

# Citrix NetScaler负载均衡Cisco Unified智力中心(CUIC)的平衡器配置

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## Introduction

本文描述配置步骤使用Citrix NetScaler负载均衡器配置CUIC。

## Prerequisites

## Requirements

Cisco 建议您了解以下主题：

- CUIC
- Citrix Netscaler

## Components Used

本文档中的信息基于以下软件和硬件版本：

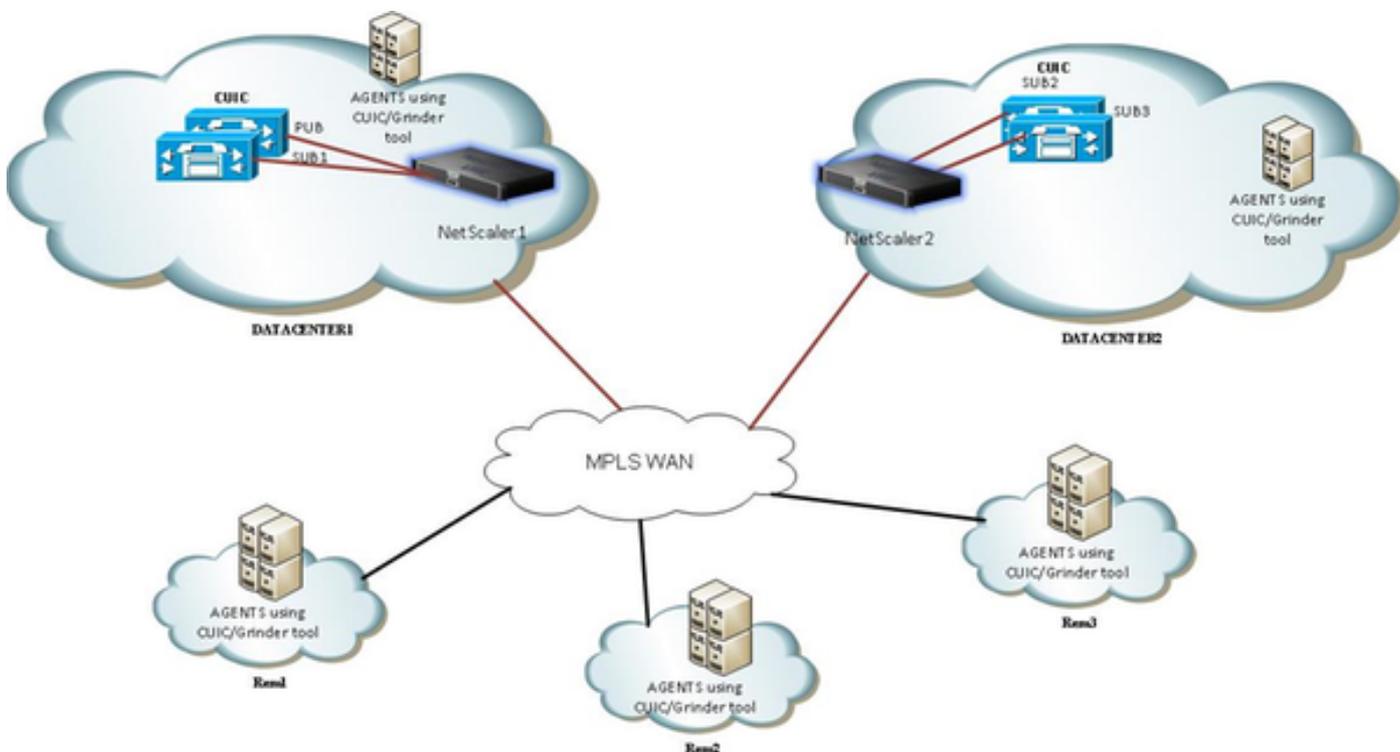
- CUIC 11.0(1)
- Citrix NS : 工具版本 : Citrix NetScaler 1000v (10.1修造125.8)

