



Common Report Format 10x115x

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Service Inventory Data

This section provides an outline of the types of data that are collected during the Service Inventory process. The purpose of the format specification is to represent the information in a common format that is not specifically tied to any single customer's format requirements. The data points listed comprise elements required by current customers, elements required by Cisco, and additional fields that are reserved for future use. This section is a summary of the types of data that are collected and is not a complete list. See the format definitions and example files in [Filename Specifications, on page 5](#) for a complete listing of fields and data.

Data Points



Note This listing does not specify the order or arrangement of data in the files. This section provides a summary of the types of data that are presented.

Report Summary Information

The following data points are included in the Report Summary Information:

- Filename

- Domain Manager Hostname
- Domain Manager IP Address
- Reporting Period Start Date/Time (reporting period)
- Reporting Period End Date/Time (reporting period)

Report Statistical Information

The following data points are included in the Report Statistical Information:

- Total Provider Count
- Total Reseller Count
- Total Customer Count
- Total Site Count
- Total Subscriber Count
- Total Unassigned Device Count
- Total MACD Row Count

Service Inventory Report Data

The following data points are found in the Service Inventory Report Data:

- Provider information
 - Provider Name
 - Provider ID
- Reseller information
 - Provider ID
 - Reseller Name
 - Reseller ID
- Customer Information
 - Provider and Reseller ID
 - Customer ID and Name
 - Address
 - Contact Information
 - Additional Details
- Customer Device Details
 - Customer Device Information

- Device Make
- Device Model
- Site Information
 - Customer ID
 - Site ID
 - Site Name
 - Site Address
 - Additional Details
- Subscriber Information
 - Customer Name
 - Site Name
 - Subscriber Username
 - License type consumed and number of licenses
 - Entitlement information, including Entitlement Profile and Entitlement Catalog
 - EM Enabled and SNR Enabled
 - Primary Extension
 - User Type
 - Unity license type Consumed and number of licenses
 - Additional Details
- Subscriber Feature Information
 - Customer Name
 - Feature Name/Identifier
 - Feature State Details
- Device/Line Information
 - Device identifiers, Device MAC addresses
 - Device Pool Name
 - Device License details
 - Device Line Associations
- Move/Add/Change/Delete (MACD) Information
 - Provider MACD Events
 - Reseller MACD Events

- Customer MACD Events
- Site MACD Events
- Subscriber MACD Events
- Feature MACD Events
- Device MACD Events
- Line MACD Events

- License Summary Information
 - Prime License Manager Info
 - Customer License Info
 - Site License Info

Viewing Layout and Format

This section outlines the layout and format of data points in the Cisco Service Inventory output file. In general, the data stored in the files is displayed by the customer with some additional processing information included where necessary. The following section gives an overview of the format, a description of the file layout, a listing of the various row formats and data types that are in the output files, and finally, examples of Cisco Service Inventory output files.

Service Inventory can produce three different types of reports:

- Unified Communications Domain Manager Service Inventory Common Format (.si)
- UC Application Service Inventory Common Format (.ucsi)
- UC Application MACD Format (.simacd)

File Extensions and Output

The Cisco Unified Communications Domain Manager Service Inventory Common Format presents all necessary data in a human-readable format while keeping output file size to a minimum. The format is an ASCII-based file with the “.si” file extension. Files that are delivered by the Cisco Unified Communications Domain Manager server (or any other Domain Manager) before final output are identified by the “.dsi” file extension (“Domain Manager Service Inventory”). The Domain Manager server delivers files in a single-file output. The file extension for the UC Application Service Inventory Common Format is “.ucsi”. The Service Inventory application also maintains additional intermediate file formats that follow a similar naming convention; however, these file formats are for internal use only and are not the focus of this document.

The output is arranged into the following sections:

- Report Summary Information
- Report Definition Information
- Service Inventory Data

- **Provider Data > Reseller Data > Customer Data > Site Data > [Subscriber Data (+Subscriber Feature Data, +Subscriber License Data, + Subscriber Device Data, +Subscriber Entitlement Data, +Subscriber Unity License data, +License Count)] > | [unassigned Device Data (Device License data)]**
- MACD Data
 - Reseller, Customer, Site, Subscriber, Device, Line, and Feature Group MACD Data
- Report Statistical Information
- License Summary Data
 - PLM Summary Info
 - Customer License Info
 - Site License Info

MACD Data

MACD data in the file is represented as a row indicating the updated state of whatever entity is currently being added, changed, or deleted. Unlike a change notification, which shows a “before” and “after” state of the entity, the MACD representation shows only the “after” state. For a delete operation, the “before” state is shown fully, and in most cases, it shows precisely the information that is being deleted. This information may differ depending on the Unified Communications Domain Manager and the case. Where necessary, the parsing applications must interpret intermediate states based on the combination of static service inventory data and MACD data.

You can also run a report for the UC Applications that is slightly different from the MACD for the Unified Communications Domain Manager report. See [MACD Report Format, on page 54](#).

Filename Specifications

The format of the service inventory filenames are critical to the proper operation of the SI applications. The following parameters apply to filenames in this format:

- The filename follows this format:

```
<date><time><timezone>+<domainManagerSequenceID>+<domainManagerType>+<fileNumber>+<fileCount>.<extension>
```

Formats	Example
1 File for Unified Communications Domain Manager 8.x:	110528032329GMT+1+CUCDM+1+1.si
1 File for Unified Communications Domain Manager 10.x/11.5(x):	20110528032329GMT+1+CUCDM2+1+1.si

Formats	Example
3 Split Files (Unified Communications Domain Manager 8.x):	<pre>20110528032329GMT+1+CUCDM+1+3.si 20110528032329GMT+Chicago45+CUCDM+2+3.si 20110528032329GMT+1+CUCDM+2+3.si</pre>

- The standard field delimiter in the filename is “+”. This avoids UNIX/Linux escape character issues and minimizes character escape when writing Java applications against the format.
- The **<domainManagerSequenceID>** field is mandatory and identifies the specific Unified CDM 10x/11.5(x) or Unified CDM 8x that is used to generate the output file. This field must be unique across Unified CDM within a data center.

If it becomes necessary to compress the service inventory file for any reason, prior to transmission across a network, for instance, then the transmitting entity "ZIPs" up the file in an appropriate format. We recommend a ".gz" file format. Domain managers add the .gz extension to the existing filename+extension. In this case, the transmitted file is “<filename>.<extension>.gz”.

Additionally, you should assign compressed files the appropriate permissions to allow proper reading and writing upon being extracted into their uncompressed form. We recommend an “a+rw” permission. File ownership should be treated similarly.

General Format Specifications



Note From Release 8.6(1), all ID fields are deprecated. The <id> fields still appear in the service inventory row definitions and their accuracy cannot be guaranteed. SI has replaced <id> field value with -1 during the data translation or correction.

Additional general format specifications include:

- Data elements in the file are stored in text, integer, and standard date/time formats where appropriate.
- The standard end-of-line character “\n”, while not typically visible in common text-editing applications, is used and available for parsing applications to use for line tokenization.
- The data element delimiter is the pipe symbol (|). Each line starts and ends with a pipe symbol, with a pipe symbol between each data point on the line.
- The pipe symbol “|” is not a valid character within fields in the format.
- An empty (null) field is represented by a tilde symbol (~). Empty fields/columns are not skipped.
- Data rows that are entirely or partially inaccurate are appended with an asterisk (*). This notation is *not* applied to Report Summary or Report Definition rows. For more information see [Data Accuracy Handling, on page 7](#).
- All MACD rows in the file are listed in the MACD section defined by the starting tag |MACDSTART| and by the closing tag |MACDEND|. (For more information see [MACD Row Format, on page 26](#).) MACD rows are ordered TOP to BOTTOM in the file by timestamp, NEWEST to OLDEST.
- Summary Information related to PLM, Customer License, and Site License in the file are listed in the SI Summary section defined by the tag |SISUMMARYSTART| and the closing tag |SISUMMARYEND|.

Data Accuracy Handling

Certain scenarios exist in which the data provided is not entirely accurate or does not even exist while Service Inventory data is processed. To effectively handle such scenarios while still preserving the overall integrity of a service inventory file, the format provides the asterisk (*) symbol for proper notation.



Note You cannot apply this notation to Report Summary rows. Use caution with parsing applications that handle and process data in the report.

Usage Conventions and Scenarios

If a single data element is known to be invalid, an asterisk is placed at the end of the field itself.

Use of asterisk at the end of a field

```
|CUST|1|31|1|XYZ, Inc.|~| ~*|~*|~*|~*|~*|~*|~*|
```



Note The * after the ~ in the preceding example indicates that the fields are not empty but are shown as empty because the actual values for the data field in question cannot be provided for some reason. For more information see [Customer Data Row, on page 17](#).

If an entire row is known to be inaccurate, the asterisk is placed at the end of the row outside the final pipe symbol.

Use of asterisk at the end of a row

```
|DEF|FGROUP|CompanyXYZ|1|Basic Feature Group|10|11|19|17|*
```



Note The * in the preceding example indicates here that the list of features in this feature group are not guaranteed to be accurate at report generation time. For more information the feature group definition row field see [Report Definition Row, on page 12](#).

Global Data Formats

This section outlines the data formats that are used throughout the row formats. Deviation from these global formats is not permitted in the scope of this SI Common Format definition.

Telephone Number (Internal TN)

This format describes the representation of an internal telephone number (TN) or line (terms used interchangeably) throughout the specification.

Format	Example
<internalTN>	810100001



Note Anywhere internal TNs are reported, the format is changed to report the IPPBX-configured full internal number.

Telephone Number (External TN)

This format describes the representation of an external E.164-compliant telephone number (TN) or line (terms used interchangeably) throughout the specification.

Format	Example
+<countryCode><areaCode><localNumber>	+19195552600



Note External TNs that are listed in the report must adhere to the standard E.164 format specification. Typically, a list of external E.164 telephone numbers is associated with an internal TN. The first E.164 number listed (if there is more than one) is the primary E.164 number.

Device Identifier Fields

This format describes the representation of a device name and, where applicable, the device type, the Media Access Control (MAC) address number throughout the specification.

Format	Examples
<deviceName> <16DigitHexMACAddress>	SEP044553abf49C 044553abf49C TCPNAME ~



Note No colon (:) is needed between the HEX digits in the MAC address element.

Date/Time Element

This format definition describes the way in which Date/Time elements are represented in information rows. All dates/times are represented in Greenwich Mean Time. All times are represented in 24-hour format. No separate definition row is required in the file to describe the date elements.

The following describes the characters that are used to construct the format:

- **yyyy** = Year
- **MM** = Month
- **dd** = Day
- **HH** = Hours
- **mm** = Minutes
- **ss** = Seconds
- **z** = Time Zone

Format	Example
<yyyyMMddHHmmssz>	20110423163455GMT

Time Zone Element

This format describes the representation of a Time Zone throughout the report. The Time Zone format is <"Region/City">.

Format	Examples
<timeZone>	Africa/Pretoria Europe/London Pacific/Fiji Indian/Maldives

Row Format Specifications

This section outlines the various secondary row formats that are used in the Cisco SI Common Format. Each type specification provides a format definition and an example usage.

File Header

File Header is the first line of each output file.

Format	Example
FSTART	FSTART



Note This row is *required*.

File Footer

File Footer is the last line of each output file.

Format	Example
[FEND]	FEND



Note This row is *required*.

Report Summary Header

Format	Example
[INFOSTART]	INFOSTART



Note This row is *required*.

Report Summary Row

This format definition describes how summary information is presented in the output files. An example of each data element is described.

