

Creating and Activating LI Configuration for M-SBC


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 Related articles:

- [Address Context - LI-IPsec](#)

The EMS uses the **EMS CALEA** user role for all LI configuration operations from and to the SBC Configurator, and the **admin user** role for communicating over netconf to the SBC. The EMS creates the SBC CALEA user credentials automatically when a SBC (including the SBC Configurator) registers to it. Cloud SBC instances are registered dynamically in the EMS.

 A single CDC configuration is supported per cluster.

Prerequisites

To configure CDC for cloud M-SBC instance:

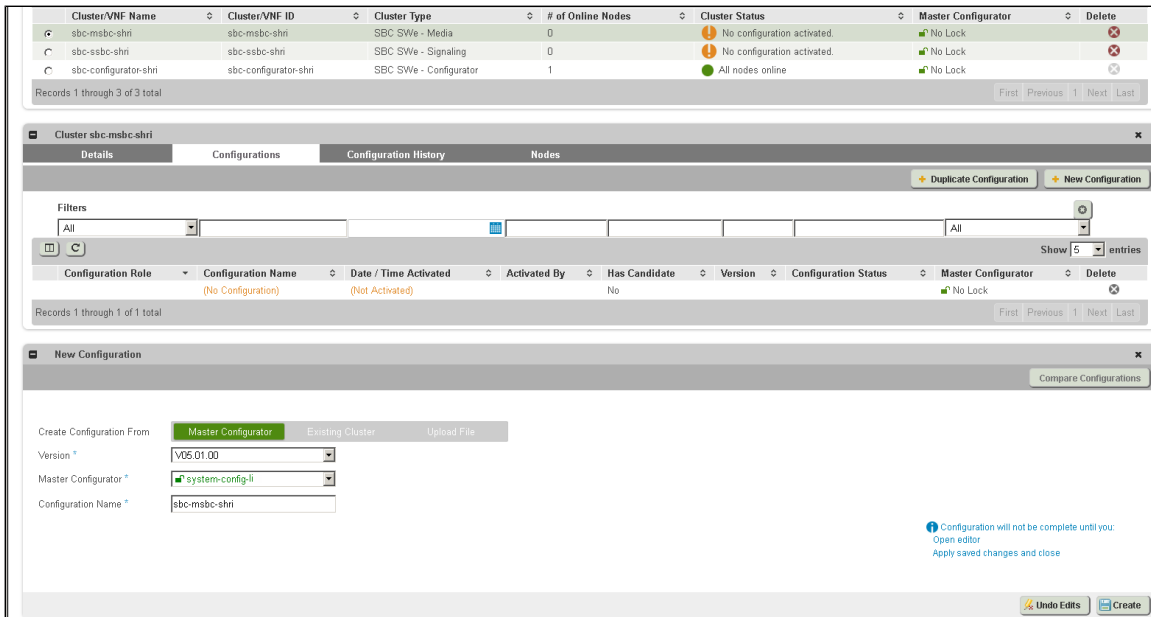
- Instantiate EMS SWe instance with LI interface support using the EMS_SA_HEAT_TEMPLATE_<name> Heat Template. For more information, refer to [EMS Standalone Instantiation for Geographical Redundancy \(GR\) Deployment](#).
- Create a Configurator cluster. For more information, refer to [Creating an SBC SWe Cluster](#).
- Create a Configurator instance. For more information, refer to [Instantiating SBC Configurator using Heat Template](#).

M-SBC Basic Configuration

To create basic configuration for M-SBC:

1. Log on to EMS as **admin** user.
2. Under **Network Mgmt**, click **Cluster / VNF Management**. The **Cluster/VNF Management** window is displayed.
3. Create M-SBC cluster. For more information, refer to [Creating an SBC SWe Cluster](#).
4. Click **Configurations** tab.
5. Click **New Configuration**. The **New Configuration** pane is displayed.

Figure 1: New Configuration



- Click **Master Configurator** tab.
- Select the version of the configuration from the **Version** drop-down.
- Select an SBC Configurator instance from the **Master Configurator** drop-down.
This node is used to create the configuration. The SBC Configurator nodes are displayed based on the version selected. Only unlocked SBC Configurator nodes are listed.
- Enter a name for the configuration in the **Configuration Name** field. The SBC configuration name can contain only letters, numbers, dashes (-), apostrophes ('), underscores (_), colons (:), and spaces.

! The cluster ID is set as the default name for the first configuration. You can modify the name. The name must be unique. The subsequent configurations are named with a combination of cluster name and some unique identifying information. The default name varies based on how the configuration is created.

- Click **Create**. A circular progress bar is displayed against the Master Configurator node. It takes around six minutes to load master configuration.

