



Avaya Solution & Interoperability Test Lab

Application Notes for Shanghai Elite Software Technology Elite CRM for Call Center with Avaya Predictive Dialing System – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Shanghai Elite Software Technology Elite CRM for Call Center to successfully interoperate with Avaya Predictive Dialing System (PDS). Elite CRM for Call Center enables an Elite Agent application to handle Avaya Predictive Dialing System outbound calls. Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the *DeveloperConnection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

Shanghai Elite Software Technology Elite CRM for Call Center is a complete solution for the call center. It provides a configurable business-flow platform to meet the ever-changing requirements of the customer.

The main features of Elite CRM for Call Center include:

- All interface designs for the agents are done through the AddinBuilder and WorkOrder utilities, eliminating the need for software development.
- The Workflow engine can be configured in many aspects such as assigning the person responsible for each step in the flow and the treatment for expired tasks.
- Contact objective and history make customer management and analysis easier.
- The Outbound management sub-system enables you to setup and manage a campaign with call list generation, job distribution, interface design, call process monitoring and reporting.
- The Monitoring system provides system wide management capability such as monitoring agent status, queue status and special business target.
- The Reporting system exports data in Excel format with customer defined criteria and format. Graphical statistical reporting is also available.

Agents use the Elite Agent application to perform their tasks. The focus of these Application Notes is to describe the configuration of the Elite Agent application to handle Avaya Predictive Dialing System outbound calls. The Elite Agent application is the point of integration between the Elite CRM for Call Center and the Predictive Dialing System.

Figure 1 illustrates the configuration used to verify the Elite CRM for Call Center interoperability with Avaya Predictive Dialing System. The Avaya Predictive Dialing System is connected to an Avaya S8500B Media Server and G650 Media Gateway using E1 ISDN-PRI trunks to place outbound calls to the PSTN, and to connect to the Avaya 4600 Series IP Telephones used by the agents. The Elite Agent application installed on the agent PCs connects to both the Elite CRM Server and Predictive Dialing System for services. All the systems are connected using the Avaya C364T-PWR Converged Stackable Switch for network connectivity.

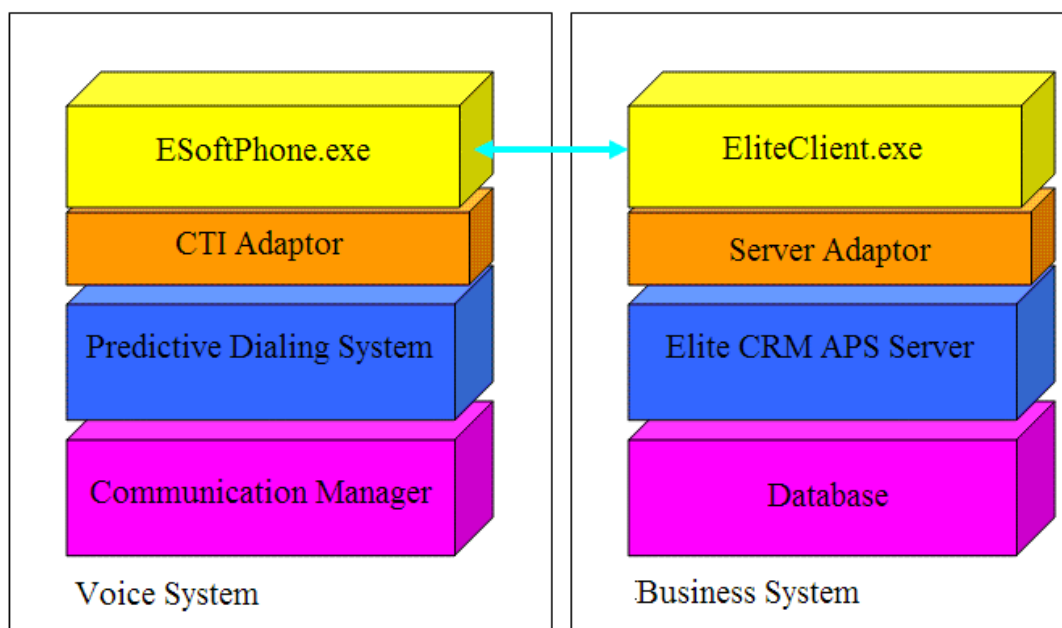


Figure 2: Elite Agent Architecture

Each instance of the Elite Agent connects to the Avaya Predictive Dialing System server for the control of the agent's work session. The Elite CRM Server does not interface directly to the Avaya Predictive Dialing System.

2. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment	Software
Avaya S8500B Media Server	Avaya Communication Manager 3.0.1 (R013x.00.1.346.0)
Avaya G650 Media Gateway <ul style="list-style-type: none"> TN2312BP IP Server Interface TN799DP C-LAN Interface TN2302AP IP Media Processor 	- HW07, FW022 HW01, FW015 HW20, FW107
Avaya Predictive Dialing System	Version 12.0, Service Pack 4

Avaya 4600 Series IP Telephones	2.4 (4610SW) 2.4 (4621SW)
Avaya C364T-PWR Converged Stackable Switch	4.3.12
Shanghai Elite Software Technology Elite CRM for Call Center Server	3.1
Shanghai Elite Software Technology Elite Agent	3.1

3. Configure Avaya Predictive Dialing System

The detailed administration of the Avaya Predictive Dialing System (PDS) such as the trunks between Predictive Dialing System and Avaya Communication Manager, user accounts, calling lists, phone strategies, record selection and starting of outbound jobs are assumed to be in place and are not covered in these Application Notes. There is no specific configuration required on the Avaya Predictive Dialing System for successful interoperability with Elite CRM for Call Center.

4. Configure Shanghai Elite Software Technology CRM for Call Center

4.1. Configure Elite CRM Server

Elite CRM Server does not communicate directly with the Avaya PDS. The Elite Agents connect to the Elite CRM server over the network. The detailed configuration of the Elite CRM server is assumed to be in place and is not covered in these Application Notes. There is no specific configuration required on Elite CRM server for successful interoperability with the Avaya Predictive Dialing System.

4.2. Configure Elite Agent

To configure Elite Agent to integrate with Avaya Predictive Dialing System, we need to modify the [CTI] section in the configuration file **EliteClient.ini** located in the directory “**C:\Program Files\Elite\Elite Agent**”. The CTI Adaptor reads the [CTI] section when Elite Agent is launched. As there are many configurable settings, only those required by the CTI Adaptor to integrate with Avaya Predictive Dialing System will be mentioned here.

Setting	Description
PDS=1	1 for Avaya PDS
ServerHost=10.1.10.180	IP address of the PDS server
ServerEndPoint=22700	TCP Port to connect to.
PBXType=2	2 for Avaya
NeedAgentID=1	Agent Login is required to login
NeedPassword=1	Agent Password is required to login
NeedQueue=0	Do not prompt for Queue during login
NeedPosition=0	Do not prompt for Position during login
NeedExtension=1	Extension is required to login
ExtensionManully=2	Extension can be modified during login

OBReleaseState=Ready	Set agent to Ready state after wrapping up an outbound call
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The CTI section in the EliteClient.ini file is shown below.

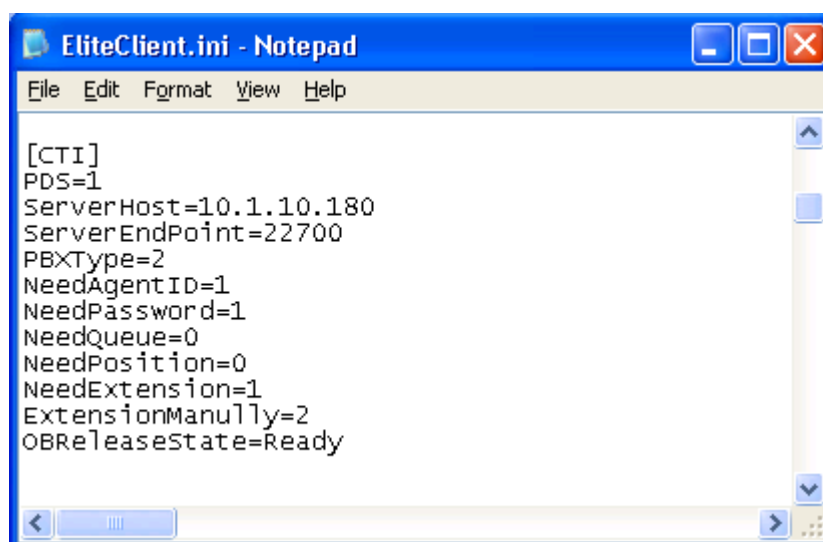


Figure 3: EliteClient.ini Configuration File

5. Interoperability Compliance Testing

The Interoperability compliance test included feature functionality and serviceability testing.

