Oracle® Communications ASAP Cartridge 1.0 for CISCO DNCS ONC Cartridge

CISCO DNCS ONC Cartridge Guide

First Edition

April 2011

ORACLE®

CISCO DNCS ONC Cartridge Guide, First Edition

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1

Cartridge Overview

This guide provides a detailed description of the CISCO_DNCS_ONC cartridge. It contains overview and technical information to assist with extending and integrating the cartridge into a customer environment.

The scope of this guide includes Oracle Communications ASAP (ASAP) as it pertains to the use of this cartridge. It is not intended to be a complete ASAP reference guide. For additional information when using this cartridge, refer to the ASAP documentation.

The CISCO_DNCS_ONC cartridge provides the ASAP service configuration and network element (NE) interface to activate subscriber services on T_ CISCO-DNCSRPC_1-0_BASS-HOST and T_CISCO-DNCSRPC_1-0_BOSS-HOST NEs.

Hardware and Software Requirements

The following sections contain the high-level software and hardware environment requirements for provisioning subscriber services on authentication center:

- NE Interface
- ASAP Version

NE Interface

The following database tables in Service Activation Request Manager (SARM) are configured to support the NE configuration:

- tbl_host_clli
- tbl_clli_route
- tbl_comm_param
- tbl_resource_pool
- tbl_ne_config

ASAP Version

This cartridge was developed and tested using ASAP version 7.0.2.

For more information on the operating environment of this ASAP version, refer to the ASAP version 7.0.2 Release Notes.

Connecting to the NE

The cartridge uses Generic Message Based protocol.

Services, Features, and Options

This cartridge supports the following services:

Table 1–1 Supported Services

Service	Description
C_CISCO-DNCSRPC_1-0_CLEAN_ACTION	Must be last CSDL in all work orders. Service Action to delete database rows associated with a single work order at end of all forward CSDLs.
C_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION	Must be first CSDL for all Work Orders. Virtual CSDL used to hold the Rollback ASDL to remove all database rows from special NEP Database for a single work order when the work order rollsback.
C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM	This transaction is used to command application clients resident on the indicated DHCTs to reset any allocated non-volatile memory to its factory default values.
C_CISCO-DNCSRPC_1-0_REGISTER_DHCT	This transaction adds a DHCT to the IDM database.
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-ADMIN-STATUS-IDMT	This transaction is used to modify the Administrative Status of one or more DHCTs.
C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT	This transaction is used to direct a DHCT to perform a network boot.
C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT	This transaction is used to modify the conditional access status and authorizations of one or more DHCTs. It is used to control a DHCT's ability to access digital broadcast services, request interactive sessions, purchase IPPV events and so on.
C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT	This transaction is used to remove a DHCT from the DNCS database.
C_CISCO-DNCSRPC_1-0_REFRESH_DHCT-INSTANT-HIT	This transaction is used to refresh the authorizations for a DHCT
C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT	This transaction obtains the current status of a DHCT's Enable DMS flag and IPPV purchase count, as well as the list of authorized packages.
C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT	This transaction is used to modify the conditional access status of one or more DHCTs.
C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT	This transaction is used to disconnect a CA Module from its associated Host device.
C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT	This device is used to pair a Host device with a CA Module.
C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL	This transaction is used to retrieve a single DHCT's IPPV purchases.

Table 1–1 (Cont.) Supported Services

Service	Description
C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT	This transaction is used to define PPV events to the PPV application server. It can also be used to modify the definition of existing PPV events.
C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT	This transaction is used to retire previously defined PPV events.
C_CISCO-DNCSRPC_1-0_ADD_RPPV-AUTHORIZATION	This transaction is used to authorize a reservation (ordered by the subscriber via ANI, an ARU, or some other ordering mechanism) PPV event on a specific DHCT.
C_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION	This transaction is used to remove an authorization for a reservation PPV event on a specific DHCT.
C_CISCO-DNCSRPC_1-0_SET_PIN	This transaction is used to define new values for the channel blocking PIN or IPPV purchase PIN for a specific DHCT

Communication Parameters

The following is the list of parameters for the sample NE configuration XML used by Service Activation Configuration Tool (SACT).

Table 1–2 Communication Parameters

Parameter Label	Parameter Value	Description
HOST_IPADDR	10.253.2.1	Network IP address for the BASS host NE.
OPEN_TIMEOUT	5	For Java only. Connection establishment timeout (in seconds).
READ_TIMEOUT	1	For Java only. Timeout for the telnet read functions (in seconds).
IDLE_TIMER_INTERVAL	60	The idle timer. If this parameter is not defined or is set to zero, the IDLE_TIMER_ASDL is not triggered regardless of how long a connection remains idle.
WL_USER	weblogic	Weblogic User
WL_PASSWORD	weblogic	Weblogic Password
WL_URL	t3://10.65.193.28:7001	Weblogic URL

2

Atomic Service Description Layer (ASDL) Commands

ASDL commands represent a set of atomic actions that ASAP can perform on a network element (NE). ASAP can combine ASDLs to create meaningful services (CSDLs) within a cartridge.

This chapter presents detailed information on the ASDL parameters that we provide with this cartridge. The following table lists and describes the type of parameter information that is included.

Table 2–1 ASDL Parameter Information

Item	Description
Parameter Name	Identifies the parameter that is configured for the stated service.
Description	Describes the parameter.
Range	Describes or lists the range of values that can be used to satisfy this parameter.
Default Value	Configures a default value for the parameter so that it is not mandatory for the upstream system to provide a value.
Type	Indicates one of the following parameter types: ■ S - Scalar, specifies the parameter label transmitted on the ASDL command. Scalar parameters are conventional name-value pair parameters. ■ C - Compound, specifies the base name of the compound parameter transmitted on the ASDL command. A compound parameter contains structures or arrays of information that are represented by a particular structure name or compound parameter name. Each compound parameter can contain a large number of elements. If you use compound parameters, you only require a single entry in the ASAP translation tables to call the compound parameter and all its associated parameter elements. ■ I - Indexed, identifies a parameter that contains a sequential numerical index value to tell the SARM that it should execute the same operation (for example, an ASDL command) for all occurrences of that index. Consequently, if there are several options on a particular CSDL command (OPT1, OPT2, OPT3, etc.), you can specify the OPT parameter as an indexed parameter. When you specify the OPT parameter as an indexed parameter, the SARM generates several occurrences of that same ASDL command and each command has a different value for the option being transmitted to the NEP. For more information on parameter types, refer to the *ASAP Developer's Guide*.

Table 2–1 (Cont.) ASDL Parameter Information

Item	Description
Class	Indicates one of the following parameter classifications: ■ R - Required scalar parameter ■ O - Optional scalar parameter ■ C - Required compound parameter ■ N - Optional compound parameter ■ M - Mandatory indexed parameter ■ I - Optional indexed parameter ■ S - Parameter count

For a detailed description of the Required and Optional parameter classifications, refer to the *ASAP System Administrator's Guide.*

ASDL Commands

This cartridge provides the following ASDL commands:

- A_CISCO-DNCSRPC_1-0_ADD_RPPV-AUTHORIZATION
- A_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT
- A_CISCO-DNCSRPC_1-0_CLEAN_ACTION
- A_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT
- A_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT
- A_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT
- A_CISCO-DNCSRPC_1-0_GET_IPPV-POLL
- A_CISCO-DNCSRPC_1-0_INIT_ACTION
- A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-ADMIN-STATUS-IDMT
- A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT
- A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT
- A_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT
- A_CISCO-DNCSRPC_1-0_REFRESH_DHCT-INSTANT-HIT
- A_CISCO-DNCSRPC_1-0_REGISTER_DHCT
- A_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT
- A_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION
- A_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM
- A_CISCO-DNCSRPC_1-0_RESUME_ACTION
- A_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT
- A_CISCO-DNCSRPC_1-0_SET_PIN
- A_CISCO-DNCSRPC_1-0_START_ACTION
- A_CISCO-DNCSRPC_1-0_STOP_ACTION
- A_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION

A_CISCO-DNCSRPC_1-0_ADD_RPPV-AUTHORIZATION

This transaction is used to authorize a reservation (ordered by the subscriber via ANI, an ARU, or some other ordering mechanism) PPV event on a specific DHCT. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.rppv_authorization.add.generated.AddRppvAuthorizationProxy.execute.**

