
<input type="checkbox"/> TOS TOSId	<input type="text" value="0"/>				

Help

Create Monitor x

Name* Type* HTTP-ECV

Standard Parameters | Special Parameters

Send String

GET https://10.10.2.47:8444/cuic/probe

Treat back slash as escape character

Receive String

In Service

Treat back slash as escape character

建立伺服器

伺服器代表CUIC節點。負載均衡器所服務的每個CUIC節點都需要一個伺服器條目。

NetScaler > Traffic Management > Load Balancing > Servers ↻ ? 📄

Action
Search ▾

Name	State	IPAddress / Domain	Traffic Domain ID
ATL-CUIC-SUB4	● Enabled	10.10.2.46	0
ATL-CUIC-SUB5	● Enabled	10.10.2.47	0

25 Per Page ▾
 1 - 2 of 2
1

要建立伺服器，請導航到Traffic Management > Load Balancing > Servers，然後按一下Add按鈕。

Create Server ✕

Server Name*

IP Address Domain Name

IPAddress* IPv6

Traffic Domain ID

Translation IP Address

Translation Mask

Resolve Retry (secs)

IPv6 Domain

Enable after Creating

Comments

? Create Close

Create Server ✕

Server Name*

IP Address Domain Name

IPAddress* IPv6

Traffic Domain ID

Translation IP Address

Translation Mask

Resolve Retry (secs)

IPv6 Domain

Enable after Creating

Comments

? Create Close

建立服務

要建立監控器，請導航到Traffic Management > Load Balancing > Services，然後按一下Add。

Name	State	IP Address/Domain Name	Traffic Domain ID	Port	Protocol	Max Clients	Max Requests	Cache Type
▶ cuic-http80-sub4	Up	10.10.2.46	0	80	HTTP	0	0	SERVER
▶ cuic-http80-sub5	Up	10.10.2.47	0	80	HTTP	0	0	SERVER
▶ cuic-http80801-sub4	Up	10.10.2.46	0	8081	HTTP	0	0	SERVER
▶ cuic-http80801-sub5	Up	10.10.2.47	0	8081	HTTP	0	0	SERVER
▶ cuic-https-sub4	Up	10.10.2.46	0	8444	SSL_BRIDGE	0	0	SERVER
▶ cuic-https-sub5	Up	10.10.2.47	0	8444	SSL_BRIDGE	0	0	SERVER

如果沒有相關聯的監視器，則預設監視器可能會顯示在配置的框中。在不刪除該監控器的情況下，從可用清單中(在此映像中為cust_tcp)選擇正確的監控器，然後按一下Add將其移到Configured清單中。按一下「OK」(確定)。下次開啟此頁面時，只會顯示選取的監視器。預設監視器會消失。發生這種情況的原因是；服務始終需要與受監控的關聯。如果未配置任何內容，負載均衡器會提供一個預設監視器，但當使用者選擇受監控的監視器時，負載均衡器將刪除預設監視器。

Configure Service



Service Name* Server*

Protocol* Port*

Traffic Domain

Service State UP Number of Active Clients

Enable Health Monitoring AppFlow Logging

Available

Monitors
arp
nd6
ping
tcp
http
tcp-ecv
http-ecv
udp-ecv
dns
ftp

Configured

Monitors	Weight	State
cust_tcp	1	<input checked="" type="checkbox"/>

State: UP
Probes: 68341 Failed [Total: 5614 Current: 0]
Last Response: Success - TCP syn+ack received.
Response Time: 0.357 millisec

Comments

Help

Configure Service

Service Name* Server*

Protocol* Port*

Traffic Domain

Service State UP Number of Active Clients

Enable Health Monitoring AppFlow Logging

Thresholds

Max Requests

Max Bandwidth (kbits)

Max Clients

Monitor Threshold

Idle Time-out (secs)