The feature functionality testing focused on verifying Elite Agent's handling of the Agent API messages in the areas of logging in and logging out of agents, setting agent states and setting completion codes.

The serviceability testing focused on verifying the ability of Elite Agent to recover from adverse conditions, such as resetting of the Predictive Dialing System and Elite CRM server and disconnecting the Ethernet cable of the Agent PC.

5.1. General Test Approach

The feature functionality test cases were performed manually. Upon startup of the Elite Agent application, the agent entered the login Id and password to log in to the Elite CRM server.

Figure 4 shows the Elite Agent screen when the log in is successful. The agent then clicked on **Logon** located on the **ESoftPhone** window to log in to the Avaya Predictive Dialing System. Upon successful log in, the agent selected an available outbound job to join. The Avaya Predictive Dialing System placed outbound calls and successful calls were delivered to the Elite Agent. The agent performed telephony operations such as hold, unhold and hangup using Elite Agent. After the calls were hung up, Elite Agent was used to set the Completion Code and to put the agent to available state to handle the next call.

The serviceability test cases were performed manually by resetting the Predictive Dialing System and Elite CRM server, and by disconnecting and reconnecting the LAN cables to the Agent PC.

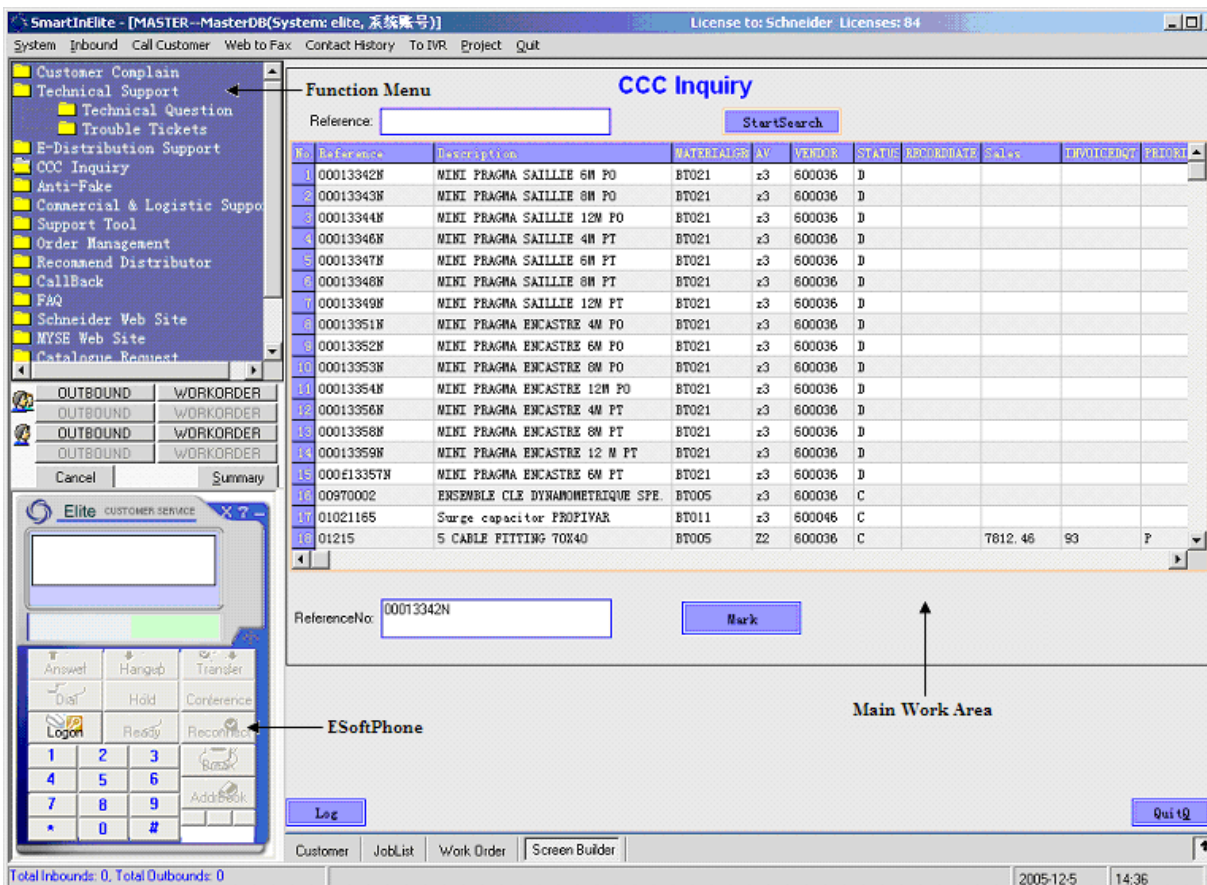


Figure 4: Elite Agent Application

5.2. Test Results

All feature functionality and serviceability test cases passed. Elite Agent successfully integrated with the Avaya Predictive Dialing System to handle outbound calls. For serviceability testing, Elite Agent was able to recover after resets of the Elite CRM server and the Avaya Predictive Dialing System server. Elite Agent was also able to recover from network disconnects and reconnects.

6. Verification Steps

6.1. Verify Avaya Predictive Dialing System

Log in to the Predictive Dialing System server using a login with administrative privileges. At the command prompt, enter the commands "*check_pds*". Verify that the message "**All processes running!**" is displayed.


```

Telnet 10.1.10.180
PDSSIN(admin)>@/opt/avaya/pds [809]
$ check_pds

Checking for required PDS processes...
Found:
admin 11405      1 0 00:02:34 ?      0:00 porter 4