Table 2–2 A_CISCO-DNCSRPC_1-0_ADD_RPPV-AUTHORIZATION

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_NUM	Response Port Number	N/A	N/A	S	O
MCLI	MCLI Host	N/A	N/A	S	R
PACKAGE_LIST_TYPE	Used to inform the CAM of authorizations for given packages. Package list type.	N/A	N/A	S	O
PACKAGE_COUNT	Number of package name in the package name list	N/A	N/A	S	O
PACKAGE_NAME_LIST	List of package names. The member label is PACKAGE_NAME.	N/A	N/A	C	O
ORDER_SOURCE	Sent in the AddRppvAuthorization transaction to identify the originator of the authorization. A numerical identifier which will be returned with the PowerKEY PPV report.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Pay Per View

Description : This transaction is used to authorize a reservation (ordered by the
subscriber via ANI, an ARU, or some other ordering mechanism) PPV event on a
specific DHCT.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT

This transaction is used to direct a DHCT to perform a network boot. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.dncsrpc.x1_0.bct.boot_dhct.generated.BootDhctProxy.execute.**

Table 2–3 A_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Broadcast Control

Description : This transaction is used to direct a DHCT to perform a network boot.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_CLEAN_ACTION

ASDL Action to remove all database rows in special NEP Database table associated with a single Work Order. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_ 0.clean.generated.CleanActionProxy.execute.**

Table 2–4 A_CISCO-DNCSRPC_1-0_CLEAN_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
Virtual ASDL. No MML.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

This transaction is used to define PPV events to the PPV application server. It can also be used to modify the definition of existing PPV events. It is implemented by the Java

method **com.mslv.activation.cartridge.cisco.ip.x1_0.ppv_event.define.generated.DefinePPVEventProxy.execute.**

Table 2–5 A_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
RESPONSE_PORT_NUM	Response Port Number	N/A	N/A	S	O
MCLI	MCLI Host	N/A	N/A	S	R
PACKAGE_NAME	Sent to identify the subscription package for service being described by the current descriptor loop, or to identify a PPV event.	N/A	N/A	S	R
SERVICE_NAME	Sent to identify the service being referenced by the current descriptorLoop.	N/A	N/A	S	R
LIMITED_DURATION_START_TIME	Sent in the DefineSegment transaction to specify the interval over which a segment is active and in the DefinePackage transaction to specify the interval over which a package is to be authorized. UNIX time.	N/A	N/A	S	R
LIMITED_DURATION	Sent in the DefineSegment transaction to specify the interval over which a segment is active and in the DefinePackage transaction to specify the interval over which a package is to be authorized. Minutes	N/A	N/A	S	R
EVENT_INFO_EVENT_TITLE	Sent in the DefinePpvEvent transaction to provide user-presentable descriptive information for IPPV events. Event title to be displayed by the DHCT during the IPPV purchase process.	N/A	N/A	S	R
EVENT_INFO_EVENT_COST	Sent in the DefinePpvEvent transaction to provide user-presentable descriptive information for IPPV events. Event cost to be displayed by the DHCT during the IPPV purchase process.	N/A	N/A	S	R
EVENT_COUNT	The number of events in the package name list	N/A	N/A	S	O
PACKAGE_NAME_LIST	An array containing the packageNames of previously-defined PPV events that are to be authorized as a unit. The member label is PACKAGE_NAME.	N/A	N/A	C	O
RIGHT_TO_COPY	Sent in the DefinePpvEvent transaction to provide PPV event parameters that are common to both RPPV and IPPV events. The right of copy.	N/A	N/A	S	O
FREE_CA_START_TIME	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. UNIX time	N/A	N/A	S	O

Table 2–5 (Cont.) A_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
FREE_CA_INTERVAL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. Seconds	N/A	N/A	S	O
BUY_WINDOW_ START_TIME	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-se basis. Unix Time	N/A	N/A	S	O
BUY_WINDOW_ INTERVAL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. Seconds	N/A	N/A	S	O
CANCEL_WINDOW_ INTERVAL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. Seconds from start of package.	N/A	N/A	S	O
ALLOW_ IMMEDIATE_ CANCEL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. True or False	N/A	N/A	S	O
ALLOW_WINDOW_ CANCEL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. True or False.	N/A	N/A	S	O
ADVERTISING_ WINDOW_START_ TIME	The AdvertisingWindow descriptor controls the interval over which an IPPV event is advertised for purchase at the PPV client. Unix Time	N/A	N/A	S	O
ADVERTISING_ WINDOW_INTERVAL	The AdvertisingWindow descriptor controls the interval over which an IPPV event is advertised for purchase at the PPV client. Seconds	N/A	N/A	S	O
MARKETING_ WINDOW_START_ TIME	Sent in the DefinePpvEvent transaction to determine how long a IPPV event should be advance purchasable. Time to begin offering advance purchase of the event, for advance purchase. UNIX time	N/A	N/A	S	O
MARKETING_ WINDOW_INTERVAL	Sent in the DefinePpvEvent transaction to determine how long a IPPV event should be advance purchasable. Seconds	N/A	N/A	S	O
MULTI_LINGUAL_ TITLE_COUNT	Sent in the DefinePpvEvent transaction to provide multiple title strings, each encoded in a separate language. This field provides the number of iterations of the following fields.	N/A	N/A	S	O
EVENT_ORDER_ PHONE_NUMBER	Sent in the DefinePpvService transaction to define the telephone number to for a user to call to order a reservation PPV event.	N/A	N/A	S	O

Table 2–5 (Cont.) A_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
NUMBER_ AVAILABLE_TIME	Time RPPV telephone order number becomes available. Unix Time	N/A	N/A	S	O
DATABASE_ OPERATION	Sent in the definitional BASS transactions to indicate whether a strict insertion or a strict update is desired. If this descriptor is omitted from a transaction, the appropriate database operation will be determined by the server from the state of the database server.	N/A	N/A	S	O
MULTI_LINGUAL_ TITLE	Sent in the DefinePpvEvent transaction to provide multiple title strings, each encoded in a separate language. The member labels are ISO_639_ LANGUAGE_CODE and EVENT_ TITLE.	N/A	N/A	C	O
MODE	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. The member labels are LENGTH, COST and RIGHT_TO_COPY.	N/A	N/A	C	O
MODE_COUNT	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. The number of elements in the mode list	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Pay Per View

Description : This transaction is used to define PPV events to the PPV application
server. It can also be used to modify the definition of existing PPV events.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT

This transaction is used to remove a DHCT from the DNCS database. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.dncsrpc.x1_ 0.idmt.deregister_dhct.generated.DeregisterDhctProxy.execute.**

Table 2–6 A_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Inventory & Directory Manager

Description: This transaction is used to remove a DHCT from the DNCS database.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT

This transaction is used to disconnect a CA Module from its associated Host device. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.host_ca.deregister.generated.DeRegisterHostProxy.execute.**

Table 2–7 A_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
CA_MODULE_ID	Identifies the CA module.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Open Cable/Host Registration
```

```
Description : This transaction is used to disconnect a CA Module from its
associated Host device.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_GET_IPPV-POLL

This transaction is used to retrieve a single DHCT's IPPV purchases. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.ippv_poll.get.generated.IPPVPollProxy.execute.**

Table 2–8 A_CISCO-DNCSRPC_1-0_GET_IPPV-POLL

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_NUM	Response Port Number	N/A	N/A	S	O
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: PowerKEY Control

Description : This transaction is used to retrieve a single DHCT's IPPV purchases.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_INIT_ACTION

This action is a placeholder for Rollback action. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.init.generated.InitActionProxy.execute.**

Table 2–9 A_CISCO-DNCSRPC_1-0_INIT_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
Virtual ASDL. No MML.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-ADMIN-STATUS-IDMT

This transaction is used to modify the Administrative Status of one or more DHCTs. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.host_ca.ModifyDhctAdminStatus.generated.ModifyDhctAdminStatusProxy.execute.**

Table 2–10 A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-ADMIN-STATUS-IDMT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
DHCT_ADMIN_ STATUS	Communicates a administrative status for DHCT.	N/A	N/A	S	R
BILLING_ID	Sent to the IDM to identify the billing system that owns a DHCT.	N/A	N/A	S	O
LOCATION_CODE	Sent in the ModifyDhctAdminStatus transaction to provide an optional location in the network.	N/A	N/A	S	O
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Inventory & Directory Manager

Description : This transaction is used to change the Administrative Status in the
DHCT profile.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT

This transaction is used to modify the conditional access status and authorizations of one or more DHCTs. It is used to control a DHCT's ability to access digital broadcast services, request interactive sessions, purchase IPPV events and so on. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.host_ca.ModifyDhctConfiguration.generated.ModifyDhctConfigProxy.execute.**

