



## APPENDIX **C**

# Managing Service Requests

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This appendix describes how to manage service requests and how to access task logs.

To apply TE device changes to network devices, you must deploy the TE service request. When you deploy a TE service request, ISC compares the device information in the Repository (the ISC database) with the current device configuration and generates a configlet.

This appendix includes the following sections:

- [Accessing the Service Requests Window, page C-1](#)
- [Service Request Operations, page C-2](#)
  - [Viewing Service Request Details, page C-3](#)
  - [Editing a Service Request, page C-6](#)
  - [Decommissioning a Service Request \(Only Applies to TE Traffic Admission SRs\), page C-7](#)
  - [Purging a Service Request, page C-9](#)
- [Verifying Service Requests, page C-9](#)
- [Managing Parallel Service Requests, page C-9](#)
- [Service Request States, page C-9](#).

## Accessing the Service Requests Window

To manage TE service requests, go to **Service Inventory > Inventory and Connection Manager > Service Requests**.

[Figure C-1](#) shows the Service Requests window.

Figure C-1 Service Requests

#	<input type="checkbox"/>	Job ID	Data Files	State	Type	Operation Type	Creator	Customer Name	Policy Name	Last Modified	Description
1.	<input type="checkbox"/>	1		DEPLOYED	TE Tunnel	ADD	admin			9/3/08 5:30 PM	cisco - TE Managed Tunnel SR
2.	<input type="checkbox"/>	2		REQUESTED	TE Tunnel	MODIFY	admin			10/2/08 10:50 AM	isctmp1 - TE Unmanaged Tunn...
3.	<input type="checkbox"/>	3		DEPLOYED	TE Tunnel	ADD	admin			9/3/08 5:30 PM	isctmp8 - TE Unmanaged Tunn...
4.	<input type="checkbox"/>	4		DEPLOYED	TE Tunnel	ADD	admin			9/3/08 5:30 PM	isctmp2 - TE Unmanaged Tunn...
5.	<input type="checkbox"/>	5		DEPLOYED	TE Tunnel	ADD	admin			9/3/08 5:30 PM	isctmp6 - TE Unmanaged Tunn...

Showing 1 - 5 of 42 records

Rows per page: 5      Go to page: 1 of 9

Auto Refresh:       Create      Details      Status      Edit      Deploy      Decommission      Purge

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The Service Requests window shows the current list of service requests for this username. The list includes the following information about each service request:

- **JobID**—The job number assigned to the service request by ISC. [Table C-1](#) describes ISC service request states.
- **Data Files**—This field is used for variable substitutions via templates and currently do not apply to TEM SRs.
- **State**—The transition state for the service request. See [Service Request States, page C-9](#) for more information.
- **Type**—The type of service request. For example, MPLS VPN, L2VPN, VPLS, VRF, TE, or FlexUNI(EVC).
- **Operation Type**—The operation type for the service request. For example, ADD means that you are adding this service request, MODIFY that a service request has been changed from an earlier state, and DELETE that you are decommissioning this service request.
- **Creator**—Username identity of person who created or last modified the service request.
- **Customer Name**—Customer name for the service request.
- **Policy Name**—Name of policy assigned to this service request.
- **Last Modified**—Date and time the service request was created or last modified.
- **Description**—Optional text description of the service request.

## Service Request Operations

From the Service Requests window you can perform the following operations for TE service requests:

- **Create**—See the respective sections in [Chapter 4, “Basic Tunnel Management”](#), [Chapter 5, “Advanced Primary Tunnel Management”](#), or [Chapter 6, “Protection Planning.”](#)
- **Details**—See [Viewing Service Request Details, page C-3](#).
- **Status**—Select **Logs** to access any available logs for a selected service request. For more details, see [Viewing a Task Log, page 9-2](#).