admin 11397      1 0 00:02:33 ?      0:00 porter 2
admin 11393      1 0 00:02:33 ?      0:00 porter 1
admin 11453      1 0 00:02:34 ?      0:00 porter 16
admin 11449      1 0 00:02:34 ?      0:00 porter 15
admin 11445      1 0 00:02:34 ?      0:00 porter 14
admin 11441      1 0 00:02:34 ?      0:00 porter 13
admin 11437      1 0 00:02:34 ?      0:00 porter 12
admin 11433      1 0 00:02:34 ?      0:00 porter 11
admin 11429      1 0 00:02:34 ?      0:00 porter 10
admin 11425      1 0 00:02:34 ?      0:00 porter 9
admin 11421      1 0 00:02:34 ?      0:00 porter 8
admin 11417      1 0 00:02:34 ?      0:00 porter 7
admin 11413      1 0 00:02:34 ?      0:00 porter 6
admin 11409      1 0 00:02:34 ?      0:00 porter 5
admin 11473      1 0 00:02:34 ?      0:00 porter 21
admin 11401      1 0 00:02:34 ?      0:00 porter 3
root 875         1 0 Jun 25 ?      0:06 /usr/sbin/swagentd -r
admin 11323      1 0 00:01:36 ?      0:00 agentcount
admin 11478      1 0 00:02:35 ?      0:00 agent -d
admin 11486      1 0 00:02:38 ?      0:01 ao_recall
admin 11482      1 0 00:02:36 ?      0:00 recall_rmp
admin 11475      1 0 00:02:35 ?      0:00 listserver
admin 11361      1 2 00:01:49 ?      0:02 opmon
admin 11356      1 0 00:01:43 ?      0:00 switcher
admin 11349      11347 0 00:01:38 ?      0:00 swif_mako -e switch1 -s 1 -p 204
8 -v 8000-8280
admin 11353      11351 0 00:01:38 ?      0:00 swif_mako -e switch1 -s 2 -p 204
9 -v 8281-83FF
admin 11351      1 0 00:01:38 ?      0:00 swif_mako -e switch1 -s 2 -p 204
9 -v 8281-83FF
admin 11347      1 0 00:01:38 ?      0:00 swif_mako -e switch1 -s 1 -p 204
8 -v 8000-8280
admin 11333      1 0 00:01:36 ?      0:00 job_strter
admin 11323      1 0 00:01:36 ?      0:00 agentcount
admin 11491      1 1 00:02:38 ?      0:00 iur_conn
admin 11318      1 0 00:01:29 ?      0:27 enservice -ORBEndpoint iiop://:en
server -ORBInitRef NameService=
admin 11493      1 0 00:02:38 ?      0:00 dccserver -ORBEndpoint iiop://:d
ccs -ORBInitRef NameService=
admin 11319      1 0 00:01:34 ?      0:00 datamgr
admin 11308      1 0 00:01:25 ?      0:00 soe_routed
admin 11309      11308 0 00:01:25 ?      0:00 soe_routed
admin 12411      1 0 00:33:17 ?      0:00 signalit
admin 11313      1 0 00:01:27 ?      0:00 conn_mgr
admin 11495      1 0 00:02:43 ?      0:02 hdsc -ORBEndpoint iiop://:hdsc -
ORBInitRef NameService=iiopl
>>> All processes running!
PDSSIN(admin)>@/opt/avaya/pds [810]
$

