Avaya Solution & Interoperability Test Lab

Application Notes for CalAmp ExtendTime on Avaya IP Telephone Web Browsers – Issue 1.0

Abstract

These Application Notes describe a compliance-tested configuration comprised of Avaya web browser enabled IP Telephones and the CalAmp ExtendTime application. ExtendTime is a web-based time and attendance application that may be accessed through the web browser interfaces of Avaya 4600 Series IP Telephones. During compliance testing, ExtendTime features and functionality were successfully exercised from the web browser interfaces of Avaya 4610SW, 4620SW, and 4625SW IP Telephones. Information in these Application Notes has been obtained through compliance testing and additional technical discussions. Testing was conducted via the Developer*Connection* Program at the Avaya Solution and Interoperability Test Lab.

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1. Introduction

These Application Notes describe a compliance-tested configuration comprised of Avaya web browser enabled IP Telephones and the CalAmp ExtendTime application. ExtendTime is a web-based time and attendance application that may be accessed through the web browser interfaces of Avaya IP Telephones. ExtendTime users may:

- enter and view work status information – clock in/out, break on/off, lunch on/off, and transfer work hours between departments and project codes.
- view messages, schedules, hours, and benefit information.
- perform directory searches.

Figure 1 shows a sample network configuration consisting of Avaya 4610SW, 4620SW, and 4625SW IP Telephones, a CalAmp ExtendTime application server, and a TFTP server. Note that actual network configurations may vary. The Avaya 4610SW, 4620SW, and 4625SW IP Telephones obtain firmware updates and web-related settings from the TFTP server. The web-related settings specify the URL (CalAmp ExtendTime application in this case) for the 4610SW, 4620SW, and 4625SW home pages. The solution described herein is also extensible to the Avaya 4621SW and 4622SW IP Telephones. The Avaya S8710 Media Server, Avaya G650 Media Gateway, and Avaya C364T-PWR Converged Stackable Switch support the verification and illustration of the solution and are not discussed in these Application Notes.