- **Edit**—See [Editing a Service Request](#), page C-6.
- **Deploy**—Only supported for TE Traffic Admission service requests from this location. For TE Resource, TE Tunnel, and TE Protection service requests, see the respective sections in [Chapter 4, “Basic Tunnel Management”](#), [Chapter 5, “Advanced Primary Tunnel Management”](#), or [Chapter 6, “Protection Planning.”](#)
- **Decommission**—See [Decommissioning a Service Request \(Only Applies to TE Traffic Admission SRs\)](#), page C-7. Not supported for TE Resource, TE Tunnel, and TE Protection service requests.
- **Purge**—See [Purging a Service Request](#), page C-9.

## Viewing Service Request Details

The service request details include the link endpoints for the service request, the history, and the configlet generated during the service request deployment operation. Use the service request details to help you troubleshoot a problem or error with the service request or to check the commands in the configlet.

This section describes how to view the details of a service request, including the history, link details, and configlets.

To view service request details:

- 
- Step 1** Choose **Service Inventory > Inventory and Connection Manager > Service Requests**.
- Step 2** Select the service request and click **Details**.

The Service Request Details window appears as shown in [Figure C-2](#).

**Figure C-2** Service Request Details—Attributes

Service Request Details	
Service Request Details for Job ID 1	
Attribute	Value
Type	TE Tunnel
State	DEPLOYED
Operation Type	ADD
Service Request ID	1
Last Modification Time	Wed Sep 03 17:30:14 PDT 2008
<b>No associated data file</b>	
<input type="button" value="History"/> <input type="button" value="Audit"/> <input type="button" value="Configlets"/> <input type="button" value="OK"/>	

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From the Service Request Details page, you can view more information about:

- **Details > History**—Service request history report.
- **Details > Audit**—Not supported by TEM.
- **Details > Configlets**—View the ISC generated configlet for the service request.

The following sections describe the links, history, and configlet details for a service request.

## History

Figure C-3, Figure C-4, and Figure C-5 show the Service Request History Report window.

**Figure C-3 Service Request History Report (top)**

Service Request State Change Report			
Element Name	State	Create Time	Report
Service element isctmp11:tunnel-te2	LOST	2005-10-31 12:22:15	transitioned from DEPLOYED to LOST state.
Service element isctmp12:tunnel-te212	LOST	2005-10-31 12:22:15	transitioned from DEPLOYED to LOST state.
Service element isctmp1:Tunnel2	LOST	2005-10-31 12:22:15	transitioned from DEPLOYED to LOST state.
Service element isctmp12:tunnel-te1000	LOST	2005-10-31 12:22:15	transitioned from DEPLOYED to LOST state.
Service element isctmp1:Tunnel1000	LOST	2005-10-31 12:22:15	transitioned from DEPLOYED to LOST state.
Service element isctmp1:Tunnel3	LOST	2005-10-31 12:22:15	transitioned from DEPLOYED to LOST state.

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**Figure C-4 Service Request History Report (middle)**

Service element isctmp11:tunnel-te1000	LOST	2005-10-31 12:22:15	transitioned from DEPLOYED to LOST state.
Service element isctmp10:tunnel-te2	DEPLOYED	2005-10-31 12:22:15	transitioned from DEPLOYED to DEPLOYED state.
Service element isctmp10:tunnel-te1	DEPLOYED	2005-10-31 12:22:15	transitioned from DEPLOYED to DEPLOYED state.
SR Job ID 8 SR ID 13	LOST	2005-10-31 12:22:15	transitioned from REQUESTED to LOST state.
	REQUESTED	2005-11-02 15:54:39	SR Job ID 8 was subsumed: Old SR ID = 13, New SR ID = 14
	REQUESTED	2005-11-02 15:54:39	SR Job ID 8 transitioned from LOST to REQUESTED state
Service element isctmp11:tunnel-te2	PENDING	2005-11-06 16:02:32	transitioned from LOST to PENDING state.
Service element isctmp12:tunnel-	PENDING	2005-11-06 16:02:32	transitioned from LOST to PENDING state.