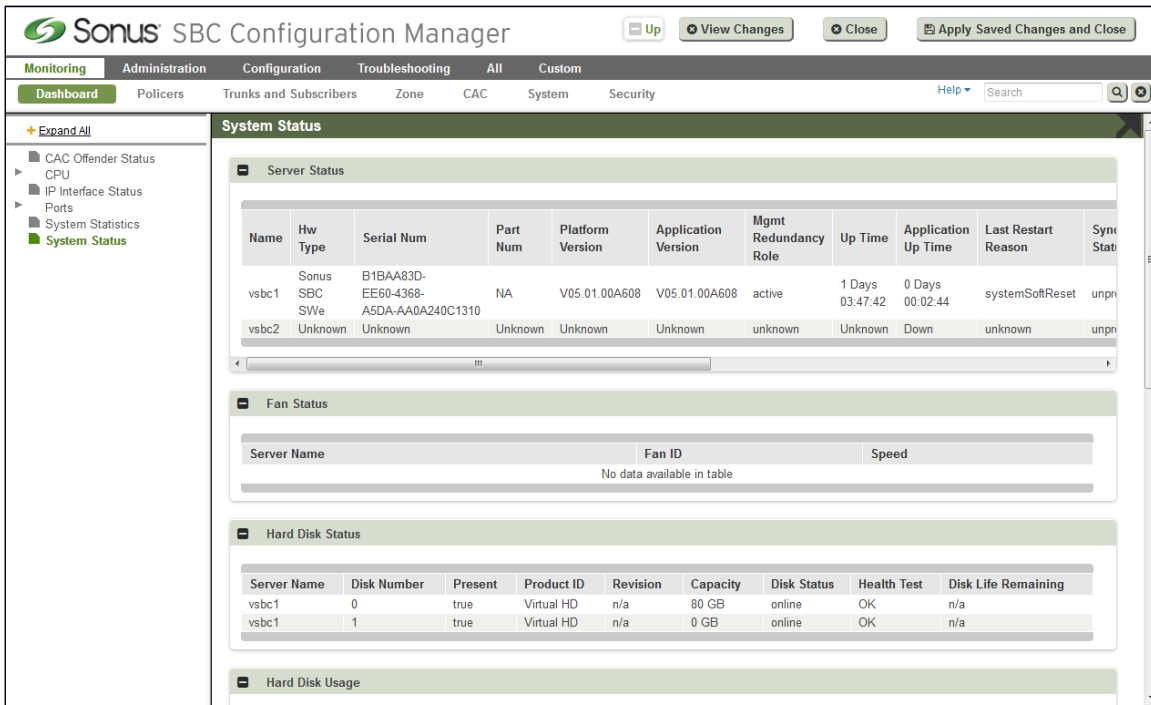
When the Master Configurator node is loaded, the **Open Editor** button is displayed next to the Master Configurator node.

Figure 2: Open Editor



- Click **Open Editor**. The **SBC Configuration Manager** window is displayed.

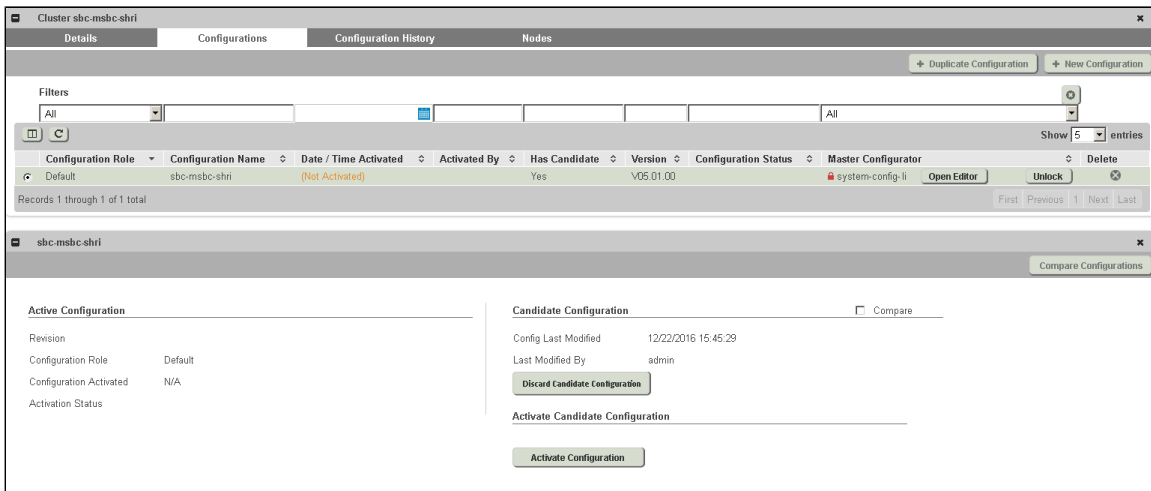
Figure 3: SBC Configuration Manager



12. Create the basic M-SBC configuration on the SBC configurator. For information on M-SBC configuration, refer to [Configuring M-SBC](#).
13. Click **Apply Saved Changes and Close**. A circular progress bar is displayed.

The configuration is saved on EMS SWe and the following window is displayed:

Figure 4: Locked Configurator



14. Create CDC configuration (Proceed to [Configuring CDC using EMS CALEA User Account](#)).

Configuring CDC using EMS CALEA User Account

For LI, the CDC configuration is performed using the CDC Configuration Manager through EMS. You can Create CDC information only as EMS `calea` user from the EMS CDC configuration window.