Client

Server

Settings

Use Source IP Client Keep-Alive TCP Buffering Compression

Client IP Header

Comments

Configure Service

Service Name* Server*

Protocol* Port*

Traffic Domain

Service State UP

Number of Active Clients

Enable Health Monitoring AppFlow Logging

Available

Monitors
arp
nd6
ping
tcp
http
tcp-ecv
http-ecv
udp-ecv
dns
ftp

Configured

Monitors	Weight	State
http_8081	1	<input checked="" type="checkbox"/>

State: UP
Probes: 68352 Failed [Total: 5630 Current: 0]
Last Response: Success - HTTP response code 302 received.
Response Time: 0.754 millisec

Comments

Configure Service



Service Name* Server*

Protocol* Port*

Traffic Domain

Service State UP Number of Active Clients

Enable Health Monitoring AppFlow Logging

Thresholds

Max Requests	<input type="text" value="0"/>	Max Bandwidth (kbits)	<input type="text" value="0"/>
Max Clients	<input type="text" value="0"/>	Monitor Threshold	<input type="text" value="0"/>

Idle Time-out (secs)

Client	<input type="text" value="180"/>	Server	<input type="text" value="360"/>
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Settings

Use Source IP Client Keep-Alive TCP Buffering Compression

Client IP Header

Comments

Help

Configure Service



Service Name* Server*

Protocol* Port*

Traffic Domain

Service State UP DOWN Number of Active Clients

Enable Health Monitoring AppFlow Logging

Available

Monitors
arp
nd6
ping
tcp
http
tcp-ecv
http-ecv
udp-ecv
dns
ftp

Configured

Monitors	Weight	State
cust_sub4_https-ecv	1	<input checked="" type="checkbox"/>

State: UP
 Probes: 384901 Failed [Total: 8624 Current: 0]
 Last Response: Success - Pattern found in response.
 Response Time: 1.463 millisec

Comments

Configure Service

Service Name* Server*

 Protocol* Port*

 Traffic Domain

 Service State UP Number of Active Clients

 Enable Health Monitoring AppFlow Logging

Monitors | Policies | Profiles | **Advanced** | SSL Settings

Thresholds

Max Requests	<input type="text" value="0"/>	Max Bandwidth (kbits)	<input type="text" value="0"/>
Max Clients	<input type="text" value="0"/>	Monitor Threshold	<input type="text" value="0"/>

Idle Time-out (secs)

Client Server

Settings

Use Source IP Client Keep-Alive TCP Buffering Compression

Client IP Header

Comments

建立虛擬伺服器

NetScaler > Traffic Management > Load Balancing > Virtual Servers

Name	State	Effective State	IP Address	Traffic Domain ID	Port	Protocol	Method	Persistence	% Health
▶ DC2-CUBC-HTTP	● Up	● Up	10.10.2.61	0	80	HTTP	LEASTCONNECTION	SOURCEIP	100.00% 2 UP/0 DOWN
▶ DC2-CUBC-HTTP8081	● Up	● Up	10.10.2.61	0	8081	HTTP	LEASTCONNECTION	SOURCEIP	100.00% 2 UP/0 DOWN
▶ DC2-CUBC-HTTPS	● Up	● Up	10.10.2.61	0	8444	SSL_BRIDGE	LEASTCONNECTION	SOURCEIP	100.00% 2 UP/0 DOWN

25 Per Page | 1 - 3 of 3 | 1

要建立虛擬伺服器，請導航到Traffic Management > Load Balancing > Virtual Servers，然後按一下Add。

檢查需要與此虛擬服務關聯的服務。

在「方法和永續性」頁籤中，選擇「方法」作為「最少連線」，「永續性」作為「SOURCEIP」，「超時」作為40分。這是因為預設的歷史報告重新整理速率設定為30分鐘；您需要設定一些大於重新整理速率的值。如果您要為歷史報表配置不同的刷新率，則還要更改此值。

Configure Virtual Server (Load Balancing)