Format	Examples
INFO <fieldName> <fieldValue>	<p>Unified Communications Domain Manager 8.1(x) format:</p> <pre> INFO formatVersion 9.0.1.1 INFO filename 20110528032329GMT+12345+CUCDM+1+1.si INFO dmVerPlatform 4.1.6+0.4.47 INFO dmVerSoftware 7.3.0+er15 INFO dmHostname nelco-cucdm4 INFO dmDomain cisco.com INFO dmIP 172.18.200.200 INFO reportStartDT 06012011000000GMT INFO reportEndDT 06012011235959GMT </pre> <p>Cisco Unified Communications Domain Manager 10.x/11.5(x)/12.5(x) format:</p> <pre> INFO formatVersion 10.6.1 INFO filename 20141126132645GMT+1+CUCDM2+1+1.si INFO dmVerPlatform 1.2.0-1415027768 INFO dmVerSoftware 1.2.0+65 INFO dmHostname 10.106.215.12 INFO dmDomain ~ INFO dmIP 10.106.215.12 INFO reportStartDT 20141126132645GMT INFO reportEndDT 20141126132645GMT</pre>

¹

Note

- The “reportStartDT” and “reportEndDT” fields are used to describe the reporting period covered by a report. These values do not indicate the time when the report is generated, nor the amount of time taken to generate the report.
- These rows are *required*. All fields are *required* in all rows.

¹ These fields can appear in any order, except the “formatVersion” row, which must be the first row and the “filename” row , which must be the second row in the Report Summary section.

Report Summary Footer

Format	Example
INFOEND	INFOEND



Note This row is *required*.

Report Definition Header

Format	Example
DEFSTART	DEFSTART



Note This row is *required*.

Report Definition Row

These row definitions specify which interpreted fields later on in the format are defined specific to the file. For instance, you need to define the list of features that are available on the system before specifying feature inclusion in a feature group. By encapsulating these definitions in the output, a parsing application can programmatically, at runtime, determine how to interpret information that is presented later in the output file.

Format
DEF <definitionName> {additional column definitions here}

Country Code Definition

Format	Example
DEF COUNTRY <country[1] ID> <country[1] Name> <country[1] Code> ... <country[N]ID> <country[N]Name> <country[N] Code>	DEF COUNTRY 15 United States USA 16 United Kingdom UK
<ul style="list-style-type: none"> This definition format permits the country code data to appear in either a two-character representation or a three-character representation. Parsing applications may use the definition row to map “country_X_id” to the appropriate names and abbreviations. All fields are <i>required</i> in this row. 	

Domain Manager Global Feature List Definition

Format	Example
DEF FEATURES <feature_1_ID> <feature_1_Name> ... <feature_N_ID> <feature_N_Name>	DEF FEATURES 10 Voice 11 Voicemail 19 Mobility

Format	Example
	<ul style="list-style-type: none"> • This row defines all possible features that are available on the current version of the Domain Manager server. Both <featureID> and <featureName> are required to properly map these features to subscribers and devices through the Feature Group Definition Row later in the file format. • The Cisco Unified Communications Domain Manager server provides a list of more than 50 features. In this case, the definition row for a report from that Domain Manager define the same number of <featureID>-<featureName> pairs. • The <featureID> values in this row are merely integers used for cross-reference within the current file. There is no guarantee of consistency for these IDs between different physical files. The integers are generated at runtime. • The actual list of <feature> values corresponds to the supported features on the current version of the Unified Communications Domain Manager server, regardless of the report format version being generated. For example, you can generate an 8.6(2) SI report version using an 8.1 Unified Communications Domain Manager application. In this case, the 8.6.2.1 report may contain features that did not exist on a 8.0 Unified Communications Domain Manager application serving as the source of data for the same report version. Parsing applications import the features list at runtime to ensure data integrity and not simply validate features or feature groups based on <featureID> values. Each <featureID> value is still guaranteed to be a unique integer within the space of all <featureID> values. • All fields are <i>required</i> in this row.

Customer Feature Group Definition

Format	Examples
<pre> DEF FGROUP <customerName> <featureGroupID> <featureGroupName> <feature[1] ID> <feature[2]ID> ... <feature[N] ID> </pre>	<pre> DEF FGROUP CompanyXYZ -1 Basic Feature Group 10 11 19 17 DEF FGROUP CompanyXYZ -1 Advanced Feature Group 10 11 19 17 22 34 35 36 53 </pre>
	<ul style="list-style-type: none"> • This row defines all features that are assigned as part of a feature group. • Features listed in the feature group definition row are “assigned” and available to those subscribers who were placed in this group. A subscriber does not necessarily use these features. • <i>All fields are required in this row.</i> • The usage of the <ID> fields in the service inventory section of the report is deprecated. The value of the <featureGroupID> is replaced with “-1”, during data translation or correction, since its original value accuracy is no longer guaranteed.

Customer Device Definition Row

Format	Example
DEF DEV <customerName> <device [1]ID> <device[1]Make> <device[1]Model> ... <device[N]ID> <device[N]Make> <device[N]Model>	DEF DEV CompanyXYZ 1 Cisco 7960 2 Cisco 7965 3 Cisco Cius_V1 4 Avaya Phone1000 5 Apple iPhone3GS 11 Cisco CUPC8
Format for Entitlement Feature Group: DEF EFGROUP <Entitlement Feature Group Name> feature [1]ID> <feature [2] ID> ... <feature [N] ID>	Example - Entitlement Feature Group DEF EFGROUP EntitlementFeatureGroup_1 1 51
Format for Entitlement Device Group: DEF DGROUP <Entitlement Device Group Name> > <device [1] ID> <device [1] Make> <device [1] Model> ... <device [N] ID> <device [N] Make> <device [N] Model>	Example - Entitlement Device Group DEF DGROUP devicegroup2 3 ~ Cisco DX80 2 ~ Cisco 7961 1 ~ Cisco 7961G-GE
Format for Entitlement Catalog: DEF ECATALOG <Provider Name> <Reseller Name> <Customer Name> <Entitlement Feature Group Name> <maximum allowed number of total devices irrespective of the device groupings> <Device Group [1] Name> <maximum allowed number of devices in the group > ... < Device Group [n] Name > < maximum allowed number of devices in the group >	Example - Entitlement Catalog DEF ECATALOG Provider1 Reseller1 ~ EntitlementFeatureGroup_1 10 devicegrp1 9 devicegroup2 1
Format for Entitlement Profile: DEF EPROFILE <Provider Name> <Reseller Name> <Customer Name> <Entitlement Profile Name> <Entitlement Feature Group Name> < maximum allowed number of total devices irrespective of the device groupings> <Device Group [1] Name> < maximum allowed number of devices in the group > ... < Device Group [n] Name > < maximum allowed number of devices in the group >	Example - Entitlement Profile DEF EPROFILE Provider1 Reseller1 Customer1 ent_profile EntitlementFeatureGroup_3 1 devicegroup2 1
<ul style="list-style-type: none"> • The <deviceID> field is used to cross-reference the device make and model information in the Device Data Row, on page 22 for a particular device assigned to a subscriber. • The device ID is a value provided by the Unified CDM server that stores the device make and model information. • Soft clients and mobile devices are reported in this row. • All fields are <i>required</i>. 	



Note The Feature Definition, |DEF|FEATURES| in the Service Inventory report for Cisco Unified Communications Domain Manager 10.x are derived from features assigned to each subscriber, phone.



Note Cisco Unified Communications Domain Manager 10.x does not have the concept Feature Groups (FGROUP). For backward compatibility reasons, Service inventory reports notional feature group (FGROUP) definitions for reports generated from Cisco Unified Communications Domain Manager 10.x. This notional Feature Group is based on the actual feature assigned to each subscriber.



Note The Customer *Device Definition* rows |DEF|DEV| in the SI report for Cisco Unified Communications Domain Manager 10.x are derived from the actual devices configured for subscriber or devices provisioned under a site.

Report Definition Footer

Format	Example
DEFEND	DEFEND



Note This row is *required*.

SI Report Header

Format	Example
SISTART	SISTART



Note This row is *required*.

Provider Data Row

Format	Example
PROV <providerID> <providerName>	PROV -1 PartnerXYZ



Note All fields are *required* in this row.



Note The <providerID> field value is always “-1” because its original value accuracy is not guaranteed.

Provider Footer Row

Format	Example
PEND	P E N D



Note This row is *required* if a |PROV| data row exists.

Reseller Data Row

Format	Example
RESELL <providerID> <resellerID> <resellerName>	RESELL -1 -1 ResellerXYZ



Note All fields are *required* in this row.



Note The <providerID> and <resellerID> field values are always “-1” because their original value accuracy is not guaranteed.

Reseller Footer Row

Format	Example
REND	R E N D



Note This row is *required* if a |RESELL| data row exists.

Customer Data Row

The <customerCountry> within this field is represented by an ID that maps to the country definition row in this example.

Format	Example
CUST <providerID> <resellerID> <customerID> <customerName> <externalCustomerID> <customerAddress1> <customerAddress2> <customerAddress3> <customerCity> <customerState> <customerCountry> <customerPostalCode>	CUST -1 -1 -1 XYZ, Inc.~ 7600 RTP Road ~ ~ Cary NC 15 27513



Note All fields are *required* in this row.



Note The <provider_id>, <reseller_id> and <customer_id> <providerID> field values are always “-1” because its original value accuracy is not guaranteed.

Customer Footer Row

Format	Example
CEND	CEND



Note This row is *required* row if a |CUST| data row exists.

Site Data Row

Format	Example
SITE <customerID> <siteID> <siteName> <externalSiteID> <siteAddress1> <siteAddress2> <siteAddress3> <siteCity> <siteState> <siteCountry> <sitePostalCode> <cityTimezone>	SITE -1 -1 RTP ~ 7600 RTP Road ~ ~ Cary NC 15 27513 EST SITE -1 -1 New York ~ 100 Broadway Ave ~ ~ New York NY 15 10101 EST SITE -1 -1 SUB_DEV_WITH_NOSITE ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
<ul style="list-style-type: none"> For more information about the proper representation of the <cityTimezone> field for the site/location, see Time Zone Element, on page 9. All fields are <i>required</i> in this row. 	



Note All fields are *required* in this row.



Note The field values for <customer_id> and <site_id> are replaced with “-1” because their original value accuracy is not guaranteed.



Note The following example shows a SITE added in the SI report to list all the Subscribers and Devices depending on their hierarchy:

```
|SITE|-1|-1| SUB_DEV_WITH_NOSITE|~|~|~|~|~|~|~|~|~|
```

This is an abstract value and is not found in CUCDM. In the report, this site is listed first followed by the actual sites provisioned in CUCDM. This change is introduced in 10.6.3 ES1.

Site Footer Row

Format	Example
SEND	SEND



Note This is a *required* row if a |SITE| data row exists.

Subscriber Data Row

This section describes the format of the Subscriber Data Row.