Prerequisites

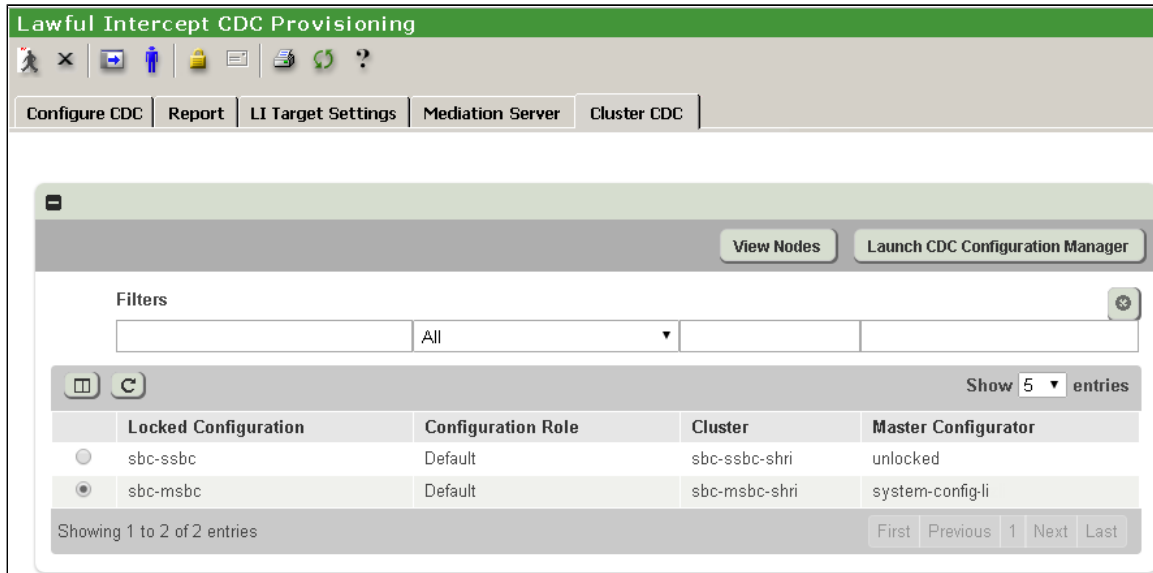
Enable `calea` user. For information, refer to [Enabling Lawful Intercept on EMS Standalone](#).

Procedure

1. Log on to EMS as `calea` user.

- Under **Network Mgmt**, click **Lawful Intercept**. The **Lawful Intercept CDC Provisioning** window is displayed.
- Click **Cluster CDC** tab. The **Cluster CDC** pane is displayed.

Figure 5: Cluster CDC Tab



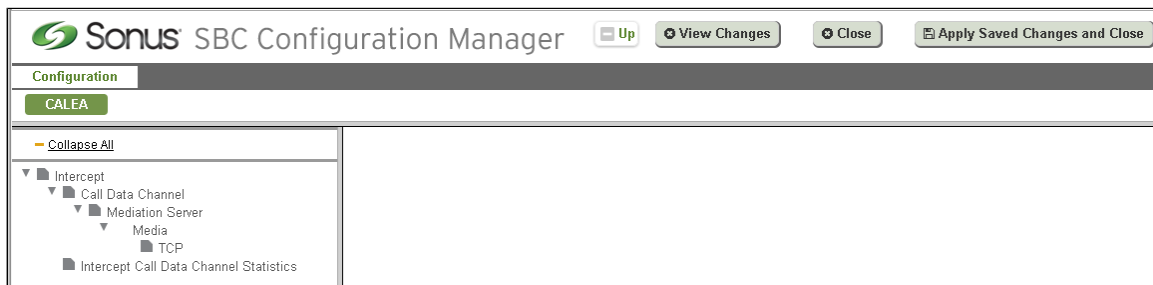
The following parameters are displayed:

Table 1: Cluster Configuration Parameters

Parameter	Description
Locked Configuration	Specifies the configuration name.
Configuration Role	Specifies the type of the configuration role. The roles are Default and Alternate.
Cluster	Specifies the name of the cluster.
Master Configurator	Specifies the name of the locked master configurator instance.

- Select the M-SBC cluster with locked configurator node.
- Click **Launch CDC Configuration Manager**. The **SBC Configuration Manager** window is displayed.

Figure 6: Launch CDC Configuration Manager



- Create Call Data Channel for M-SBC (Proceed to [Creating Call Data Channel for M-SBC](#)).

