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Avaya Solution & Interoperability Test Lab

Application Notes for Amtelco eCreator PDS Agent with Avaya Proactive Contact 3.0 - Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Amtelco eCreator PDS Agent to successfully interoperate with Avaya Proactive Contact 3.0. The eCreator PDS Agent is a desktop application that provides Avaya Proactive Contact 3.0 call control functions and eCreator web-based script functions to the agent. The eCreator PDS Agent allows an agent to handle outbound, inbound and blended work. Information in these Application Notes has been obtained through interoperability compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.
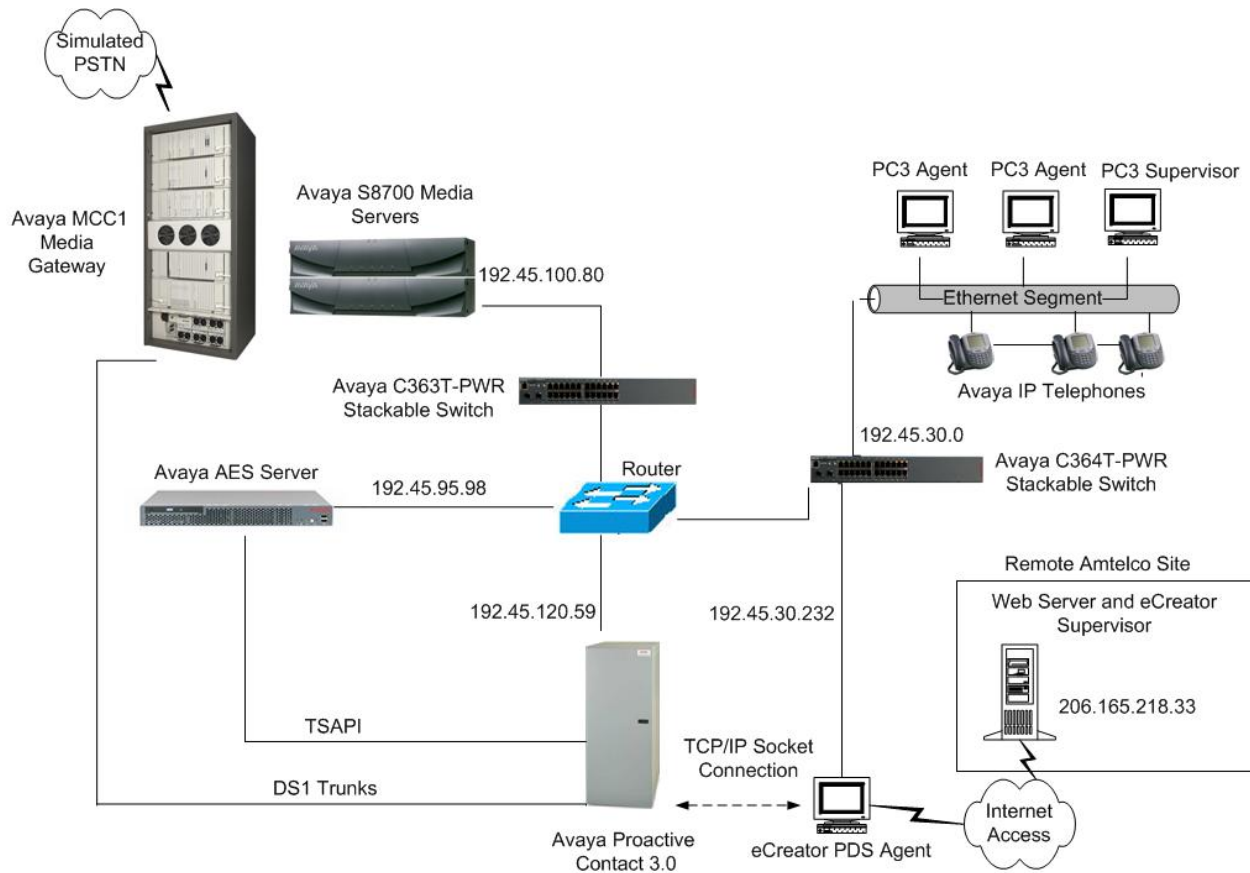
1. Introduction