Format	Example
SUB <customerID> <siteID> <subID> <subUsername> <subEmail> <subNameFirst> <subNameMiddle> <subNameLast> <subTitle> <subDepartment> <subDepartmentCode> <subContactTelephone> <featureGroupName> EntitlementProfile <Primary Extension> <User Type> <EM Enabled> <SNR Enabled> <HCS License type> <License Count> ... <HCS License type> <License Count> <HCUC License type> <License Count> ... <HCUC License type> <License Count>	

Format	Example
	<pre> SUB -1 -1 -1 jsmith jsmith@xyz.com John Thomas Smith Manager Finance 99 +19198548001 Basic Services BasicProfile 3456789 CUCM Local 0 0 ~ 0 ~ ~ </pre> <pre> SUB -1 -1 -1 div1@cisco.com div1@hcsprovider.com ~ ~ div1 ~ ~ ~ ~ FeatureGroup_3 CUCM-LDAP Synced 0 1 HCS Foundation 1 ~ ~ DEV -1 -1 -1 SEPA88010E10003 A88010E10003 0 1 1 Default ~ </pre> <pre> LINE 123 0 </pre> <p>In the above examples, both John Smith and Jane Doe are a part of feature group “Basic Services”. The assignment determines the features available to John and Jane as defined in the feature group definition row with the corresponding <customerName> and <featureGroupName>.</p> <pre> SUB -1 -1 -1 larryj larryj@cisco.com Larry ~ Jones ~ ~ ~ ~ Group1 StandardProfile 0 CUCM Local 0 0 HCS Foundation 1 HCUC_BasicMessaging 1 </pre> <p>In the above example, Larry Jones is part of Feature Group “Group1”. “Group1” is not a feature group defined in Cisco Unified Communications Domain Manager. It is a Service Inventory derived feature group (derived from Features assigned to subscribers when the SI report is generated). Also <EM Enabled>/<SNR Enabled> is indicated by a 1 or 0 value, where 1 is Enabled. <Primary Extension> is the primary directory number for the subscriber while the user can have multiple lines on their phones. <User Type> represents whether the user is added locally in CUCM or CUCDM, or added through Ldap sync to CUCM or CUCDM.</p> <p>If a subscriber activates a license then the <HCS License Type> indicates the type of license activated and <License Count> indicates the number of license units of license activated. If a subscriber activates more than one type of license, then each type of license, along with the number of license units activated is reported in the Subscriber data row. If a Subscriber is consumes a voice mail license then filed UC License Type indicates the type of license consumed and License Count indicates number of units of license consumed.</p> <pre> SUB -1 -1 -1 staufel staufel@cisco.com Simon ~ Tuaafel ~ ~ ~ Group1 Advanced Profile 0 0 HCS Foundation 1 Telepresence Room 1 HCUC_BasicMessaging 1 CUC_SpeechViewPro 1 </pre> <p>In SI report, User Type can contain the following values:</p>

Format	Example
	<ul style="list-style-type: none"> • CUCM Local • CUCM-LDAP Synced • CUCDM-LDAP Synced <p>Note The <EntitlementProfile> indicates the type of entitlement profile a Subscriber is associated with. This must correspond to the one defined in the DEF EPROFILE section. If Entitlement profile is not associated with the subscriber, this field appears as “~”.</p>
Note	All fields are <i>required</i> in this row.
Note	The values for the following fields: customer_id , site_id and sub_id have been replaced with “-1” during data translation or correction, since its original value accuracy is no longer guaranteed. The usage of the <ID> fields in the service inventory section of the report is deprecated.

Subscriber Footer Row

Format	Example
SUBEND	SUBEND



Note This row is *required* if a |SUB| data row exists.

Eprofile Definition Row

Format	Example
DEV <profilename> <profileID> <customerID> <customerprofile> <deviceIDs> <devicegroup> <numberofdevices> <numberofdevicesingroup>	DEF EPROFILE p1 ~ cust02 cust02EntProfile 51 53 1 46 p1devicegroup02 10 10

Ecatalog Definition Row

Format	Example
DEV <profilename> <profileID> <customerID> <customerprofile> <deviceIDs> <devicegroup> <numberofdevices> <numberofdevicesingroup>	DEF ECATALOG p1 ~ cust01 51 53 1 46 p1devicefroup01 10 10

Devicegroup Definition Row

Format	Example
DEV <groupname> <devicegroup> <numberofdevices>	DEF DGROUP p1devicegroup02 25

Device Data Row

This format defines how a single device is represented in the report. The device is registered and assigned to the subscriber when represented within a |SUB|/|SUBEND| pair. The device is registered and functional at a site but is not assigned to a user when a device is placed outside a |SUB|/|SUBEND| pair in the report. Device examples include conference room phones, lobby phones, or Cisco Extension Mobility-enabled “empty” devices.

In these scenarios, the |DEV| row exists immediately following the |SITE| row and before |SUB| rows for that site. Device Data Rows cannot exist anywhere else in the report. Cisco Extension Mobility profiles are reported in the same way as traditional devices.

Format	Examples
DEV <customerID> <siteID> <subID> <deviceName> <deviceMAC> <phoneOrExtMobility> <deviceTypeID> or <device Type> <lineCount> <Device Pool Name> <HCS License Type>	

Format	Examples
	<p data-bbox="802 296 1484 321"> DEV -1 -1 -1 SEIP0445687B8AAF 0445687B8AAF 0 3 1 Cu1Si1-DevicePool ~ </p> <p data-bbox="802 352 1484 478">In the example above, the <deviceMAC> field follows the preceding MAC Address format definition. The <deviceTypeID> field references the device type as defined in the Customer Device Definition Row, on page 14.</p> <p data-bbox="802 499 1484 558">The value of <phoneOrExtMobility> parameter can be 0 or 1. Following are their definitions:</p> <ul data-bbox="834 579 1484 688" style="list-style-type: none"> • 0: indicates if the device DEV is a physical phone. • 1: indicates if the device DEV is an Extension Mobility profile. <p data-bbox="850 709 1484 768">Note Extension Mobility profile is not a device and will not have <device Type>.</p> <p data-bbox="802 821 1484 879">The <Device Pool> field indicates the ID of the Device Pool to which the device is associated.</p>
	<p data-bbox="802 926 1484 972"> DEV -1 -1 ~ SEP1143ADFE23FF 1143ADFE23FF 0 3 1 Cu1Si1-DevicePool HCS Standard </p> <p data-bbox="802 1010 1484 1161">The preceding example shows a device registered to a site or location but not assigned to an individual subscriber. The tilde (~) shows that there is no <subID> associated with this device. The <phoneOrExtMobility> parameter is set to 0 to indicate that it is a physical phone.</p> <p data-bbox="802 1182 1484 1333">If the DEV row is an Extension Mobilty as indicated by the field phoneOrExtMobility set to 1, then the deviceTypeID may not have any value. Hence, we recommend to first check the phoneOrExtMobility field and ignore the deviceTypeID check if it's an Extention Mobility.</p>
	<p data-bbox="802 1388 1484 1413"> DEV -1 -1 -1 jsmith ~ 1 ~ 1 Cu1Si1-DevicePool ~ </p> <p data-bbox="802 1444 1484 1596">The preceding example shows an Extension Mobility profile assigned with the profile name “jsmith” <deviceTypeID> = “~”, and no <deviceMAC> field. The <phoneOrExtMobility> parameter is set to 1 to indicate that it is a Cisco Extension Mobility profile.</p>
	<p data-bbox="802 1640 1484 1686"> DEV -1 -1 -1 sep098765432108 098765432108 0 8 0 Cu1Si1-DevicePool HCS Foundation </p> <p data-bbox="802 1724 1484 1850">The preceding example shows how a typical DEV data row appears in the 10.6.1 report format. 10.6.3 SI report format has certain difference compared to earlier report formats. For example, <HCS License Type> reports the type of HCS licenses consumed</p>

Format	Examples
	by the device. For devices owned or controlled by subscribers, the value appears as “~”.
Note	<ul style="list-style-type: none"> • The <lineCount> field gives the number of lines, specifically Internal TNs, assigned to the device. External TNs are mapped to individual internal lines. The number of Line Data Rows that follows must match this <lineCount> value. • If a single device is shared with more than one user or device, you can list that device in more than one subscriber record. If a single device is shared or assigned to more than one user, the TOTAL device count is not affected in the Report Statistical section. • All fields are <i>required</i> in the Device Data row. The following fields cannot be empty: <ul style="list-style-type: none"> • <deviceName> (if an EM Profile) • <deviceMAC> (if a physical device or soft client). • The values for the fields <customer_id>, <site_id>, and <subscriber_ID> are replaced with -1 because their original value accuracy is not guaranteed.

Device Line Data Row

This format definition describes how device lines are represented in the report. The format definition depends on the Global Data format definitions of [Telephone Number \(Internal TN\)](#) and [Telephone Number \(External TN\)](#), on page 8.

Format	Examples
LINE <internalTN> <contactCenterAgentLineService> <externalTNe164[1]> ... <externalTNe164[N] >	<div style="background-color: #f0f0f0; padding: 5px;"> LINE 4761000 0 </div> <p>The preceding example describes a single internal TN only.</p> <div style="background-color: #f0f0f0; padding: 5px;"> LINE 4761001 1 +19194761001 </div> <p>The preceding example describes a single internal TN with a mapped external TN (E.164 compliant) and the extension enabled as a contact center agent line.</p> <div style="background-color: #f0f0f0; padding: 5px;"> LINE 4761001 0 +19194761001 +19194761002 </div> <p>The preceding example describes two external TNs associated with a single line.</p>

Format	Examples
<p>The <contactCenterAgentLineService> field in all the preceding examples is a Boolean field indicating whether this particular device LINE is activated for contact center agent usage. The appropriate feature in the feature group assigned to subscriber describes the contact center feature availability. The <contactCenterAgentLineService> field indicates actual activation of the feature, rather than simply indicating availability of this feature.</p>	
<p>Note</p>	<ul style="list-style-type: none"> • If a single line is shared with more than one user or device, the line number can be listed in more than one device record. • All fields are <i>required</i> in this row. The following fields cannot be empty: <internalTN>, <contactCenterAgentLineService>.

SI Report Footer

Format	Example
SIEND	SIEND



Note This row is *required*.

MACD Report Header

Format	Example
MACDSTART	MACDSTART



Note This row is *required*.

MACD Row Format

This format definition describes the general layout of all MACD rows in the report. Certain fields described are required in each MACD row, while individual differences are highlighted in the definition for each type in the following sections.

Format	Examples
MACD <macdEffectiveDT> <macdCategory> <macdCode... <additional fields>...	MACD 201108111983040511GMT FGROUP A ... MACD 201108111983040511GMT RESELL A ... MACD 201108111983040511GMT CUST A ... MACD 201108111983040511GMT SUB A ... MACD 201108111983040511GMT SITE A ... MACD 201108111983040511GMT DEV A ... MACD 201108111983040511GMT LINE A ...
<ul style="list-style-type: none"> • The fields are <i>required</i> for all MACD rows, regardless of type. • In the format, the <macdCategory> field always matches the row type name of the corresponding type to the change. • The <macdEffectiveDT> field represents the effective date/time of the MACD event. The format of this element must follow the Date/Time Element, on page 9 format. 	

MACD Code Element (General)

This format definition describes how MACD Code elements are represented in all MACD rows. No separate definition row is required in the file to describe the MACD Code elements.

The following list describes the characters used to construct the format:

- **M** = Moved
- **A** = Entity is Added
- **D** = Entity is Deleted
- **C** = Entity is Changed
- **N** = No Change or Active

Format	Examples
<macdCode>	M A D C
<p>This format definition applies to all row types that have corresponding MACD rows, except devices. Devices have additional states for registration and assignment that require a separate representation. See MACD Code Element (Devices Only), on page 27.</p>	

MACD Code Element (Devices Only)

This format definition describes how MACD Code elements are represented in all MACD rows for devices. No separate definition row is required in the file to describe the MACD Code Elements for devices.

The following list describes the characters used to construct the format:

- **A** = Device is Registered

- **D** = Device is not Registered
- **S** = Device is Associated to a user or Cisco Extension Mobility profile is added to the user
- **U** = Device is not Associated to a user or Cisco Extension Mobility profile is removed from the user
- **C** = Device is Modified or Cisco Extension Mobility profile is Modified

Format	Examples
<macdCode>	A D S U C

MACD Data Row (Feature Group)

This format definition describes how the addition, modification, or deletion for a feature group appears in the SI report, MACD section.