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

## 背景信息

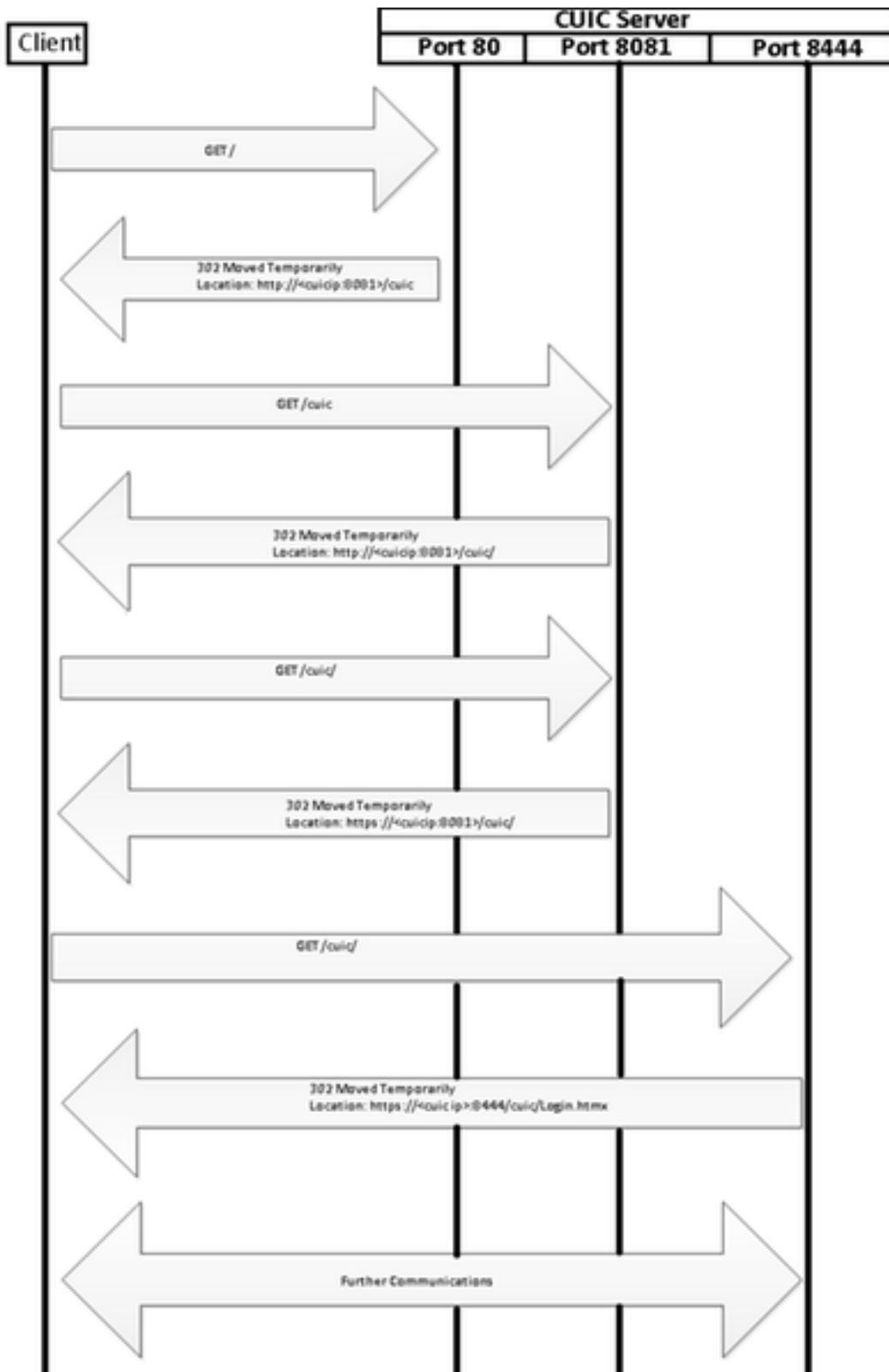
CUIC是提供您报告在相关业务数据的一个灵活和直观基于Web的报道的平台。使用CUIC，您能创建联系中心报告和显示板被开发并且共享在您的组织中的全面信息门户。在大CUIC配置，Citrix NetScaler 1000v (负载均衡器)用于装载平衡CUIC超文本传输协议(HTTP)和超文本传输协议安全的(HTTPS)数据流。