Name* IP Address Based IP Pattern Based

Protocol* HTTP IP Address* 10 . 10 . 2 . 61

Network VServer Range 1 Port* 80

Enable DNS64 Bypass AAAA Requests Traffic Domain ID

State UP Disable AppFlow Logging

Services | Service Groups | Policies | Method and Persistence | Advanced | Profiles | SSL Settings

LB Method

Method Least Connection New Service Startup Request Rate PER_SECOND

Increment Interval

Current Method: Round Robin
Reason: Bound service's state changed to UP

Persistence Persistence SOURCEIP Time-out (min) 40

Backup Persistence Persistence NONE Time-out (min) 2 IPv4 Netmask IPv6 Mask Length 128

Configure Virtual Server (Load Balancing)

Name* IP Address Based IP Pattern Based

Protocol* HTTP IP Address* 10 . 10 . 2 . 61

Network VServer Range 1 Port* 8081

Enable DNS64 Bypass AAAA Requests Traffic Domain ID

State UP Disable AppFlow Logging

Services | Service Groups | Policies | Method and Persistence | Advanced | Profiles | SSL Settings

[Activate All](#) [Deactivate All](#)

Active	Service Name	IP Address	Port	Protocol	State	Weight	Dynamic Weight
<input checked="" type="checkbox"/>	cuic-http80801-sub4	10.10.2.46	8081	HTTP	<input checked="" type="radio"/> UP	1	0
<input checked="" type="checkbox"/>	cuic-http80801-sub5	10.10.2.47	8081	HTTP	<input checked="" type="radio"/> UP	1	0
<input type="checkbox"/>	cuic-http80-sub4	10.10.2.46	80	HTTP	<input checked="" type="radio"/> UP	1	
<input type="checkbox"/>	cuic-http80-sub5	10.10.2.47	80	HTTP	<input checked="" type="radio"/> UP	1	

Comments

Configure Virtual Server (Load Balancing)

Name* IP Address Based IP Pattern Based

Protocol* IP Address*

Network VServer Range Port*

Enable DNS64 Bypass AAAA Requests Traffic Domain ID

State UP AppFlow Logging

Services | Service Groups | Policies | Method and Persistence | Advanced | Profiles | SSL Settings

[Activate All](#) [Deactivate All](#)

Active	Service Name	IP Address	Port	Protocol	State	Weight	Dynamic Weight
<input checked="" type="checkbox"/>	cuic-https-sub4	10.10.2.46	8444	SSL_BRIDGE	<input checked="" type="radio"/> UP	<input type="text" value="1"/>	0
<input checked="" type="checkbox"/>	cuic-https-sub5	10.10.2.47	8444	SSL_BRIDGE	<input checked="" type="radio"/> UP	<input type="text" value="1"/>	0

Comments

建立永續性組

要建立永續性組，請導航到Traffic Management > Load Balancing > Persistency Groups，然後按一下Add。

選擇Method作為Least Connection，Persistence作為SOURCEIP，Time-out作為40分鐘。這是因為預設的歷史報告重新整理速率設定為30分鐘；您需要設定一些大於重新整理速率的值。如果您要為歷史報表配置不同的刷新率，則還要更改此值。

由於每個CUIC伺服器在三個埠上偵聽，因此您需要在此處包括全部三個虛擬伺服器。如果客戶端向已傳送到特定CUIC伺服器的HTTP 80埠發出請求，則來自該客戶端的所有指向埠8081、8444的請求都將路由到同一個CUIC。

Configure Persistency Group

Group Name: PgroupDC2

Persistence*: SOURCEIP

IPv4 Netmask: 255 . 255 . 255 . 255

IPv6 Mask Length: 128

Time-out: 40

Backup Persistence*: NONE

Virtual Server Name*

Configured (3)	Remove All
DC2-CUIC-HTTP	-
DC2-CUIC-HTTP8081	-
DC2-CUIC-HTTPS	-

+ Add

OK Close

參考

1. <http://support.citrix.com/proddocs/topic/netscaler/ns-gen-netscaler-wrapper-con.html>

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）。