Format	Examples
MACD <macdEffectiveDT> FGROU<macdCode> <customerName> <featureGroupName> <feature[1]ID> <feature[2]ID> ... <feature[N]ID>	MACD 20110423163455GMT FGROUP A CompanyXYZ Advanced Feature Group 10 11 19 33 99
	In the preceding example, a feature group is added to the system, assigned to a customer "CompanyXYZ" and contains features 10, 11, 19, 33, and 99 (mapped to the FEATURES definition row).
	MACD 20110423163455GMT FGROUP C CompanyXYZ Advanced Feature Group 10 11 19 99
	In the preceding example, the same feature group is modified, and feature 33 is removed.
	MACD 20110423163455GMT FGROUP D CompanyXYZ Advanced Feature Group 10 11 19 99
	In the preceding example, the entire feature group is deleted. In the next report, this feature group will not exist if it is not added again.

MACD Data Row (Provider)

This report format does not support "Provider" MACD information.

MACD Data Row (Reseller)

This format definition describes how reseller MACD information is presented within the SI report file.

Format	Examples
MACD <macdEffectiveDT> RESELL <macdCode> <resellerName>	<p> MACD 20110423163455GMT RESELL A ResellerXYZ </p> <p>In the preceding example, a reseller named “ResellerXYZ” is added to the Domain Manager on April 23, 2011 at 04:34:55 PM GMT.</p> <p> MACD 20110423163455GMT RESELL D ResellerXYZ </p> <p>In the preceding example, the reseller named “ResellerXYZ” is deleted from the Unified Communications Domain Manager.</p> <p> MACD 20110423163455GMT RESELL C ResellerXYZ </p> <p>In the preceding example, the reseller named “ResellerXYZ” shows a change.</p>
Note	<ul style="list-style-type: none"> • Reseller metadata changes are supported on Unified Communications Domain Manager and it results in the generation of a MACD row. However, Unified Communications Domain Manager does not currently support indicating the nature of such changes in the MACD row. • Only the new state of the entity is reported in the MACD row.

MACD Data Row (Customer)

This format definition describes how the customer MACD information is presented within the SI report file.

Format	Examples
MACD <macdEffectiveDT> CUST <macdCode> <customerName> <resellerName> <externalCustomerID>	<p> MACD 20110423163455GMT CUST A CompanyXYZ ResellerXYZ ~ </p> <p>In the preceding example, “CompanyXYZ” is added on April 23, 2011 at 4:34:55 PM GMT to the Unified Communications Domain Manager.</p> <p> MACD 20110423163455GMT CUST D CompanyXYZ ResellerXYZ ~ </p> <p>In the preceding example, "CompanyXYZ" is deleted.</p> <p> MACD 20110423163455GMT CUST C CompanyXYZ ResellerXYZ 34587573 </p> <p>In the preceding example, "CompanyXYZ" is changed. The <externalCustomerID> field is updated.</p>

Format	Examples
Note <ul style="list-style-type: none"> The only changes that are currently supported are changes to the <code><externalCustomerID></code> field. Other customer metadata changes are supported on Unified Communications Domain Manager and results in generation of a MACD row. However, Unified Communications Domain Manager does not indicate these changes in the MACD row. Only the new state of the entity is reported in the MACD row. 	

MACD Data Row (Division)

This report format version does not support "Division" MACD information.

MACD Data Row (Site)

This format definition describes how site MACD information is presented within the SI report file.

Format	Examples
<pre> MACD <macdEffectiveDT> SITE <macdCode> <customerName> <siteName> <externalSiteID> </pre>	<pre> MACD 20110423163455GMT SITE A CompanyXYZ New York ~ </pre> <p>In the preceding example, a site with the name “New York” is added on April 23, 2011 at 4:34:55 PM GMT to the Domain Manager.</p> <pre> MACD 20110423163455GMT SITE D CompanyXYZ New York ~ </pre> <p>In the preceding example, a site was deleted from customer “CompanyXYZ”.</p> <pre> MACD 20110423163455GMT SITE C CompanyXYZ New York 74536577456 </pre> <p>In the preceding example, the <code><externalSiteID></code> field was changed.</p>
Note <ul style="list-style-type: none"> The only changes that are currently supported and meaningful are changes to the <code><externalSiteID></code> field. Other site metadata changes are supported on Unified Communications Domain Manager and results in the generation of a MACD row. However, Unified Communications Domain Manager does not indicate the nature of such changes in the MACD row. Only the new state of the entity is reported in the MACD row. 	

MACD Data Row (Subscriber)

This format definition describes how subscriber MACD information is presented within the SI report file.

Format	Examples
<p> MACD <macdEffectiveDT> SUB <macdCode> <customerName> <siteName> <subUsername> <subEmail> <subNameFirst> <subNameMiddle> <subNameLast> <subTitle> <subDepartment> <subDepartmentCode> <subContactTelephone> <featureGroupName> </p>	<p> MACD 20110423163455GMT SUB A CompanyXYZ NewYork jsmith jsmith@xyz.com John Thomas Smith Manager Finance 99 +19198548001 Basic Features </p> <p>In the preceding example, subscriber John Smith is added on April 23, 2011 at 4:34:55 PM GMT to the customer “CompanyXYZ” at site “New York”. John Smith’s full details are provided on the MACD line to show all the data that was added.</p> <p> MACD 20110423163455GMT SUB D CompanyXYZ NewYork jsmith jsmith@xyz.com John Thomas Smith Manager Finance 99 +19198548001 Basic Features </p> <p>In the preceding example, the user John Smith is deleted.</p> <p> MACD 20110423163455GMT SUB C CompanyXYZ NewYork jsmith jsmith@xyz.com John Thomas Smith Manager Finance 99 ~ Basic Features </p> <p>Following are the various types of possible modifications or changes when a subscriber is concerned:</p> <ul style="list-style-type: none"> • Modifications to metadata such as email, name (first, middle, last), title, department, and department code. • Modifications, additions, or deletions to fields <subContactTelephone> and <featureGroupID>. If an external TN is deleted from the user, it appears as a MACD change type. <p> MACD 20110423163455GMT SUB C CompanyXYZ NewYork jsmith jsmith@xyz.com John Thomas Smith Manager Finance 99 +19198548001 ~ </p> <p>Adding or removing a user to or from a feature group also appears as a MACD change type. The preceding example shows John Smith deletion from the feature group.</p> <p>110423163455GMT SUB A CompanyXYZ NewYork jsmith jsmith@xyz.com John Thomas Smith Manager Finance 99 +19198548001 Basic Features </p> <p>The preceding example shows the user John Smith addition to the feature group.</p>
<p>Note</p>	<p>Only the new state of the entity is reported in the MACD row. The MACD section does not report Entitlement, SNR enabled, EM enabled, or Licensing delta.</p>

MACD Data Row (Device Line and Service)

This format definition describes how device and line MACD information is presented within the SI report file. Reporting MACD data for devices includes registration, assignment, and change operations for devices listed as part of sites and subscribers only. It also includes the addition, deletion, and modification of lines for those devices. In almost all cases, the device and line MACD rows are presented together. In some cases, the line MACD rows can be omitted. Line MACD rows can never be presented in standalone fashion. Service Inventory and MACD data for devices listed in Provider, Reseller, and Division, Customer, and Site inventories are not reported. Only data for registered devices under Site and Subscriber entities are reported.

Format
MACD <macdEffectiveDT> DEV <macdCode> <customerName> <siteName> <subUsername> <deviceName> <deviceMAC> <phoneOrExtMobility> <deviceTypeID> <lineCount>
MACD <macdEffectiveDT> LINE <macdCode> <internalTN> <contactCenterAgentLineService> ...
MACD <macdEffectiveDT> LINE <macdCode> <internalTN> <contactCenterAgentLineService>

The following are examples of different scenarios for the MACD Data Row:

- [A device with two internal TNs is registered to a site., on page 33](#)
- [Assignment of the device to a subscriber described in A device with two internal TNs is registered to a site., on page 33](#)
- [Unassignment of device from a subscriber described in A device with two internal TNs is registered to a site., on page 33](#)
- [A device with two lines is unregistered from a site., on page 33](#)
- [A device with two lines is registered and assigned to a subscriber., on page 34](#)
- [A device with two lines is unassigned and unregistered from a subscriber., on page 34](#)
- [A device with two lines has a setting modified on either the device itself, one of its lines, or both of its lines. Modification does not affect the service inventory record but a MACD row appears., on page 34](#)
- [A device with two lines. Contact Center service is enabled on line 1 but is already enabled on the second line., on page 34](#)
- [A device with two lines. Contact Center service is enabled on line 2., on page 35](#)
- [A device with two lines. Contact Center service is disabled on line 1 and enabled on line 2., on page 35](#)
- [A device with 0 lines is registered and assigned to a subscriber., on page 35](#)
- [A device with two lines is modified. A third line is added., on page 35](#)
- [A device with three lines is modified. The second line is deleted., on page 36](#)

A device with two internal TNs is registered to a site.

Example 13-26

```
|MACD|20110423171235GMT|DEV|A|CompanyXYZ|NewYork|~|SEP0445687B8A11|0445687B8A11|0|3|2|
| MACD|20110423171235GMT|LINE|A|4761000|0|
| MACD|20110423171235GMT|LINE|A|4761001|0|
```

Assignment of the device to a subscriber described in A device with two internal TNs is registered to a site.

Example

Example 13-27

```
|MACD|20110423171235GMT|DEV|S|CompanyXYZ|NewYork|jsmith|SEP0445687B8A11|0445687B8A11|0|3|0|
```

Note Line information is omitted in this scenario if it has not changed.

Unassignment of device from a subscriber described in A device with two internal TNs is registered to a site.

Example

Example 13-27

```
|MACD|20110423171235GMT|DEV|U|CompanyXYZ|NewYork|~|SEP0445687B8A11|0445687B8A11|0|3|0|
```

Note Line information is omitted in this scenario if it has not changed.

A device with two lines is unregistered from a site.

Example

Example 13-29

```
|MACD|20110423171235GMT|DEV|D|333|1|~|SEP0445687B8A11|0445687B8A11|0|3|0|
```

Note Line information is omitted in this scenario.

A device with two lines is registered and assigned to a subscriber.

A device with two lines is registered and assigned to a subscriber.

```
|MACD|20110423171235GMT|DEV|S|CompanyXYZ|NewYork|jsmith|
SEP0445687B8A11|0445687B8A11|0|3|2||MACD|20110423171235GMT|LINE|A|4761000|0|
|MACD|20110423171235GMT|LINE|A|4761001|0|
```

A device with two lines is unassigned and unregistered from a subscriber.

```
|MACD|20110423171235GMT|DEV|D|CompanyXYZ|NewYork|~|SEP0445687B8A11|0445687B8A11|0|3|0|
```



Note Line information may be omitted in this scenario.

A device with two lines has a setting modified on either the device itself, one of its lines, or both of its lines. Modification does not affect the service inventory record but a MACD row appears.

Example 13-32

```
|MACD|20110423171235GMT|DEV|C|CompanyA|NewYork|jsmith|
SEP0445687B8A11|0445687B8A11|0|3|2|
|MACD|20110423171235GMT|LINE|C|4761000|0|
|MACD|20110423171235GMT|LINE|C|4761001|0|
```

A device with two lines. Contact Center service is enabled on line 1 but is already enabled on the second line.