## Network Diagram



## 访问与HTTP/HTTPS的统一的智力中心报告

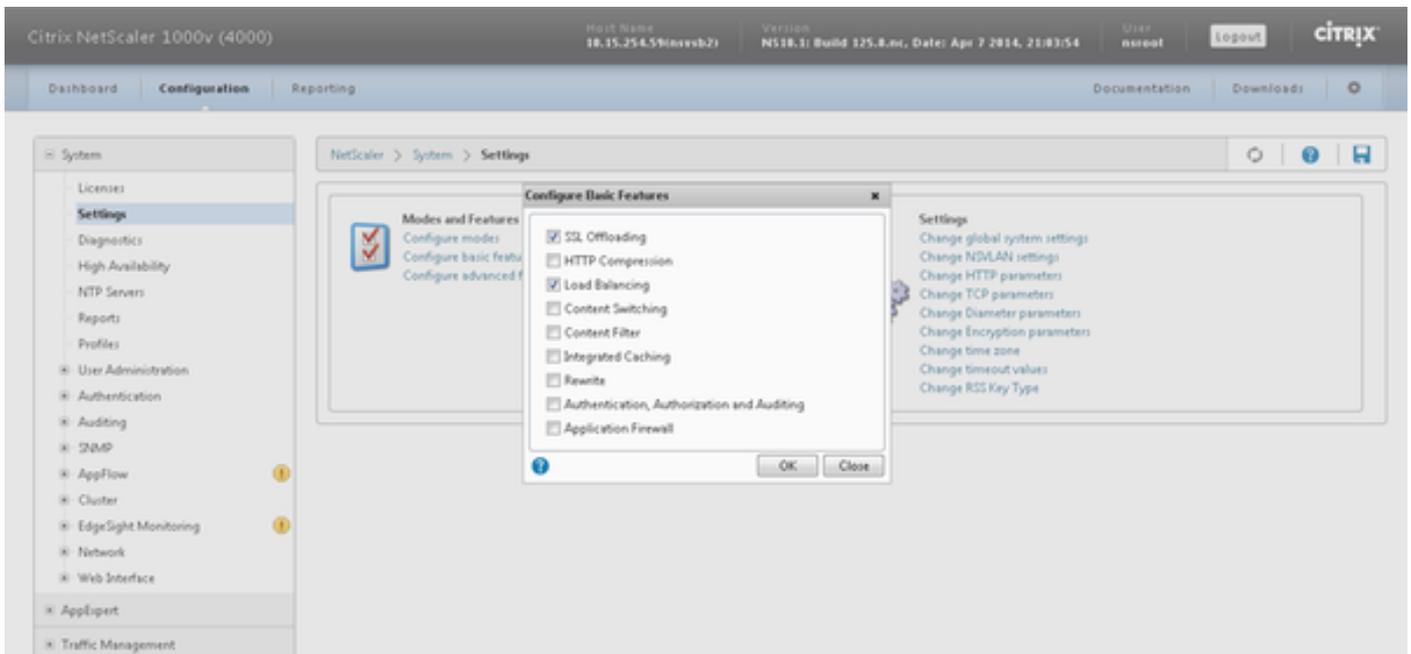
当HTTP在CUIC服务器时被禁用，这是对不同的端口的HTTP流。



## 配置

### 系统设置

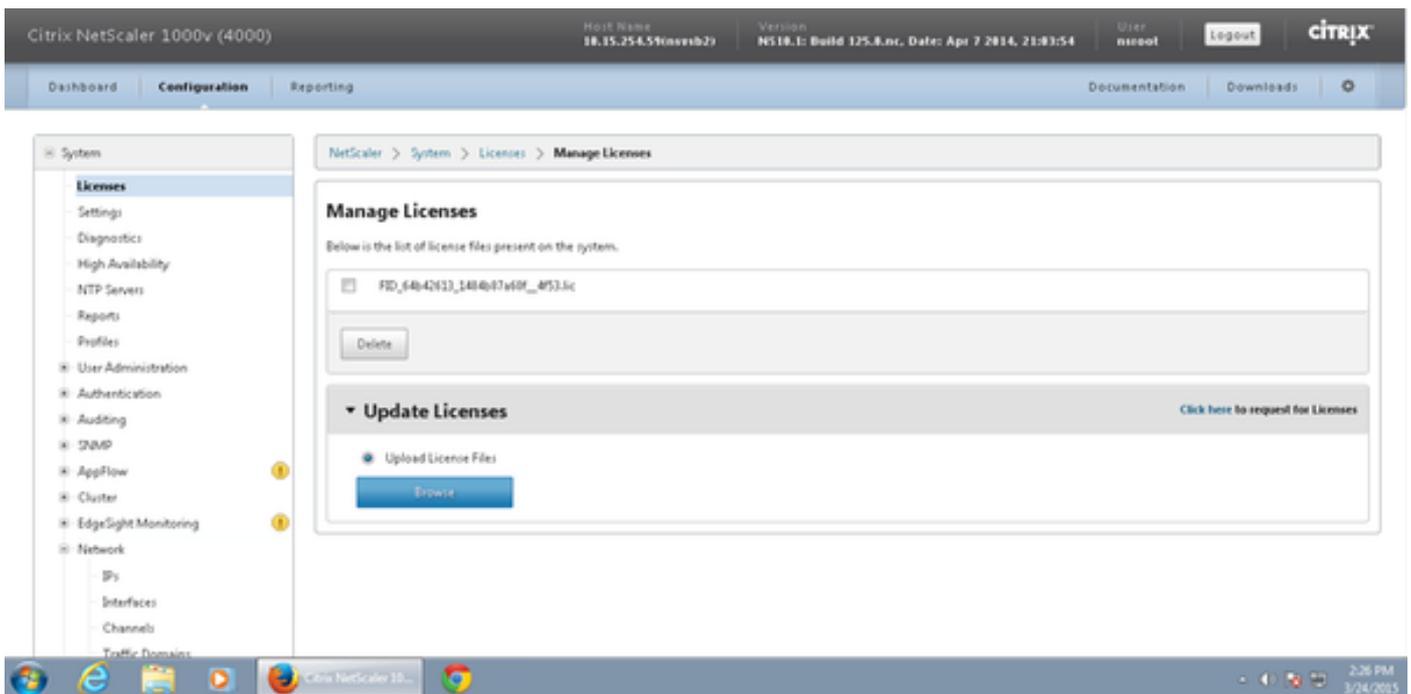
Configuration>设置>配置基本的功能



## 加载许可证

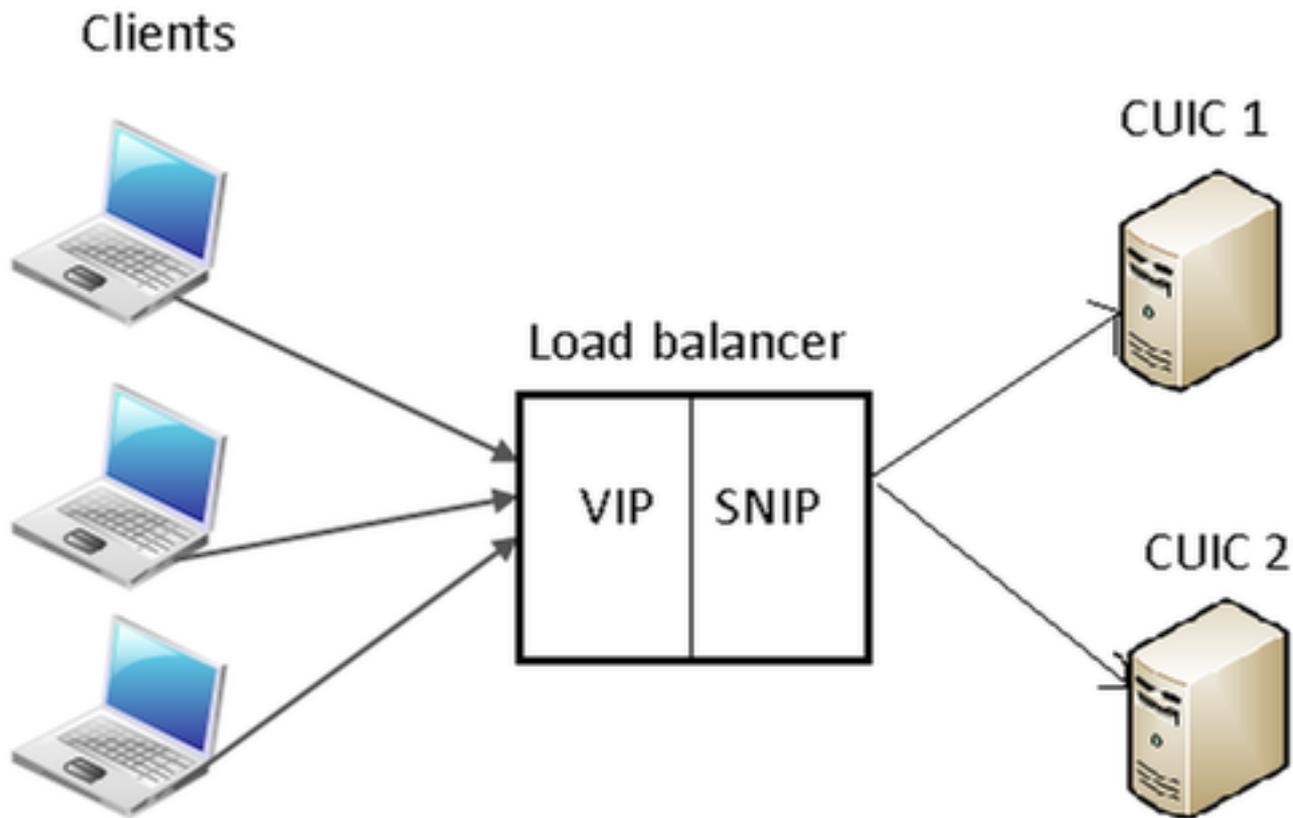
没有许可证SSL也许不工作。

连接对系统>许可证>管理许可证> Update license



## 网络配置

客户端谈通过Virtual IP (VIP)装载平衡器，并且负荷平衡器与CUIC谈通过其子网IP (剪)。



点击系统>网络> IP > IPv4s

NetScaler > System > Network > IPs > IPv4s

IPv4s IPv6s

Add... Open... Remove Action Search

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

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## 创建子网IP

步骤1.点击Add添加IP地址，选择类型作为子网IP。

步骤2.点击创建创建所需的IP地址。

**Configure IP**

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.