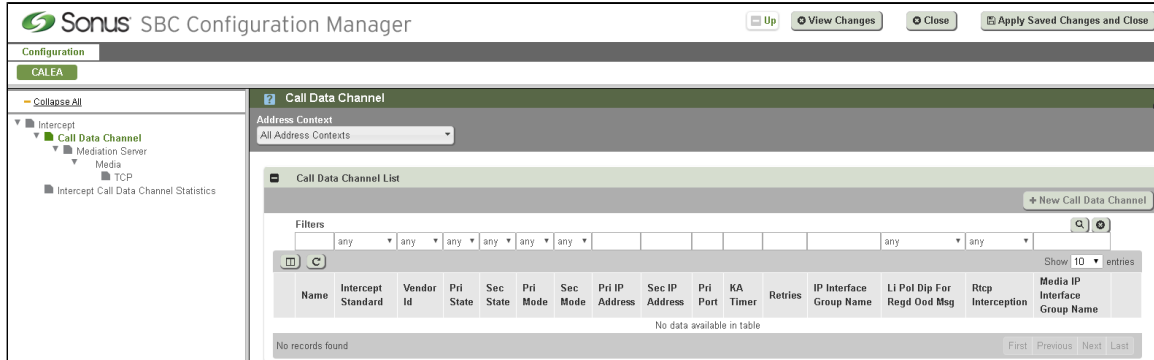
Creating Call Data Channel for M-SBC

The SBC SWE provides the ability to configure the IP address, TCP port, and other parameters used for communication towards the mediation server.

To create a new Call Data Channel:

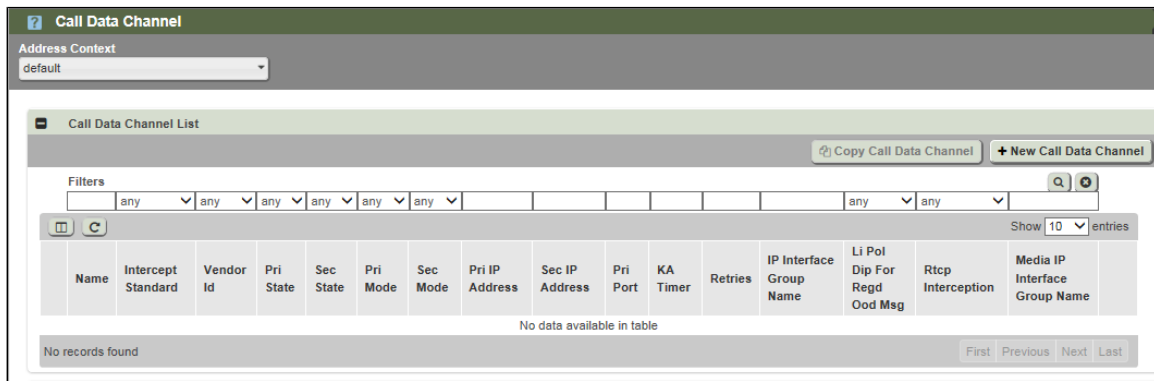
1. In the **SBC Configuration Manager** window, navigate to **Configuration > Intercept > Call Data Channel**. The **Call Data Channel** window is displayed.

Figure 7: Call Data Channel Window




2. Select **default** from **Address Context** drop-down menu.

Figure 8: Call Data Channel for M-SBC



3. Click **New Call Data Channel**. The **Create New Call Data Channel** window is displayed.

 You can configure the LI using the **default** Address Context only.

4. Specify the following values:
 - a. **Name:** Type the name of the call data channel.
 - b. **Intercept Standard:** Select **packetcable** from the drop-down menu.
 - c. **Vendor ID:** Select **ss8** from the drop-down menu.
 - d. **RTCP Interception:** Select **Enabled**.
 - e. **Media IP Interface Group Name:** Select media IP interface group name from the drop-down menu.