Example 13-33

```
|MACD|20110423171235GMT|DEV|C|CustomerXYZ|NewYork|jsmith|
SEP0445687B8A11|0445687B8A11|0|3|2|
|MACD|20110423171235GMT|LINE|C|4761000|1|
|MACD|20110423171235GMT|LINE|C|4761001|1|
```



Note In this example, the second line already has Contact Center service enabled. However, due to the nature of reporting MACD operations, the new state of the entire device (and lines) is reported, which, in this example, now includes Contact Center service on both lines for the device.

A device with two lines. Contact Center service is enabled on line 2.

Example 13-34

```
|MACD|20110423171235GMT|DEV|C|CustomerXYZ|NewYork|jsmith|
SEP0445687B8A11|0445687B8A11|0|3|2|
|MACD|20110423171235GMT|LINE|C|4761000|0|
|MACD|20110423171235GMT|LINE|C|4761001|1|
```

A device with two lines. Contact Center service is disabled on line 1 and enabled on line 2.

Example 13-35

```
|MACD|20110423171235GMT|DEV|C|CustomerXYZ|NewYork|jsmith|
SEP0445687B8A11|0445687B8A11|0|3|2|
|MACD|20110423171235GMT|LINE|C|4761000|0|
|MACD|20110423171235GMT|LINE|C|4761001|1|
```



Note [A device with two lines. Contact Center service is enabled on line 1 but is already enabled on the second line., on page 34](#) and [A device with two lines. Contact Center service is enabled on line 2., on page 35](#) represent different scenarios resulting in the generation of identical MACD rows for this device. In both cases, the new state of the device (and lines) is reported, regardless of the operation leading to that state.

A device with 0 lines is registered and assigned to a subscriber.

Example

Example 13-36

```
|MACD|20110423171235GMT|DEV|A|CustomerXYZ|NewYork|jsmith|
SEP0445687B8A11|0445687B8A11|0|3|0|
```

Note Line information is omitted in this scenario because it does not exist.

A device with two lines is modified. A third line is added.

Example 13-37

```
|MACD|20110423171235GMT|DEV|C|CompanyXYZ|NewYork|jsmith|
SEPMyNewPhoneName|0445687B8A11|0|3|1|
|MACD|20110423171235GMT|LINE|A|4761002|0|
```

A device with three lines is modified. The second line is deleted.

Example 13-38

```
|MACD|20110423171235GMT|DEV|C|CompanyXYZ|NewYork|jsmith|
SEPMYNewPhoneName|0445687B8A11|0|3|1|
|MACD|20110423171235GMT|LINE|D|4761001|0|
```



Note

- The examples describe several scenarios that may occur in the registration and assignment of devices to both sites and subscribers. If a device is registered with lines, the line MACD row is reported with the device MACD row. If a device is already registered and later assigned, the line MACD rows are not reported because those have not changed.
- The only supported change to a device for Service Inventory purposes is the modification of the **<lineCount>** field. Modifications to the **<lineCount>** field, however, are the result of additions or deletions of lines, and those corresponding line MACD rows must immediately follow this device MACD row.
- Modify various device and line settings on the Cisco Unified CDM application for a device that does not affect the billing record. Such changes, however, still result in the generation of a MACD row for the device (with optional line MACD rows). You cannot capture the nature of the change and indicate whether the MACD row in question has or has not affected the billing record. Similar to MACD rows for other entities, the Device (and Line) MACD rows simply report the state of the device (and lines) following the change operation in question.
- To modify user assignment of a device, the device must be unassociated with a user, then associated with another user.
- You can also modify the site assignment. If the device is associated with a user, it must be unassociated with that user. Then it must be unregistered from the site, then reregistered under another site. Further the device must be reassigned to the user under the site it has reregistered..
- If multiple devices are added, changed, or deleted at the same time, these are reported on a separate MACD row.
- Soft client and mobile device MACDs are reported the same way as traditional devices.
- Device MACD rows use the **<lineCount>** field to identify the number of **|LINE|** MACD records that immediately follow the **|DEV|** MACD record in the report. This number is *not* the total count of lines that are assigned to the device at the time of the MACD operation. Be aware of this notation when you use parsing applications. For device changes that result in zero line changes, the **<lineCount>** field is a tilde (~).
- Licensing (Licensing Type) is not included as part of a MACD report.

MACD Report Footer

Format	Examples
MACDEND	MACDEND
Note	This row is <i>required</i> .

Report Statistical Header

Format	Examples
STATSTART	STATSTART
Note	This row is <i>required</i> .

Report Statistical Row

Format	Examples
STAT <fieldName> <fieldValue> <fieldUnits>	<pre> STAT providerCount 1 ~ STAT resellerCount 1 ~ STAT customerCount 3 ~ STAT siteCount 6 ~ STAT subscriberCount 12 ~ STAT devRegAssigned 20 ~ STAT devRegUnassigned 20 ~ STAT macdCount 126 ~ STAT siRequestDT 06013011030000GMT ~ STAT siStartDT 06013011030800GMT ~ STAT siEndDT 06013011032314GMT ~ </pre>
Note	Each Domain Manager must properly write out the preceding time stamps because of how the SI files are received from the Domain Manager servers. This information is used for performance tracking and debugging information. The preceding column <fieldUnits> is currently unused and left empty.

The following lists the meaning of each requested statistic:

Field Name	Description
providerCount	The total number of unique providers (PROV rows) listed in the report.
resellerCount	The total number of unique resellers (RESELL rows) listed in the report.
customerCount	The total number of unique customers (CUST rows) listed in the report.

Field Name	Description
siteCount	The total number of unique sites (SITE rows) listed in the report.
subscriberCount	The total number of unique subscribers (SUB rows) listed in the report.
devRegAssigned	The total number of unique devices that are both registered and assigned to a subscriber listed in the report. If devices are shared, this count does not accurately reflect the number of DEV rows present in the report. Uniqueness is required.
devRegUnassigned	The total number of unique devices that are registered but not assigned to a subscriber, listed in the report. This is the count of devices that are assigned to sites, such as conference room phones, lobby phones, and “empty” Cisco Extension Mobility phones. If devices are shared, this count does not accurately reflect the number of DEV rows that are present. Uniqueness is required.
macdCount	The total number of MACD rows reported in the MACD section of the file.

The following lists the meaning of each requested Date/Time (DT) field:

Field Name	Description
siRequestDT	The time when the SI request is received or activated by the Domain Manager.
siStartDT	The time when the Domain Manager begins the SI process (for example, after delays).
siEndDT	The time when the Domain Manager ends the SI process. This field should not include any file transfer times or the like.

Report Statistical Footer

Format	Examples
STATEND	STATEND
Note	This row is <i>required</i> .

Summary

This section provides a summary of the SI report format including headers, rows, and footers. It provides generic SI report information that is not specifically related to any customer.

SI Summary Header

Format	Example
LICENSESUMMARYSTART	LICENSESUMMARYSTART



Note This row is *required*.

Summary Row (PLM Info)

Field Name	Description
SUMMARY	Summary row tag
PLMINFO	PLM info tag
HOSTNAME	IP address of the PLM configured
PRODUCT_TYPE	Cluster product type configured in PLM
PRODUCT_VERSION	Version of the cluster application in PLM
LICENSE_TYPE	License types of Cisco Unified CM, and Cisco Unity Connection
INSTALLED_LICENSE_COUNT	Total count of installed licenses
REQUIRED_LICENSE_COUNT	Total count of used licenses used
AVAILABLE_LICENSE_COUNT	Total count of available licenses
LICENSE_STATUS	Validity of licenses

Example

```
|SUMMARY|PLMINFO|10.106.215.90|CER|10|CER_User|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.90|HCER|10|HCER_User|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|10 |HUCM_TelePresenceRoom |10000|0|10000|
VALID|
```

```
|SUMMARY|PLMINFO|10.106.215.114|HUCM|10|HUCM_Standard|10000|1|9999|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|9.0|HUCM_Standard|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|10|HCUC_SpeechConnectPort|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|9.0|HCUC_SpeechConnectPort|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|10|HCUC_BasicMessaging|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|9.0|HCUC_BasicMessaging|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|9.0|HCUC_EnhancedMessaging|0|0|0|VALID|
```

**Note**

- The Summary PLM Info row is required when PLM is configured in Cisco HCM-F.
- This row is repeated for each PLM server hosts, product, and license type added. Details of each PLM server include the following information:
 - IP address
 - Product version
 - Product, and license type
 - Count of installed, required, and available licenses
 - Compliance status of each license type

Summary Row (Customer License Info)

FieldName	FieldName
SUMMARY	Summary row tag
CUSTLICENSEINFO	Customer license information tag
PLMHOSTNAME	IP address of the PLM configured
PROVIDER	Service provider name
RESELLER	Name of the configured reseller
CUSTOMER	Name of the configured customer
PRODUCT_TYPE	Product type of the cluster configured in PLM
PRODUCTHOSTNAME	IP address of the cluster configured in PLM
LICENSE_TYPE	Information on license types of Cisco Unified CM, and Cisco Unity Connection

FieldName	FieldName
CONSUMED_LICENSE_COUNT	Count of consumed licenses

Example

```
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Cust2|HUCM|10.106.215.74|HUCM_TelePresenceRoom|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Cust2|HUCM|10.106.215.74|HUCM_Essential|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Cust2|HCUC|10.106.215.122|HCUC_EnhancedMessaging|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Cust2|HCUC|10.106.215.122|HCUC_SpeechConnectPort|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Cust2|HCUC|10.106.215.122|HCUC_BasicMessaging|5|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Cust2|HCUC|10.106.215.122|HCUC_StandardMessaging|0|
```

**Note**

- The Summary Customer License Info is required.
- This row is repeated for each customer, products, and license type. Each row provides the information on the PLM IP address, provider, reseller, customer, product type, cluster IP address, type of license, and count of license consumed.

Summary Row (Site License Info)

FieldName	Description
SUMMARY	Summary row tag
SITELICENSEINFO	Site license information tag
PROVIDER	Name of the configured provider
RESELLER	Name of the configured reseller
CUSTOMER	Name of the configured customer
SITE	Name of the configured site
LICENSE_TYPE	License types of Cisco Unified CM, and Cisco Unity Connection
CONSUMED_LICENSE_COUNT	Count of consumed licenses

Example

```
|SUMMARY|SITELICENSEINFO|Tangy1|~|Tancust2|tansite2|HCS Foundation|1|
|SUMMARY|SITELICENSEINFO|Tangy1|~|Tancust2|tansite2|HCS Standard|1|
|SUMMARY|SITELICENSEINFO|Tangy1|~|Tancust2|tansite2|HCUC_BasicMessaging|5|
```

**Note**

- The Summary Site License Info row is required.
- This row is repeated for each site, and license Type. This data is collected from UC applications.
- The Site License Summary is provided even for dummy sites used for representing the subscribers under the customer hierarchy.

Example:

```
|SUMMARY|SITELICENSEINFO|Provider|~|Customer1|SUB_DEV_WITH_NOSITE|HCS
Foundation|3|
|SUMMARY|SITELICENSEINFO|Provider|~|Customer1|SUB_DEV_WITH_NOSITE|HCS
Essential|1|
|SUMMARY|SITELICENSEINFO|Provider|~|Customer1|SUB_DEV_WITH_NOSITE|HCS
Standard|2|
```

SI Summary Footer

Format	Example
SISUMMARYEND	SISUMMARYEND

License Summary

The Summary Licensing Sections are added with the following licenses in the Service Inventory Report.

- **PLM License:** It contains the information about PLM server details, cluster applications which are assigned to the PLM host, license usages such as License type, Installed licenses, Required licenses, Status of the licenses from the specific clusters.
- **Customer License:** It contains the information about PLM server details with hierarchy of customer level, including the cluster applications which are assigned to the customers with IP Address of the cluster, Licenses type and Number of licenses used by the customer from the cluster Apps.
- **Site License:** It contains the information about Site level licensing which includes the information of Lobby Device licenses, Subscriber licenses and license usages such as License type and License count with each hierarchy of sites.