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**Figure C-5 Service Request History Report (bottom)**

Service element isctmp1:Tunnel300	DEPLOYED	2005-11-07 00:33:09	transitioned from DEPLOYED to DEPLOYED state.
Service element isctmp10:tunnel-te1002	DEPLOYED	2005-11-07 00:33:09	transitioned from DEPLOYED to DEPLOYED state.
Service element isctmp1:Tunnel138	DEPLOYED	2005-11-07 00:33:09	transitioned from DEPLOYED to DEPLOYED state.
Service element isctmp10:tunnel-te1	DEPLOYED	2005-11-07 00:33:09	transitioned from DEPLOYED to DEPLOYED state.
Service element isctmp11:tunnel-te1007	DEPLOYED	2005-11-07 00:33:09	transitioned from DEPLOYED to DEPLOYED state.
SR Job ID 8 SR ID 21	DEPLOYED	2005-11-07 00:33:09	transitioned from PENDING to DEPLOYED state.

OK

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The history report shows the following information about the service request:

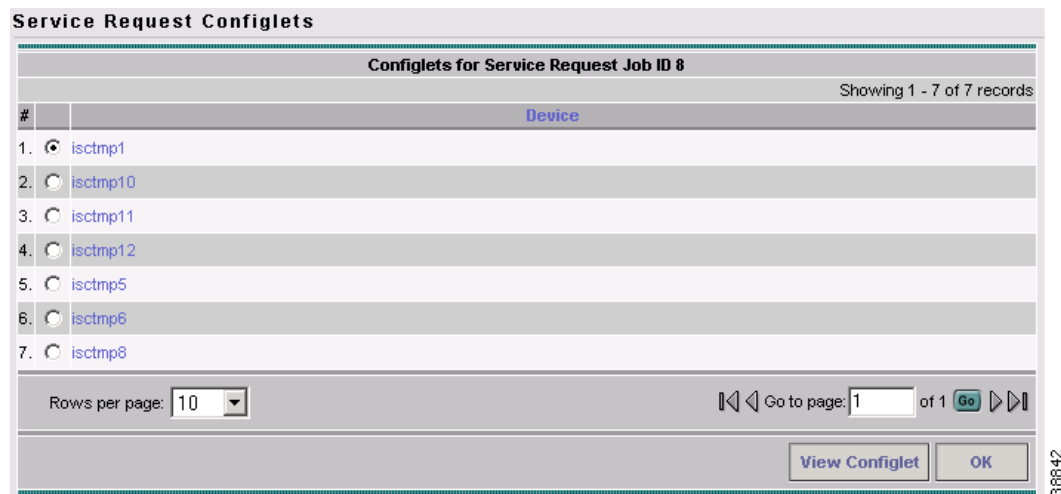
- **Element name**—The device, interface, and subinterfaces participating in this service request.
- **State**—The transition states the element has gone through.
- **Create Time**—The time the element was created for this service request.
- **Report**—The action taken by ISC for the element in this service request.

## Configlets

To view configlets:

- Step 1** Click **Configlets** on the Service Request Details window. The Service Request Configlets window appears (Figure C-6).

**Figure C-6** Service Request Configlets



This window shows all devices whose configuration is affected by the service request.

- Step 2** Select the device to view the configlet.

- Step 3** Click **View Configlet**.

The Service Request Configlet window appears (Figure C-7).

**Figure C-7** Configlet Example

```

Service Request Configlet

Configlet for Device: isctmp1

-----
Configlet #1, Job ID 8 (Created: 2005-11-06 16:02:29)

mpls traffic-eng auto-bw timers
!
interface Tunnel2
  description CISCO ISC-P9
  ip unnumbered Ethernet0/0
  tunnel mode mpls traffic-eng
  tunnel destination 192.168.118.183
  tunnel mpls traffic-eng priority 0 0
  tunnel mpls traffic-eng bandwidth sub-pool 1000
  tunnel mpls traffic-eng path-option 1 explicit name isctmp1-isctmp8-1
  tunnel mpls traffic-eng path-option 2 dynamic
  tunnel mpls traffic-eng affinity 0x0 mask 0x0
  no tunnel mpls traffic-eng auto-bw
  no tunnel mpls traffic-eng auto-bw
  no tunnel mpls traffic-eng auto-bw
  no tunnel mpls traffic-eng auto-bw
  no tunnel mpls traffic-eng fast-reroute
  mpls ip
  tunnel mpls traffic-eng record-route
!
interface Tunnel3

```

The device configlet shows all commands downloaded to the device configuration during the service request deployment operation.