Figure 9: Creating New Call Data Channel

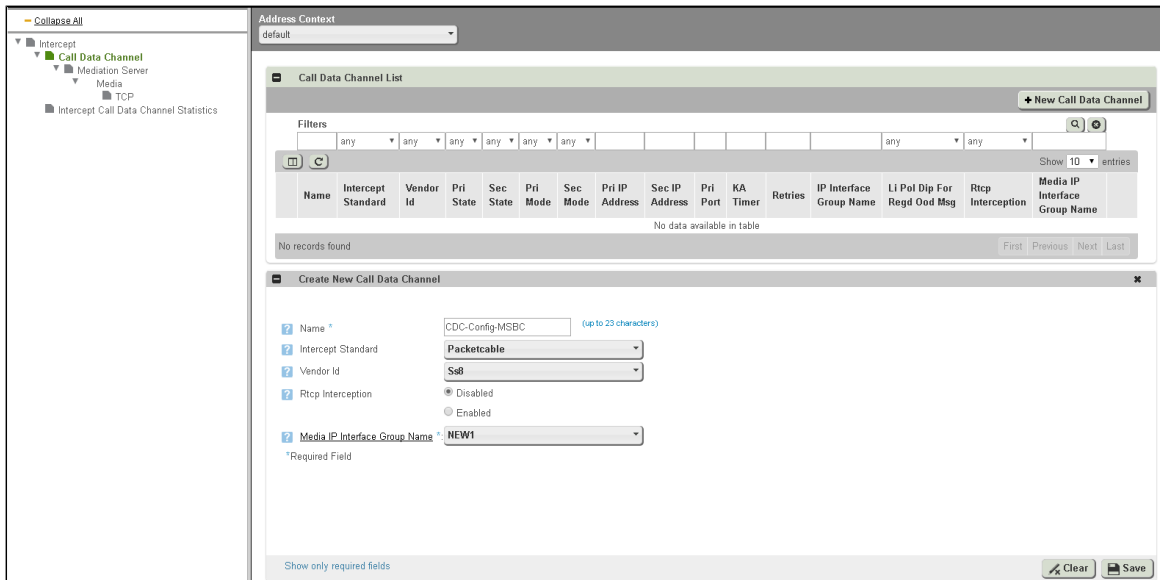
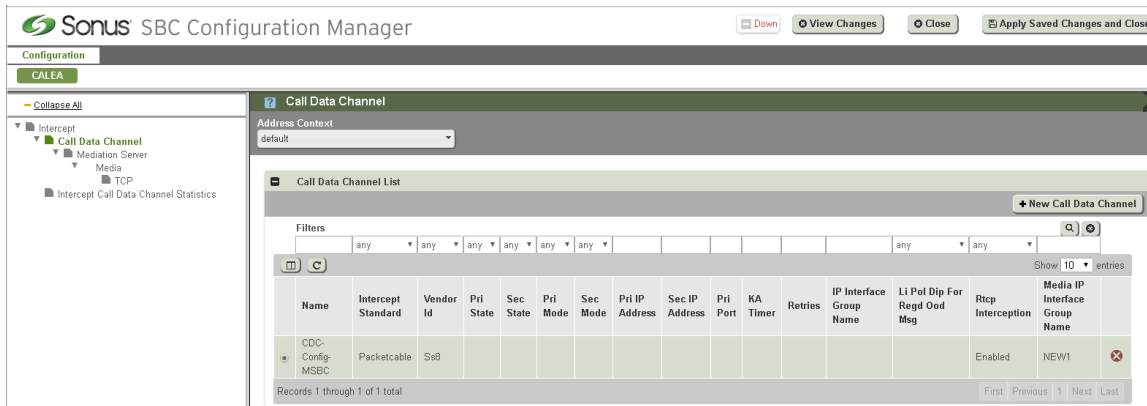


Figure 10: Creating New Call Data Channel Parameters

Parameter	Description
Name	Specifies the name of the CDC.
Intercept Standard	Specifies the intercept standard used.
Vendor Id	Specifies the vendor of the LI server used.
RTCP Interception	Specifies to intercept RTCP data. The values are <ul style="list-style-type: none"> Disabled (default) Enabled
Media IP interface Group Name	Select Media IP interface Group Name.

5. Click **Save**. The object is created successfully.
6. Click **OK**.

Figure 11: Call Data Channel List



7. Configure mediation server (Proceed to [Creating Mediation Server](#)).

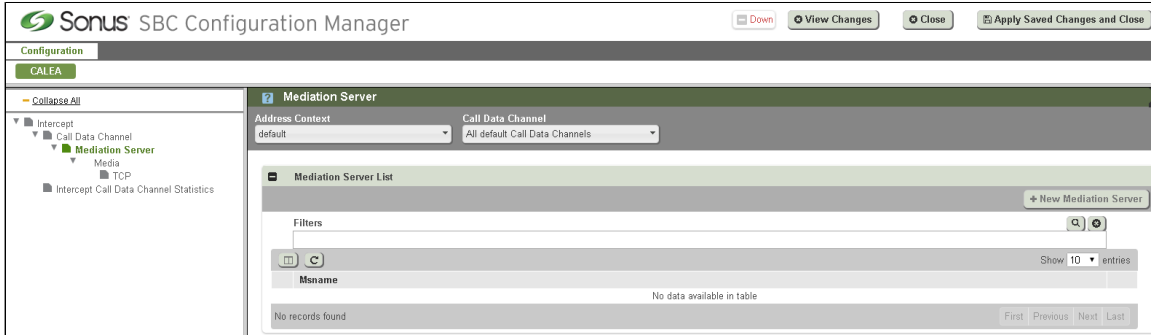
Creating Mediation Server

After the Call Data Channel is created, you must create Mediation Server objects associated with the Call Data Channel. The CDC configuration supports configuring up to eight Mediation Servers.

To create mediation server:

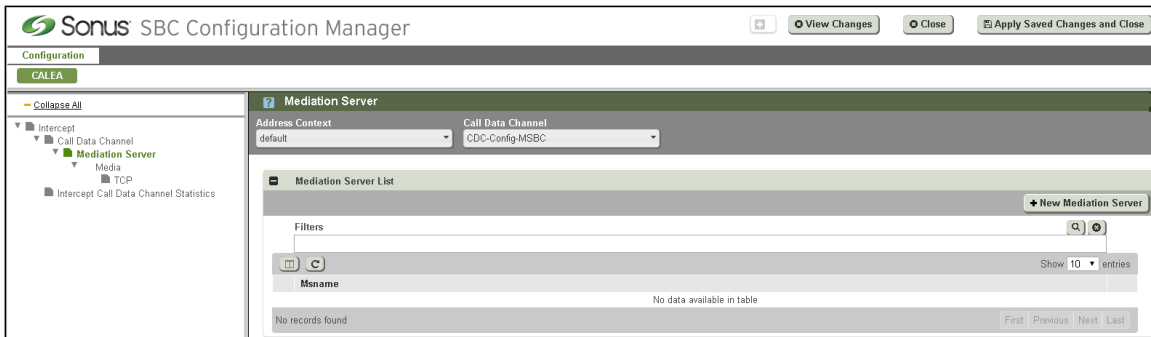
1. Navigate to **Configuration > Intercept > Call Data Channel > Mediation Server**. The **Mediation Server** window is displayed.