**Note**

The PLM customer summary section shows only those customers who are available in the service inventory report.

Licence Summary Header

Format	Example
LICENSESUMMARYSTART	LICENSESUMMARYSTART



Note This row is *required*.

Licence Summary Footer

Format	Example
LICENSESUMMARYEND	LICENSESUMMARYEND



Note This row is *required*.

Create Microsoft Excel-Based Service Inventory Report

Procedure

- Step 1** Generate a Microsoft Excel-Based Service Inventory Report by selecting the **Generate XLS report** checkbox.
- Step 2** Download the generated report.
- Step 3** To perform an audit of the Entitlement violations, perform the following:
- a) Open the MetaData tab in the report.
 - b) Click **Audit**.
- A popup box appears when the audit is complete. The Audit tab is added as the last sheet of the Microsoft Excel-Based Service Inventory Report. If the Audit sheet is blank, there are no entitlement violations.

Microsoft Excel-based Service Inventory Report

Service Inventory information can also be provided in a Microsoft Excel-based report. It is an additional provision to a text based SI report. User has a choice to select for Microsoft Excel-based report format. The Excel-based report contains the following information:



Note Fields are left blank if they do not apply to the specific Cisco Unified Communications Domain Manager used to generate the report.

Table 1: Microsoft Excel-Based Service Inventory Report Format

Tab	Description	Correlation to regular SI Report
MetaData	Provides general information such as: <ul style="list-style-type: none"> • Format Version such as 10.6.1 • Filename; for example, 20150406093636GMT+1+CUCDM2+1+1.si 20150406093636GMT+1+CUCDM2+1+1.xlsx • Domain Manager Platform Version • Domain Manager Software • Domain Manager domain • Domain Manager IP Address • Report Start Time Stamp • Report End Time Stamp • Country ID • Country Name • Country Code. The ISO country code abbreviation in either 2-character or 3-character format. See http://www.nationsonline.org/oneworld/country_code_list.htm. Click Audit on this tab to perform an audit for Entitlement violations. Audit results appear in an Audit tab.	Information between INFOSTART and INFOEND
Features	A list of all possible features that are currently on the domain manager and their feature numbers. The feature numbers are generated at runtime, and are merely integers used for cross-referencing in the current file. There is no guarantee that feature IDs are consistent between files.	DEF FEATURES
FeatureGroups	A list of feature IDs by Feature Group Name and Customer Name. Features listed in the feature group are “assigned” and available to those subscribers who were placed in this group. A subscriber does not necessarily use these features.	DEF FGROUP

Tab	Description	Correlation to regular SI Report
DeviceDefs	A list of devices configured for each customer. Each row includes the Customer Name, as well as the Device ID, Make, and Model. The Device ID is a value provided by the Cisco Unified Communications Domain Manager server that stores the device make and model information.	DEF DEV
DeviceGroup	A list of the configured device groups, each on a separate row. Includes the Device Group Name, ID, Make, and Model. The Device ID is a value provided by the Cisco Unified Communications Domain Manager server that stores the device make and model information.	DEF DGROUP
EntitlementFeatureGroup	Provides a row for each Entitlement Feature Group, with a list of the feature IDs that are available to the Entitlement Group. Features listed in this tab are “assigned” and available to those subscribers who were placed in this group. A subscriber does not necessarily use these features.	DEF EFGROUP
EntitlementCatalog	A list of Entitlement Feature Groups by Provider, Reseller, and Customer. Includes the maximum number of allowable devices for each Entitlement Feature Group.	DEF ECATALOG
EntitlementProfile	A list of Entitlement Profiles by Provider, Reseller, Customer, and Entitlement Catalog. Includes the maximum number of allowable devices for each Entitlement Feature Group. The maximum number of devices are limitations for an individual user, not for all users in the system.	DEF EPROFILE
Providers	A list of Providers by name	PROV to PEND
Resellers	A list of Resellers by name, for each Provider	RESELL to REND
Customers	A list of Customers by Reseller and Provider. Customer information includes Name, External Customer ID, Address, City, State, Country, and Postal Code.	CUST to CEND
Sites	A list of Sites by Customer. Site information includes Name, External Site ID, Address, City, State, Country, Postal Code, and Time Zone.	SITE to SEND

Tab	Description	Correlation to regular SI Report
Subscribers	<p>A list of Subscribers by Name. Includes the following information about the subscriber (if available):</p> <ul style="list-style-type: none"> • Customer the subscriber belongs to • Site the subscriber belongs to • Email address • First Name • Middle Name • Last Name • Title • Department • Department Code • Primary Extension • Feature Group the subscriber belongs to • Entitlement Profile to which the subscriber is associated with. This corresponds with the profile on the Entitlement Profile tab. • Extension Mobility (EM) License status (1 or 0, where 1 is Enabled) • SNR License status (1 or 0, where 1 is Enabled) • License Type shows the value, if a phone assigned to a subscriber and EM or SNR license is activated by the subscriber • License Count • VM License Type or Telepresence license type, if the VM license is activated by the subscriber • VM License Count 	SUB to SUBEND

Tab	Description	Correlation to regular SI Report
Devices	<p>A list of devices, including the following information about each device:</p> <ul style="list-style-type: none"> • Device MAC address • Phone or Extension Mobility—Set to 0 if device is a physical phone, or set to 1 if device is a Cisco Extension Mobility profile • Device Type ID—Device type defined in the DeviceDefs tab • Line Count—The number of lines, specifically Internal TNs assigned to the device. External TNs are mapped to individual internal lines. • Subscriber where device is registered. If the device is registered to a site or location, but is not assigned to an individual subscriber, a tilde (~) shows that there is no subscriber associated with this device. • Site where device is registered • Customer where device is registered • License Type—The type of Cisco HCS license activated by the device. For devices owned or controlled by subscribers, the type appears as “~”. 	DEV
DeviceLines	<p>A list of device lines, including the following information about each device line:</p> <ul style="list-style-type: none"> • Full Line Internal Number • Contact Center Line Service—Indicates whether this particular device LINE is activated for contact center agent usage (0 is Not Activated, 1 is Activated). Availability of contact center features is described by the appropriate feature in the subscriber's assigned feature group. This field indicates actual activation of the feature, rather than simply indicating availability of the feature. • Line E164 Number(s) • Device <p>Note If a single line is being shared by more than one user or device, the line number can be listed in more than one device record.</p>	LINE
MACD	Provides all MACD details	Information between MACDSTART and MACDEND

Tab	Description	Correlation to regular SI Report
PLMLicense	Provides PLM server details, as well as information about the cluster applications (for example, Cisco Emergency Responder (CER) or HCS Cisco Unity Connection (HCUC)) which are assigned to the PLM host. License Type, number of Installed licenses, number of Required and Available Licenses, and the Status of the licenses from the specific clusters is provided.	SUMMARY PLMINFO
CustomerLicense	Provides PLM server details for the Customer hierarchy node level, including the cluster applications which are assigned to the customers. IP Address of the cluster, License Type, and number of licenses used by the customer from the clusterApps is provided.	SUMMARY CUSTLICENSEINFO
SiteLicense	Provides details about site level licensing, including lobby device licenses, subscriber licenses, and license usage. The License Type is provided as well as a count of the number of licenses for each hierarchy of sites.	SUMMARY SITELICENSEINFO
Audit	<p>When the Audit button is clicked on the MetaData tab, an audit for entitlement violations is completed. The system checks for mismatches between the following:</p> <ul style="list-style-type: none"> • Entitlement Feature Group and Subscriber Feature Group • Device Group and Device List +count <p>A pop-up message indicates when the audit is finished, and the results are displayed in the Audit tab.</p> <p>If there are no violations, the Audit tab is created, but it is left blank.</p>	Not Applicable

Single File - Example

Single File Service Inventory Report

```
[FSTART]
[INFOSTART]
[INFO|formatVersion|9.0.1.1|
[INFO|filename|20110528032329GMT+12345+CUCDM+1+1.si|
[INFO|dmVerPlatform|4.1.6+0.4.47|
[INFO|dmVerSoftware|7.3.0+er15|
[INFO|dmHostname|sodfn-voss4|
[INFO|dmDomain|cisco.com|
[INFO|dmIP|172.18.200.200|
```

```

|INFO|reportStartDT|06012011000000GMT|
|INFO|reportEndDT|06012011235959GMT|
|INFOEND|
|DEFSTART|
|DEF|COUNTRY|15|United States|USA|16|United Kingdom|UK|
|DEF|FEATURES|1|Presence|2|UserMobility|3|EMCC|4|AlertingName|5|AlertingNameAscii|6|AutoAnswer|7|
CallForwardAll|8|CallForwardAllToVoiceMail|9|CallForwardBusy|10|CallForwardOnBusyToVoiceMail|11|
CallForwardNoAnswer|12|CallForwardOnNoAnswerToVoiceMail|13|CallForwardNoCoverage|14|
CallForwardNoCoverageToVoiceMail|15|CallForwardNotRegistered|16|CallForwardOnNotRegisteredToVoiceMail
|17|CallForwardOnCTIFailure|18|CallForwardOnCTIFailureToVoiceMail|19|Lines1|20|Lines2|21|Lines3|22|Lines4|23|
Lines5|24|Lines6|25|Lines7|26|Lines8|27|Lines9|28|Lines10|29|Lines11|30|Lines12|31|Lines13|32|Lines14|33|e164Mask
|34|CallerName|35|CallerNumber|36|RedirectedNumber|37|DialedNumber|38|ClonedLine|39|BusyTrigger|40|
MaxCallsWaiting|41|RecordingOption|42|RecordingProfile|43|RingSettingPhoneActive|44|RingSettingPhoneIdle|45|
BusyLampFields|46|ExtensionMobility|47|SpeedDials|48|builtinBridgeStatus|49|Privacy|50|SRST|51|VoiceMail|52|
VisualVoicemail|53|Voice| |DEF|FGROUP|XYZ, Inc.|27|Basic Feature Group|10|11|
|DEF|FGROUP|NQZ|29|Advanced Feature Group|10|11|19|33|99| | | | | |
|DEF|FGROUP|ComputerCo|233|Engineering Dept Feature Group|10|11|19|33|53|
|DEF|DEV| XYZ, Inc.|1|Cisco|7960|2|Cisco|7965|3|Cisco|Cius_V1|4|sjhdr|Phone1000|
|DEF|DEV|NQZ|1|Cisco|7960|2|Cisco|7965|3|Cisco|Cius_V1|4|sjhdr|Phone1000|5|B12N|ndcPhone
3GS|
|DEF|DEV|ComputerCo|1|Cisco|7960|3|Cisco|Cius_V1|5|B12N|ndcPhone 3GS|11|Cisco|CUPC8|
|DEF|DGROUP| NQZdevicegroup|8|~|Cisco 9971|7|~|Cisco 9951|6|~|Cisco 8961|5|~|Cisco
8945|4|~|Cisco 8941|3|~|Cisco 8861|2|~|Cisco 8851|1|~|Cisco 8841|
|DEF|DGROUP|sosnsysdevicegroup|8|~|Cisco 9971|7|~|Cisco 9951|6|~|Cisco 8961|5|~|Cisco
8945|4|~|Cisco 8941|3|~|Cisco 8861|2|~|Cisco 8851|
|DEF|EFGROUP|NQZFeatureGroup_1|1|46|51| | | | | |
|DEF|ECATALOG|Provider|~|~|NQZFeatureGroup_1|20| NQZdevicegroup|20| NQZdevices|20|
|DEF|ECATALOG|Provider|r1|~|NQZFeatureGroup_1|20| NQZdevicegroup|20| NQZdevices|20|
|DEF|ECATALOG|Provider|r1|
NQZ|EntitlementFeatureGroup_1|20|NQZdevicegroup|20|P1providerdevices|20|
|DEF|EPROFILE|Provider|~|~|enhancedprofile01|EntitlementFeatureGroup_1|20|P1providerdevices|20|
|DEF|EPROFILE|Provider| AbcNyzCon | NQZ
|Basicprofile001|EntitlementFeatureGroup_1|20|custdevicegroup|20|
|DEF|EPROFILE|Provider|AbcBnzCom| NQZ
|standardprofile02|EntitlementFeatureGroup_1|20|custdevicegroup|20|