Table 2–11 A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
DHCT_STATE_DMS_ ENABLE_FLAG	This field is set to False to cause the CAM to deprovision all package authorizations on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_DIS_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to request interactive sessions.Indicates if interactive services are enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_ ANALOG_ENABLE_ FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize analog services.Indicates if analog services are enabled or disabled.	N/A	N/A	S	R
DHCT_STATE_IPPV_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize IPPV services.Indicates if IPPV is enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_MAX_ IPPV_EVENTS	Specifies the maximum number of IPPV purchases allowed without being reported to and acknowledged by the CAM.	N/A	N/A	S	R
DHCT_STATE_ CREDIT_LIMIT	The maximum total cost of stored IPPV purchases.	N/A	N/A	S	R
DHCT_STATE_PIN_ ENABLE	This field is used to manage the capability to require a Personal Identification Number (PIN) to make IPPV purchases	N/A	N/A	S	R
DHCT_STATE_PIN	Personal Identification Number (PIN).	N/A	N/A	S	R
DHCT_STATE_FAST_ REFRESH_FLAG	This is used to cause the CAM to increase the rate at which EMMs are transmitted for the specified DHCT.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_X	The geographic location X of the specified DHCT.Specifies the geographic location, on X axis.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_Y	The geographic location Y of the specified DHCT.Specifies the geographic location, on Y axis	N/A	N/A	S	R

Table 2–11 (Cont.) A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT

Parameter Name	Description	Range	Default Value	Type	Class
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
PACKAGE_AUTH_ LIST_TYPE	This is used to indicate whether the PackageAuthorization contains only subscription packages, only PPV packages, or both.	N/A	N/A	S	R
PACKAGE_AUTH_ NAME_LIST	The package name which provides an authorization name for services sold on a subscription basis or a PPV basis. The member label is NAME.	N/A	N/A	C	R

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: PowerKEY/DHCT State

Description : This transaction modifies the status and authorizations of one or
more DHCT records in the CAM database. This transaction configures one or more
DHCTs in the CAM database. These requests enable DMS, enable DIS, enable analog,
enable IPPV purchases, configure maximum IPPV purchases to be stored, configure
IPPV purchase credit limit, configure the pin, set the location in the network,
configure the refresh rate, and authorize packages for one or more DHCTs with a
single transaction. A DHCT must be registered in the IDM database prior to being
configured in the CAM database. This transaction involves the identification of
the packages a DHCT is authorized to receive. Package Names are used to identify
packages, which may consist of either a single bandwidth segment, such as
Subscription HBO, or a set of segments, such as the package of basic services. The
DhctState descriptor causes the indicated DHCT's state to be discarded and
replaced in completion with the state specified in the DhctState descriptor.
Likewise, the PackageAuthorization descriptor causes all package authorizations
for the specified DHCT to be discarded and replaced with those specified in the
PackageAuthorization descriptor in the descriptor loop. This provides a method for
synchronizing the DHCT's state and authorizations with the Administrative Gateway.
Upon completion of the ModifyDhctConfiguration request, the CAM will respond with
indications of the success or failure of the transaction.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT

This transaction is used to modify the conditional access status of one or more DHCTs. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.dncsrpc.x1_0.pct.modify_dhct_state.generated.ModifyDhctStateProxy.execute.**

Table 2–12 A_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
DHCT_STATE_DMS_ ENABLE_FLAG	This field is set to False to cause the CAM to deprovision all package authorizations on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_DIS_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to request interactive sessions.Indicates if interactive services are enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_ ANALOG_ENABLE_ FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize analog services.Indicates if analog services are enabled or disabled.	N/A	N/A	S	R
DHCT_STATE_IPPV_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize IPPV services.Indicates if IPPV is enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_MAX_ IPPV_EVENTS	Specifies the maximum number of IPPV purchases allowed without being reported to and acknowledged by the CAM.	N/A	N/A	S	R
DHCT_STATE_ CREDIT_LIMIT	The maximum total cost of stored IPPV purchases.	N/A	N/A	S	R
DHCT_STATE_PIN_ ENABLE	This field is used to manage the capability to require a Personal Identification Number (PIN) to make IPPV purchases	N/A	N/A	S	R
DHCT_STATE_PIN	Personal Identification Number (PIN).	N/A	N/A	S	R
DHCT_STATE_FAST_ REFRESH_FLAG	This is used to cause the CAM to increase the rate at which EMMs are transmitted for the specified DHCT.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_X	The geographic location X of the specified DHCT.Specifies the geographic location, on X axis.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_Y	The geographic location Y of the specified DHCT.Specifies the geographic location, on Y axis	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: DHCT State Management

Description : This transaction is used to modify the conditional access status of
one or more DHCTs.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT

This transaction obtains the current status of a DHCT's Enable DMS flag and IPPV purchase count, as well as the list of authorized packages. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.dncsrpc.x1_0.pct.query_dhct.generated.QueryDhctProxy.execute.**

Table 2–13 A_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: DHCT State Management

Description : This transaction is used to modify the conditional access status of
one or more DHCTs.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_REFRESH_DHCT-INSTANT-HIT

This transaction is used to refresh the authorizations for a DHCT. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.dhct_instant_hit.refresh.generated.DhctInstantHitProxy.execute.**

Table 2–14 A_CISCO-DNCSRPC_1-0_REFRESH_DHCT-INSTANT-HIT

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: PowerKEY Control

Description : This transaction is used to refresh the authorizations for a DHCT.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_REGISTER_DHCT

This transaction adds a DHCT to the IDM database. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.dncsrpc.x1_ 0.dhct.register.generated.RegisterDhctProxy.execute.**

Table 2–15 A_CISCO-DNCSRPC_1-0_REGISTER_DHCT

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
MCLI	MCLI Host	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
DHCT_SE_SERIAL_ NUMBER	Sent in the RegisterDhct transaction to identify the DHCT.	N/A	N/A	S	O
KEY_CERTIFICATE	Sent to specify a public key certificate assigned to a network entity.	N/A	N/A	S	O

Table 2–15 (Cont.) A_CISCO-DNCSRPC_1-0_REGISTER_DHCT

Parameter Name	Description	Range	Default Value	Type	Class
IP_ADDRESS	Sent to the Inventory &Directory Manager to provide the IP address for either DHCT or Service Provider.	N/A	N/A	S	O
DHCT_ADMIN_ STATUS	Communicates a administrative status for DHCT	N/A	N/A	S	R
BOOT_PAGE	Carries the name of a bootterm page.	N/A	N/A	S	O
DHCT_TYPE	Sent to the Inventory &Directory Manager to communicate the type of a DHCT.	N/A	N/A	S	R
DHCT_TYPE_ REVISION	Sent to the Inventory &Directory Manager to communicate the type of a DHCT.	N/A	N/A	S	R
ORGANIZATION_ UNIQUE_ID	Sent to the Inventory &Directory Manager to communicate the type of a DHCT.	N/A	N/A	S	R
OFFSET_MINUTES	Sent to the Inventory &Directory Manager to indicate the time-of-day information for a DHCT. Offset minutes	N/A	N/A	S	O
DAY_LIGHT_SAVING	Sent to the Inventory &Directory Manager to indicate the time-of-day information for a DHCT. Day Light Saving.	N/A	N/A	S	O
SW_TOC	Software table of content	N/A	N/A	S	O
NSAP_ADDRESS	Carries an OSI NSAP address for use in either DHCT or Service Provider definition.	N/A	N/A	S	O
PRIMARY_VASP_ NSAP	Carries the OSI NSAP address used by the DHCT to contact its primary or owning VASP for level 2 boot or application download.	N/A	N/A	S	O
BILLING_ID	Sent to the IDM to identify the billing system that owns a DHCT.	N/A	N/A	S	O
USER_KEY_ CERTIFICATE	Sent to specify a public key certificate assigned to a network entity.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Inventory & Directory Manager

Description : This transaction adds a DHCT to the IDM database.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT

This device is used to pair a Host device with a CA Module. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.host_ca.register.generated.RegisterHostProxy.execute.**

Table 2–16 A_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R
CA_MODULE_ID	Identifies the CA module	N/A	N/A	S	R
HOST_ID	The identity of a Host.	N/A	N/A	S	R
TRANS_NUM	Used to handle Async Response	N/A	N/A	S	R
RESPONSE_PORT_NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Open Cable/Host Registration

