



## **Troubleshooting Guide**

# **Cisco Unified CRM Connector for SAP**

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Troubleshooting Guide, Cisco Unified CRM Connector for SAP

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# Preface

## Purpose

*The Troubleshooting Guide Cisco Unified CRM Connector for SAP* provides troubleshooting procedures for the Cisco Unified CRM Connector for SAP. This document does not cover every possible trouble event that might occur but instead focuses on those events frequently seen by the Cisco Technical Assistance Center (TAC).

## Audience

*The Troubleshooting Guide Cisco Unified CRM Connector for SAP* provides guidance for network administrators responsible for managing the Cisco Unified CRM Connector for SAP, for enterprise managers, and for employees. This guide requires knowledge of telephony and IP networking technology.

## Organization

- Chapter 1, Introduction  
Brief description of Cisco Unified CRM Connector for SAP.
- Chapter 2, Logging  
This chapter provides information about how to collect and analyze logs for Cisco Unified CRM Connector for SAP.
- Chapter 3, Realtime Status of Cisco Unified CRM Connector for SAP  
Explains how to extract real-time status information for Cisco Unified CRM Connector for SAP.
- Chapter 4, Realtime Status of Cisco Unified CRM Connector DataStore  
Explains how to extract real-time status information for Cisco Unified CRM Connector DataStore.
- Chapter 5, Common Problems  
This chapter contains a listing of common issues and their solutions or workarounds.
- Chapter 6, Sample Log Files  
This section shows a listing of log files that can be used as a reference.
- Chapter 7, Registry Settings  
Explains the registry settings for Cisco Unified CRM Connector for SAP.

## Related Documentation

- Documentation for Cisco Unified CRM Connector is accessible from:  
[http://www.cisco.com/en/US/products/ps9117/tsd\\_products\\_support\\_series\\_home.html](http://www.cisco.com/en/US/products/ps9117/tsd_products_support_series_home.html).
- For documentation for Cisco Unified Contact Center Products, go to <http://www.cisco.com/cisco/web/psa/default.html>, click **Voice and Unified Communications**, then click **Cisco Unified Contact Center Products**, then click the product/option you are interested in.
- Technical Support documentation and tools can be accessed from: <http://www.cisco.com/cisco/web/support/index.html>.
- The Product Alert tool is accessible from (login required):  
<http://www.cisco.com/cgi-bin/Support/FieldNoticeTool/field-notice>.
- Information and how to deploy IPSEC are available in the *Security Best Practices Guide for Cisco Unified ICM/Contact Center Enterprise & Hosted* which is accessible from:  
[http://www.cisco.com/en/US/products/sw/custcosw/ps1001/technical\\_reference\\_list.html](http://www.cisco.com/en/US/products/sw/custcosw/ps1001/technical_reference_list.html).

## Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>.

# 1. INTRODUCTION

The Cisco Unified CRM Connector for SAP integrates the SAP Customer Relationship Management (SAP CRM) application with Cisco Unified Contact Center Enterprise/Hosted (Unified CCE/CCH).

## 2. LOGGING

### Cisco Unified CRM Connector for SAP

For gateway startup issues, review the logs using ICM dumplog tool. Cisco Unified CRM Connector for SAP output is written into the ctigw1 ems file. Refer to the Unified CCE/CCH product documentation for directions on using the ICM dumplog tool.

When a problem arises it is suggested that the following files/logs be gathered:

- Cisco Unified CRM Connector for SAP logs
- PG PIM logs
- PG OPC logs
- CG CTI Server logs
- CTI-OS logs (only if CTI OS Supervisor Desktop)
- SAP ICI logs

The Cisco Unified CRM Connector for SAP process has a log that is consistent with Unified CCE/CCH logs. It will be ctigw1, etc. (just like pim1, pim2, etc.). Dumplog may be used in a manner consistent with all other logs to dump the gateway log.

Cisco Unified CRM Connector for SAP (ctigw1) log files are stored in C:\Program Files\Cisco Systems\ConnectorSAP\logfiles. This is not the same folder as the PG's log files.

### EMS Trace - Setting the Trace Level

Trace levels for the Cisco Unified CRM Connector for SAP can be found in the registry under

```
HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorSAP\SAP1\EMS  
\CurrentVersion\Library\Processes\
```

The EMSTraceMask are trace masks and they control which tracing information is switched on.

**Warning:** The default value for the trace masks is 0x04. Changing this value can have a serious impact on client performance. It should only be modified by experienced field personnel or at the request of Cisco support personnel. Reset the EMSTraceMask and EMSDisplayToScreen to their default level after capturing logs as full tracing will have a performance impact. Set the value for EMSTraceMask to 0xffffffff for maximum tracing. Dumplog output files are simple ASCII text and can be opened with a conventional text editor, such as Notepad.

## EMS Trace - Collected Trace Messages

Trace levels for the Cisco Unified CRM Connector for SAP collected tracing can be found in the registry under

```
HKLM\SOFTWARE\Cisco Systems,  
Inc.\CRMConnectorSAP\SAP1\CTIData\<InstanceName>\Dynamic
```

The EMSTraceMaskCollectMsg are trace masks and they control which collected tracing information is switched on. Collected tracing will allow engineers to turn on additional tracing that allows inspection of complete transactions as a collection.

**Warning:** The default value for the trace masks is 0x00. Changing this value can have a serious impact on client performance. It should only be modified by experienced field personnel or at the request of Cisco support personnel. Reset the EMSTraceMask and EMSDisplayToScreen to their default level after capturing logs as full tracing will have a performance impact. Set the value for EMSTraceMaskCollectMsg to 0xffffffff for maximum tracing. Dumplog output files are simple ASCII text and can be opened with a conventional text editor, such as Notepad.

## Cisco Unified CRM Connector DataStore

The Cisco Unified CRM Connector DataStore logs will only be available if an external Cisco Unified CRM Connector DataStore is used. Otherwise, with an internal data storage, the logs are included in the regular Cisco Unified CRM Connector for SAP logs.

To determine if an external Cisco Unified CRM Connector DataStore is used for this Cisco Unified CRM Connector for SAP installation, run a Realtime Status Session of the Cisco Unified CRM Connector for SAP (refer to Chapter 3) and execute the **lddi** command. Check if the IcmConnectDll value shows “internal” or “external”.

The Cisco Unified CRM Connector DataStore logs can be extracted by using the dumplog utility. Dumplog may be used in a manner consistent with all other logs.

Cisco Unified CRM Connector DataStore (DSgw1) log files are stored in C:\Program Files\Cisco Systems\ConnectorDataStore\logfiles. This is not the same folder as the Unified CCE/CCH PG or Cisco Unified CRM

Connector for SAP log files.