These Application Notes describe the compliance-tested configuration utilizing Avaya Proactive Contact 3.0 (PC3) and Amtelco eCreator PDS Agent (eCreator PDS Agent). The eCreator PDS Agent is a desktop application that provides the call control functions from Avaya Proactive Contact 3.0 and web-based script functions from eCreator to the agent. The eCreator PDS Agent installed on agent workstations provides the following capabilities.

- Avaya PC3 call control functions are presented to the agent using the eCreator PDS Agent application.
- Inbound, outbound, blended and managed Avaya PC3 jobs are associated with eCreator web scripts. The scripts pop up on the agent's application based on the type of job being worked.
- Information for each call is passed from Avaya PC3 to the eCreator PDS Agent application to populate the scripts.
- The eCreator PDS Agent application returns information to Avaya PC3 to update calling records with items such as Do Not Call status, Recall status and Call Completion codes.

1.1. Integration Overview

The integration configuration consists of a pair of redundant Avaya S8700 Media Servers, an Avaya MCC1 Media Gateway, Avaya Application Enablement Services (AES) server, Avaya IP Telephones, an Avaya Proactive Contact 3.0, eCreator PDS Agent workstation, and a remote eCreator server. A TSAPI CTI link is configured between Avaya Proactive Contact 3.0 and Avaya Communication Manager via Avaya AES in this test environment. This CTI link is used with the Predictive Agent Blending feature on Avaya PC3 to allow agents to handle both inbound and outbound calls.

The eCreator PDS Agent workstation contains two network interfaces, one of which is for communicating with Avaya PC3, and the other is for a direct internet connection to the remote eCreator server. The remote eCreator server is used for Microsoft IIS and the eCreator Supervisor application.

The eCreator PDS Agent interfaces to Avaya PC3 via a socket connection. The TCP/IP socket connection defines a set of messages exchanged between the eCreator PDS Agent application and the Avaya PC3 server to control the agent's work session. This allows eCreator PDS Agent to perform operations such as logging in and out the agent, joining a job, changing the agent state, handling calls and setting completion codes. In the tested configuration, outbound, inbound, managed and blended jobs were supported by eCreator PDS Agent.

2. Equipment and Software Validated

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

Equipment	Software
Avaya Proactive Contact Server	Avaya Proactive Contact 3.0 SP 1, Build 36
Avaya S8700 Media Servers	Avaya Communication Manager 3.1.2 (R013X.01.2.632.1)
Avaya Application Enablement Services Server	3.1.1 Patch 1, Build 43.2
Avaya 4600 Series IP Telephones	1.83 (4624SW) 2.20 (4621SW, 4610SW)
Avaya C363T-PWR Converged Stackable Switch	4.5.14
Avaya C364T-PWR Converged Stackable Switch	4.5.14
eCreator Server on Dell PowerEdge 2450	Microsoft Windows 2003 Server SP1 eCreator Supervisor 2.14.00 Microsoft IIS 6.0
eCreator PDS Agent Workstation on Dell Precision 340	Microsoft Windows 2003 eCreator PDS Agent 1.1.72 Internet Explorer 6.0

3. Configure Avaya Proactive Contact 3.0

There are three possible system deployments of Avaya Proactive Contact 3.0.
- Avaya Proactive Contact with Computer Telephony Interface (CTI)
- Avaya Proactive Contact with Avaya Proactive Contact Gateway PG230
- Avaya Proactive Contact (with the traditional system cabinet)

The compliance testing was configured with both Avaya Proactive Contact with the system cabinet and the Avaya Proactive Contact with CTI.