**Step 4** Click **OK** to exit.

## Editing a Service Request

The TE Resource, TE Tunnel and TE Protection service requests can be edited from the main Traffic Engineering Management Services window as described in chapters 4, 5, 6, and 7. This is the recommended method. Alternatively, the edit operation can be initiated from the Service Request window for these service requests.

The TE Admission service request, however, can only be initiated from the Service Requests window. We will focus on TE Admission service requests in the following procedure.

To edit a service request, use the following steps:

- 
- Step 1** Choose **Service Inventory > Inventory and Connection Manager > Service Requests**.
  - Step 2** Select the service request you want to modify and click **Edit**.  
The TE Traffic Admission SR window in [Figure 7-3](#) appears.
  - Step 3** Make the desired changes in the editor and click **Save**.

The Service Requests window reappears with the corresponding State set to **REQUESTED** and the Operation Type changed to **MODIFY** as shown in [Figure C-8](#).

**Figure C-8** Service Requests - **MODIFY REQUESTED** state

#	Job ID	State	Type	Operation Type	Creator	Customer Name	Policy Name	Last Modified	Description
6.	6	REQUESTED	VPLS	ADD	admin	Customer2	VPLSPolicy1	10/19/05 3:29 PM	
7.	7	REQUESTED	VPLS	ADD	admin	Customer2	VPLSPolicy2	10/19/05 3:29 PM	
8.	8	DEPLOYED	TE Tunnel	MODIFY	admin			11/7/05 12:33 AM	
9.	9	DEPLOYED	TE Protection	MODIFY	admin			11/2/05 3:54 PM	
10.	10	REQUESTED	TE Admission	MODIFY	admin			11/30/05 1:20 PM	tunnel-te1 : CISCO ISC-P55

Showing 6 - 10 of 16 records

Rows per page: 5 Go to page: 2 of 4

Auto Refresh:  Create Details Status Edit Deploy Decommission Purge

- Step 4** Deploy the service request by selecting it and clicking **Deploy > Deploy**.  
This is necessary for the changes to be provisioned to the network.
- Step 5** In the Deploy Service Request window, select the time at which the deployment should take place (default is immediately), and click **Save**.
- Step 6** After deployment, look for the service request state to go to **DEPLOYED** to indicate a successful deployment.

## Decommissioning a Service Request (Only Applies to TE Traffic Admission SRs)

To decommission a TE Admission service request, use the following steps:

- Step 1** Choose **Service Inventory > Inventory and Connection Manager > Service Requests**.
- Step 2** Select the service request you want to decommission and click **Decommission**.  
The Confirm Request window in [Figure C-9](#) appears.

Figure C-9 Confirm Request - Decommissioning a TE Traffic Admission SR

**Confirm Request**

**Confirm Decommission Service Request(s)**

Showing 1-2 of 2 records

#	Job ID	State	Operation Type	Customer Name
1.	10	REQUESTED	ADD	
2.	12	DEPLOYED	ADD	

Rows per page: 5      Go to page: 1 of 1 **Go**

Warning: ⚠

If the service request(s) has template(s) associated with it, you should remove the template commands first before decommission the service request(s).

**OK**   **Cancel**

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Mouse over any yellow warning symbol to see the warning message.

- Step 3** Click **OK** to confirm the decommissioning of the service request.

The Service Requests window reappears with the corresponding Operation Type changed to **DELETE** as shown in Figure C-10.