## EMS Trace - Setting the Trace Level

Trace levels for the Cisco Unified CRM Connector DataStore can be found in the registry under

HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorDataStore\DS1\EMS\CurrentVersion\Library\Processes\

The EMSTraceMask are trace masks and they control which tracing information is switched on.

**Warning:** The default value for the trace masks is 0x04. Changing this value can have a serious impact on client performance. It should only be modified by experienced field personnel or at the request of Cisco support personnel. Reset the EMSTraceMask and EMSDisplayToScreen to their default level after capturing logs as full tracing will have a performance impact. Set the value for EMSTraceMask to 0xffffffff for maximum tracing. Dumplog output files are simple ASCII text and can be opened with a conventional text editor, such as Notepad.

## EMS Trace - Collected Trace Messages

Trace levels for the Cisco Unified CRM Connector DataStore collected tracing can be found in the registry under

HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorDataStore\DS1\Data\DSgw1\Dynamic

The EMSTraceMaskCollectMsg are trace masks and they control which collected tracing information is switched on. Collected tracing will allow engineers to turn on additional tracing that allows inspection of complete transactions as a collection.

**Warning:** The default value for the trace masks is 0x00. Changing this value can have a serious impact on client performance. It should only be modified by experienced field personnel or at the request of Cisco support personnel. Reset the EMSTraceMask and EMSDisplayToScreen to their default level after capturing logs as full tracing will have a performance impact. Set the value for EMSTraceMaskCollectMsg to 0xffffffff for maximum tracing.

## Trace Mask Key

Following table shows the key to both the EMSTraceMask and the EMSTraceMaskCollectMsg

COMMUNICATION = 0x00000010;



```

TPI                = 0x00000020;
ICM                = 0x00000040;
AGENT              = 0x00000080;
CALL              = 0x00000100;
TRANSACTION        = 0x00002000;
SCHEDULER          = 0x00004000;
CONFIG             = 0x00008000;
MESSAGE_NAME       = 0x00010000;
MESSAGE_DETAIL     = 0x00020000;
HEARTBEAT          = 0x00040000;
PERFORMANCE_DATA  = 0x00080000;
CREATE             = 0x01000000;
DELETE            = 0x02000000;
BEGIN_METHOD       = 0x04000000;
END_METHOD         = 0x08000000;
COLLECTED          = 0x80000000;

```

The individual settings can be combined via bitwise AND to combine multiple trace settings. Following are some suggested trace mask settings:

**Normal                    0x00000004**

Shows errors, warnings and info messages

**Trace low                0x8001209F**

Shows errors, warnings and info messages as well as trace messages of the following categories: COMMUNICATION, AGENT, TRANSACTION, MESSAGE\_NAME, COLLECTED MESSAGES

**Trace medium 0x8407A0FF**

Shows errors, warnings and info messages as well as trace messages of the following categories: COMMUNICATION, TPI, ICM, AGENT, TRANSACTION, CONFIG, MESSAGE\_NAME, MESSAGE\_DETAIL, HEARTBEAT, BEGIN\_METHOD, COLLECTED MESSAGES

**Trace high               0x8F0FE0FF**

Shows errors, warnings and info messages as well as trace messages of the following categories: COMMUNICATION, TPI, ICM, AGENT, TRANSACTION, SCHEDULER, CONFIG, MESSAGE\_NAME, MESSAGE\_DETAIL, HEARTBEAT, PERFORMANCE\_DATA, CREATE, DELETE, BEGIN\_METHOD, END\_METHOD, COLLECTED MESSAGES

# 3. REALTIME STATUS OF CISCO UNIFIED CRM CONNECTOR FOR SAP

The Remote Console is the main interface console to the Cisco Unified CRM Connector for SAP process. You can use Remote Console to query information directly from the Cisco Unified CRM Connector for SAP process. Several monitors can be run at the same time. The impact on the system's performance is minimal. The monitor's features are kept for each session.

## Usage

You can run monitors from a Telnet session or a DOS command prompt. Please note that only local access is supported. The monitor process supports local commands. Local commands are defined within monitor. This section provides a list of basic monitor commands for use with processes such as <list\_> or <dump\_>.

To navigate and / or edit the executed commands you can press the <Up> or <Down> arrows on the keyboard.

A monitor telnet session can be started by entering following command at a DOS command prompt:

```
C:\>telnet localhost <RemoteConsolePort>
```

or in a telnet session:

```
Welcome to Microsoft Telnet Client  
Escape Character is 'CTRL+'
```

```
Microsoft Telnet> localhost <RemoteConsolePort>
```

“localhost” indicates that a connection to the local server and is synonym to the “127.0.0.1” IP address which always points to the current machine. <RemoteConsolePort> is the address of the gateway port, which is stored in the following registry key:

```
HKLM\SOFTWARE\Cisco Systems,  
Inc.\CRMConnectorSAP\SAP1\CTIData\<InstanceName>\Dynamic
```

The default is 42031.

After the monitor is started the following prompt is visible:

```
remote>
```

## List of Commands

To display a basic list of commands type **help**. The following list displays:

```
remote>help

help command's list

Command          Parameter  Description
-----
help             ?         -         Display this help
echo             -         toggle on/off
status           -         Display gateway status
trace            [tracelvl] Get or set the tracelevel
collectedtrace [tracelvl] Get or set the tracelevel for collected messages
da              -         Dump agent monitor entry
dt              -         Dump transaction monitor entry
dtdi            -         Dump tpi dll info
dddi            -         Dump ds dll info
la              -         List logged agents states
lt              -         List calls for specific ID or all
ltdi            -         List tpi dll info
lddi            -         List ds dll info
exit            -         Exit monitor

remote>
```

By entering the command **status**, you get an overview of the Cisco Unified CRM Connector for SAP process including application version, connection state, errors count etc.

# 4. REALTIME STATUS OF CISCO UNIFIED CRM CONNECTOR DATASTORE

The Remote Console is the main interface console to the Cisco Unified CRM Connector DataStore process. You can use Remote Console to query information directly from the Cisco Unified CRM Connector DataStore process. Several monitors can be run at the same time. The impact on the system's performance is minimal. The monitor's features are kept for each session.

## Usage

You can run monitors from a Telnet session or a DOS command prompt. Please note that only local access is supported. The monitor process supports local commands. Local commands are defined within monitor. This section provides a list of basic monitor commands for use with processes such as <list\_ > or <dump\_ >.

To navigate and / or edit the executed commands you can press the <Up> or <Down> arrows on the keyboard.