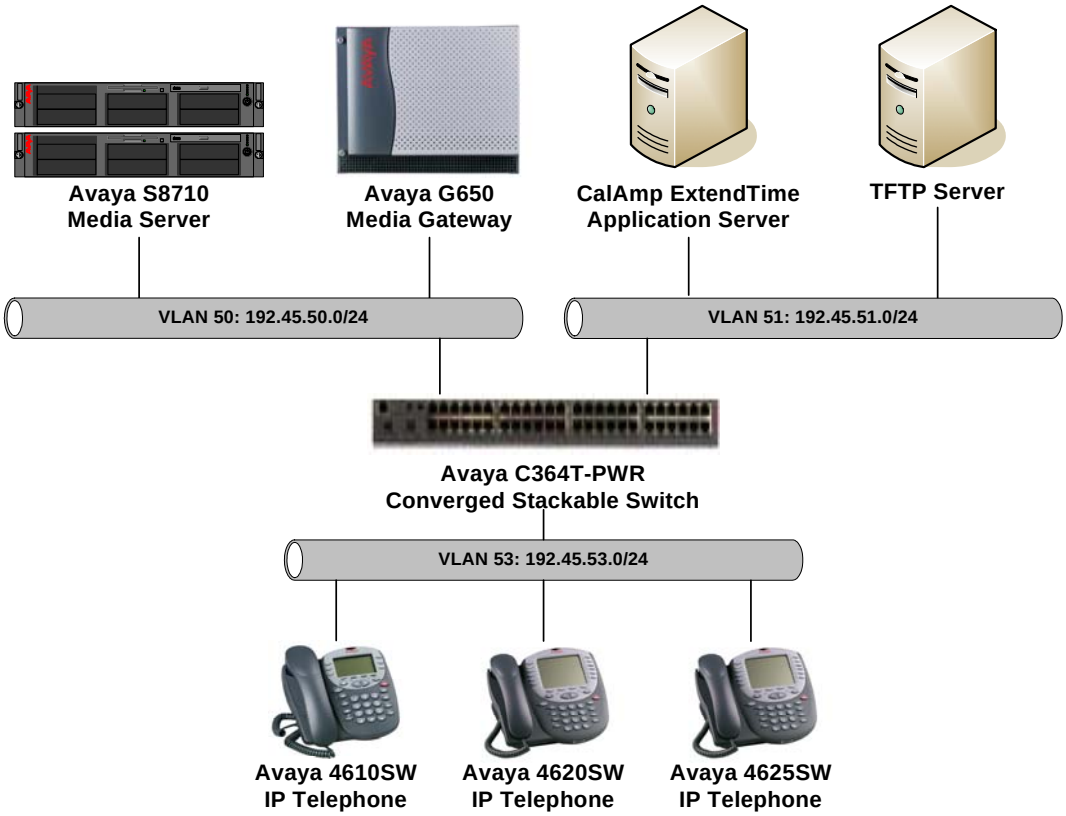

Figure 1: Sample configuration.

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2. Equipment and Software Validated

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

Equipment	Software/Firmware
Avaya S8710 Media Server	3.0 (R013x.00.0.340.3)
Avaya G650 Media Gateway	-
Avaya 4610SW IP Telephone	2.2
Avaya 4620SW IP Telephone	2.2
Avaya 4625SW IP Telephone	2.5
Avaya C364T-PWR Converged Stackable Switch	4.3.12
CalAmp ExtendTime	6.0.0
SolarWinds.Net TFTP Server	5.0.46

3. Configure Web Access on Avaya IP Telephones

Step	Description
1.	In the 46xxsettings.txt file on the TFTP server, enter the following line in the 4610, 4620, and 4625 settings sections: SET WMLHOME http://<hostname or IP address of CalAmp ExtendTime server>/AvayaET.asp
2.	Reboot the IP telephones. After the IP telephones complete rebooting, press the "**Web**" softkey and verify that the ExtendTime web login screen appears on the telephone displays.

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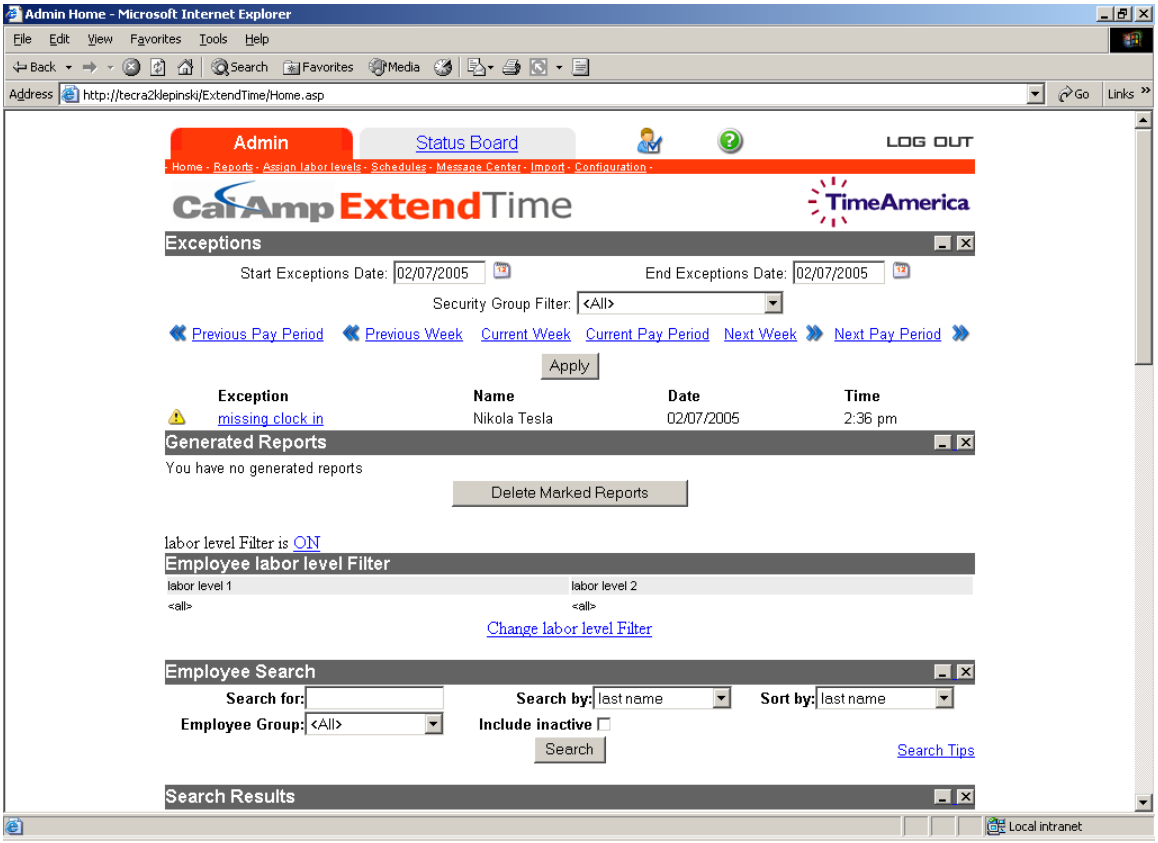
4. Create CalAmp ExtendTime Users