Description : This transaction is used to pair a Host device with a CA Module.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION

This transaction is used to remove an authorization for a reservation PPV event on a specific DHCT. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.rppv_authorization.remove.generated.RemoveRppvAuthorizationProxy.execute.**

Table 2–17 A_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_NUM	Response Port Number	N/A	N/A	S	O
MCLI	MCLI Host	N/A	N/A	S	R
PACKAGE_NAME	Sent to identify the subscription package for service being described by the current descriptor loop, or to identify a PPV event.	N/A	N/A	S	R

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Pay Per View

Description : This transaction is used to remove an authorization for a
reservation PPV event on a specific DHCT.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM

This transaction is used to command application clients resident on the indicated DHCTs to reset any allocated non-volatile memory to its factory default values. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.client_nvm.reset.generated.ResetClientNvmProxy.execute.**

Table 2–18 A_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
MCLI	MCLI Host	N/A	N/A	S	R
RESPONSE_PORT_NUM	Response Port Number	N/A	N/A	S	O

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: DHCT Configuration

Description: This transaction is used to remove a DHCT from the DNCS database.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_RESUME_ACTION

This action will resume a previously stopped Work Order. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.resume.generated.ResumeActionProxy.execute.**

Table 2–19 A_CISCO-DNCSRPC_1-0_RESUME_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
Virtual ASDL. No MML.
```

Output Parameters

ASDL Exit (Exit Type) Msg : <Message>

A_CISCO-DNCSRPC_1-0_RESUME_ACTION(C), value <Message>

A_CISCO-DNCSRPC_1-0_RESUME_ACTION(I), value <Message>

For the Register Host service, the following parameters will be returned:

CA_MODULE_MAC_ADDRESS(C), value <value>

CA_MODULE_MAC_ADDRESS(I), value <value>

For the Query Dhct service, the following parameters will be returned:

PIN(C), value password

DIS_ENABLE_FLAG(C), value <value>

MAX_IPPV_EVENTS(C), value <value>

PACKAGE_LIST_TYPE(C), value <value>

PIN_ENABLE(C), value <value>

FAST_REFRESH_FLAG(C), value <value>

CREDIT_LIMIT(C), value <value>

LOCATION_X(C), value <value>

IPPV_ENABLE_FLAG(C), value <value>

LOCATION_Y(C), value <value>

DMS_ENABLE_FLAG(C), value <value>

ANALOG_ENABLE_FLAG(C), value <value>

PACKAGE_AUTH_NAME_LIST[i].NAME(C), value <value>

PIN(I), value <value>

DIS_ENABLE_FLAG(I), value <value>

MAX_IPPV_EVENTS(I), value <value>

PACKAGE_LIST_TYPE(I), value <value>

PIN_ENABLE(I), value <value>

FAST_REFRESH_FLAG(I), value <value>

CREDIT_LIMIT(I), value <value>

LOCATION_X(I), value <value>

IPPV_ENABLE_FLAG(I), value <value>

LOCATION_Y(I), value <value>

DMS_ENABLE_FLAG(I), value <value>

ANALOG_ENABLE_FLAG(I), value <value>

PACKAGE_AUTH_NAME_LIST[i].NAME(I), value <value>

For the IPPV Poll service, the following parameters will be returned:

RECORD_TYPE(C), value <value>

PACKAGE_NAME(C), value <value>

PURCHASE_LENGTH(C), value <value>

PURCHASE_TIME(C), value <value>

PURCHASE_COST(C), value <value>

PURCHASE_RIGHT_TO_COPY(C), value <value>

RECORD_TYPE(I), value <value>

PACKAGE_NAME(I), value <value>

PURCHASE_LENGTH(I), value <value>

PURCHASE_TIME(I), value <value>

PURCHASE_COST(I), value <value>

PURCHASE_RIGHT_TO_COPY(I), value <value>

A_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT

This transaction is used to retire previously defined PPV events. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.ppv_event.retire.generated.RetirePpvEventProxy.execute.**

Table 2–20 A_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Table 2–20 (Cont.) A_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
MCLI	MCLI host	N/A	N/A	S	R
PACKAGE_NAME	Sent to identify the subscription package for service being described by the current descriptor loop, or to identify a PPV event.	N/A	N/A	S	R

MML commands

MML Syntax :

```
This is the main class, which provisions the ASDL.

Functional Group: Pay Per View

Description : This transaction is used to retire previously defined PPV events.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_SET_PIN

This transaction is used to define new values for the channel blocking PIN or IPPV purchase PIN for a specific DHCT. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.set_ pin.set.generated.SetPinProxy.execute.**

Table 2–21 A_CISCO-DNCSRPC_1-0_SET_PIN

Parameter Name	Description	Range	Default Value	Type	Class
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
BLOCKING_PIN	Sent to specify the new value of the channel blocking PIN.	N/A	N/A	S	O
BLOCKING_PIN_ ENABLE	Sent to specify the new value of the channel blocking PIN.	N/A	N/A	S	O
MCLI	MCLI Host	N/A	N/A	S	R
PURCHASE_PIN	Sent to specify the new value of the IPPV purchase PIN.	N/A	N/A	S	O
PURCHASE_PIN_ ENABLE	Sent to specify the new value of the IPPV purchase PIN	N/A	N/A	S	O

MML commands

MML Syntax :

```
N/A
```

Output Parameters

N/A

A_CISCO-DNCSRPC_1-0_START_ACTION

This action is a placeholder for a Rollback action. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.start.generated.StartActionProxy.execute.**

Table 2–22 A_CISCO-DNCSRPC_1-0_START_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
Virtual ASDL. No MML.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_STOP_ACTION

This is the action to temporarily stop a Work Order until the RESUME ACTION ASDL is executed. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.stop.generated.StopActionProxy.execute.**

Table 2–23 A_CISCO-DNCSRPC_1-0_STOP_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
Virtual ASDL. No MML.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

A_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION

Virtual ASDL action to hold the ASDL CLEAN_ACTION as the rollback ASDL. It is implemented by the Java method **com.mslv.activation.cartridge.cisco.ip.x1_0.virt_clean.generated.VirtualCleanActionProxy.execute.**

Table 2–24 A_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
MCLI	MCLI Host	N/A	N/A	S	R

MML commands

MML Syntax :

```
Virtual ASDL. No MML.
```

Output Parameters

ASDL Exit <Exit Type> Msg : <Message>

User Exit Types

User exit types allow cartridge developers and systems administrators to map ASDL exit codes to one of the predefined base exit types. Base exit types determine the product behavior. Cartridges map return codes and status values from a network element to a user defined exit type.

Regular expressions (regex) are used to perform pattern searches on responses from network elements. The pattern is stored in "tbl_user_err" in the SARM database. The user exit type contains a regex pattern that is applied at runtime.

Regular expressions enable users to associate a series of responses to a specific base type. For example, a regular expression "6." can identify a pattern where any response with the character "6" followed by any number of characters will translate to base type of FAIL.

Regular expressions can also allow very specific searches within a response from a network element. Regular expressions are typically compiled before being executed. Compilation produces a binary version of the expression and ensures that the syntax of the regular expression is correct. This compilation occurs using SACT\SADT when user exit types are deployed into ASAP. If the syntax is deemed to be incorrect during compilation, SADT displays an error message and the deployment of the user exit type will fail.

For more information on pattern matching, refer to the *ASAP Developer's Guide* and the *ASAP System Administrator's Guide*.