A monitor telnet session can be started by entering following command at a DOS command prompt:

```
C:\>telnet localhost <RemoteConsolePort>
```

or in a telnet session:

```
Welcome to Microsoft Telnet Client  
Escape Character is 'CTRL+''
```

```
Microsoft Telnet> localhost <RemoteConsolePort>
```

“localhost” indicates that a connection to the local server and is synonym to the “127.0.0.1” IP address which always points to the current machine. <RemoteConsolePort> is the address of the gateway port, which is stored in the following registry key:

```
HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorDataStore\  
DS1\Data\<InstanceName>\Dynamic
```

The default is 42030.

After the monitor is started the following prompt is visible:  
remote>

## List of Commands

To display a basic list of commands type **help**. The following list displays:

```
remote>help

help command's list

Command          Parameter  Description
-----
help             ?         -         Display this help
echo             -         toggle on/off
status           -         Display gateway status
trace            [tracelvl] Get or set the tracelevel
collectedtrace [tracelvl] Get or set the tracelevel for collected messages
dt              -         Dump transaction monitor entry
dtdi            -         Dump tpi dll info
dddi            -         Dump ds dll info
la              -         List logged agents states
lt              -         List calls for specific ID or all
ltdi            -         List tpi dll info
lddi            -         List ds dll info
exit            -         Exit monitor

remote>
```

By entering the command **status**, you get an overview of the Cisco Unified CRM Connector DataStore process including application version, connection state, errors count etc.

# 5. COMMON PROBLEMS

## Connector Startup Problems

**Symptom:** Cisco Unified CRM Connector for SAP stays in IDLE state after startup. The Cisco Unified CRM Connector for SAP is connecting to CTI Server A/B, i.e. no PIM involved.

**Cause:** The Cisco Unified CRM Connector for SAP waits for the PIM to open up a connection and transfer an OPEN\_REQ message. Note that, in a duplexed system, side B gateway is only connected from PIM when side A goes down.

**Solution:** Verify PIM configuration in registry CtiHostA/CitHostB (in HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorSAP\SAP1\CTIData\<InstanceName>\Config\) setting must match the Unified CCE/CCH PG IP address and CtiPortA /CtiPortB configuration (in HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorSAP\CTIData\<InstanceName>\Config\). Also verify that the Peripheral ID is correct in CTIAgentPeripheralID.

## Connector Status not going ACTIVE on a Co-located Installation

**Symptom:** Cisco Unified CRM Connector for SAP stays in ACTIVATING state after startup on an co-located installation, i.e. the Cisco Unified CRM Connector for SAP is installed on the same server as the Unified CCE/CCH PG.

**Cause:** Ensure that the CtiHostA/B settings in the registry do not point to “localhost”. This setting must contain an IP address or host name of the Unified CCE/CCH PG servers.

**Solution:** Verify PIM configuration in registry CtiHostA/CitHostB (in HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorSAP\SAP1\CTIData\<InstanceName>\Config\) setting must match the Unified CCE/CCH PG IP address and CtiPortA /CtiPortB configuration (in HKLM\SOFTWARE\Cisco Systems, Inc.\CRMConnectorSAP\CTIData\<InstanceName>\Config\). Also verify that the Peripheral ID is correct in CTIAgentPeripheralID.

## Agent Login Problems

**Symptom:** The following error message appears on the SAP Interaction Center WebClient (ICWC) after a login attempt:

*Failed to log on to the communication management software system*

**Solution:** Ensure that the Cisco Unified CRM Connector for SAP CTIgw1 service is running and in ACTIVE state and that a connection can be

established to port 8080 (or whichever port is currently configured) of the Cisco Unified CRM Connector for SAP server.

Open a browser and type in the following in the address bar:

http://172.160.42.10:8080/ (replace the IP address with the one of the Cisco Unified CRM Connector for SAP server and port number with the one currently used by the Cisco Unified CRM Connector for SAP)

If you see a response from the Cisco Unified CRM Connector for SAP displaying a page listing the services offered by it, then the Cisco Unified CRM Connector for SAP is running and is responding. If not you will see an “Unable to connect” message in the browser. If you are testing an SSL connection, then the corresponding certificate has to be installed in the browser beforehand.

Alternatively you can test if the connector replies with a telnet session.

**Symptom:** Agent login failure

PeripheralErrorCode:8196 is found in Cisco Unified CRM Connector for SAP log file (ensure trace settings are set correctly):

```
2007.10.09 14:21:05 T(0x00000040) :  
ICM::CIcmCtiConnector::OnClientConnectionMsg  
T=1900 * Msg Detail Data:  
MsgType:CONTROL_FAILURE_CONF (InvokeID:0x2000002  
FailureCode:CF_GENERIC_OPERATION  
PeripheralErrorCode:8196 )
```

**Cause:** This indicates that an invalid device ID was specified during login on the ICWC.

**Solution:** Correct the login parameters.

## Failover

If the Cisco Unified CRM Connector for SAP loses the connection to the CTI server, it attempts to connect to the second Unified CCE/CCH PG on a duplexed system. There will be no impact from the agent’s perspective. If the Cisco Unified CRM Connector for SAP is down together with the Unified CCE/CCH PG, side B will take over and all agent and call states will be as before.

## Call Attached Data Missing on Transfer

When a transferred call appears on the second agents ICWC, the Call Attached Data is not visible yet. It only becomes visible on the second agents ICWC **after** the first agent completes the transfer. This is an SAP Integrated Communication Interface (ICI) limitation.

# 6. SAMPLE LOG FILES

## Example of Agent Logon SOAP Telegrams

Following is a list of the SOAP telegrams that are sent back and forth between the SAP Server and the Cisco Unified CRM Connector for SAP. These telegrams can be found in the Cisco Unified CRM Connector for SAP log files if the trace setting is sufficiently high. Some duplicated telegrams have been omitted for brevity.

Added comments are in *italic* font. The numbers (*I* ...) correspond to the numbers in the sequence diagram in Chapter 7.2.1 of the SAP ICI Interface Specification, Version 3.05 [3].