Figure C-10 Service Requests - Decommissioning a TE Traffic Admission SR

Show Services with Job ID matching \* of Type All **Find**

Showing 11 - 15 of 16 records

#	Job ID	State	Type	Operation Type	Creator	Customer Name	Policy Name	Last Modified	Description
11.	11	DEPLOYED	TE Admission	ADD	admin			10/20/05 6:01 PM	Tunnel2 : CISCO ISC-P64
12.	12	REQUESTED	TE Admission	DELETE	admin			11/30/05 1:43 PM	Tunnel1000 : CISCO ISC-P70
13.	16	DEPLOYED	TE Admission	ADD	admin			11/2/05 3:54 PM	tunnel-te1000 : tunnel-te1000
14.	17	DEPLOYED	TE Admission	ADD	admin			11/2/05 3:54 PM	tunnel-te1004 : CISCO ISC-P136
15.	18	DEPLOYED	TE Admission	ADD	admin			11/2/05 3:55 PM	tunnel-te1006 : tunnel-te1006

Rows per page: 5      Go to page: 3 of 4 **Go**

**Auto Refresh:**  **Create** **Details** **Status** **Edit** **Deploy** **Decommission** **Purge**

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- Step 4** Deploy the service request by selecting it and clicking **Deploy > Deploy**.

This is necessary for the changes to be provisioned to the network.

- Step 5** In the Deploy Service Request window, select the time at which the deployment should take place (default is immediately), and click **Save**.

- Step 6** After deployment, look for the service request state to go to **CLOSED** to indicate that the service request has been decommissioned successfully.

## Purging a Service Request

The Purge operation is designed to remove a service request from the repository without affecting the network.

The **Purge** button has 2 options:

- **Purge**—The regular purge can only be used on the service request in **CLOSED** state. Therefore, it cannot be used on TE Resource, TE Tunnel, or TE Protection service requests because these cannot be decommissioned. These three types of service requests can only be force purged.
- **Force Purge**—During force purge, the repository checks the necessary dependency on the service request before it can be purged, so if a service request cannot be purged, there will be an error message.

## Verifying Service Requests

After you deploy a service request, you should verify that there were no errors.

You can verify a service request through the following:

- Transition state—The transition state of a service request is listed on the Service Requests window in the State column. See [Service Request States, page C-9](#) for more information.
- View service request details—From the Service Requests Details window, you can view the link endpoints and the configlets for this service request.
- Task Logs—Access the task logs either from the **Monitoring > Task Manager** or from **Service Inventory > Inventory and Connection Manager > Service Requests (Status button)** to help you troubleshoot a failed service request or to view more details about a service request. See [TE Task Logs, page 9-1](#) for more information.

## Managing Parallel Service Requests

ISC service requests are processed in parallel, except when multiple service requests attempt to configure the same device. In this case, the service requests are processed sequentially (that is, only one write to the device can happen at a time).

No parallel provisioning will be possible on the same SR, but given that there are SRs at router level for unmanaged tunnels, unmanaged tunnels can be provisioned on separate routers at the same time.

For more information on multiple concurrent users, see [Multiple Concurrent Users, page F-4](#).

## Service Request States

A service request transition state describes the different stages a service request enters during the provisioning process.

For example, when you deploy a service request, ISC compares the device information in the Repository (the ISC database) with the current device configuration and generates a configlet for each device. When the configlets are generated and downloaded to the devices, the service request enters the *Pending* state. When the devices are audited, the service request enters the *Deployed* state.