Understanding User Exit Type XML Files

```
…
<userDefinedExitType>
<neDescriptor>
<softwareLoad>DYNAMIC_SL</softwareLoad>
<technology>DYNAMIC_VENDOR-DYNAMIC_TECH</technology>
</neDescriptor>
<searchPattern>SUCCESS.</searchPattern>...1
```

```
<userType>U_SUCCEED</userType>...2
<baseType>SUCCEED<</baseType>...3
<description>The ASDL provisioning was successful</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>90.</searchPattern>
<userType>U_FAIL</userType>
<baseType>FAIL</baseType>
<description>The ASDL failed - fail the current order and stop
processing.</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>101-110[201-215]</searchPattern>...4
<userType>U_SOFT_FAIL</userType>
<baseType>SOFT_FAIL</baseType>
<description>The ASDL has encountered a soft failure. Processing will
continue.</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>801-850</searchPattern>...5
<userType>U_MINOR_ERROR</userType>
<baseType>SOFT_FAIL</baseType>
<description>The ASDL has encountered a soft failure. Processing will
continue.</description>
</userDefinedExitType>
<userDefinedExitType>
<searchPattern>251-275&&[^261-265]</searchPattern>...6
<userType>U_DELAYED_FAIL</userType>
<baseType>DELAYED_FAIL</baseType>
<description>The ASDL has failed during provisioning.</description>
</userDefinedExitType>
<userDefinedExitType>
<neDescriptor>
<softwareLoad>BCS36</softwareLoad>
<technology>NORTEL_DMS</technology>
<neVendor>Nortel</neVendor>
</neDescriptor>
<searchPattern>*.</searchPattern>
<userType>U_MAINTAIN</userType>
<baseType>MAINTENANCE</baseType>
<description>The ASDL will Wait until the NE comes out of Maintenance
Mode</description>
</userDefinedExitType>
```

The numbered elements highlighted in bold in the previous code sample are explained as follows:

1. Pattern searches accommodate situations in which responses from the device contain small variants that represent the same meaning. The user type contains an associated search pattern that is applied at runtime. Using regular expressions, you can default a series of responses. For example a regular expression "90." can specify a pattern where any response with the character "90" followed by any character will translate to base type of FAIL. If the regular expression is defined as "90*", then any response with the character "90" followed by any number of characters will translate to base type of FAIL.
2. The user type that the search pattern maps to.
3. The base type that maps to the user type.
4. 101 to 110 and 201 to 215 will translate to a base type of SOFT_FAIL

5. 801-850 will translate to a base type of SOFT_FAIL. Note that the user type differs from the previous range.
6. 251 to 275 but not 261 to 265 will translate to a base type of DELAYED_FAILURE.

The previous code sample shows some typical search pattern examples. Some additional examples follow:

- ^.*\b(one|two|three)\b.*$ = matches a complete line of text that contains any of the words "one", "two" or "three"
- ^(?=.*?\bone\b)(?=.*?\btwo\b)(?=.*?\bthree\b).*$ matches a complete line of text that contains all of the words "one", "two" and "three"
- "[^"\r\n]*" matches a single-line string that does not allow the quote character to appear inside the string.
- \b\d{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}\b matches any IP address.

For more information on search patterns, refer to http://java.sun.com/j2se/1.4.2/docs/api/java/util/regex/Pattern.html.

For more information on user exit types, refer to the *ASAP Developer's Guide*.

User Defined ASDL Exit Types

The following table lists the user defined ASDL exit types.

Table 2–25 User Defined ASDL Exit Types

Search Pattern	User Type	Base Type	Description
0	SUCCEED	SUCCEED	No Error
107	CA_MOD_NOT_REGISTER	FAIL	CA Module not registered
108	INVALID_CA_MODULE	FAIL	Invalid CA Module
104	INVALID_HOST_ID	FAIL	Invalid Host ID
109	PODID_FAIL_LUHN_CHK	FAIL	Description goes Here.
28	INVALID_KEY_CERT	FAIL	Invalid Key Certificate
45	MISSING_REQ_DES	FAIL	Missing Required Descriptor
56	EXTRANEOUS_DES	FAIL	Extraneous descriptor present
9998	UNSPECIFIED_ERR_OK	FAIL	Unspecified error, request parsed correctly
9999	UNSPECIFIED_ERROR	FAIL	Unspecified error
30	INVALID_MAC_ADDRESS	FAIL	Invalid MAC Address
5	DHCT_NOT_REGISTERED	FAIL	DHCT not registered
20	INVALID_ADMIN_STATUS	FAIL	Invalid DHCT Admin Status
46	PACKAGE_NOT_DEFINED	FAIL	Package not defined
22	INVALID_DHCT_STATE	FAIL	Invalid DHCT State
33	INVALID_PACKAGE_AUTH	FAIL	Invalid Package Authorization
19	INVALID_CREDIT_LIMIT	FAIL	Invalid Credit Limit
31	INVALID_MAC_IPPV_EVN	FAIL	Invalid Max IPPV Events
44	MISSING_PIN	FAIL	Missing PIN

Table 2–25 (Cont.) User Defined ASDL Exit Types

Search Pattern	User Type	Base Type	Description
69	PPV_TABLE_FULL	FAIL	PPV table full
87	NO_PURCHASES_REPORT	FAIL	No Purchases Reported
88	NO_RESPONSE_FRM_DHCT	FAIL	No Response From DHCT
35	INVALID_PACKAGE_NAME	FAIL	Invalid Package Name
17	INVALID_BOOT_PAGE	FAIL	Invalid Boot Page
21	INVALID_DHCT_SRL_NUM	FAIL	Invalid DHCTSE Serial Number
66	DUP_DHCTSE_SRL_NUM	FAIL	Duplicate DHCTSE Serial Number
27	INVALID_IP_ADDRESS	FAIL	Invalid IP Address
68	DUP_IP_ADDRESS	FAIL	Duplicate IP Address
32	INVALID_NSAP_ADDRESS	FAIL	Invalid NSAP Address
6	DHCT_PREV_REGISTERED	FAIL	DHCT previously registered
7	DHCT_TYPE_NOT_FOUND	FAIL	DHCT type not found
72	SWTOC_NOT_FOUND	FAIL	Software table of content not found
73	INVALID_BILLING_ID	FAIL	Invalid Billing ID
10005	INVALID_DHCT_MAC_ADD	FAIL	Invalid Dhct Mac Address
10000	DHCTMACADDR_NOT_ DEFD	FAIL	DHCT MAC Address not defined
10003	INVALID_BLOCKING_PIN	FAIL	Invalid Blocking Pin
10016	INVALID_PURCHASE_PIN	FAIL	Invalid Purchase Pin
74	INVALID_SERVICE_NAME	FAIL	Invalid Service Name
10052	SERVICE_NOT_PPV	FAIL	Service Not PPV
10007	INVALID_EVENT_LIST	FAIL	Invalid Event List
36	INVALID_PAY_PER_VIEW	FAIL	Invalid Pay Per View
26	INVALID_IMPULSE_PPV	FAIL	Invalid Impulse Pay Per View
97	PPV_EVENT_WINDOW_ERR	FAIL	PPV Event Window Error
10024	INVALID_ADVRT_WINDOW	FAIL	Invalid Advertising Window
10013	INVALID_MRKT_WINDOW	FAIL	Invalid Marketing Window
10011	INVALID_LMTD_DURATIN	FAIL	Invalid Limited Duration
10022	START_TIME_PASSED	FAIL	Start Time has passed
10006	INVALID_EVENT_INFO	FAIL	Invalid Event Info
10004	INVALID_DB_OPERATION	FAIL	Invalid Database Operation
10053	INVALID_MULTI_TITLE	FAIL	Invalid Multi Lingual Title
10054	UNSUPPORTED_ LANGUAGE	FAIL	Unsupported Language
10014	INVALID_PKG_NAME	FAIL	Invalid Package name.