### 1) SAP -> connector

```
<ns0:getWorkcenterCapability xmlns:ns0="urn:IciSystemInterface">
  <userid xmlns="urn:IciSystemInterface">USER1</userid>
</ns0:getWorkcenterCapability>
```

### Connector -> SAP

```
<getworkcentercapabilityresponse xmlns="urn:IciSystemInterface">
  <response xmlns>
    <types>100</types> → specified via TpiWorkcenterType
in registry
    <workcenterlist>>false</workcenterlist>
    <filter>>false</filter>
  </response>
</getworkcentercapabilityresponse>
```

### SAP -> connector

```
<ns0:getWorkcenter xmlns:ns0="urn:IciSystemInterface">
  <id xmlns="urn:IciSystemInterface">11114;11114;52513</id>
  <type xmlns="urn:IciSystemInterface">100</type>
</ns0:getWorkcenter>
```

### Connector -> SAP

```
<getworkcenterresponse xmlns="urn:IciSystemInterface">
  <response xmlns>
    <id>11114;11114;52513</id>
    <description>11114;11114;52513</description>
    <type>100</type>
    <default>>true</default>
  </response>
</getworkcenterresponse>
```

### SAP -> connector

```
<ns0:setWorkcenter xmlns:ns0="urn:IciUserInterface">
  <userid xmlns="urn:IciUserInterface">USER1</userid>
  <workcenterid
xmlns="urn:IciUserInterface">11114;11114;52513</workcenterid>
  <workcentertype
xmlns="urn:IciUserInterface">100</workcentertype>
</ns0:setWorkcenter>
```



### Connector -> SAP

```
<setworkcenterresponse xmlns="urn:IciUserInterface">
    <response xmlns />
</setworkcenterresponse>
```

### 2) SAP -> connector

```
<ns0:getAttributes xmlns:ns0="urn:IciUserInterface">
    <userid xmlns="urn:IciUserInterface">USER1</userid>
</ns0:getAttributes>
```

### Connector -> SAP

```
<getattributesresponse xmlns="urn:IciUserInterface">
    <response xmlns>
        <currentchannels>
            <item>
                <description>Telephony</description>
                <id>1</id>
            </item>
        </currentchannels>
        <addresses>
            <item>
                <address>+140452513</address>
                <channel>1</channel>
            </item>
        </addresses>
        <workmodes>
            <item>
                <description>Logged off</description>
                <id>1</id>
            </item>
            <item>
                <description>Logged on -
ready</description>
                <id>2</id>
            </item>
            <item>
                <description>Logged on - not
ready</description>
                <id>3</id>
            </item>
            <item>
                <description>Logged on - not ready
1</description>
                <id>1001</id>
            </item>
            <item>
                <description>Logged on - not ready
2</description>
                <id>1002</id>
            </item>
            <item>
                <description>Logged on - not ready
3</description>
                <id>1003</id>
            </item>
        </workmodes>
        <queues>
            <item>
                <description>8003278454</description>
                <id>8003278454</id>
            </item>
```

```

        </queues>
        <channels>
            <item>
                <description>Telephony</description>
                <id>1</id>
            </item>
        </channels>
        <userid>USER1</userid>
        <wrapupmode>2</wrapupmode>
        <currentworkmode>
            <description>Logged off</description>
            <id>1</id>
        </currentworkmode>
        <currentqueues />
    </response>
</getattributesresponse>

```

### 3) SAP -> connector

```

<ns0:setCurrentChannels xmlns:ns0="urn:IciUserInterface">
    <userid xmlns="urn:IciUserInterface">USER1</userid>
    <channels xmlns="urn:IciUserInterface">
        <item>1</item>
    </channels>
</ns0:setCurrentChannels>

```

#### Connector -> SAP

```

<setcurrentchannelsresponse xmlns="urn:IciUserInterface">
    <response xmlns />
</setcurrentchannelsresponse>

```

### 4) SAP -> connector

```

<ns0:setCurrentQueues xmlns:ns0="urn:IciUserInterface">
    <userid xmlns="urn:IciUserInterface">USER1</userid>
    <queues xmlns="urn:IciUserInterface">
        <item>8003278454</item>
    </queues>
</ns0:setCurrentQueues>

```

#### Connector -> SAP

```

<setcurrentqueuesresponse xmlns="urn:IciUserInterface">
    <response xmlns />
</setcurrentqueuesresponse>

```

### 5) SAP -> connector

```

<ns0:subscribe xmlns:ns0="urn:IciContainerInterface">

```

```

        <appurl
xmlns="urn:IciContainerInterface">http://10.10.112.24:8001/sap(bD11bi
ZjPTIwNSZkPW1pbiZpPTEmcz1TSUQlM2FBTk9OJTNhZWxjcmQwMF9FQ0RfMDElM2FwSTJ
1Szd2WWlyUkFkeUp1NmZ5YWtzWkNTSEZIR2RGX3hwZjEtaDVBLUFUVA==)/bc/soap/ic
i</appurl>
        <appid
xmlns="urn:IciContainerInterface">470A44907F684956E10000000A0A7018
        </appid>
        <channeltype
xmlns="urn:IciContainerInterface">1</channeltype>
        <containerid
xmlns="urn:IciContainerInterface">+140452513</containerid>
</ns0:subscribe>

```

### **Connector -> SAP**

```

<subscribeResponse xmlns="urn:IciContainerInterface">
    <response xmlns=""/>
</subscribeResponse>

```

### **6) SAP -> connector**

```

<ns0:getCalls xmlns:ns0="urn:IciPhoneLineInterface">
    <lineNumber
xmlns="urn:IciPhoneLineInterface">+140452513</lineNumber>
</ns0:getCalls>

```

### **Connector -> SAP**

```

<getCallsResponse xmlns="urn:IciPhoneLineInterface">
    <response xmlns=""/>
</getCallsResponse>

```

### **14) SAP -> connector**

```

<ns0:setAddresses xmlns:ns0="urn:IciUserInterface">
    <userId xmlns="urn:IciUserInterface">USER1</userId>
    <addresses xmlns="urn:IciUserInterface">
        <item>
            <channel>1</channel>
            <address>+140452513</address>
        </item>
    </addresses>
</ns0:setAddresses>

```

### **Connector -> SAP**

```

<setAddressesResponse xmlns="urn:IciUserInterface">
    <response xmlns=""/>
</setAddressesResponse>

```

### **15) SAP -> connector**

```

<ns0:subscribe xmlns:ns0="urn:IciUserInterface">
    <appUrl
xmlns="urn:IciUserInterface">http://10.10.112.24:8001/sap(bD1
1biZjPTIwNSZkPW1pbiZpPTEmcz1TSUQlM2FBTk9OJTNhZWxjcmQwMF9FQ0RfMDElM2Fw

```

```
STJ1Szd2WWlyUkFkeUp1NmZ5YwtzWkNTSEZIR2RGX3hwZjEtaDVBLUFUVA==) /bc/soap
/ici</appUrl>
```

```
    <appId
xmlns="urn:IciUserInterface">470A448F7F684956E1000000A0A7018</appId>
    <userId xmlns="urn:IciUserInterface">USER1</userId>
</ns0:subscribe>
```

### **Connector -> SAP**

```
<subscribeResponse xmlns="urn:IciUserInterface">
    <response xmlns=""/>
</subscribeResponse>
```

