

# How to Manage SSL Certificate Chains

## Description

This article describes how to manage SSL Certificate Chains. It is important to note that SSL Certificate Chains can be Added, Unassigned from an SSL Offload Profile and Deleted. They cannot be edited. If you need to make a change to the SSL Certificate Chain, you must delete it, and recreate it.

For more information on SSL Certificate Chains, See: [Introduction to Virtual Listeners / VIPs in MCP 2.0](#)

- [Add SSL Domain Certificate](#)
- [Unassign SSL Certificate Chain from an SSL Offload Profile](#)
- [Delete SSL Certificate Chain](#)

## Prerequisites:

### Add SSL Certificate Chain

1. User must have either Primary Administrator or Network Role
2. Network Domain must be an Advanced Network Domain
3. The certificate chain must be in PEM (ASCII) format.
  - a. There may be one or more certificates in the text, each:
    - i. Needs to start with "-----BEGIN CERTIFICATE-----"
    - ii. Needs to end with "-----END CERTIFICATE-----"
4. The input must NOT have any keys in PEM (ASCII) format
  - a. Input should not include: "-----BEGIN ENCRYPTED PRIVATE KEY-----" or "-----END ENCRYPTED PRIVATE KEY-----"
5. The SSL Certificate Chain must be valid
6. The SSL Certificate Chain Expiration Date must be valid
7. The maximum number of certificate elements (levels) inside the SSL Certificate Chain is 10
8. PKX/PKCS Unencrypted Formats are Acceptable
9. Limit of 100 Certificate Chains per Network Domain

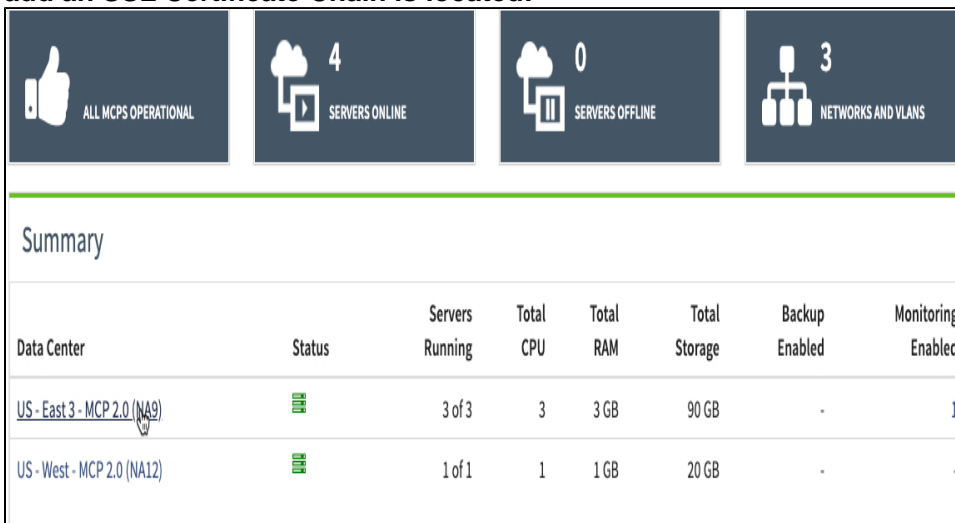
### Delete SSL Certificate Chain

1. User must have either Primary Administrator or Network role
2. SSL Certificate Chain ID is not currently used in an SSL Offload Profile



## Content / Solution:

### Add SSL Domain Certificate

1. **From the Home page, select the Data Center where the Network Domain on which you want to add an SSL Certificate Chain is located:**



The screenshot shows the MCP 2.0 Home page with four status cards: ALL MCPs OPERATIONAL, 4 SERVERS ONLINE, 0 SERVERS OFFLINE, and 3 NETWORKS AND VLANS. Below these is a 'Summary' table with columns for Data Center, Status, Servers Running, Total CPU, Total RAM, Total Storage, Backup Enabled, and Monitoring Enabled.

Data Center	Status	Servers Running	Total CPU	Total RAM	Total Storage	Backup Enabled	Monitoring Enabled
<a href="#">US - East 3 - MCP 2.0 (NA9)</a>		3 of 3	3	3 GB	90 GB	-	1
<a href="#">US - West - MCP 2.0 (NA12)</a>		1 of 1	1	1 GB	20 GB	-	-

- The Data Center dashboard will be displayed. Select the Network Domain on which you want to add an SSL Certificate Chain:

Name	Type	SNAT IPv4 Address	Actions
Network Domain 1 Department 1: R&D   Team: Documentation	Enterprise	168.128.250.3	[Refresh] [Delete]
Network Domain 2 Department 1: R&D   Team: Documentation	Advanced	168.128.3.45	[Refresh] [Delete]