These Application Notes assume that Avaya Proactive Contact 3.0 is configured and operational for outbound, inbound, blended and managed jobs. The following features should have already been configured on Avaya PC3.
- Intelligent Call Blending
- Do Not Call Feature
- Completion Codes
- Agent Owned Recall
- Recall/Callback

- Agent Playable Message
- Autorelease
- Job Linking
- Native Voice and Data Transfer (Supervised Transfer)
- Predictive Agent Blending

The sections below highlight the fields in the Avaya PC3 configuration files that are needed to configure the eCreatorPDSAgent.ini file and the eCreator Supervisor.

3.1. Agent Playable Message Configuration files

The Agent Playable Message feature allows an agent to play a message to a customer at the end of the call. The messages file, **voicemsg.cfg**, is located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The message file contains the list of messages that are available for the customer to use. In this compliance testing only message "pf_msg_1" was used. The message label "pf_msg_1" will be used in **Section 4.1** to configure the eCreatorPDSAgent ini file.

```
14:inmwait2:1014:Male:Folder2:Voice:Message14
15:inmwait3:1015:Male:Folder2:Voice:Message15
16:inmwait4:1016:Male:Folder2:Voice:Message16
17:fvirt1:1017:Female:Folder3:Voice:Message17
18:mvirt1:1018:Female:Folder3:Voice:Message18
19:pf_msg_1:1019::Folder4:Music:Message19
20:pf_msg2:1020::Folder4:Music:Message20
21:pf_msg3:1021:Female:Folder4:Voice:Message21
22:pf_msg4:1022:Female:Folder4:Voice:Message22
23:pf_msg5:1023:Female:Folder4:Voice:Message23
24:pf_msg6:1024:Female:Folder4:Voice:Message24
```

3.2. Call Record Fields Configuration files

The calling list contains the customer call record information. The call record fields are defined in the list configuration files (i.e. **list1.fdict**), located in the /opt/avaya/pds/lists folder on the Avaya PC3 server. Any of the call record fields can be used for the pop-up call record window, the highlighted fields are the ones that were used during this compliance testing. These call record fields will be used in **Section 4.2** to configure the eCreator Supervisor.

```
RECLEN:776
ACCTNUM:16:C:ACCOUNT NUMBER:
BALANCE:10:$:BALANCE:
TOTALDUE:10:$:TOTAL DUE:
NAME1:25:C:NAME LINE1:
NAME2:25:C:NAME LINE2:
CITY:25:C:City:
STATE:2:C:State:
ZIPCODE:5:N:ZIPCODE:
PHONE1:10:C:HOME PHONE:
PHONE2:10:C:BUSINESS PHONE:
COMMENT1:60:C:COMMENT LINE 1:
AGENT:8:C:AGENT ID:
DTE:10:D:SYSTEM DATE:
TME:8:T:SYSTEM TIME:
ENTRYDATE:10:D:1ST DATE ON SYSTEM:
```