```

```

|DEFEND|
|SISTART|
|PROV|-1|Provider|
|RESELL|-1|-1|AbcNyzCon|
|REND|
|RESELL|-1|-1|AbcBnzCom| | | | | | | | | |
|CUST|-1|-1|-1|XYZ, Inc.|~|7600 RTP Road|~|~|Cary|NC|15|27513|
|SITE|-1|-1|RTP|~|7600 RTP Road|~|~|Cary|NC|15|27513|EST|
|DEV|-1|-1|~|SEP0445687BDDDD|0|003|1|
|LINE|8548111|+19198328111|0|
|SUB|-1|-1|-1|jsmith|jsmith@xyz.com|John|Thomas|Smith|Manager|Finance|99|+19192898121|Basic
Feature Group|
|DEV|-1|-1|-1|SEP0445687B8AAF|0|003|1|
|LINE|8548001|+19192898121|0|
|DEV|-1|-1|-1|SEP95AAEEFF3456|0|001|2|
|LINE|98548002|+19192898122|0|
|LINE|8548003|+19192898123|1|+19192898124|
|SUBEND|
|SUB|-1|-1|-1|jdoe|jdoe@xyz.com|Jane|Mary|Doe|SeniorAccountant|Finance|99|+19192898125|Basic
Feature Group|
|DEV|-1|-1|-1|SEPAAAABBBBCCCC|001|1|
|LINE|98548002|+19192898122|0|
|SUBEND|
|SEND|
|SITE|-1|-1|New York|~|100 Broadway Ave|~|~|New York|NY|15|10101|EST|
|SUB|...
|DEV|...
|LINE|...
|SUBEND|
|SEND|
|SITE|...
|SEND|
|CEND|
|CUST|-1|-1|-1|ComputerCo|~|3012 ABC Road|~|~|Cary|NC|15|27513|
|SITE|...

```

```

|SUB|...
|DEV|...
|LINE|...
|SUBEND|
|SEND|
...
|CEND|
|CUST|...
|SITE|...
...
|SEND|
...
|CEND|
...
|REND|
|PEND|
|SIEND|
|MACDSTART|
|MACD|20110423163455GMT|C|SITE|XYZ, Inc.|New York|74536577456| | | | | |
|MACD|20110423163455GMT|C|RESELL|111|XYACommunications|
|MACD|20110423171235GMT|DEV|C|TechCo|RTP|smith|SEPNewPhoneName|0445687B8A11|0|3|1|
|MACD|20110423171235GMT|LINE|D|4761002|1|+19194761002|
|MACD|...
...
|MACDEND|
|STATSTART|
|STAT|providerCount|1|~|
|STAT|resellerCount|2|~|
|STAT|customerCount|3|~|
|STAT|siteCount|6|~|
|STAT|subscriberCount|12|~|
|STAT|macdCount|126|~|
|STAT|devRegUnassigned|344|~|
|STAT|devRegAssigned|5235|~|

```

```

|STAT|siRequestDT|06013011030000GMT|~|
|STAT|siStartDT|06013011030800GMT|~|
|STAT|siEndDT|06013011032314GMT|~|
|STATEND|
|SISUMMARYSTART|
|LICENSESUMMARYSTART|
|SUMMARY|PLMINFO|10.106.215.114|CER|10|CER_User|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCER|10|HCER_User|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|9.0|HUCM_TelePresenceRoom|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|10|HUCM_TelePresenceRoom|20000|1|19999|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|9.0|HUCM_Essential|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|10|HUCM_Essential|20000|0|20000|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|9.0|HUCM_Basic|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|10|HUCM_Basic|20000|1|19999|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|10|HUCM_Foundation|20000|36|19964|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|9.0|HUCM_Foundation|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|10|HUCM_Standard|10000|0|10000|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HUCM|9.0|HUCM_Standard|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|10|HCUC_SpeechConnectPort|20|0|20|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|9.0|HCUC_SpeechConnectPort|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|9.0|HCUC_BasicMessaging|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|10|HCUC_BasicMessaging|10100|5|10095|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|9.0|HCUC_EnhancedMessaging|0|0|0|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|10|HCUC_EnhancedMessaging|10050|0|10050|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|10|HCUC_StandardMessaging|10020|0|10020|VALID|
|SUMMARY|PLMINFO|10.106.215.114|HCUC|9.0|HCUC_StandardMessaging|0|0|0|VALID|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HCUC|10.106.215.122|HCUC_EnhancedMessaging|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HCUC|10.106.215.122|HCUC_SpeechConnectPort|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HCUC|10.106.215.122|HCUC_BasicMessaging|5|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HCUC|10.106.215.122|HCUC_StandardMessaging|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HUCM|10.106.215.89|HUCM_TelePresenceRoom|1|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HUCM|10.106.215.89|HUCM_Essential|0|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HUCM|10.106.215.89|HUCM_Foundation|36|
|SUMMARY|CUSTLICENSEINFO|10.106.215.114|Tangy1|~|Tancust2|HUCM|10.106.215.89|HUCM_Standard|0|

```


Service Inventory Report Examples

The service inventory reports are located at the links provided below:

- “.si”, “.ucsi”, “.simacd” reports in text format:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_3/HCMF_10_6_3/Maintain_Operate_Guide/Examples/20180221093358GMT.zip

- Location report in Excel format:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_3/HCMF_10_6_3/Maintain_Operate_Guide/Examples/20180319070016GMT_Loc

- .si report in Excel format:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_3/HCMF_10_6_3/Maintain_Operate_Guide/Examples/20180319101639GMT_1_CUCDM2_1_1

- Endpoint report CUCDM 10.x:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_2/HCMF_Product/Maintain_and_Operate_Guide/Examples/20150622151853GMT_DevDepRpt_CUCDM10x.xlsx

- Endpoint report CUCDM 8.x:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_2/HCMF_Product/Maintain_and_Operate_Guide/Examples/20150622175644GMT_DevDepRpt_CUCMD8x.xlsx

- Endpoint report Hybrid:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_2/HCMF_Product/Maintain_and_Operate_Guide/Examples/20150623071916GMT_DevDepRpt_HyBRID.xlsx

- “.si”, “.ucsi”, “.simacd” reports in text format:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_1/HCMF_Product/Maintain_and_Operate_Guide/Examples/20150324124047GMT.zip

- Location report in Excel format:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_1/HCMF_Product/Maintain_and_Operate_Guide/Examples/20150601161733GMT_Loc.csv

- .si report in Excel format:

http://www.cisco.com/c/dam/en/us/td/docs/voice_ip_comm/hcs/10_6_1/HCMF_Product/Maintain_and_Operate_Guide/Examples/20150602213320GMT_1_CUCDM_1_1.xlsx

MACD Report Format

In the Cisco HCS 9.1(1) System Release, Service Inventory (SI) generates reports directly from Cisco Unified Communications Manager and Cisco Unity Connection application servers for customers that are provisioned in Cisco Hosted Collaboration Mediation-Fulfillment that do not have a Unified Communications Domain Manager configured. Most of the formats in the generated report are the same as the Unified Communications Domain Manager report results. However, a new MACD format report is also available specifically for a supported UC Application.

This report provides information on modified Subscribers, Devices and Lines provisioned on the UC Applications Servers of the Cisco HCS system. Service Provider (SP) customers use this data to generate billing records for their end customers as part of their regular business processes.

The following section shows the formats for the MACD Service Inventory Report for supported UC Applications.



Note The <LOCATION> field is configured differently for UC Applications. Make sure you have configured the <LOCATION> correctly in your Cisco Unified Communications Manager under **System > Location**. This field is required for Service Inventory to generate UC Application-based reports.



Note For information about the format of generic report elements, see [Global Data Formats, on page 7](#) and its related topics.

UC Applications MACD Format

HCM-F provides a Service Inventory (SI) application that periodically queries Unified Communications Application Servers and reports their current operating state. This report provides information about modifications to Subscribers, Devices and Lines provisioned on the UC Applications Servers of the HCS system. This data is ultimately used by the service provider (SP) customer to generate or facilitate the correct generation of appropriate billing records for their end customers as part of their regular business processes.

This section outlines the layout and format of data points in the Cisco Service Inventory MACD output file. The MACD file is organized by Customer with some additional processing information included where necessary. The following sections give an overview of the format, a description of the file layout, a listing of the various row formats and data types contained in the output file, and finally, examples of Cisco Service Inventory MACD output file.

The Cisco SI Common MACD Format is designed to present all Subscriber MACD data in a human-readable format while keeping output file size to a minimum. The format is an ASCII-based file, with the “.simacd” file extension.

The output is arranged into the following sections:

- Report Information
 - Report Start Time
 - Report Version
- Customer Data
 - UC Application Type
 - Version
 - Hostname/IP
- Subscriber MACD Data
 - Subscriber Total Count
 - UC Application, Subscriber, Device, Line, and Feature MACD data

The subscriber MACD data is presented in a row format, and provides the information on new, modified, and deleted entities. The MACD representation provides the “after” state of an entity.

UC Applications File Layout

Table 2: Report Format for the UC Applications MACD

Report Formats
FILESTART
INFOSTART
<FORMAT-VERSION> <REPORT_CREATION_TIME>
INFOEND
CUST
<CUSTOMER_NAME> <APP1_TYPE> <APP1_VERSION> <APP_1HOSTNAME> <APP2_TYPE>
<APP2_VERSION> <APP2_HOSTNAME>
...
<APP(N)_TYPE> <APP(N)_VERSION> <APP(N)_HOSTNAME>
MACDSTART
SUB-TOT <COUNT>
SUB <MACDCODE> <CUCM_IP> <CUC_IP> <SUB_USERNAME>
<SUB_UUID> <SUB_FIRSTNAME> <SUB_LASTNAME> <SUB_EMAIL>
<PRIMARY_TN> <PRIMARY_EXTENSION> <CUC_VM_EXTENSION> <CUC_BILLING_ID>
<VOICE_FEATURE> <VM_FEATURE>
<PRESENCE_FEATURE> <CUEAC_FEATURE> DEV <DEVICE_NAME> <DEVICE_TYPE>
<DEVICE_MODEL> <LOCATION>
<EXT_MOBILITY> LINE <DIRECTORY_NUMBER> <EXTERNAL_NUM_MASK> LINE(N)
...
LINE_END(N) DEV_END DEV(N)
...
DEV_END(N) SUB_END
MACDEND
CUSTEND
CUST(N)
CUSTEND(N)
FILEEND

UC Applications Filename Specifications

The format of the Service Inventory MACD filename is critical to the proper operation of the SI applications. The following parameters apply to filenames in this format:

The filename follows this format:

```
<date><time><timezone> .<extension>
```

SI MACD File

```
20130111015000GMT.simacd
```

This MACD file naming convention is for a single file output that contains all Customers and their respective Subscriber MACD data.