### **16) SAP -> connector**

```
<ns0:setCurrentWorkmode xmlns:ns0="urn:IciUserInterface">
    <userId xmlns="urn:IciUserInterface">USER1</userId>
    <workmode xmlns="urn:IciUserInterface">3</workmode>
</ns0:setCurrentWorkmode>
```

### **Connector -> SAP**

```
<setCurrentWorkmodeResponse xmlns="urn:IciUserInterface">
    <response xmlns=""/>
</setCurrentWorkmodeResponse>
```

### **17) Connector -> SAP**

```
<userChanged xmlns="urn:IciEventInterface">
    <appIds xmlns="">
        <item>470A448F7F684956E1000000A0A7018</item>
    </appIds>
    <user xmlns="">
        <currentChannels>
            <item>
                <description>Telephony</description>
                <id>1</id>
            </item>
        </currentChannels>
        <addresses>
            <item>
                <address>+140452513</address>
                <channel>1</channel>
            </item>
        </addresses>
        <workmodes>
            <item>
                <description>Logged off</description>
                <id>1</id>
            </item>
            <item>
                <description>Logged on -
ready</description>
                <id>2</id>
```

```

        </item>
        <item>
ready</description>          <description>Logged on - not
                              <id>3</id>
        </item>
        <item>
1</description>            <description>Logged on - not ready
                              <id>1001</id>
        </item>
        <item>
2</description>            <description>Logged on - not ready
                              <id>1002</id>
        </item>
ready 3</description>      <item><description>Logged on - not
                              <id>1003</id>
        </item>
</workmodes>
<queues>
  <item>
    <description>8003278454</description>
    <id>8003278454</id>
  </item>
</queues>
<channels>
  <item>
    <description>Telephony</description>
    <id>1</id>
  </item>
</channels>
<userId>USER1</userId>
<wrapUpMode>2</wrapUpMode>
<currentWorkmode>
ready</description>      <description>Logged on - not
                              <id>3</id>
</currentWorkmode>
<currentQueues>
  <item>
    <description>8003278454</description>
    <id>8003278454</id>
  </item>
</currentQueues>
</user>
</userChanged>

```

## Example of Agent Initiates Outbound Call SOAP Telegrams

Following is a list of the SOAP telegrams that are sent back and forth between the SAP Server and the Cisco Unified CRM Connector for SAP when the agent initiates an outbound call. These telegrams can be found in the Cisco Unified CRM Connector for SAP log files if the trace setting is sufficiently high. Some duplicated telegrams have been omitted for brevity. Added comments are in *italic* font. The numbers (**1** ...) correspond to the numbers in the sequence diagram in Chapter 7.3 of the SAP ICI Interface Specification, Version 3.05 [3].

### 1) SAP -> connector

```
<ns0:create xmlns:ns0="urn:IciItemInterface">
  <channelType xmlns="urn:IciItemInterface">1</channelType>
  <containerId
xmlns="urn:IciItemInterface">+4049952512</containerId>
</ns0:create>
```

### connector -> SAP

```
<createResponse xmlns="urn:IciItemInterface">
  <response xmlns="">
    <status><description>Created</description><id>1</id></status>
    <capabilityList>
      <item>6</item>
      <item>7</item>
      <item>8</item>
      <item>101</item>
      <item>102</item>
      <item>103</item>
    </capabilityList>
    <processingStatus>
      <description>Not in process</description>
      <id>1</id>
    </processingStatus>
    <itemId>1</itemId>
  </response>
</createResponse>
```

### 2) SAP -> connector

```
<ns0:dial xmlns:ns0="urn:IciPhoneCallInterface">
  <lineNumber
xmlns="urn:IciPhoneCallInterface">+4049952512</lineNumber>
  <callHandle xmlns="urn:IciPhoneCallInterface">1</callHandle>
  <dialNumber
xmlns="urn:IciPhoneCallInterface">+916782327185</dialNumber>
</ns0:dial>
```

### connector -> SAP

```
<dialResponse xmlns="urn:IciPhoneCallInterface">
```

```

        <response xmlns="">+916782327185</response>
</dialResponse>

```

### 3) connector -> SAP

```

<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds
    xmlns=""><item>478CF7F94C151713E1000000A0A7018</item></appIds>
  <phoneCall xmlns="">
    <dialedNumber>+116782327185</dialedNumber>
    <lineNumber>+4049952512</lineNumber>
    <callStatus>
      <description>Ringing</description>
      <id>104</id>
    </callStatus>
    <capabilityList>
      <item>6</item>
      <item>102</item>
    </capabilityList>
    <internal>>false</internal>
    <remoteNumbers>
      <item>+116782327185</item>
    </remoteNumbers>
    <callHandle>1</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
      <description>Active</description>
      <id>2</id>
    </processingStatus>
    <attachedData>&lt;?xml version = "1.0" encoding = "UTF-8"
    ?&gt;&lt;ItemAttachedData&
      gt;&lt;Application id = "SAP-
      IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05/&
      gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&lt;CV10/&gt;&
      lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedData>
    <inbound>>false</inbound>
  </phoneCall>
</phoneCallChanged>

```

### SAP -> connector

```

<phoneCallChangedResponse xmlns="urn:IciEventInterface">
  <response xmlns=""/>
</phoneCallChangedResponse>

```

### 4) Connector -> SAP

```

<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>478CF7F94C151713E1000000A0A7018</item>
  </appIds>
  <phoneCall xmlns="">

```

```

<dialNumber>+116782327185</dialNumber>
<lineNumber>+4049952512</lineNumber>
<callStatus>
  <description>Ringing</description>
  <id>104</id>
</callStatus>
<capabilityList>
  <item>6</item>
  <item>102</item>
</capabilityList>
<internal>>false</internal>
<remoteNumbers>
  <item>+116782327185</item>
</remoteNumbers>
<callHandle>1</callHandle>
<trunkId xsi:nil="true"/>
<processingStatus>
  <description>Active</description>
  <id>2</id>
</processingStatus>
<attachedData>&lt;?xml version = "1.0" encoding = "UTF-8"
?&gt;&lt;ItemAttachedData&
  12:30:54 ConnectorSAP-CTIgw1 Trace: ++continued++:
gt;&lt;Application id = "SAP-
IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05/&
gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&lt;CV10/&gt;&
lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedData>
  <inbound>>false</inbound>
</phoneCall>
</phoneCallChanged>

```

### **SAP -> connector**

```

<phoneCallChangedResponse xmlns="urn:IciEventInterface">
  <response xmlns=""/>
</phoneCallChangedResponse>

```

### **5) connector -> SAP**

```

<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>478CF7F94C151713E10000000A0A7018</item>
  </appIds>
  <phoneCall xmlns="">
    <dialNumber>+40499D49</dialNumber>
    <lineNumber>+4049952512</lineNumber>
    <callStatus>
      <description>Alerting</description>
      <id>3</id>
    </callStatus>
    <capabilityList>
      <item>1</item>
    </capabilityList>
  </phoneCall>
</phoneCallChanged>