? Create Close

## 创建VIP

步骤1. 点击**添加**添加IP地址，选择**类型**作为**虚拟IP**。

步骤2. 点击**创建**创建所需的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

---

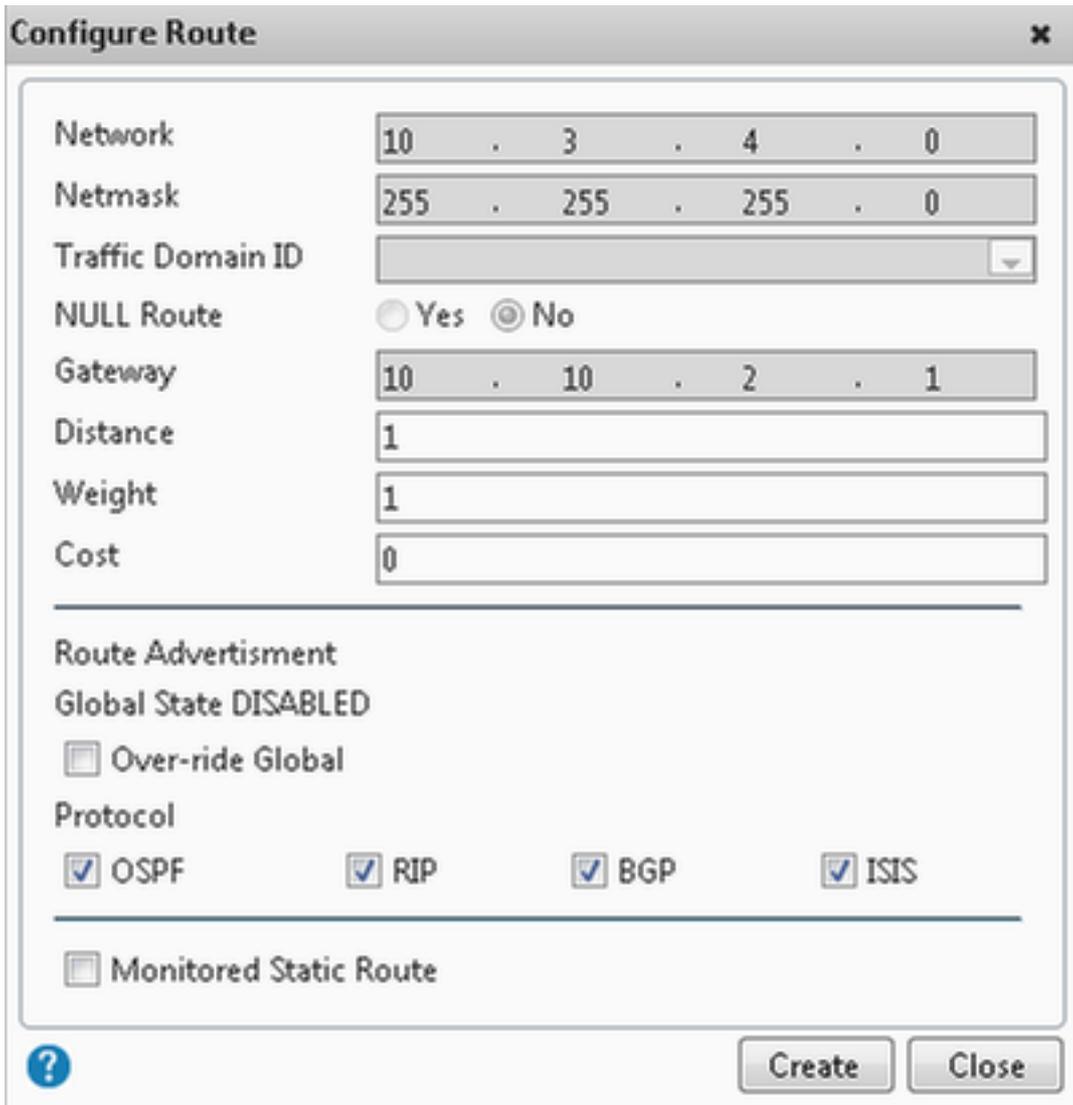
**Application Access Controls**

Enable Management Access control to support the below listed applications.

? Create Close

## 创建路由

若需要，请创建路由对网络从HTTP/HTTPS请求来装载平衡器。



The image shows a 'Configure Route' dialog box with the following fields and options:

- Network: 10 . 3 . 4 . 0
- Netmask: 255 . 255 . 255 . 0
- Traffic Domain ID: (empty dropdown)
- NULL Route:  Yes  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

Buttons: Create, Close

点击**创建**创建期望路由。

## HTTPS负载均衡配置

创建虚拟服务器条目，一个在CUIC的每个端口的，将被监控的三端口(HTTP端口80。8081和HTTPS端口8444)。每个虚拟服务器条目是从客户端收到HTTP数据流的IP和端口组合(访问CUIC报告)。