UC Application General Format Specification

Some additional general format specifications include the following:

- Data elements in the file is stored in text, integer, and standard date/time formats appropriately.
- The standard end-of-line character “\n,” while typically not visible in common text-editing applications, is used and available for parsing programs to use for line tokenization.
- A PIPE symbol (|) is the data element delimiter. A PIPE symbol is available between data points, and at both the ends of each line.
- A PIPE symbol (|) is not a valid character within fields in the format.
- A TILDE symbol (~) represents an empty (null) field. Empty fields/columns are not skipped.
- The Report Data Collection Failure information is provided in the Customer Data Row. At a minimum, the failed Customer Name is appended with an asterisk (*) and if available, the failed UC Application(s) is appended with an asterisk (*). See the [Customer Data Row, on page 17](#) Section for reference.

UC Applications Row Format Specifications

This section outlines the various row formats used in the Cisco SI Common MACD Format. Each type specification provides a format definition and an example usage.

UC Applications Report Summary Row

This format definition describes the manner in which summary information is presented in the output files. An example of each data element is described below.

Format	Examples
<format_version> <report_creation_time >	9.1.1.1 20130108225300GMT
Note	<ul style="list-style-type: none"> • The “report_creation_time” field in the above example is used to describe scheduled report start time. These values in no way indicate the final report generation time, nor the amount of time taken to generate the report itself. • All fields are <i>required</i> in all rows.

Customer Data Header

Format	Example
ICUST	CUST



Note This row is *required*.

UC Applications Customer Data Row

Format	Examples
<customer_name> <app_type> <app_version> <app_hostname>	Customer2 CUCM VERSION_8_6 10.81.120.27
<app2_type> <app2_version> <app2_hostname> ...	Customer5 CUCM VERSION_8_6 CUCM-5
<app(N)_type> <app(N)_version> <app(N)_hostname>	Customer4* CUCM VERSION_8_6 10.81.120.29 CUC VERSION_8_6 si911compub-1
	<p>Note This example shows that “Customer4” has failed report data collection and as a result no Subscriber MACD data rows will be displayed. In this case, SI was unable to indicate which UC Application had failed and so only the “customer_name” field is appended with the asterisk “*”.</p>
	Customer6* CUCM VERSION_8_6 ~*
	<p>Note This example shows that Customer6 has failed report data collection. The failed UC App (~) has also been marked with the asterisk. In the case the “app_hostname” field has been populated with the tilde (~) to indicate that “app_hostname” data was not available. This example was obtained by provisioning a Customer in SDR with an empty Unified Communications Manager cluster (no Unified Communications Manager application servers were provisioned).</p>
<ul style="list-style-type: none"> The “app_hostname” field in the above example may be populated with either a hostname or IP Address. The “app_type” field indicates the version of the UC Application as it is provisioned in HCM-F SDR. The “app_type” field indicates the type of UC Application. As of HCM-F 9.1(1), SI only supports report collection from 8.6 Version UC Applications. 	

UC Applications Subscriber Summary Row

Format	Examples
SUB-TOT <count>	SUB-TOT 6
Note	<ul style="list-style-type: none"> • The SUB-TOT is a count of all Subscribers for a Customer included in the MACD report. • The Lobby Phone User is included in this total count.

UC Applications Subscriber MACD Code Element

This format definition describes the way in which MACD Code elements will be represented in all Subscriber MACD rows. There is no separate definition row required in the file to describe the MACD Code elements.

MACD operations are reported at the Subscriber level only. Changes to Devices and Lines, including adding and deleting Devices and Lines are reported as a Change ('C') in the Subscriber MACD Row.

The following list describes the characters used to construct the format:

- A = Subscriber Entity is Added
- D = Subscriber Entity is Deleted
- C = Subscriber Entity is Changed

Format	Examples
<macdcode>	A D C
Note	<ul style="list-style-type: none"> • Service Inventory reports the difference between the last successful data snapshot and the current data snapshot daily. Intermediate changes to Subscribers, Devices and Lines are not captured. • “Last successful data snapshot”, refers to the data snapshot that was taken during the most recent and successful scheduled report run. “Current data snapshot”, refers to the data snapshot that is taken when current daily scheduled report is started. • Typically, Service Inventory runs and generates a report every 24 hours. Scheduled report time changes, disabling the scheduled report or report generation errors affect this behavior.

UC Applications Subscriber MACD Row Format

This format definition describes the general layout of all MACD rows in the report. Certain fields described below are required of each MACD row, regardless of type, while individual differences are highlighted in the definition for each type later.

Format

|SUB|<MACDCODE>|<CUCM_IP>|<CUC_IP>|<SUB_USERNAME>|<SUB_UUID>|<SUB_FIRSTNAME|

```

<SUB_LASTNAME>|<SUB_EMAIL>|
<PRIMARY_TN>|<PRIMARY_EXTENSION>|<CUC_VM_EXTENSION>

|<CUC_BILLING_ID>|<VOICE_FEATURE>|<VM_FEATURE>|<PRESENCE_FEATURE>|<CUEAC_FEATURE>

|DEV|<DEVICE_NAME>|<DEVICE_TYPE>|<DEVICE_MODEL>|<LOCATION>| <EXT_MOBILITY|
LINE|<DIRECTORY_NUMBER>|<EXTERNAL_NUM_MASK>|LINE(N)|...|LINE_END(N)|DEV_END|
DEV(N)|...|DEV_END(N)|SUB_END|

```

- The above fields are populated with the value retrieved from the provisioned Unified Communications Manager and Cisco Unity Connection UC Application servers. If a value for a field is not provisioned on the UC Application Servers or is not available for the type of Subscriber, then a '~' appears in the field of the SUB MACD row. In this case, where a field value is available on both the Unified Communications Manager and Cisco Unity Connection, the Unified Communications Manager value is always be used. The Cisco Unity Connection value is only be used if Unified Communications Manager value are not available for that subscriber, for example voice mail only user.
- The <CUCM_IP> and <CUC_IP> fields are populated with the UC Application Server's HCM-F provisioned IP address or the Hostname where Subscriber data is retrieved.
- The <SUB_UUID> field for a Voice Mail Only user is the equivalent Cisco Unity Connection Object ID field that is defined in the Cisco Unity Connection Rest API. If the user has both Unified Communications Manager and Cisco Unity Connection features enabled, then this SUB_UUID field is populated with the Unified Communications Manager UUID and the Cisco Unity Connection Object ID is ignored.
- The <SUB_USERNAME>, <SUB_FIRSTNAME> and <SUB_LASTNAME> fields are populated with the Unified Communications Manager End User's "User ID", "First name" and "Last name" unless the Subscriber is a Voice Mail Only User. In that case, the fields are populated with the Cisco Unity Connection User's "Alias", "First Name" and "Last Name" fields.
- The <SUB_EMAIL> is populated with Unified Communications Manager "Email ID" field. For a Voice Mail Only User, the <SUB_EMAIL> field is populated with the Cisco Unity Connection "Corporate Email Address" field.
- The <PRIMARY_TN> field is populated from the Unified Communications Manager End User "Telephone Number" field. If the Subscriber is a Voice Mail Only User, then the "Extension" field of the Cisco Unity Connection User is used.
- The <PRIMARY_EXTENSION> field is populated from the "Directory Number" of the Unified Communications Manager End User's first LINE of the first DEVICE.
- The <VOICE_FEATURE> field is populated with a '1' if the Subscriber is provisioned on a Unified Communications Manager
- The <PRESENCE_FEATURE> field is populated with the Unified Communications Manager End User's provisioned "Primary Extension" field and typically populated with 0/1.
- The <VM_FEATURE> field is populated from the Cisco Unity Connection User's provisioned "Class of Service". If the COS indicates that the User is enrolled in Voice Mail, then the field is set with 1. Otherwise, this field is set to '~'.
- The Subscriber <CUC_BILLING_ID> and <CUC_VM_EXTENSION> Fields are only be populated if the <VM_FEATURE> field is 1, and is filled with a ~ in the event that the <VM_FEATURE> is set to '0' or '~'.

- The Subscriber field <CUEAC_FEATURE> is always filled with a ‘ ~ ’ as the field is unobtainable with the current UC Application API's available.
- All <DEVICE> and <LINE> field data is only available from Unified Communications Manager.
- The <DEVICE_NAME> and <DEVICE_MODEL> fields are populated from the “MAC Address” and the “Product Type” of the Unified Communications Manager Device. The <DEVICE_TYPE> field is populated from the Unified Communications Manager API and is set to “Phone” for all Phone Device Types.
- The <LOCATION> field is populated with the device’s provisioned location name. The device’s location name is set using the Unified Communications Manager "System->Location" configuration page
- The Device’s <EXT_MOBILITY> field is set using the Unified Communications Manager’s “Enable Extension Mobility” check box of the Unified Communications Manager device.
- The <EXTERNAL_NUM_MASK > field is populated using the “External Phone Number Mask” of the Line of the Unified Communications Manager Device.

UC Applications Subscriber MACD Add Records - Examples

Below are examples of a Subscriber MACD Add records.

An Add record is seen when a new End User is provisioned on CUCM or CUCxN since the last success report or if this is a Day Zero Report.

CUCM Subscriber MACD Add

Example 13-46

```
|SUB|A|~|10.81.120.27|~|userA|{4BFD972A-F280-B694-E616-E4FBD7060711}|sitest|userA|userA|
~|v150lmerpart1|~|~|1|~|1|~|DEV|SEP11111A01016|Phone|Cisco|7970|Hub_None|1|LINE|801016|~|LINE_END|
DEV_END|SUB_END|
```

CUCxN Subscriber MACD Add

Example 13-40

```
|SUB|A|~|108.2.5.25|user09000|3722c735-a696-4efb-9c7d-91b0e9ae5e07|
09000_first_changed0110|09000_last_changed0110|9000@yutu.com.changed0110|809000|~|809000|user09000billing
|~|1|~|~|DEV|LINE|LINE_END|DEV_END|SUB_END|
```

UC Applications Lobby Phone Subscriber MACD - Examples

A lobby phone has more than 0 lines and is not associated to any end user. The Change indicates that a DEVICE or LINE or some other Device or Line field was Added, Deleted or Changed. The Lobby Phone Subscriber has a list of Devices Per Customer. The Lobby Phone Subscriber is Add when the “Day Zero Report” is generated.

CUCxN Subscriber MACD Delete**Example 13-44**

```
|SUB|D|~|108.2.6.13|user08013|538cb999-d224-4432-bfad-ddfe4e39e94f|sitest|user08013|
|~|808013|~|808013|~|~|1|~|~|DEV|LINE|LINE_END|DEV_END|SUB_END|
```

UC Applications Subscriber MACD Change - Examples

Below are examples of a Subscriber MACD Change records.

CUCM and CUCxN Subscriber MACD Change**Example 13-45**

```
|SUB|C|108.2.6.11|108.2.6.13|user08005|{0AE9953B-37EF-54AE-B930-454E6553DFD0}|
sitest|user08005_changedforES|~|808005|v1501mer-part1|808005|~|1|1|1|~|DEV|SEP111111A08005|
Phone|Cisco 7970|Hub_None|0|LINE|808005|~|LINE_END|DEV_END|SUB_END|
```

CUCM Subscriber MACD Change**Example 13-46**

```
|SUB|C|108.2.6.11|~|user08452|{38AD77CA-5410-0481-7E1A-764316D87D38}|sitest|user08452|
~|~|v1501mer-part1|~|~|1|~|1|~|DEV|SEP111111A08452|Phone|Cisco
7970|Hub_None|0|LINE|808452|~|
LINE_END|DEV_END|SUB_END|
```