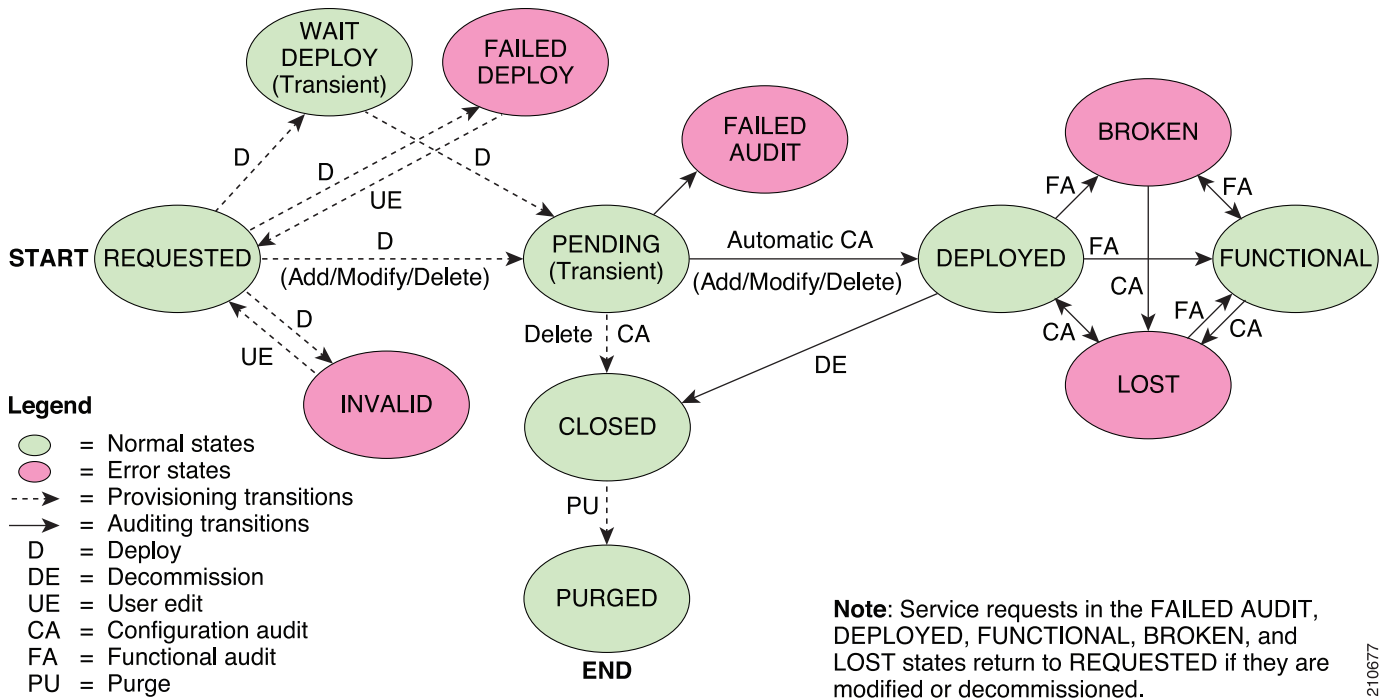
Figure C-11, “Service Requests States Transition Diagram,” shows a high-level diagram of the relationships and movement among ISC service request states.



**Note**

For more information about parallel processing of ISC service requests, see [Managing Parallel Service Requests](#), page C-9.

**Figure C-11** Service Requests States Transition Diagram



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Table C-1, “Summary of Cisco IP Solution Center Service Request States,” describes the functions of each ISC service request state. They are listed in alphabetical order.

**Table C-1** Summary of Cisco IP Solution Center Service Request States

Service Request Type	Description
<b>Broken</b> (valid only for MPLS services)	The router is correctly configured but the service is unavailable (due to a broken cable or Layer 2 problem, for example).  An MPLS service request moves to <b>Broken</b> if the auditor finds the routing and forwarding tables for this service, but they do not match the service intent.
<b>Closed</b>	A service request moves to <b>Closed</b> if the service request should no longer be used during the provisioning or auditing process. A service request moves to the <b>Closed</b> state only upon successful audit of a decommission service request. ISC does not remove a service request from the database to allow for extended auditing. Only a specific administrator purge action results in service requests being removed.