3.3. Agent Defined Completion Codes

Avaya Proactive Contact 3.0 uses completion codes to identify the result of a phone call with a customer. The agent defined completion code file, **ag_cmd1.ky**, is located in the /opt/avaya/pds/config folder on the Avaya PC3 server. The highlighted fields are the completion codes that are will be used by the agents during this compliance testing. Once the agent logs into Avaya PC3, these completions codes are automatically available for the agent to use.

```
KEY:^A@^M::::F1
KEY:^AA^M:LOGOUT:::F2 Logout of job
KEY:^AB^M:DIAL:::F3 Dial previewed record
KEY:^AC^M:CANCEL:cancel_call:35:F4 Managed cancel call
KEY:^AD^M:RELEASE:call_complete:89:F5 Managed non-connection
KEY:^AE^M:RELEASE:pf_msg_1:20:F6 HU
KEY:^AF^M:HOME:::F7 Goto first editable field
KEY:^AG^M:RELEASE:call_complete:21:Code 21
KEY:^AH^M:RELEASE:call_complete:22:Code 22
KEY:^AI^M:RELEASE:call_complete:23:Code 23
KEY:^AJ^M:RECALL:::F11 Set recall
KEY:^AK^M:RELEASE:call_complete:19:F12 Recall release
KEY:^AL^M:DONE:::SF1 Release record
KEY:^AM^M:CALL:::SF2 Field call
KEY:^AN^M:HANGUP:::SF3 Manual hangup
KEY:^AO^M:MCALL:::SF4 Manual call
KEY:^AP^M:HOOKFLASH:::SF5 PBX Transfer call
KEY:^AQ^M:RELEASE:call_complete:16:SF6 Ringing phone
KEY:^AR^M:RELEASE:call_complete:17:SF7 Cust hung-up in queue
KEY:^AS^M:RELEASE:call_complete::SF8
KEY:^AT^M:DIALDIGIT:::SF9 Dial pad enable
KEY:^AU^M:EAR_VOLUME:::SF10 Adjust ear volume
KEY:^AV^M:MOUTH_VOLUME:::SF11 Adjust mouth volume
KEY:^AW^M:MASTER:::SF12 Agent assistant key
KEY:^AX^M:HOLD:::CF1 Agent HOLD key
KEY:^AY^M:UNHOLD:::CF2 Agent UNHOLD key
KEY:^AZ^M:MOFLASH_B:call_complete:6:CF3 Blind trans to INB
KEY:^Aa^M:MOFLASH_S:::CF4 Supv trans to INB
KEY:^Ab^M::::CF5
KEY:^Ac^M::::CF6
KEY:^Ad^M:RELEASE:call_complete:93:CF7 Sold Campaign
KEY:^Ae^M::::CF8
KEY:^Af^M:RELEASE:call_complete:98:CF9 Agent owned recall
KEY:^Ag^M:DO_NOT_CALL:::CF10 Do Not Call
……
```

4. Configure eCreator PDS Agent

The following steps describe the configuration of eCreator PDS Agent.
- Configure eCreatorPDSAgent.ini file.
- Configure call record data fields using the eCreator Supervisor application.

The assumption is that the eCreator PDS Agent desktop and Supervisor applications should have already been installed.

4.1. Configure eCreatorPDSAgent.ini File

The eCreatorPDSAgent.ini file is used to enable/disable the operational characteristics and availability of particular Avaya PC3 agent functions. On the agent machine, edit the eCreatorPDSAgent.ini file located in C:\Program Files\eCreatorPDSAgent. The following parameters need to be configured.
- Logon parameters
- Agent parameters
- Preview parameters
- Logging parameters
- Option parameters
- Release Scripts parameters

The Logon parameters establish the communication path between Avaya PC3 and the eCreator PDS Agent application. Configure the following parameters in the **logon** section.
- **servername** – set to the IP address of the Avaya PC3 server.
- **portnumber** – set to "22700".

The Agent parameters configure the type of blending feature that will be used by the agent. Configure the following parameter in the **agent** section.
- **logonacd** - Set to "1" if the Predictive Agent Blending feature on Avaya PC3 is used. Set to "0" if the Intelligent Call Blending feature on Avaya PC3 is used.

The Preview parameters control the appearance and duration of the call record Preview Pane that appears near the bottom of the eCreator PDS Agent screen when a call record is first received at the agent's workstation. Configure the following parameters in the **preview** section.
- **time** – set to "3". This is the duration in seconds that the Preview pane is to be displayed.
- **fields** – set to "3". This is the number of fields in the Avaya PC3 database that are to be displayed in the Preview pane. The names of the fields are administered in the eCreator Supervisor application. Setting this field to "3" will display the first 3 call record fields administered in eCreator Supervisor.
- **height** – set to "1000". This is the desired height in pixels of the Preview pane when it is displayed.

The Logging parameters enable the real-time monitoring of messages between the eCreator PDS Agent application and Avaya PC3. Configure the following parameters in the **logging** section.