- The Network Domain dashboard will be displayed:

**Network Domain 1**

Id: 043a31c0-3223-4c31-849e-074d69c024b7

Created: November 16, 2016

SNAT IPv4 Address: 165.180.9.10

Outside Transit VLAN IPv4 Subnet: 100.64.16.128/28

Outside Transit VLAN IPv6 Subnet: 2607:F480:1111:452::0:0:0/64

IPV4 CPNIC Gateway Address: 167.180.8.201

IPV6 CPNIC Gateway Address: 3368:2527:814:6172:181b:eb3d:d97f:c5f2

IPV4 Internet Gateway Address: 165.180.10.72

IPV6 Internet Gateway Address: cbe1:f9bb:992a:dd8e:8563:e9de:b75f:8024

Tags: Department 1: R&D | Team: Documentation

- Servers
- VLANs and Servers
- Firewall Rules
- Network Domain Static Routes and SNAT Exclusions
- Public IPv4 Addresses and NAT Rules
- Load Balancing / Virtual IPs
- Anti-Affinity Rules

- Click on the Load Balancing / Virtual IPs tab, then click on the Actions button and select Add SSL Certificate / Certificate Chain button:

Load Balancing / Virtual IPs

Actions:

- Add Virtual Listener
- Add Pool
- Add Nodes
- Add SSL Certificate / Certificate Chain**
- Create SSL Offload Profile

VIP	SSL	Name	Creation Date
		Unassigned SSL certificates	

5. The Add SSL Domain Certificate dialog will be displayed:

Add SSL Domain Certificate

Certificate Type ⓘ

SSL Domain Certificate

SSL Domain Certificate Name\* ⓘ

Description

Certificate Text\* ⓘ

Key\* ⓘ

Add another certificate

Create SSL Offload Profile

Cancel Add SSL Domain Certificate

6. Select SSL Certificate Chain from the Certificate Type drop-down menu:

Add SSL Domain Certificate

Certificate Type ⓘ

✓ SSL Domain Certificate

SSL Certificate Chain

SSL Domain Certificate Name\* ⓘ

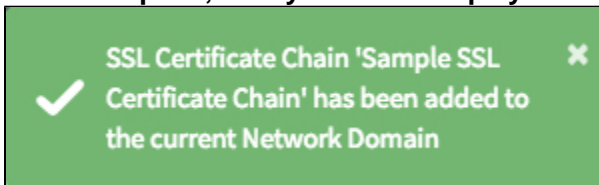
7. Fill out the form with the desired information:

- **Certificate Type** - SSL Certificate Chain
- **SSL Certificate Chain Name** - The Name must be unique within the Network Domain
- **Description** - The *optional* Description is limited to a maximum length of 255 characters.
- **Certificate Text** - The Certificate Text can contain up to 10 Certificates
  - The certificate chain must be in PEM (ASCII) format.
    - i. There may be one or more certificates in the text, each:
      1. Needs to start with "-----BEGIN CERTIFICATE-----"
      2. Needs to end with "-----END CERTIFICATE-----"
    - The input must NOT have any keys in PEM (ASCII) format
      - i. Input should not include: "-----BEGIN ENCRYPTED PRIVATE KEY-----" or "-----END ENCRYPTED PRIVATE KEY-----"
  - You can click the **Add another certificate** button to create another certificate, or
  - You can click the **Create SSL Offload Profile** button to create an SSL Offload Profile

- **Note:** You can choose either Add another certificate or Create SSL Offload Profile. You cannot select both.