UserExitType.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<serviceModel xmlns="http://www.metasolv.com/ServiceActivation/2003/ServiceModel">
     <userDefinedExitType>
          <neDescriptor>
               <softwareLoad>1-0<//softwareLoad>
               <technology>DNCSRPC<//technology>
               <neVendor>CISCO<//neVendor>
          <//neDescriptor>
          <searchPattern>0<//searchPattern>
          <userType>SUCCEED<//userType>
          <baseType>SUCCEED<//baseType>
          <description>No Error<//description>
     <//userDefinedExitType>
     ..................
     <//serviceModel >
```

3

Service Definition

The CISCO_DNCS_ONC cartridge contains a set of CSDLs that map to one or more ASDL commands. You can also create additional CSDLs that map to existing and newly-created ASDLs. An upstream system can assemble any of these CSDL commands onto a work order for provisioning.

This chapter presents detailed information about the CSDL parameters in this cartridge. The following table lists and describes the type of parameter information that is included.

Table 3–1 ASDL Parameter Information

Item	Description
Parameter Name	Identifies the parameter that is configured for the stated service.
Description	Describes the parameter.
Range	Describes or lists the range of values that can be used to satisfy this parameter.
Default Value	Configures a default value for the parameter so that it is not mandatory for the upstream system to provide a value.
Type	Indicates one of the following parameter types: ■ S - Scalar, specifies the parameter label transmitted on the ASDL command. Scalar parameters are conventional name-value pair parameters. ■ C - Compound, specifies the base name of the compound parameter transmitted on the ASDL command. A compound parameter contains structures or arrays of information that are represented by a particular structure name or compound parameter name. Each compound parameter can contain a large number of elements. If you use compound parameters, you only require a single entry in the ASAP translation tables to call the compound parameter and all its associated parameter elements. ■ I - Indexed, identifies a parameter that contains a sequential numerical index value to tell the SARM that it should execute the same operation (for example, an ASDL command) for all occurrences of that index. Consequently, if there are several options on a particular CSDL command (OPT1, OPT2, OPT3, etc.), you can specify the OPT parameter as an indexed parameter. When you specify the OPT parameter as an indexed parameter, the SARM generates several occurrences of that same ASDL command and each command has a different value for the option being transmitted to the NEP. For more information on parameter types, refer to the *ASAP Developer's Guide*.

Table 3–1 (Cont.) ASDL Parameter Information

Item	Description
Class	Indicates one of the following parameter classifications: ■ R - Required scalar parameter ■ O - Optional scalar parameter ■ C - Required compound parameter ■ N - Optional compound parameter ■ M - Mandatory indexed parameter ■ I - Optional indexed parameter ■ S - Parameter count

For a detailed description of the Required and Optional parameter classifications, refer to the *ASAP System Administrator's Guide.*

CSDL Commands

This cartridge provides the following CSDL commands:

- C_CISCO-DNCSRPC_1-0_ADD_RPPV-AUTHORIZATION
- C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT
- C_CISCO-DNCSRPC_1-0_CLEAN_ACTION
- C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT
- C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT
- C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT
- C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL
- C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-ADMIN-STATUS-IDMT
- C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT
- C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT
- C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT
- C_CISCO-DNCSRPC_1-0_REFRESH_DHCT-INSTANT-HIT
- C_CISCO-DNCSRPC_1-0_REGISTER_DHCT
- C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT
- C_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION
- C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM
- C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT
- C_CISCO-DNCSRPC_1-0_SET_PIN
- C_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION

C_CISCO-DNCSRPC_1-0_ADD_RPPV-AUTHORIZATION

This transaction is used to authorize a reservation (ordered by the subscriber via ANI, an ARU, or some other ordering mechanism) PPV event on a specific DHCT.

Table 3–2 C_CISCO-DNCSRPC_1-0_ADD_RPPV-AUTHORIZATION

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
ORDER_SOURCE	Sent in the AddRppvAuthorization transaction to identify the originator of the authorization. A numerical identifier which will be returned with the PowerKEY PPV report.	N/A	N/A	S	O
PACKAGE_COUNT	Number of package name in the package name list	N/A	N/A	S	O
PACKAGE_LIST_ TYPE	Used to inform the CAM of authorizations for given packages. Package list type.	N/A	N/A	S	O
PACKAGE_NAME_ LIST	List of package names. The member label is PACKAGE_NAME.	N/A	N/A	C	O
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–3 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_ADD_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_ADD_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_ADD_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_ADD_ RPPV-AUTHORIZATION
C_CISCO-DNCSRPC_1-0_ADD_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_ADD_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT

This transaction is used to direct a DHCT to perform a network boot.

Table 3–4 C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–5 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT	A_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT
C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_BOOT_DHCT-BCT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_CLEAN_ACTION

Must be last CSDL in all work orders. Service Action to delete database rows associated with a single work order at end of all forward CSDLs.

Table 3–6 C_CISCO-DNCSRPC_1-0_CLEAN_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–7 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_CLEAN_ACTION	A_CISCO-DNCSRPC_1-0_CLEAN_ACTION

C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

This transaction is used to define PPV events to the PPV application server. It can also be used to modify the definition of existing PPV events.

Table 3–8 C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
ADVERTISING_ WINDOW_INTERVAL	The AdvertisingWindow descriptor controls the interval over which an IPPV event is advertised for purchase at the PPV client. Seconds	N/A	N/A	S	O
ADVERTISING_ WINDOW_START_ TIME	The AdvertisingWindow descriptor controls the interval over which an IPPV event is advertised for purchase at the PPV client. Unix Time	N/A	N/A	S	O
ALLOW_ IMMEDIATE_ CANCEL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. True or False	N/A	N/A	S	O
ALLOW_WINDOW_ CANCEL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. True or False.	N/A	N/A	S	O
BUY_WINDOW_ INTERVAL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. Seconds	N/A	N/A	S	O
BUY_WINDOW_ START_TIME	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-se basis. Unix Time	N/A	N/A	S	O
CANCEL_WINDOW_ INTERVAL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. Seconds from start of package.	N/A	N/A	S	O
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DATABASE_ OPERATION	Sent in the definitional BASS transactions to indicate whether a strict insertion or a strict update is desired. If this descriptor is omitted from a transaction, the appropriate database operation will be determined by the server from the state of the database server.	N/A	N/A	S	O
EVENT_COUNT	The number of events in the package name list	N/A	N/A	S	O
EVENT_INFO_ EVENT_COST	Sent in the DefinePpvEvent transaction to provide user-presentable descriptive information for IPPV events. Event cost to be displayed by the DHCT during the IPPV purchase process.	N/A	N/A	S	R
EVENT_INFO_ EVENT_TITLE	Sent in the DefinePpvEvent transaction to provide user-presentable descriptive information for IPPV events. Event title to be displayed by the DHCT during the IPPV purchase process.	N/A	N/A	S	R

Table 3–8 (Cont.) C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
EVENT_ORDER_ PHONE_NUMBER	Sent in the DefinePpvService transaction to define the telephone number to for a user to call to order a reservation PPV event.	N/A	N/A	S	O
FREE_CA_INTERVAL	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. Seconds	N/A	N/A	S	O
FREE_CA_START_ TIME	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. UNIX time	N/A	N/A	S	O
LIMITED_DURATION	Sent in the DefineSegment transaction to specify the interval over which a segment is active and in the DefinePackage transaction to specify the interval over which a package is to be authorized. Minutes	N/A	N/A	S	R
LIMITED_ DURATION_START_ TIME	Sent in the DefineSegment transaction to specify the interval over which a segment is active and in the DefinePackage transaction to specify the interval over which a package is to be authorized. UNIX time.	N/A	N/A	S	R
MARKETING_ WINDOW_INTERVAL	Sent in the DefinePpvEvent transaction to determine how long a IPPV event should be advance purchasable. Seconds	N/A	N/A	S	O
MARKETING_ WINDOW_START_ TIME	Sent in the DefinePpvEvent transaction to determine how long a IPPV event should be advance purchasable. Time to begin offering advance purchase of the event, for advance purchase. UNIX time	N/A	N/A	S	O
MODE	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. The member labels are LENGTH, COST and RIGHT_TO_COPY.	N/A	N/A	C	O
MODE_COUNT	Sent in the DefinePpvEvent transaction to provide additional definition for packages that are to be purchasable via the DHCT on a per-use basis. The number of elements in the mode list	N/A	N/A	S	O
MULTI_LINGUAL_ TITLE	Sent in the DefinePpvEvent transaction to provide multiple title strings, each encoded in a separate language. The member labels are ISO_639_ LANGUAGE_CODE and EVENT_ TITLE.	N/A	N/A	C	O

Table 3–8 (Cont.) C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
MULTI_LINGUAL_ TITLE_COUNT	Sent in the DefinePpvEvent transaction to provide multiple title strings, each encoded in a separate language. This field provides the number of iterations of the following fields.	N/A	N/A	S	O
NUMBER_ AVAILABLE_TIME	Time RPPV telephone order number becomes available. Unix Time	N/A	N/A	S	O
PACKAGE_NAME	Sent to identify the subscription package for service being described by the current descriptor loop, or to identify a PPV event.	N/A	N/A	S	R
PACKAGE_NAME_ LIST	An array containing the packageNames of previously-defined PPV events that are to be authorized as a unit. The member label is PACKAGE_NAME.	N/A	N/A	C	O
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
RIGHT_TO_COPY	Sent in the DefinePpvEvent transaction to provide PPV event parameters that are common to both RPPV and IPPV events. The right of copy.	N/A	N/A	S	O
SERVICE_NAME	Sent to identify the service being referenced by the current descriptorLoop.	N/A	N/A	S	R
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–9 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT
C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_DEFINE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT

This transaction is used to remove a DHCT from the DNCS database.

Table 3–10 C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–11 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT	A_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT
C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_DEREGISTER_DHCT-IDMT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT

This transaction is used to disconnect a CA Module from its associated Host device.

Table 3–12 C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT

Parameter Name	Description	Range	Default Value	Type	Class
CA_MODULE_ID	Identifies the CA module.	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–13 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT
C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_DEREGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL

This transaction is used to retrieve a single DHCT's IPPV purchases.

Table 3–14 C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–15 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL	A_CISCO-DNCSRPC_1-0_GET_IPPV-POLL
C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_GET_IPPV-POLL	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-ADMIN-STATUS-IDMT

This transaction is used to modify the Administrative Status of one or more DHCTs.

Table 3–16 C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-ADMIN-STATUS-IDMT

Parameter Name	Description	Range	Default Value	Type	Class
BILLING_ID	Sent to the IDM to identify the billing system that owns a DHCT.	N/A	N/A	S	O
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_ADMIN_ STATUS	Communicates a administrative status for DHCT.	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
LOCATION_CODE	Sent in the ModifyDhctAdminStatus transaction to provide an optional location in the network.	N/A	N/A	S	O
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–17 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-ADMIN-STATUS-IDMT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-ADMIN-STATUS-IDMT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-ADMIN-STATUS-IDMT	A_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-ADMIN-STATUS-IDMT
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-ADMIN-STATUS-IDMT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-ADMIN-STATUS-IDMT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT

This transaction is used to modify the conditional access status and authorizations of one or more DHCTs. It is used to control a DHCT's ability to access digital broadcast services, request interactive sessions, purchase IPPV events and so on.

Table 3–18 C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