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SPOC 11/30/2006

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- **log** – set to "1". This enables the logging function.
- **winsock** – set to "0". This entry is generally used for diagnostic purposes.

The Options parameters control the availability of certain Avaya PC3 function on the eCreator PDS Agent application. When an Option parameter is enabled, set to "1", its corresponding feature command appears on the menu of the eCreator PDS Agent screen. Configure the following parameters in the **options** section.

- **dnc** – set to "1". This enables the use of the Mark Record As Do Not Call menu command.
- **volume** – set to "1". This enables the use of the Adjust Headset Volume menu command.
- **supvxfer** – set to "1". This enables the use of the Supervised Transfer menu command.
- **blindxfer** – set to "1". This enables the use of the Blind Transfer menu command.
- **cancelxfer** – set to "1". This enables the use of the Cancel Transfer menu command.
- **sendmesg** – set to "1". This enables the use of the Send Message menu command.

The Release Scripts parameter enables the agent to play a message when the Release Line w/Msg command is issued by the agent. Configure the following parameters in the **release script** section.

- **script1** – set to "pf_msg_1". This is the message label on Avaya PC3 as described in **Section 3.1**.
- **display1** – set to "Release1". This is the name displayed for script1 that appears on the agents screen.

4.2. Configure eCreator Supervisor

The eCreator Supervisor application can be used to create scripts using the call record data fields from Avaya PC3. The scripts are then accessed by the eCreator PDS Agent application to pop-up the call record information window. The configuration below describes how to set up the call record fields that are needed by the scripting tool. The administrator can then use Microsoft Front Page to configure a custom script. The Front Page scripting is beyond the scope of this document.

On the eCreator Supervisor machine, start the eCreator Supervisor application by double clicking on the executable file, CreateSupervisor.exe, found in the C:\Program Files\eCreater 2 folder. The **Scripted Application Supervisor** window is displayed. Click the **Clients** icon to create a new eCreator Client.

In the **Client** window, click **Edit.**

Enter a unique **Client #** and press the **Enter** key on the keyboard.

Click **Yes** in the **Client Not Found** window.

In the **Client** window, use the drop down menu under **Page:General Info** and select **Navigation**.

Click the **New Script** icon.

In the **Script Creation Wizard** window, configure the following.
- **Script Name** – enter any descriptive name
- **Job Name** – enter the name of the job from Avaya PC3 that will be used for this script.
- **Script Type** – select "Generic" from the drop down list.

Click **Next**.

Enter the web address for the scripts and the login information to access Microsoft FrontPage. The web address is the location of the scripts on the web server. Click **Next**.

Check the **Use as Inbound Script** and **Use as Outbound Scripts** fields. Enter "Default.asp" for the **Start Page** fields. In the **Fields** fields, enter the names of the call record fields in Avaya PC3, as described in **Section 3.2** that will be passed to a script to appear in the eCreator PDS Agent window. The call record fields shown below were used during this compliance testing, but any call record field from **Section 3.2** can be used. Click **Next**.

Click **Finish** in the summary page.

The **Client** window is displayed. Click the **eCreator** icon.

The **eCreator Palette** window is displayed.

Select "Avaya PDS Integration" from the drop down list. The scripts will use these two elements, **Choose Completion Code** and **Finish Item**, to pass the Avaya PC3 Completion Codes for a call from the eCreator PDS Agent Application to Avaya PC3 and to release the line. Press the **Enter** key on the keyboard.

Click **Save,** then click **Close**.

5. Interoperability Compliance Testing

The interoperability compliance testing covered feature functionality and serviceability testing. Feature functionality focused on verifying the proper operation of eCreator PDS Agent when integrated with Avaya Proactive Contact 3.0. Serviceability testing verified that the eCreator PDS Agent desktop recovered from adverse conditions, such as rebooting, power failure and network disconnect.