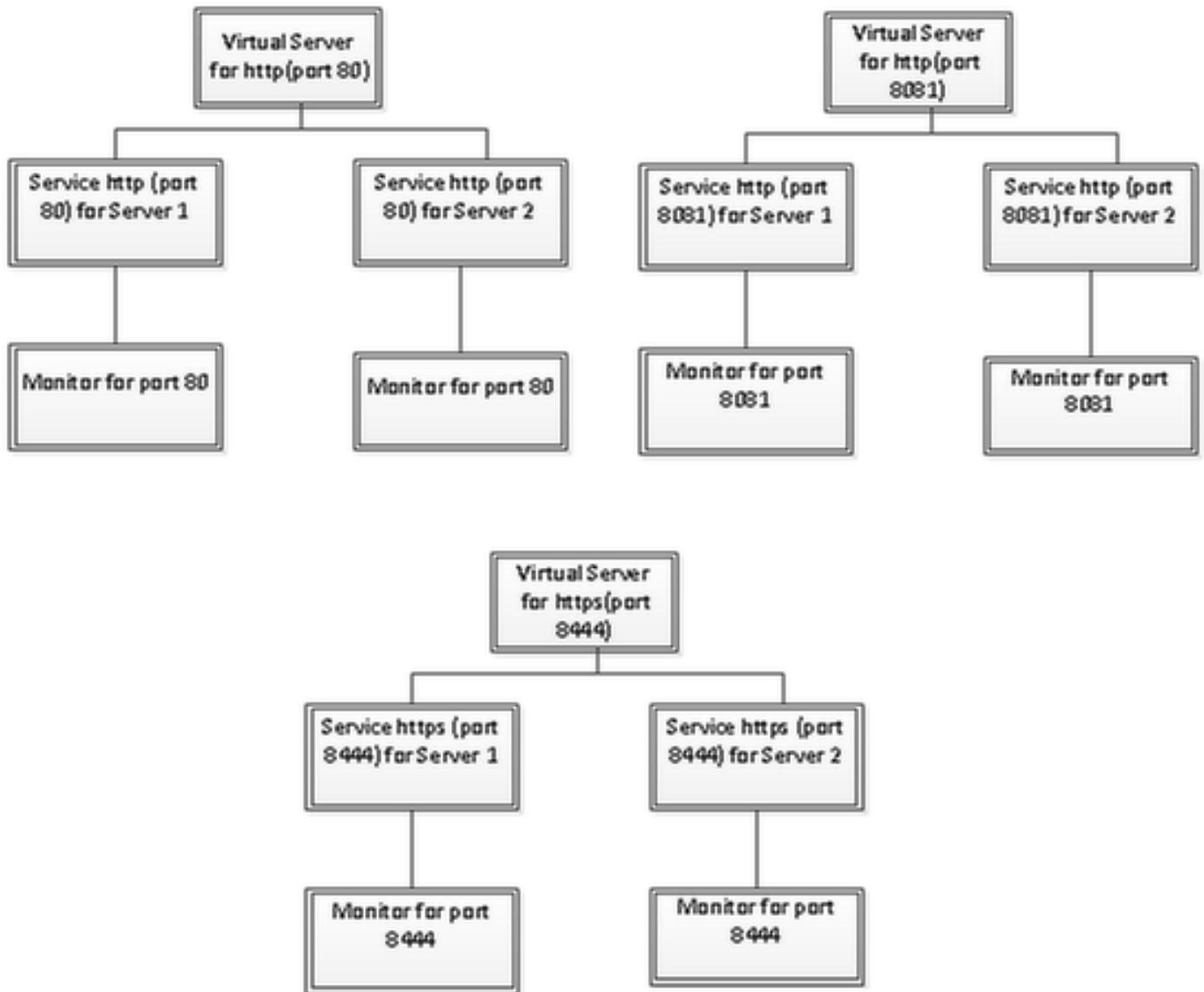
要求虚拟服务器与服务器联接，发送负荷数据流他们。要检查服务器的监控程序的健康状态，他们需要分配到每个服务器。使用监控程序，负荷发现服务器(CUIC)故障并且重新分配流入的数据流到在服务请求的身体好的服务器。

因此关联是虚拟Server->Service和Server->Monitor。

配置汇总：

- 创建监控程序
- 创建服务器
- 用服务器关联创建服务
- 与对应的监控程序连接每项服务
- 创建虚拟服务器
- 与虚拟服务器连接对应的服务
- 创建持续时间组并且添加虚拟服务器

此镜像表示三个虚拟服务器条目和其关联。



## 创建监控程序

连接到流量管理>负载均衡>监控程序

NetScaler > Traffic Management > Load Balancing > Monitors

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

要创建监控程序，请连接到**流量管理>负载均衡>监控程序**，点击**Add**按钮。  
 监控程序的三种类型为端口80被创建，8081and 8444。

## 创建HTTP端口的80监控程序

选择**类型**作为**TCP**并且相应地指定**间隔**、**响应超时**、**停工期**，**重试次数**等。  
 点击**创建**创建监控程序。HTTPS，两监控程序需要被创建(一个每个服务器)。

**Create Monitor** x

Name\*  Type\* TCP

Standard Parameters | Special Parameters

Interval	<input type="text" value="1"/>	Minutes	Destination IP	<input type="text" value="."/> <input type="text" value="."/> <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	<span style="border: 1px solid gray; padding: 2px;">NONE</span>	
Success Retries	<input type="text" value="1"/>		Custom Header	<input style="width: 100%;" type="text"/>	
Failure Retries	<input type="text" value="0"/>		Net Profile	<span style="border: 1px solid gray; padding: 2px;"> </span>	
<input checked="" type="checkbox"/> Enabled	<input type="checkbox"/> Reverse		<input type="checkbox"/> Transparent	<input type="checkbox"/> Secure	<input type="checkbox"/> IP Tunnel
<input checked="" type="checkbox"/> LRTM (Least Response Time using Monitoring)					
<input type="checkbox"/> TOS	<input type="text" value="0"/>	TOSId			
<input type="button" value="Create"/> <input type="button" value="Close"/>					