Table C-1 Summary of Cisco IP Solution Center Service Request States (continued)

Service Request Type	Description
<b>Deployed</b>	A service request moves to <b>Deployed</b> if the intention of the service request is found in the router configuration file. <b>Deployed</b> indicates that the configuration file has been downloaded to the router, and the intent of the request has been verified at the configuration level. That is, ISC downloaded the configlets to the routers and the service request passed the audit process.
<b>Failed Audit</b>	This state indicates that ISC downloaded the configlet to the router successfully, but the service request did not pass the audit. Therefore, the service did not move to the <b>Deployed</b> state. The <b>Failed Audit</b> state is initiated from the <b>Pending</b> state. After a service request is deployed successfully, it cannot re-enter the <b>Failed Audit</b> state (except if the service request is redeployed).
<b>Failed Deploy</b>	The cause for a <b>Failed Deploy</b> status is that DCS reports that either the upload of the initial configuration file from the routers failed or the download of the configuration update to the routers failed (due to lost connection, faulty password, and so on).
<b>Functional</b> (valid only for MPLS services)	An MPLS service request moves to <b>Functional</b> when the auditor finds the VPN routing and forwarding tables (VRF) for this service and they match with the service intent. This state requires that both the configuration file audit and the routing audit are successful.
<b>Invalid</b>	<b>Invalid</b> indicates that the service request information is incorrect in some way. A service request moves to <b>Invalid</b> if the request was either internally inconsistent or not consistent with the rest of the existing network/router configurations (for example, no more interfaces were available on the router). The Provisioning Driver cannot generate configuration updates to service this request.
<b>Lost</b>	A service request moves to <b>Lost</b> when the Auditor cannot find a configuration-level verification of intent in the router configuration files. The service request was in the <b>Deployed</b> state, but now some or all router configuration information is missing. A service request can move to the <b>Lost</b> state <i>only</i> when the service request had been <b>Deployed</b> .
<b>Pending</b>	A service request moves to <b>Pending</b> when the Provisioning Driver determines that the request looks consistent and was able to generate the required configuration updates for this request. <b>Pending</b> indicates that the service request has generated the configuration updates and the configuration updates are successfully downloaded to the routers.  The Auditor regards pending service requests as new requests and begins the audit. If the service has been freshly provisioned and not yet audited, it is not an error (pending audit). However, if an audit is performed and the service is still pending, it is in an error state.

**Table C-1** Summary of Cisco IP Solution Center Service Request States (continued)

Service Request Type	Description
<b>Requested</b>	If the service is newly entered and not yet deployed, it is not an error. However, if a Deploy is done and it remains <b>Requested</b> , the service is in an error state.
<b>Wait Deploy</b>	This service request state pertains only when downloading configlets to a Cisco CNS-CE server, such as a Cisco CNS IE2100 appliance. <b>Wait Deploy</b> indicates that the configlet has been generated, but it has not been downloaded to the Cisco CNS-CE server because the device is not currently online. The configlet is staged in the repository until such time as the Cisco CNS-CE server notifies ISC that it is up. Configlets in the <b>Wait Deploy</b> state are then downloaded to the Cisco CNS-CE server.

Table C-2, “User Operations on ISC Service Requests,” describes user operations and their impact on ISC service requests.

**Table C-2** User Operations on ISC Service Requests

User Operations	Description
<b>Decommission</b>	This user operation removes the service from all devices in the service request.
<b>Force Deploy</b>	This user operation allows you to <b>Deploy</b> a service request from any state except <b>Closed</b> . This is equivalent to restarting the state diagram. The service request can move from its current state to any other possible state. However, it does not move to the <b>Requested</b> state.
<b>Force Purge</b>	This user operation removes a service request from the database irrespective of its state. If you <b>Force Purge</b> a service request from the ISC repository before first decommissioning the service request, the service remains running on the network (specifically, the configuration remains on the devices on which the service was provisioned), but all record of the service request that created the service is removed from ISC.
<b>Purged</b>	When a service request is <b>Purged</b> , it is removed from the ISC database.