8. Once the form has been filled out with the desired information, click the Add SSL Certificate Chain button:

9. Once complete, the system will display a success message:

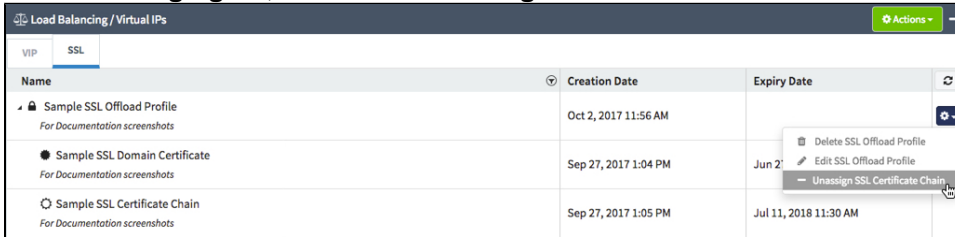


10. The SSL Certificate Chain will be displayed:

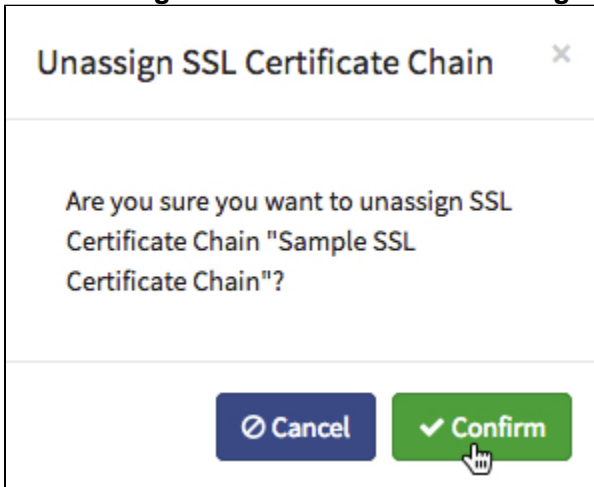
Name	Creation Date	Expiry Date	
Unassigned SSL certificate chains			
Sample SSL Certificate Chain For Documentation screenshots	Sep 27, 2017 12:27 PM	Jul 11, 2018 11:30 AM	

Unassign SSL Certificate Chain from an SSL Offload Profile

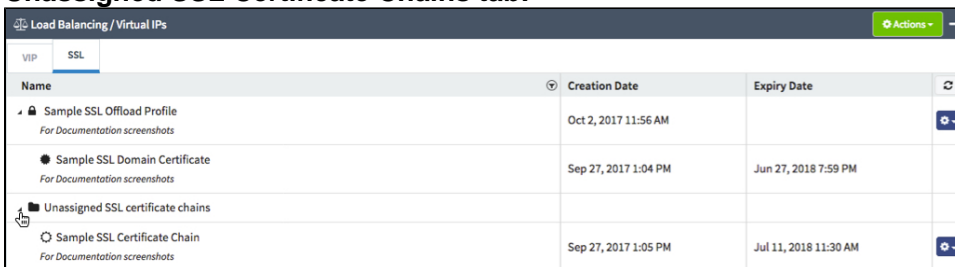
1. **Locate the SSL Certificate Chain that you want to un-assign from the SSL Offload Profile. Click on the Manage gear, and select Unassign SSL Certificate Chain:**



2. **The Unassign SSL Certificate Chain dialog will be displayed. Click Confirm:**

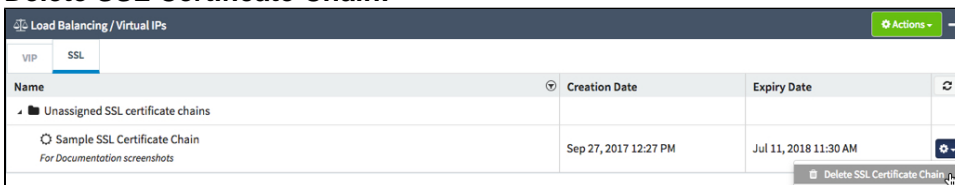


3. **The SSL Certificate Chain will be unassigned from the SSL Offload Profile. It will be added to the Unassigned SSL Certificate Chains tab:**

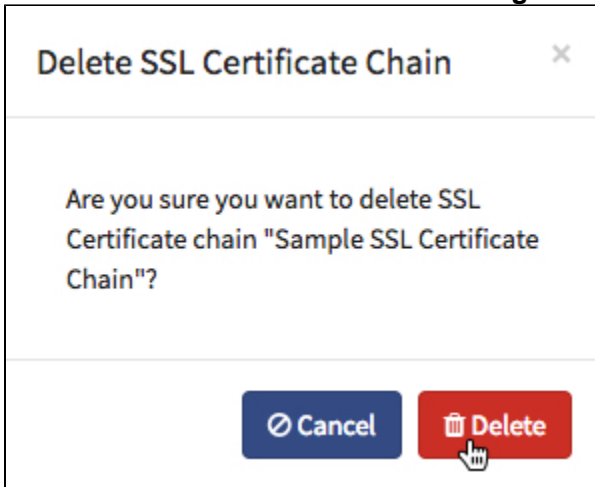


## Delete SSL Certificate Chain

1. **Locate the SSL Certificate Chain that you want to delete. Click on the Manage gear, and select Delete SSL Certificate Chain:**



2. The Delete SSL Certificate Chain dialog will be displayed. Click Delete:



3. The system will display a message indicating that the SSL Certificate Chain has been deleted:



4. The SSL Certificate Chain will be deleted:



## Recently Updated

- [How to Create a Virtual Listener on a Network Domain](#)
- [Introduction to Nodes at an MCP 2.0 Data Center Location](#)
- [How to Manage Virtual Listeners on a Network Domain](#)
- [Introduction to SSL Offload, including SSL Domain Certificate, SSL Certificate Chain, and SSL Offload Profiles](#)
- [How to Delete a Virtual Listener from a Network Domain](#)