5.1. General Test Approach

All feature functionality test cases were performed manually to verify proper operation. The general test approach was to test the features on eCreator PDS Agent that are supported with Avaya Proactive Contact 3.0.

- The following features on eCreator PDS Agent were tested.
    - o Login
    - o Changing PC3 Passwords
    - o Join Job
    - o Logout
    - o Send Message
    - o Available/Unavailable
    - o Attach/Detach from job
    - o Set Callback
    - o Set Callback - Agent owned Recall

- o Release Line with Message
- o Preview Call
- o Mark Record "Do Not Call"
- o Release Line
- o Hangup Line
- o Finish Item
- o Supervised Transfer (Native Voice and Data Transfer)
- o Unsupervised Blind Transfer (Native Voice and Data Transfer)
- o Cancel Supervised Transfer (Native Voice and Data Transfer)
- o Hold/Unhold
- o Manual Call
- o Dial Digits
- o Transfer Call

- The following events from Avaya PC3 to the eCreator PDS Agent were tested.
  - o AutoRelease Line
  - o JobEnd
  - o JobTransLink
  - o JobTransRequest
  - o Receive Message
  - o XferCustHangup

- The following agent types were tested.
  - o Outbound agent
  - o Managed agent
  - o Inbound agent – Intelligent Call Blending Feature
  - o Blended agent – Intelligent Call Blending Feature
  - o Blended agent – Predictive Agent Blending

- The following types of Avaya PC3 systems were tested.
  - o Avaya PC3 in the System Cabinet configuration
  - o Avaya PC3 with CTI configuration

5.2. Test Results

All feature and performance tests passed. The eCreator PDS Agent successfully interfaced with Avaya Proactive Contact 3.0 for outbound and inbound calls. For serviceability testing, the eCreator PDS Agent was able to resume handling of inbound and outbound calls after restoration of connectivity to the Avaya PC3 server, from network disconnect/re-connect, and server resets.

The following observations were obtained from testing:
- When testing with Avaya PC3 with CTI, the eCreator PDS Agent displayed call functions that can not be used with this configuration of Avaya PC3. Call functions such as transfer, hold, place manual call, hangup line, or place manual call can only be completed via the agent's hardphone. Therefore, these functions should not be used on the agent application when using Avaya PC3 with CTI.