DHCT_STATE_ ANALOG_ENABLE_ FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize analog services.Indicates if analog services are enabled or disabled.	N/A	N/A	S	R
DHCT_STATE_ CREDIT_LIMIT	The maximum total cost of stored IPPV purchases.	N/A	N/A	S	R
DHCT_STATE_DIS_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to request interactive sessions.Indicates if interactive services are enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_DMS_ ENABLE_FLAG	This field is set to False to cause the CAM to deprovision all package authorizations on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_FAST_ REFRESH_FLAG	This is used to cause the CAM to increase the rate at which EMMs are transmitted for the specified DHCT.	N/A	N/A	S	R
DHCT_STATE_IPPV_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize IPPV services.Indicates if IPPV is enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_X	The geographic location X of the specified DHCT.Specifies the geographic location, on X axis.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_Y	The geographic location Y of the specified DHCT.Specifies the geographic location, on Y axis	N/A	N/A	S	R
DHCT_STATE_MAX_ IPPV_EVENTS	Specifies the maximum number of IPPV purchases allowed without being reported to and acknowledged by the CAM.	N/A	N/A	S	R
DHCT_STATE_PIN	Personal Identification Number (PIN).	N/A	N/A	S	R
DHCT_STATE_PIN_ ENABLE	This field is used to manage the capability to require a Personal Identification Number (PIN) to make IPPV purchases	N/A	N/A	S	R
PACKAGE_AUTH_ LIST_TYPE	This is used to indicate whether the PackageAuthorization contains only subscription packages, only PPV packages, or both.	N/A	N/A	S	R

Table 3–18 (Cont.) C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-CONFIG-PCT

Parameter Name	Description	Range	Default Value	Type	Class
PACKAGE_AUTH_ NAME_LIST	The package name which provides an authorization name for services sold on a subscription basis or a PPV basis. The member label is NAME.	N/A	N/A	C	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–19 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-CONFIG-PCT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-CONFIG-PCT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-CONFIG-PCT	A_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-CONFIG-PCT
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-CONFIG-PCT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-CONFIG-PCT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT

This transaction is used to modify the conditional access status of one or more DHCTs.

Table 3–20 C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
DHCT_STATE_ ANALOG_ENABLE_ FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize analog services.Indicates if analog services are enabled or disabled.	N/A	N/A	S	R
DHCT_STATE_ CREDIT_LIMIT	The maximum total cost of stored IPPV purchases.	N/A	N/A	S	R

Table 3–20 (Cont.) C_CISCO-DNCSRPC_1-0_MODIFY_DHCT-STATE-PCT

Parameter Name	Description	Range	Default Value	Type	Class
DHCT_STATE_DIS_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to request interactive sessions.Indicates if interactive services are enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_DMS_ ENABLE_FLAG	This field is set to False to cause the CAM to deprovision all package authorizations on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_FAST_ REFRESH_FLAG	This is used to cause the CAM to increase the rate at which EMMs are transmitted for the specified DHCT.	N/A	N/A	S	R
DHCT_STATE_IPPV_ ENABLE_FLAG	This field is set to False to cause the CAM to disable the ability of the specified DHCT to utilize IPPV services.Indicates if IPPV is enabled or disabled on a given DHCT.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_X	The geographic location X of the specified DHCT.Specifies the geographic location, on X axis.	N/A	N/A	S	R
DHCT_STATE_ LOCATION_Y	The geographic location Y of the specified DHCT.Specifies the geographic location, on Y axis	N/A	N/A	S	R
DHCT_STATE_MAX_ IPPV_EVENTS	Specifies the maximum number of IPPV purchases allowed without being reported to and acknowledged by the CAM.	N/A	N/A	S	R
DHCT_STATE_PIN	Personal Identification Number (PIN).	N/A	N/A	S	R
DHCT_STATE_PIN_ ENABLE	This field is used to manage the capability to require a Personal Identification Number (PIN) to make IPPV purchases	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–21 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-STATE-PCT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-STATE-PCT	A_CISCO-DNCSRPC_1-0_START_ACTION

Table 3–21 (Cont.) CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-STATE-PCT	A_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-STATE-PCT
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-STATE-PCT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_MODIFY_ DHCT-STATE-PCT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT

This transaction obtains the current status of a DHCT's Enable DMS flag and IPPV purchase count, as well as the list of authorized packages.

Table 3–22 C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–23 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT	A_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT
C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_QUERY_DHCT-PCT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_REFRESH_DHCT-INSTANT-HIT

This transaction is used to refresh the authorizations for a DHCT.

Table 3–24 C_CISCO-DNCSRPC_1-0_REFRESH_DHCT-INSTANT-HIT

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–25 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_REFRESH_ DHCT-INSTANT-HIT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_REFRESH_ DHCT-INSTANT-HIT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_REFRESH_ DHCT-INSTANT-HIT	A_CISCO-DNCSRPC_1-0_REFRESH_ DHCT-INSTANT-HIT
C_CISCO-DNCSRPC_1-0_REFRESH_ DHCT-INSTANT-HIT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_REFRESH_ DHCT-INSTANT-HIT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_REGISTER_DHCT

This transaction adds a DHCT to the IDM database.

Table 3–26 C_CISCO-DNCSRPC_1-0_REGISTER_DHCT

Parameter Name	Description	Range	Default Value	Type	Class
BILLING_ID	Sent to the IDM to identify the billing system that owns a DHCT.	N/A	N/A	S	O
BOOT_PAGE	Carries the name of a bootterm page.	N/A	N/A	S	O
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DAY_LIGHT_SAVING	Sent to the Inventory &Directory Manager to indicate the time-of-day information for a DHCT. Day Light Saving.	N/A	N/A	S	O
DHCT_ADMIN_ STATUS	Communicates a administrative status for DHCT	N/A	N/A	S	R

Table 3–26 (Cont.) C_CISCO-DNCSRPC_1-0_REGISTER_DHCT

Parameter Name	Description	Range	Default Value	Type	Class
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
DHCT_SE_SERIAL_ NUMBER	Sent in the RegisterDhct transaction to identify the DHCT.	N/A	N/A	S	O
DHCT_TYPE	Sent to the Inventory &Directory Manager to communicate the type of a DHCT.	N/A	N/A	S	R
DHCT_TYPE_ REVISION	Sent to the Inventory &Directory Manager to communicate the type of a DHCT.	N/A	N/A	S	R
IP_ADDRESS	Sent to the Inventory &Directory Manager to provide the IP address for either DHCT or Service Provider.	N/A	N/A	S	O
KEY_CERTIFICATE	Sent to specify a public key certificate assigned to a network entity.	N/A	N/A	S	O
NSAP_ADDRESS	Carries an OSI NSAP address for use in either DHCT or Service Provider definition.	N/A	N/A	S	O
OFFSET_MINUTES	Sent to the Inventory &Directory Manager to indicate the time-of-day information for a DHCT. Offset minutes	N/A	N/A	S	O
ORGANIZATION_ UNIQUE_ID	Sent to the Inventory &Directory Manager to communicate the type of a DHCT.	N/A	N/A	S	R
PRIMARY_VASP_ NSAP	Carries the OSI NSAP address used by the DHCT to contact its primary or owning VASP for level 2 boot or application download.	N/A	N/A	S	O
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
SW_TOC	Software table of content	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R
USER_KEY_ CERTIFICATE	Sent to specify a public key certificate assigned to a network entity.	N/A	N/A	S	O

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–27 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_REGISTER_DHCT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_REGISTER_DHCT	A_CISCO-DNCSRPC_1-0_START_ACTION

Table 3–27 (Cont.) CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_REGISTER_DHCT	A_CISCO-DNCSRPC_1-0_REGISTER_DHCT
C_CISCO-DNCSRPC_1-0_REGISTER_DHCT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_REGISTER_DHCT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT

This device is used to pair a Host device with a CA Module.

Table 3–28 C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT

Parameter Name	Description	Range	Default Value	Type	Class
CA_MODULE_ID	Identifies the CA module	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
HOST_ID	The identity of a Host.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response will be returned to the same IP address and port as the request, unless an alternate port is supplied here.	N/A	N/A	S	O
TRANS_NUM	Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–29 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT
C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_REGISTER_HOST-CAMT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION

This transaction is used to remove an authorization for a reservation PPV event on a specific DHCT.

Table 3–30 C_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R

Table 3–30 (Cont.) C_CISCO-DNCSRPC_1-0_REMOVE_RPPV-AUTHORIZATION

Parameter Name	Description	Range	Default Value	Type	Class
PACKAGE_NAME	Sent to identify the subscription package for service being described by the current descriptor loop, or to identify a PPV event.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–31 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_REMOVE_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_REMOVE_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_REMOVE_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_REMOVE_ RPPV-AUTHORIZATION
C_CISCO-DNCSRPC_1-0_REMOVE_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_REMOVE_ RPPV-AUTHORIZATION	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM

This transaction is used to command application clients resident on the indicated DHCTs to reset any allocated non-volatile memory to its factory default values.

Table 3–32 C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–33 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM	A_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM
C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_RESET_CLIENT-NVM	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT

This transaction is used to retire previously defined PPV events.

Table 3–34 C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
PACKAGE_NAME	Sent to identify the subscription package for service being described by the current descriptor loop, or to identify a PPV event.	N/A	N/A	S	R
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–35 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT
C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_RETIRE_PPV-EVENT	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_SET_PIN

This transaction is used to define new values for the channel blocking PIN or IPPV purchase PIN for a specific DHCT.

Table 3–36 C_CISCO-DNCSRPC_1-0_SET_PIN

Parameter Name	Description	Range	Default Value	Type	Class
BLOCKING_PIN	Sent to specify the new value of the channel blocking PIN.	N/A	N/A	S	O
BLOCKING_PIN_ ENABLE	Sent to specify the new value of the channel blocking PIN.	N/A	N/A	S	O
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R
DHCT_MAC_ADDR	Sent to identify the DHCT being described by the current descriptor loop.	N/A	N/A	S	R
PURCHASE_PIN	Sent to specify the new value of the IPPV purchase PIN.	N/A	N/A	S	O
PURCHASE_PIN_ ENABLE	Sent to specify the new value of the IPPV purchase PIN	N/A	N/A	S	O
RESPONSE_PORT_ NUM	Response Port Number	N/A	N/A	S	O
TRANS_NUM	Transaction Number. Used to handle Async Response	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–37 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_SET_PIN	A_CISCO-DNCSRPC_1-0_INIT_ACTION
C_CISCO-DNCSRPC_1-0_SET_PIN	A_CISCO-DNCSRPC_1-0_START_ACTION
C_CISCO-DNCSRPC_1-0_SET_PIN	A_CISCO-DNCSRPC_1-0_SET_PIN
C_CISCO-DNCSRPC_1-0_SET_PIN	A_CISCO-DNCSRPC_1-0_STOP_ACTION
C_CISCO-DNCSRPC_1-0_SET_PIN	A_CISCO-DNCSRPC_1-0_RESUME_ACTION

C_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION

Must be first CSDL for all Work Orders. Virtual CSDL used to hold the Rollback ASDL to remove all database rows from special NEP Database for a single work order when the work order rollsback.

Table 3–38 C_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION

Parameter Name	Description	Range	Default Value	Type	Class
CISCO_DNCS_HOST	MCLI Host	N/A	N/A	S	R

Mapping to ASDLs

The following table illustrates the CSDL to ASDL mapping for this service.

Table 3–39 CSDL to ASDL Mapping

CSDL	ASDL
C_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION	A_CISCO-DNCSRPC_1-0_VIRT_CLEAN_ACTION

4

Configuring ASAP to Support Additional NE Instances

You can configure Oracle Communications ASAP (ASAP) to support the T_CISCO-DNCSRPC_1-0_BASS-HOST and T_CISCO-DNCSRPC_1-0_BOSS-HOST - NEP configuration using the Service Activation Configuration Tool (SACT). Refer to the *ASAP Administration Guide* for more information.

Extracting Source Files

Before you can access an XML file to modify it, you must extract it from the .sar file. Use the following procedure to extract source files from the sar file.

To extract source files:

1. If necessary, create a repository directory, copy the .sar file to the new directory and un-jar the sar file.
2. After you un-jar the sar file, you can access the XML files.

Loading a New XML File

When you finish modifying an XML file, you must create a new sar file, then restart the cartridge using the new file.

Configuration XML File

Below is an example of the Activation.Configuration.XML file for the CISCO_DNCS_ONC cartridge.