Figure 12: Mediation Server



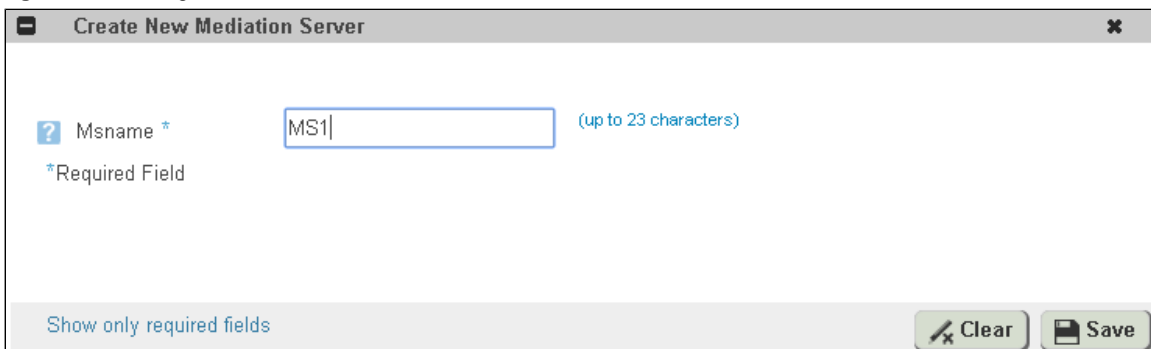
2. Select **default** from **Address Context** drop-down menu.
3. Select the **Call Data Channel** created for M-SBC from the drop-down menu.

Figure 13: New Mediation Server



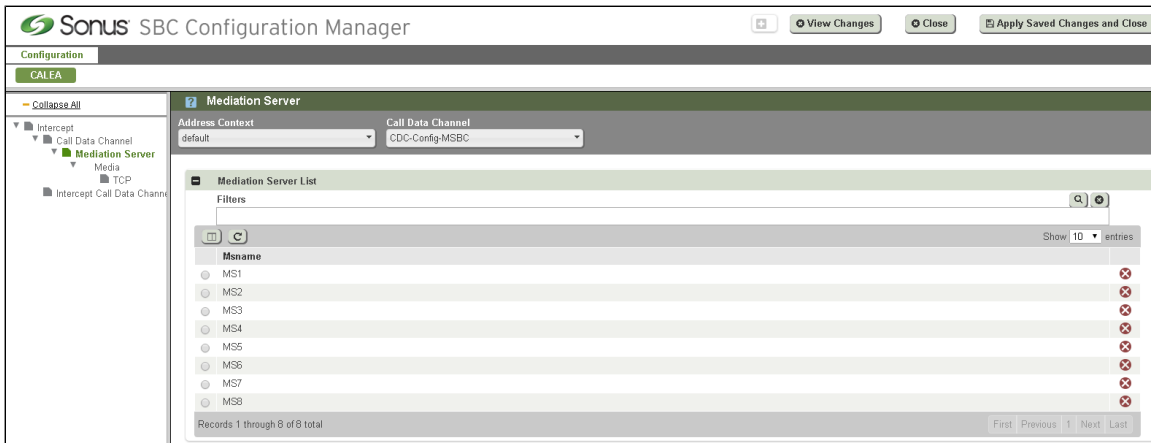
4. Click **New Mediation Server**. The **Create New Mediation Server** window is displayed.
5. Type the mediation server name in **Mname**.

Figure 14: Creating New Mediation Server



6. Click **Save**. The Object is created successfully.
7. Click **OK**. The **Mediation Server List** window is displayed. You can create up to eight mediation servers for M-SBC.

Figure 15: Mediation Server List



8. Configure TCP (Proceed to [Mediation Server - Media - TCP](#)).

Mediation Server - Media - TCP

This screen includes the LI Mediation Server TCP Media intercept parameters.

To view TCP parameters:

1. Navigate to **Configuration > Intercept > Call Data Channel > Mediation Server > Media > TCP**. The **TCP** window is displayed.