```



```

        <item>2</item>
        <item>3</item>
        <item>6</item>
        <item>102</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
        <item>+40499D49</item>
    </remoteNumbers>
    <callHandle>1</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
        <description>Not in process</description>
        <id>1</id>
    </processingStatus>
    <attachedData>&lt;?xml version = "1.0" encoding = "UTF-8"?&gt;&lt;ItemAttachedData&gt;&lt;Application id = "SAP-IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05/&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedData>
    <inbound>>false</inbound>
</phoneCall>
</phoneCallChanged>

```

#### 6) SAP -> connector

```

<accept xmlns="urn:IciItemInterface">
    <itemId xmlns="">1</itemId>
<containerId xmlns="">+0041319176043</containerId></accept>

```

#### 4) connector -> SAP

```

<acceptResponse xmlns="urn:IciItemInterface">
    <response xmlns=""/>
</acceptResponse>

```

#### SAP -> connector

```

<phoneCallChangedResponse xmlns="urn:IciEventInterface">
    <response xmlns=""/>
</phoneCallChangedResponse>

```

#### 7) connector -> SAP

```

<phoneCallChanged xmlns="urn:IciEventInterface">
    <appIds xmlns="">
        <item>478CF7F94C151713E1000000A0A7018</item>
    </appIds>
    <phoneCall xmlns="">
        <dialNumber>+40499D50</dialNumber>
        <lineNumber>+4049952512</lineNumber>
        <callStatus>

```

```

        <description>Connected</description>
        <id>101</id>
    </callStatus>
    <capabilityList>
        <item>3</item>
        <item>4</item>
        <item>6</item>
        <item>7</item>
        <item>8</item>
        <item>102</item>
        <item>103</item>
        <item>104</item>
        <item>105</item>
        <item>107</item>
        <item>109</item>
        <item>110</item>
        <item>111</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
        <item>+40499D50</item>
    </remoteNumbers>
    <callHandle>1</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
        <description>Active</description>
        <id>2</id>
    </processingStatus>
    <attachedData>&lt;?xml version = "1.0" encoding = "UTF-8"?&gt;&lt;ItemAttachedData&gt;&lt;Application id = "SAP-IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05/&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedData>
    <inbound>>false</inbound>
</phoneCall>
</phoneCallChanged>

```

### **SAP -> connector**

```

<phoneCallChangedResponse xmlns="urn:IciEventInterface">
    <response xmlns=""/>
</phoneCallChangedResponse>

```

### **9) SAP -> connector**

```

<ns0:drop xmlns:ns0="urn:IciPhoneCallInterface">
    <lineNumber
xmlns="urn:IciPhoneCallInterface">+4049952512</lineNumber>
    <callHandle xmlns="urn:IciPhoneCallInterface">1</callHandle>
</ns0:drop>

```

### *connector -> SAP*

```
<dropResponse xmlns="urn:IciPhoneCallInterface">
  <response xmlns=""/>
</dropResponse>
```

### *10) connector -> SAP*

```
<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>478CF7F94C151713E1000000A0A7018</item>
  </appIds>
  <phoneCall xmlns="">
    <dialedNumber>+40499D50</dialedNumber>
    <lineNumber>+4049952512</lineNumber>
    <callStatus>
      <description>Ended</description>
      <id>4</id>
    </callStatus>
    <capabilityList>
      <item>5</item>
      <item>6</item>
      <item>102</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
      <item>+0</item>
    </remoteNumbers>
    <callHandle>1</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
      <description>Wrapup</description>
      <id>3</id>
    </processingStatus>
    <attachedData>&lt;?xml version = "1.0" encoding = "UTF-8"
    ?&gt;&lt;ItemAttachedData&gt;&lt;Application id = "SAP-IC"
    &gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05/&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedData>
    <inbound>>false</inbound>
  </phoneCall>
</phoneCallChanged>
```

### *SAP -> connector*

```
<phoneCallChangedResponse xmlns="urn:IciEventInterface">
  <response xmlns=""/>
</phoneCallChangedResponse>
```

## Example of Consult Transfer SOAP Telegrams

Following is a list of the SOAP telegrams that are sent back and forth between the SAP Server and the Cisco Unified CRM Connector for SAP during a consult transfer. These telegrams can be found in the Cisco Unified CRM Connector for SAP log files if the trace setting is sufficiently high. Some duplicated telegrams have been omitted for brevity.

Added comments are in *italic* font. The numbers (**1** ...) correspond to the numbers in the sequence diagram in Chapter 7.5 of the *SAP ICI Interface Specification, Version 3.05* document.

### 1) SAP -> connector

```
<ns0:create xmlns:ns0="urn:IciItemInterface">
  <channelType xmlns="urn:IciItemInterface">1</channelType>
  <containerId
xmlns="urn:IciItemInterface">+00413191773001</containerId>
</ns0:create>
```

### connector -> SAP

```
<createResponse xmlns="urn:IciItemInterface">
  <response xmlns="">
    <status>
      <description>Created</description>
      <id>1</id>
    </status>
    <capabilityList>
      <item>6</item>
      <item>7</item>
      <item>8</item>
      <item>101</item>
      <item>102</item>
      <item>103</item>
    </capabilityList>
    <processingStatus>
      <description>Not in process</description>
      <id>1</id>
    </processingStatus>
    <itemId>4</itemId>
  </response>
</createResponse>
```

### 2) SAP -> connector

```
<ns0:consult xmlns:ns0="urn:IciPhoneCallInterface">
  <lineNumber
xmlns="urn:IciPhoneCallInterface">+00413191773001</lineNumber>
  <callHandle xmlns="urn:IciPhoneCallInterface">4</callHandle>
  <connCallHandle
xmlns="urn:IciPhoneCallInterface">1</connCallHandle>
  <dialNumber
xmlns="urn:IciPhoneCallInterface">+73003</dialNumber>
```

```
        <nextStep xmlns="urn:IciPhoneCallInterface">2</nextStep>
</ns0:consult>
```

### **connector -> SAP**

```
<consultResponse xmlns="urn:IciPhoneCallInterface">
    <response xmlns=""/>
</consultResponse>
```