**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 [Create] [Close]

对于HTTPS请键入监控程序，配置特殊参数部分。如果对HTTP请求的回应是200或302，此监控程序报告成功。

当HTTP在CUIC时被禁用，302预计否则200。要处理两个情况200和302请是包括的。

### Configure Monitor

Name\*  Type HTTP

Standard Parameters | Special Parameters

HTTP Request

Treat back slash as escape character

Response Codes

### Create Monitor

Name\*  Type\* HTTP-ECV

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  Net Profile

LRTM (Least Response Time using Monitoring)  Transparent  Secure  IP Tunnel

TOS TOSId

对于HTTPS请键入监控程序，配置特殊参数部分。只有当回应**在使用中**，包含一个字符串此监控程序报告成功。

**Configure Monitor** [X]

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



Name\*

Type\*

Standard Parameters

Special Parameters

Interval

Response Time-out

Down Time

Deviation

Retries

SNMP Alert Retries

Success Retries

Failure Retries

Enabled  Reverse

LRTM (Least Response Time using Monitoring)

TOS TOSId

Destination IP   IPv6

Destination Port

Dynamic Time-out

Dynamic Interval

Resp Time-out Threshold

Action

Custom Header

Net Profile

Transparent

Secure  IP Tunnel

Treat back slash as escape character

Help

Create

Close

**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

Create
Close

## 创建服务器

服务器表示CUIC节点。对于负载均衡器服务的每个CUIC节点需要服务器项。

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

Add...
Open...
Remove
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 ▾

要创建服务器，请连接到流量管理>负载均衡>服务器，点击Add按钮。

**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

## 创建服务

要创建监控程序，请连接对流量管理>负载均衡> Services，点击Add。

NetScaler > Traffic Management > Load Balancing > Services

Add... Open... Remove Action Search

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

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当没有被关联时的监控程序，默认监控程序在被配置的机箱也许显示。没有去除那，请选择正确的监控程序从从可用的列表的可用的监控程序(在此镜像它是cust\_tcp)并且点击添加移动它向配置列表。单击 Ok。下时候，当打开此页，它显示仅所选的监控程序。默认监控程序消失。这发生，因为;服务总是需要与被监控的产生关联。如果没有配置什么都，负荷平衡器提供一个默认值一，但是，当用户选择那么时被监控的装载平衡器去掉默认监控程序。

### Configure Service

Service Name\* cuic-http80-sub4 Server\* ATL-CUIC-SUB4 (10.10.2.46)

Protocol\* HTTP Port\* 80

Traffic Domain 0

Service State  UP Number of Active Clients

Enable Health Monitoring  AppFlow Logging

Monitors Policies Profiles Advanced SSL Settings

Available		Configured		
Monitors		Monitors	Weight	State
arp		cust_tcp	1	<input checked="" type="checkbox"/>
nd6				
ping				
tcp				
http				
tcp-ecv				
http-ecv				
udp-ecv				
dns				
ftp				

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

Comments

Help OK Close

# Configure Service

Service Name\*  Server\*   
Protocol\*  Port\*   
Traffic Domain

Service State  UP  Down  
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

Help

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

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 millisc

Comments

Help

# Configure Service

Service Name\*  Server\*   
Protocol\*  Port\*   
Traffic Domain

Service State  UP  DOWN 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

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

Help

**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	<input type="text" value="180"/>	Server	<input type="text" value="360"/>
--------	----------------------------------	--------	----------------------------------

Settings

Use Source IP  Client Keep-Alive  TCP Buffering  Compression

Client IP Header

Comments

## 创建虚拟服务器

NetScaler > Traffic Management > Load Balancing > Virtual Servers

Name	State	Effective State	IP Address	Traffic Domain ID	Port	Protocol	Method	Persistence	% Health
DC2-CUBC-HTTP	<input checked="" type="radio"/> Up	<input checked="" type="radio"/> Up	10.10.2.61	0	80	HTTP	LEASTCONNECTION	SOURCEIP	100.00% 2 UP/0 DOWN
DC2-CUBC-HTTP8081	<input checked="" type="radio"/> Up	<input checked="" type="radio"/> Up	10.10.2.61	0	8081	HTTP	LEASTCONNECTION	SOURCEIP	100.00% 2 UP/0 DOWN
DC2-CUBC-HTTPS	<input checked="" type="radio"/> Up	<input checked="" type="radio"/> 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

要创建虚拟服务器，连接到**流量管理>负载均衡>虚拟服务器**，和点击**添加**。  
 检查需要与此虚拟服务产生关联的服务。

在**方法**和**持续时间**选项，请选择**方法**作为**最少连接**，**持续时间**作为**SOURCEIP**和**超时**作为**40分钟**。  
 这是因为默认历史报告的刷新率设置为30分钟;您比刷新率需要配置若干值极大。如果配置历史报告的另外刷新率，则请更改此值。

### 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

LB Method

Method  New Service Startup Request Rate

Increment Interval

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

Persistence

Persistence  Backup Persistence

Time-out (min)  Time-out (min)