Figure 16: TCP

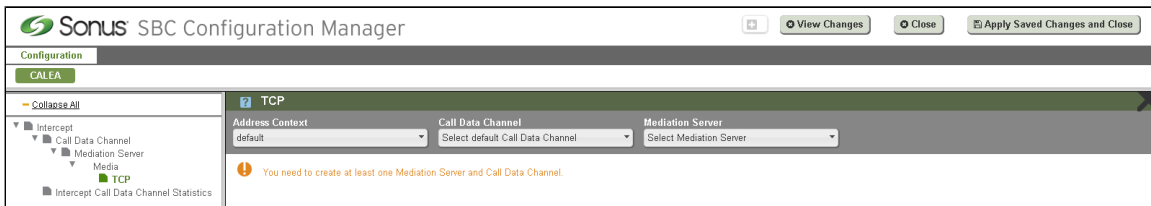


Table 2: TCP Parameters

Parameter	Description
IP Address V4 or V6	IPV4/IPV6 address of the mediation server for media interception over TCP.
Port Number	Specifies the port number of the mediation server for media interception over TCP. Range is 0 - 65535.
DSCP Value	Specifies the DSCP value for intercepted media packets sent on TCP port. Default value is 16 and range is 0 - 63.
Mode	Specifies the mode of the TCP connection towards the mediation server for media interception. The Options are: <ul style="list-style-type: none"> • In Service • Out of service (default)
State	Specifies the state of the TCP connection towards the mediation server for media interception. The Options are: <ul style="list-style-type: none"> • Disabled (default) • Enabled

KA Time	Specifies the duration between two keep alive transmissions in idle condition. The default value is 180.
KA Interval	Specifies the duration between two successive keep alive re-transmissions, if acknowledgement to the previous keep alive transmission is not received. The default value is 30.
KA Probe	Specifies the number of re-transmissions to be carried out before declaring that remote end is not available. The default value is 4.

2. Select **default** from the **Address Context** drop-down menu.
3. Select the **Call Data Channel** from the drop down menu.
4. Select the **Mediation Server** from the drop-down menu.
5. Configure the required details.


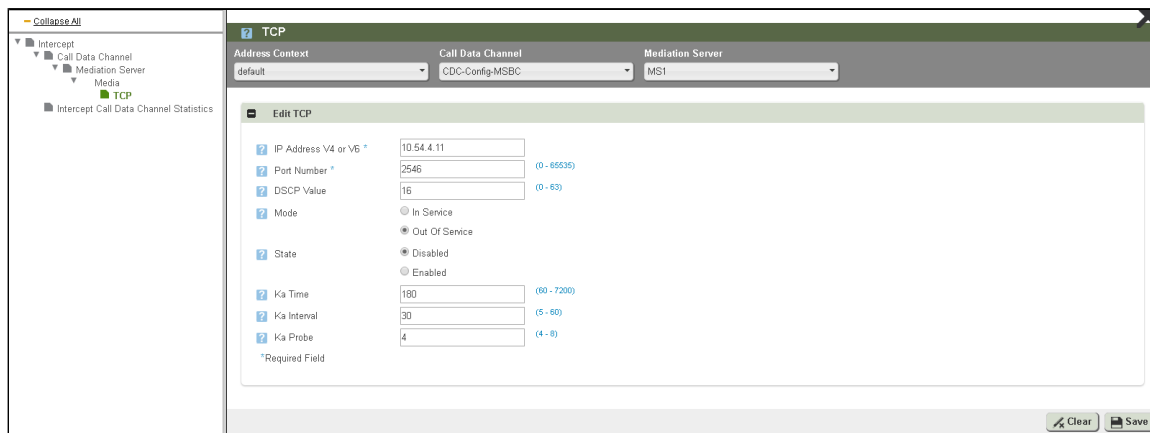
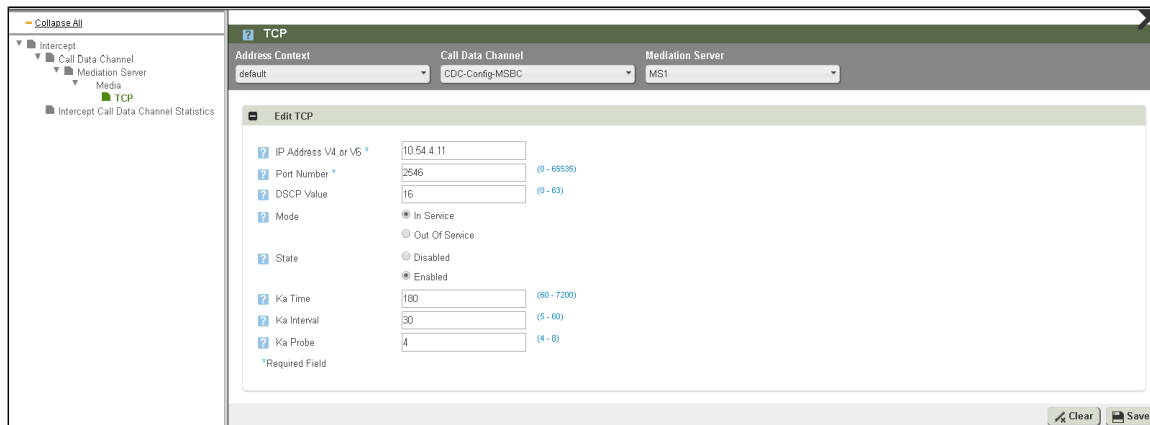
 The configurations can only be updated with **State** as **Disabled** and **Mode** as **Out Of Service**.

Figure 17: Editing TCP - Out of Service



6. Click **Save**. The object is Updated Successfully.
7. Click **OK**.
8. Enable the mediation server by changing the **State** as **Enabled** and **Mode** as **In Service**.