```
<?xml version="1.0" encoding="UTF-8"?>
<activationConfig
xmlns="http://www.metasolv.com/ServiceActivation/2003/ActivationConfig">
     <connectionPool name="CSDNCSPL">
          <device name="CISCO_DNCS_DEV1">
               <environment/>
               <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
          </device>
     </connectionPool>
     <element name="T_CISCO-DNCSRPC_1-0_BOSS-HOST">
          <vendor>CISCO</vendor>
          <technology>DNCSRPC</technology>
          <softwareLoad>1-0</softwareLoad>
          <nepServerName>$NEP</nepServerName>
          <primaryPool>CSDNCSPL</primaryPool>
```

```
          <maximumConnections>5</maximumConnections>
          <dropTimeout>1</dropTimeout>
          <spawnThreshold>6</spawnThreshold>
          <killThreshold>3</killThreshold>
          <routingElement name="T_CISCO-DNCSRPC_1-0_BOSS-HOST"/>
          <communicationParameter>
               <label>HOST_IPADDR</label>
               <value>
                    <value>10.254.6.9 </value>
               </value>
               <description>Network IP address for the BOSS host NE.</description>
               <deviceName>COMMON_DEVICE_CFG</deviceName>
               <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
          </communicationParameter>
          <communicationParameter>
               <label>OPEN_TIMEOUT</label>
               <value>
                    <value>5</value>
               </value>
               <description>For Java only. Connection establishment timeout (in
seconds).</description>
               <deviceName>COMMON_DEVICE_CFG</deviceName>
               <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
          </communicationParameter>
          <communicationParameter>
               <label>READ_TIMEOUT</label>
               <value>
                    <value>1</value>
               </value>
               <description>For Java only. Timeout for the telnet read functions
(in seconds).</description>
               <deviceName>COMMON_DEVICE_CFG</deviceName>
               <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
          </communicationParameter>
          <communicationParameter>
               <label>IDLE_TIMER_INTERVAL</label>
               <value>
                    <value>60</value>
               </value>
               <description>The idle timer. If this parameter is not defined or is
set to zero, the IDLE_TIMER_ASDL is not triggered regardless of how long a
connection remains idle.</description>
               <deviceName>COMMON_DEVICE_CFG</deviceName>
               <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
          </communicationParameter>
          <communicationParameter>
               <label>WL_USER</label>
               <value>
                    <value>weblogic</value>
               </value>
               <description>Weblogic User</description>
               <deviceName>COMMON_DEVICE_CFG</deviceName>
               <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
          </communicationParameter>
          <communicationParameter>
               <label>WL_PASSWORD</label>
               <value>
                    <value>weblogic</value>
               </value>
               <description>Weblogic Password</description>
```

```
                <deviceName>COMMON_DEVICE_CFG</deviceName>
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
            </communicationParameter>
            <communicationParameter>
                <label>WL_URL</label>
                <value>
                    <value>t3://10.65.193.28:7001</value>
                </value>
                <description>Weblogic URL</description>
                <deviceName>COMMON_DEVICE_CFG</deviceName>
                <lineType>GENERIC_MESSAGE_BASED_CONNECTION</lineType>
            </communicationParameter>
        </element>
</activationConfig>
```