- When the eCreator PDS Agent workstation was disconnected/reconnected from the LAN, the agent needed to log in to Avaya PC3 and then attach/detach from the job before the agent was able to receive outbound calls. The error message "Agent phone is busy. Release phone line before proceeding. (E28964)" was displayed on the agent's desktop.
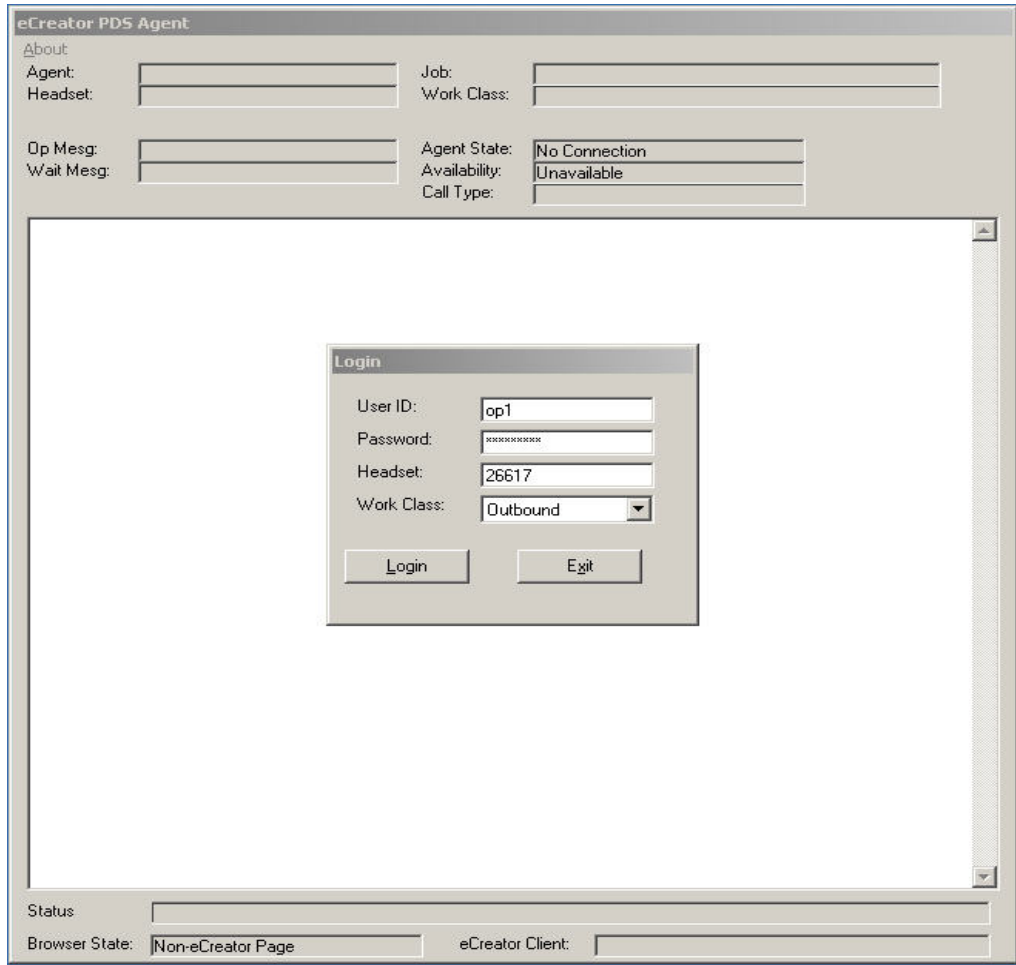
6. Verification Steps

6.1. Verify Avaya PC3

On Avaya PC3, use the "**netstat –a**" command to verify the connection between Avaya PC3 and the eCreator PDS Agent. The results of the "**netstat –a**" should show an **ESTABLISHED** agent connection.

```
cx  Telnet 192.45.120.59                                              _ □ ×
tcp      0      0  *.logger              *.*                  LISTEN
tcp      0      0  lzpds.53380           lzpds.1521           ESTABLISHED
tcp      0      0  *.ccs                 *.*                  LISTEN
tcp      0      0  lzpds.logger          lzpds.53349          ESTABLISHED
tcp      0      0  lzpds.53382           lzpds.logger         ESTABLISHED
tcp      0      0  lzpds.NameService     lzpds.53345          ESTABLISHED
tcp      0      0  *.dccs                *.*                  LISTEN
tcp      0      0  lzpds.logger          lzpds.53358          ESTABLISHED
tcp      0      0  lzpds.dccs            lzpds.53355          ESTABLISHED
tcp      0      0  *.portmap             *.*                  LISTEN
tcp      0      0  *.ftp                 *.*                  LISTEN
tcp      0      0  lzpds.logger          lzpds.53378          ESTABLISHED
tcp      0      0  lzpds.agent           192.45.30.232.1720   ESTABLISHED
tcp      0      0  lzpds.dialerSM        lzpds.53351          ESTABLISHED
tcp      0      0  lzpds.53348           lzpds.NameService    ESTABLISHED
tcp      0      0  lzpds.dialerSM        lzpds.53347          ESTABLISHED
tcp      0      0  lzpds.53368           lzpds.53372          ESTABLISHED
tcp      0      0  lzpds.serviceMonitor  lzpds.53365          ESTABLISHED
tcp      0      0  lzpds.53350           lzpds.serviceMonitor ESTABLISHED
tcp      0      0  *.49157               *.*                  LISTEN
tcp      0      0  *.49156               *.*                  LISTEN
tcp      0      0  *.49158               *.*                  LISTEN
tcp      0      0  *.4045                *.*                  LISTEN
tcp      0      0  *.serviceAct          *.*                  LISTEN
tcp      0      0  lzpds.53378           lzpds.logger         ESTABLISHED
```

6.2. Verify eCreator PDS Agent

The following steps can ensure that eCreator PDS Agent can log in to Avaya Proactive Contact 3.0 to receive outbound calls. Avaya PC3 should have outbound jobs running.