### **3)connector -> SAP**

```
<phoneCallChanged xmlns="urn:IciEventInterface">
    <appIds xmlns="">
        <item>47B339A480C83283E10000000A424709</item>
    </appIds>
    <phoneCall xmlns="">
        <dialedNumber>+00413191773002</dialedNumber>
        <lineNumber>+00413191773001</lineNumber>
        <callStatus>
            <description>Hold</description>
            <id>105</id>
        </callStatus>
        <capabilityList>
            <item>4</item>
            <item>6</item>
            <item>7</item>
            <item>8</item>
            <item>102</item>
            <item>103</item>
            <item>104</item>
            <item>105</item>
            <item>108</item>
            <item>109</item>
            <item>110</item>
        </capabilityList>
        <internal>true</internal>
        <remoteNumbers>
            <item>+00413191773002</item>
        </remoteNumbers>
        <callHandle>1</callHandle>
        <trunkId xsi:nil="true"/>
        <processingStatus>
            <description>Active</description>
            <id>2</id>
        </processingStatus>
        <attachedData>&lt;?xml version="1.0" encoding="utf-8"
?&gt;&lt;ItemAttachedData&gt;&lt;Application id="SAP-IC"
&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05/&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&lt;CV10/&gt;&lt;/Application&gt;&lt;Application
```

```

id="CRM_IC/BUPA"&gt;&lt;CURRENTCUSTOMER/&gt;&lt;CURRENTCONTACT/&gt;&lt;
CURRENTCOMPONENT/&gt;&lt;BPCONFIRMED/&gt;&lt;COMPCONFIRMED/&gt;&lt;
/Application&gt;&lt;Application
id="CRM_IC/MCM"&gt;&lt;FWDTYPE&gt;Consult&lt;/FWDTYPE&gt;&lt;FWDFROM&
gt;173001&lt;/FWDFROM&gt;&lt;FWDTIME&gt;0&lt;/FWDTIME&gt;&lt;/Applica
tion&gt;&lt;/ItemAttachedData&gt;</attachedData>

<inbound>>false</inbound>
</phoneCall>
</phoneCallChanged>

```

## 6) connector -> SAP

```

<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>47B339A480C83283E1000000A424709</item>
  </appIds>
  <phoneCall xmlns="">
    <dialedNumber>+00413191773003</dialedNumber>
    <lineNumber>+00413191773001</lineNumber>
    <callStatus>
      <description>Ringing</description>
      <id>104</id>
    </callStatus>
    <capabilityList>
      <item>6</item>
      <item>102</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
      <item>+00413191773003</item>
    </remoteNumbers>
    <callHandle>4</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
      <description>Active</description>
      <id>2</id>
    </processingStatus>
    <attachedData>&lt;?xml version = "1.0" encoding =
"UTF-8"?&gt;&lt;ItemAttachedData&gt;&lt;Application id="SAP-
IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05&g
t;3&lt;/CV05&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&
lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachDa
ta>
    <inbound>>false</inbound>
  </phoneCall>
</phoneCallChanged>

```

## 7) connector -> SAP

```

<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>47B3098BCC7C2C61E1000000A424709</item>

```

```

</appIds>
<phoneCall xmlns="">
  <dialedNumber>+00413191773003</dialedNumber>
  <lineNumber>+00413191773003</lineNumber>
  <callStatus>
    <description>Alerting</description>
    <id>3</id>
  </callStatus>
  <capabilityList>
    <item>1</item>
    <item>2</item>
    <item>3</item>
    <item>6</item>
    <item>102</item>
  </capabilityList>
  <internal>true</internal>
  <remoteNumbers>
    <item>+00413191773001</item>
  </remoteNumbers>
  <callHandle>6</callHandle>
  <trunkId xsi:nil="true"/>
  <processingStatus>
    <description>Not in process</description>
    <id>1</id>
  </processingStatus>
  <attachedData>&lt;?xml v
12:05:40 ConnectorSAP-CTIgw1 Trace: ++continued++:
ersion = "1.0" encoding = "UTF-
8">&lt;ItemAttachedData&gt;&lt;Application id="SAP-
IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05&
t;1&lt;/CV05&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&
lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedDa
ta>
    <inbound>true</inbound>
  </phoneCall>
</phoneCallChanged>

```

### **SAP ->connector**

```

<ns0:accept xmlns:ns0="urn:IciItemInterface">
  <itemId xmlns="urn:IciItemInterface">6</itemId>
  <containerId
xmlns="urn:IciItemInterface">+00413191773003</containerId>
</ns0:accept>

```

### **connector -> SAP**

```

<acceptResponse xmlns="urn:IciItemInterface">
  <response xmlns=""/>
</acceptResponse>

```

### 8)SAP -> connector

```
<ns0:transfer xmlns:ns0="urn:IciPhoneCallInterface">
  <lineNumber
xmlns="urn:IciPhoneCallInterface">+00413191773001</lineNumber>
  <connCallHandle
xmlns="urn:IciPhoneCallInterface">4</connCallHandle>
  <heldCallHandle
xmlns="urn:IciPhoneCallInterface">1</heldCallHandle>
</ns0:transfer>
```

### connector -> SAP

```
<transferResponse xmlns="urn:IciPhoneCallInterface">
  <response xmlns=""/>
</transferResponse>
```

### 9)connector -> SAP

```
<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>47B339A480C83283E10000000A424709</item>
  </appIds>
  <phoneCall xmlns="">
    <dialedNumber>+00413191773002</dialedNumber>
    <lineNumber>+00413191773001</lineNumber>
    <callStatus>
      <description>Ended</description>
      <id>4</id>
    </callStatus>
    <capabilityList>
      <item>5</item>
      <item>6</item>
      <item>102</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
      <item>+0</item>
    </remoteNumbers>
    <callHandle>1</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus><description>Not in
process</description>
      <id>1</id>
    </processingStatus>
    <attachedData>&lt;?xml version="1.0" encoding="utf-
8"?&gt;&lt;ItemAttachedData&gt;&lt;Application
id="CRM_IC/BUPA"&gt;&lt;CURRENTCUSTOMER/&gt;&lt;CURRENTCONTACT/&gt;&lt;
t;CURRENTCOMPONENT/&gt;&lt;BPCONFIRMED/&gt;&lt;COMPCONFIRMED/&gt;&lt;
/Application&gt;&lt;Application
id="CRM_IC/MCM"&gt;&lt;FWDTYPE&gt;Transfer&lt;/FWDTYPE&gt;&lt;FWDFROM
&gt;173001&lt;/FWDFROM&gt;&lt;FWDTIME&gt;16750641&lt;/FWDTIME&gt;&lt;
/Application&gt;&lt;Application id="SAP-
IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05&g
```



```

t;3&lt;/CV05&gt;&lt;&lt;CV06/&gt;&lt;&lt;CV07/&gt;&lt;&lt;CV08/&gt;&lt;&lt;CV09/&gt;&
lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedDa
ta>

    <inbound>>false</inbound>
  </phoneCall>
</phoneCallChanged>