```

Figure 5: Output of “check_pds” command

6.2. Verify Elite CRM for Call Center Agent

On the PC running Elite Agent, open a command prompt and change to the directory “C:\Program Files\Elite\Elite Agent”. Type “ESoftPhone.exe -standalone” to bring up the ESoftPhone application in stand-alone mode, as shown in **Figure 6**. Click **Logon** to display the Logon window as shown in **Figure 7**. Enter a valid user account and password configured on Predictive Dialing System for **Agent** and **Password**. Enter the station extension that is used by the agent for **Extension**. Click **Login**. Avaya Predictive Dialing System will call the extension to connect the agent. When the agent answers the call, the agent will hear the welcome announcement from Avaya Predictive Dialing System. Select an outbound job to join in the

Outbound Jobs window that appear and click **Ok**. Avaya Predictive Dialing System will start to place outbound calls and deliver successful calls to the agent. Verify that the agent is able to handle the calls using **ESoftPhone**.

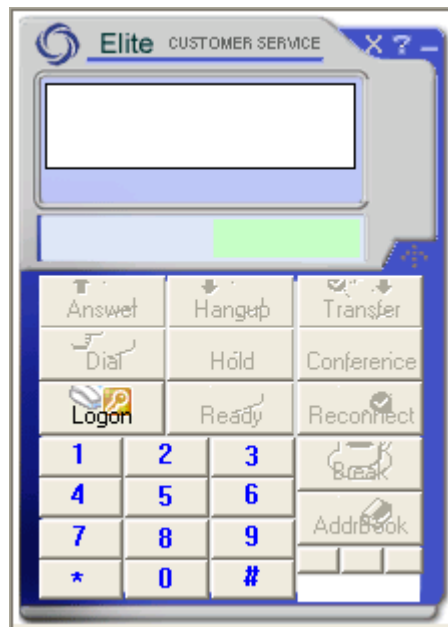


Figure 6: ESoftPhone in Stand-Alone Mode



Figure 7: Logon Window for ESoftPhone

7. Support

Technical support on Elite CRM for Call Center can be obtained through the following:

- Call Shanghai Elite technical support at +86-21-64516261.
- Email support@elitecrm.com

8. Conclusion

These Application Notes describe the configuration steps required for Elite CRM for Call Center 3.1 to successfully interoperate with Avaya Predictive Dialing System Version 12.0. All feature functionality and serviceability test cases were completed successfully.

9. Additional References

This section references the product documentation relevant to these Application Notes.

Avaya product documentation can be found at <http://support.avaya.com>.

- *Avaya Predictive Dialing System 3.1 Installation Manual*, Issue 13j (Dec 2005)
- *Avaya Predictive Dialing System 3.1 Manager Manual*, Issue 17d (Sept 2005)

Shanghai Elite product information can be found at <http://www.elitecrm.com>.

- *Elite CRM Installation and Configuration Guide, Version 3.0*, November 2005

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