Step	Description
1.	From the Start Menu on the agent desktop, select **Start ➔ Programs ➔eCreater PDS Agent ➔ eCreater PDS Agent**. Enter the agent login information in the **Login** window. Click **Login**.

Step	Description
2.	Select the job that the agent wants to join from the **Active Jobs** drop down list. Click **Attach**.

Step	Description
3.	Verify the **Availability** field displays "Available" and the **Agent State** field displays "Waiting for Record". The agent is now available to receive an outbound call.

Step	Description
4.	Verify the **Agent State** field displays "On Record" when an outbound call is delivered to the agent. Verify the **PAGE OPTIONS** area display the call record data fields that were configured in Section 4.2.

Step	Description
5.	Left click on **Call** to display the list of call functions available to the agent. Verify the call functions configured in the eCreatorPDSAgent.ini file, **Release Line w/Msg**, **Supervised Transfer(Voice & Data)** and **Blind Transfer (Voice & Data)**, are displayed.

Step	Description
6.	Left click on **Record** to display the list of call functions available to the agent. Verify the call function configured in the eCreatorPDSAgent.ini file, **Mark Record as Do Not Call**, is displayed.

Step	Description
7.	Left click on **System** to display the list of call functions available to the agent. Verify the call function configured in the eCreatorPDSAgent.ini file, **Send Message**, is displayed.

 |

Step	Description
8.	Verify the drop down list for the **Completion Code** field contains the Completion Codes administered on Avaya PC3 in the ag_cmd1.ky file in **Section 3.3**.

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7. Support

For technical support on the Amtelco solution, contact Amtelco at http://www.amtelco.com

8. Conclusion

These Application Notes describe the required configuration steps for Amtelco eCreator PDS Agent to successfully interoperate with Avaya Proactive Contact 3.0 via the TCP/IP socket connection. Functionality and serviceability were successfully validated. The configuration described in these Application Notes has been compliance tested.

The following observations were seen:
- When testing with Avaya PC3 with CTI, the eCreator PDS Agent displayed call functions that can not be used with this configuration of Avaya PC3. Call functions such as transfer, hold, place manual call, hangup line, or place manual call can only be completed via the agent's hardphone. Therefore, these functions should not be used on the agent application when using Avaya PC3 with CTI.
- When the eCreator PDS Agent workstation was disconnected/reconnected from the LAN, the agent needed to log in to Avaya PC3 and then attach/detach from the job before the agent was able to receive outbound calls. The error message "Agent phone is busy. Release phone line before proceeding. (E28964)" was displayed on the agent's desktop.

9. Additional References

The following documents may be found at http://support.avaya.com:
- *Avaya Proactive Contact 3.0 Agent API Reference*, October 2005, Doc ID: 07-300499
- *Administrator's Guide for Avaya Communication Manager*, Release 3.1.2, Issue 2.1, May 2006; Doc ID: 03-300509
- *Avaya Proactive Contact 3.0 Administration (UNIX-based)*, October 2005; Doc ID: 07-300488

The following application note may be found at https://avaya.com/gcm/master-usa/en-us/resource/index.htm
- *Sample Avaya Proactive Contact 3.0 (PC3) with CTI Installation and Configuration*, Issue 1.0, Avaya Solution and Interoperability Test Lab

Amtelco product documentation is available on request at 1-800-356-9148.
- *eCreator PDS Agent Reference Guide*

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