```

### 10)connector -> SAP

```

<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>47B339A480C83283E1000000A424709</item>
  </appIds>
  <phoneCall xmlns="">
    <dialedNumber>+00413191773003</dialedNumber>
    <lineNumber>+00413191773001</lineNumber>
    <callStatus>
      <description>Ended</description>
      <id>4</id>
    </callStatus>
    <capabilityList>
      <item>5</item>
      <item>6</item>
      <item>102</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
      <item>+0</item>
    </remoteNumbers>
    <callHandle>4</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
      <description>Not in process</description>
      <id>1</id>
    </processingStatus>
    <attachedData>&lt;?xml version="1.0" encoding="utf-
8"?&gt;&lt;&lt;ItemAttachedData&gt;&lt;&lt;Application
id="CRM_IC/BUPA"&gt;&lt;&lt;CURRENTCUSTOMER/&gt;&lt;&lt;CURRENTCONTACT/&gt;&lt;
&lt;CURRENTCOMPONENT/&gt;&lt;&lt;BPCONFIRMED/&gt;&lt;&lt;COMPCONFIRMED/&gt;&lt;
/Application&gt;&lt;&lt;Application
id="CRM_IC/MCM"&gt;&lt;&lt;FWDTYPE&gt;Transfer&lt;/FWDTYPE&gt;&lt;&lt;FWDFROM
&gt;173001&lt;/FWDFROM&gt;&lt;&lt;FWDTIME&gt;16750641&lt;/FWDTIME&gt;&lt;&lt;
/Application&gt;&lt;&lt;Application id="SAP-
IC"&gt;&lt;&lt;CV01/&gt;&lt;&lt;CV02/&gt;&lt;&lt;CV03/&gt;&lt;&lt;CV04/&gt;&lt;&lt;CV05&g
t;1&lt;/CV05&gt;&lt;&lt;CV06/&gt;&lt;&lt;CV07/&gt;&lt;&lt;CV08/&gt;&lt;&lt;CV09/&gt;&
lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedDa
ta>

    <inbound>>false</inbound>
  </phoneCall>
</phoneCallChanged>

```

## 12)connector -> SAP

```
<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>47B3098BCC7C2C61E1000000A424709</item>
  </appIds>
  <phoneCall xmlns="">
    <dialedNumber>+00413191773003</dialedNumber>
    <lineNumber>+00413191773003</lineNumber>
    <callStatus>
      <description>Connected</description>
      <id>101</id>
    </callStatus>
    <capabilityList>
      <item>3</item>
      <item>4</item>
      <item>6</item>
      <item>7</item>
      <item>8</item>
      <item>102</item>
      <item>103</item>
      <item>104</item>
      <item>105</item>
      <item>107</item>
      <item>109</item>
      <item>110</item>
      <item>111</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
      <item>+00413191773001</item>
    </remoteNumbers><callHandle>6</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
      <description>Active</description>
      <id>2</id>
    </processingStatus>
    <attachedData>&lt;?xml version="1.0" encoding="utf-8"
    ?&gt;&lt;ItemAttachedData&gt;&lt;Application
    id="CRM_IC/BUPA"&gt;&lt;CURRENTCUSTOMER/&gt;&lt;CURRENTCONTACT/&gt;&lt;
    t;CURRENTCOMPONENT/&gt;&lt;BPCONFIRMED/&gt;&lt;COMPCONFIRMED/&gt;&lt;
    /Application&gt;&lt;Application
    id="CRM_IC/MCM"&gt;&lt;FWDTYPE&gt;Transfer&lt;/FWDTYPE&gt;&lt;FWDFROM
    &gt;173001&lt;/FWDFROM&gt;&lt;FWDTIME&gt;16750641&lt;/FWDTIME&gt;&lt;
    /Application&gt;&lt;Application id="SAP-
    IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05&
    t;6&lt;/CV05&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&
    lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedDa
    ta>
      <inbound>true</inbound>
    </phoneCall>
  </phoneCallChanged>
```

### 13)connector -> SAP

```
<phoneCallChanged xmlns="urn:IciEventInterface">
  <appIds xmlns="">
    <item>47B3098BCC7C2C61E1000000A424709</item>
  </appIds>
  <phoneCall xmlns="">
    <dialedNumber>+00413191773002</dialedNumber>
    <lineNumber>+00413191773003</lineNumber>
    <callStatus>
      <description>Connected</description>
      <id>101</id>
    </callStatus>
    <capabilityList>
      <item>3</item>
      <item>4</item>
      <item>6</item>
      <item>7</item>
      <item>8</item>
      <item>102</item>
      <item>103</item>
      <item>104</item>
      <item>105</item>
      <item>107</item>
      <item>109</item>
      <item>110</item>
      <item>111</item>
    </capabilityList>
    <internal>true</internal>
    <remoteNumbers>
      <item>+00413191773001</item>
    </remoteNumbers>
    <callHandle>6</callHandle>
    <trunkId xsi:nil="true"/>
    <processingStatus>
      <description>Active</description>
      <id>2</id>
    </processingStatus>
    <attachedData>&lt;?xml version="1.0" encoding="utf-8"
    ?&gt;&lt;&lt;ItemAttachedData&gt;&lt;Application
    id="CRM_IC/BUPA"&gt;&lt;CURRENTCUSTOMER/&gt;&lt;CURRENTCONTACT/&gt;&lt;
    t;CURRENTCOMPONENT/&gt;&lt;BPCONFIRMED/&gt;&lt;COMPCONFIRMED/&gt;&lt;
    /Application&gt;&lt;Application
    id="CRM_IC/MCM"&gt;&lt;FWDTYPE&gt;Transfer&lt;/FWDTYPE&gt;&lt;FWDFROM
    &gt;173001&lt;/FWDFROM&gt;&lt;FWDTIME&gt;16750641&lt;/FWDTIME&gt;&lt;
    /Application&gt;&lt;Application id="SAP-
    IC"&gt;&lt;CV01/&gt;&lt;CV02/&gt;&lt;CV03/&gt;&lt;CV04/&gt;&lt;CV05&g
    t;6&lt;/CV05&gt;&lt;CV06/&gt;&lt;CV07/&gt;&lt;CV08/&gt;&lt;CV09/&gt;&
    lt;CV10/&gt;&lt;/Application&gt;&lt;/ItemAttachedData&gt;</attachedDa
    ta>
      <inbound>true</inbound>
  </phoneCall>
</phoneCallChanged>
```

```
</phoneCall>  
</phoneCallChanged>
```

## 7. REGISTRY SETTINGS

Refer to *Cisco Unified CRM Connector for SAP Installation and Configuration Guide* document for details about the registry settings.