IPv4 Netmask  IPv6 Mask Length

### 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

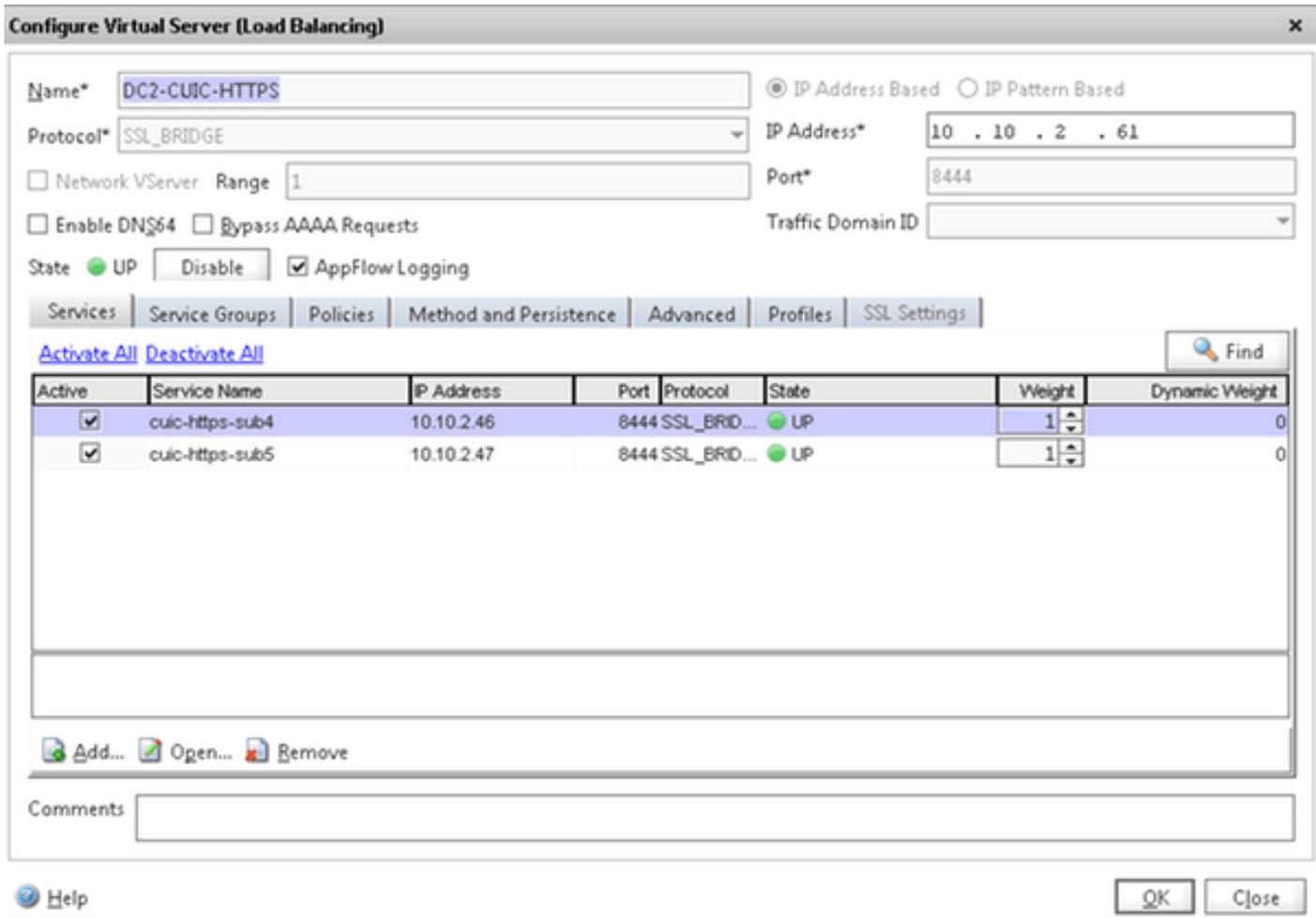
State  UP   AppFlow Logging

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-http80801-sub4	10.10.2.46	8081	HTTP	<input checked="" type="radio"/> UP	<input type="text" value="1"/>	0
<input checked="" type="checkbox"/>	cuic-http80801-sub5	10.10.2.47	8081	HTTP	<input checked="" type="radio"/> UP	<input type="text" value="1"/>	0
<input type="checkbox"/>	cuic-http80-sub4	10.10.2.46	80	HTTP	<input checked="" type="radio"/> UP	<input type="text" value="1"/>	
<input type="checkbox"/>	cuic-http80-sub5	10.10.2.47	80	HTTP	<input checked="" type="radio"/> UP	<input type="text" value="1"/>	

Comments



## 创建持续时间组

要创建持续时间组，请连接对流量管理>负载均衡>持续时间组，点击添加。

选择方法作为最少连接，持续时间作为SOURCEIP和超时作为40分钟。这是因为默认历史报告的刷新率设置为30分钟;您比刷新率需要配置若干值极大。如果配置历史报告的另外刷新率，则请更改此值。

因为每个CUIC服务器在三个端口监听，您需要包括全部三个虚拟服务器这里。如果对已经被发送到特定CUIC服务器的HTTP 80端口的客户端的要求，自瞄准对端口8081的该客户端的所有请求，8444路由对同样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

## 参考

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