Figure 18: Editing TCP - In Service



9. Click **Save** to save the configuration.
10. Click **Apply Saved Changes and Close**.
11. Activate the CDC configuration (Proceed to [Activating CDC Configuration for M-SBC](#)).

Activating CDC Configuration for M-SBC

To activate a cluster configuration for SBC SWe:

1. Log on to **EMS** as **admin** user.
2. Under **Network Mgmt**, click **Cluster / VNF Management**. The **Cluster/VNF Management** window is displayed.
3. Select the M-SBC cluster for which the CDC configuration is created.
4. Click **Configuration** tab. The **Configuration** pane is displayed.

Figure 19: Configuration Pane

The screenshot shows the 'Configuration' tab for cluster 'sbc-msbc-shri'. At the top, there are tabs for 'Details', 'Configurations', 'Configuration History', and 'Nodes'. Below these are buttons for '+ Duplicate Configuration' and '+ New Configuration'. A filters section is present, followed by a table of configurations. The table has columns: Configuration Role, Configuration Name, Date / Time Activated, Activated By, Has Candidate, Version, Configuration Status, Master Configurator, and Delete. One record is shown with role 'Default', name 'sbc-msbc-shri', status '(Not Activated)', and master configurator 'system-config-li'. Below the table are navigation buttons: 'Open Editor', 'Unlock', and 'Delete'. A summary section shows 'Records 1 through 1 of 1 total'. The main area is split into 'Active Configuration' and 'Candidate Configuration'. The active configuration shows revision 1, role 'Default', and status 'N/A'. The candidate configuration shows last modified '12/22/2016 15:45:29' by 'admin' and buttons for 'Discard Candidate Configuration' and 'Activate Candidate Configuration'.

5. In **Configuration Role** column, select the configuration role to activate.
6. Click **Activate Configuration**. The **Activation in progress** status is displayed. When the activation is completed, the nodes in the cluster are updated with the active configuration, the **Configuration Status** is displayed as **Last update complete**.

Figure 20: Activation Completed

The screenshot shows the 'Configuration' tab for cluster 'sbc-msbc-shri' after activation. The table at the top now shows three records: 'sbc-msbc-shri' (Ready), 'sbc-sbc-shri' (No configuration activated), and 'sbc-configurator-shri' (All nodes online). The main area shows the 'Active Configuration' for role 'Default' with revision 1, configuration activated on '12/22/2016 17:36:34', and activation status 'Activation Complete'. The 'Candidate Configuration' remains the same as in Figure 19. At the bottom, there are buttons for 'View Configuration', 'Create Candidate Configuration', and 'Reactivate Configuration'. An 'Archived Versions' section is also visible with a table for revisions.

7. Instantiate M-SBC. For more information, refer to [Instantiating M-SBC using N:1 Nested Heat Template](#).

- After activating the default configuration and an update to the active configuration occurs, you must activate the candidate configuration using the steps on the page [Partial Configuration](#).

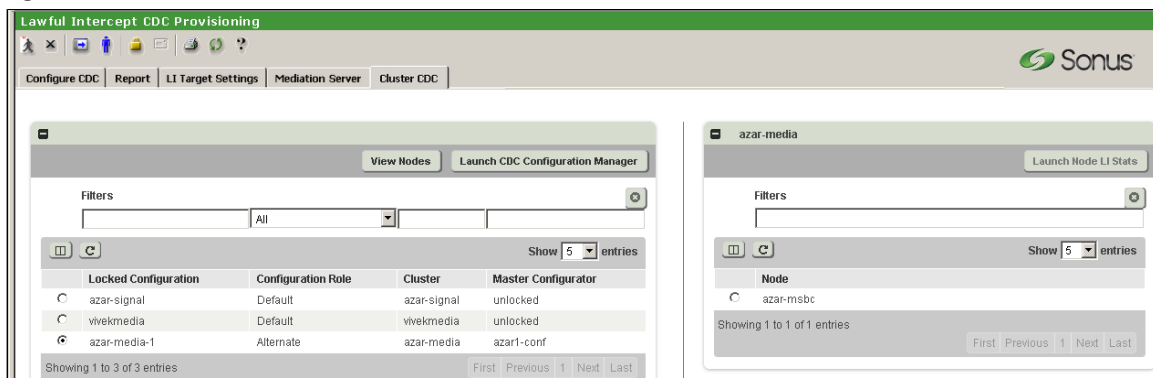
Viewing Statistics for M-SBC

This object displays the mediation server media statistics.

To view the LI statistics:

- Logon to **EMS** as **CALEA** user.
- Under **Network Mgmt**, click **Lawful Intercept**. The **Lawful Intercept CDC Provisioning** window is displayed.
- Click **Cluster CDC** tab. The **Cluster CDC** pane is displayed.
- Select the M-SBC cluster.
- Click **View Nodes**. The nodes list in the cluster is displayed.

Figure 21: View Nodes



- Select the required node to view the mediation server media status.

Click **Launch Node LI Stats**. The **Mediation Server Media Status** window is displayed.

Figure 22: Mediation Server Media Status