This section describes the steps for creating ExtendTime web users only. Message creation and configuration is beyond the scope of these Application Notes.

Step	Description
1.	Open a web browser and enter http://<hostname or IP address of CalAmp ExtendTime server>/login.asp as the URL. Log in with the appropriate credentials. The main page appears as shown below:



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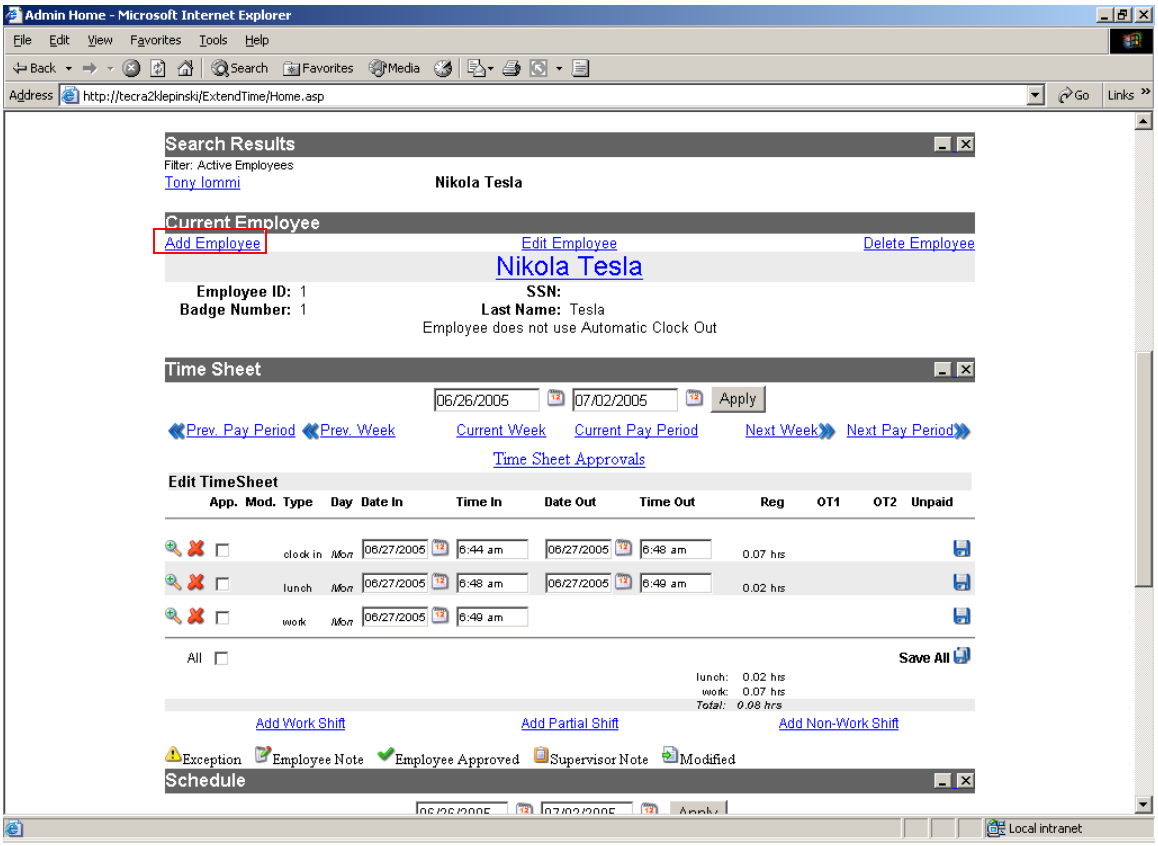
Step	Description
2.	Scroll down and click on "**Add Employee**".



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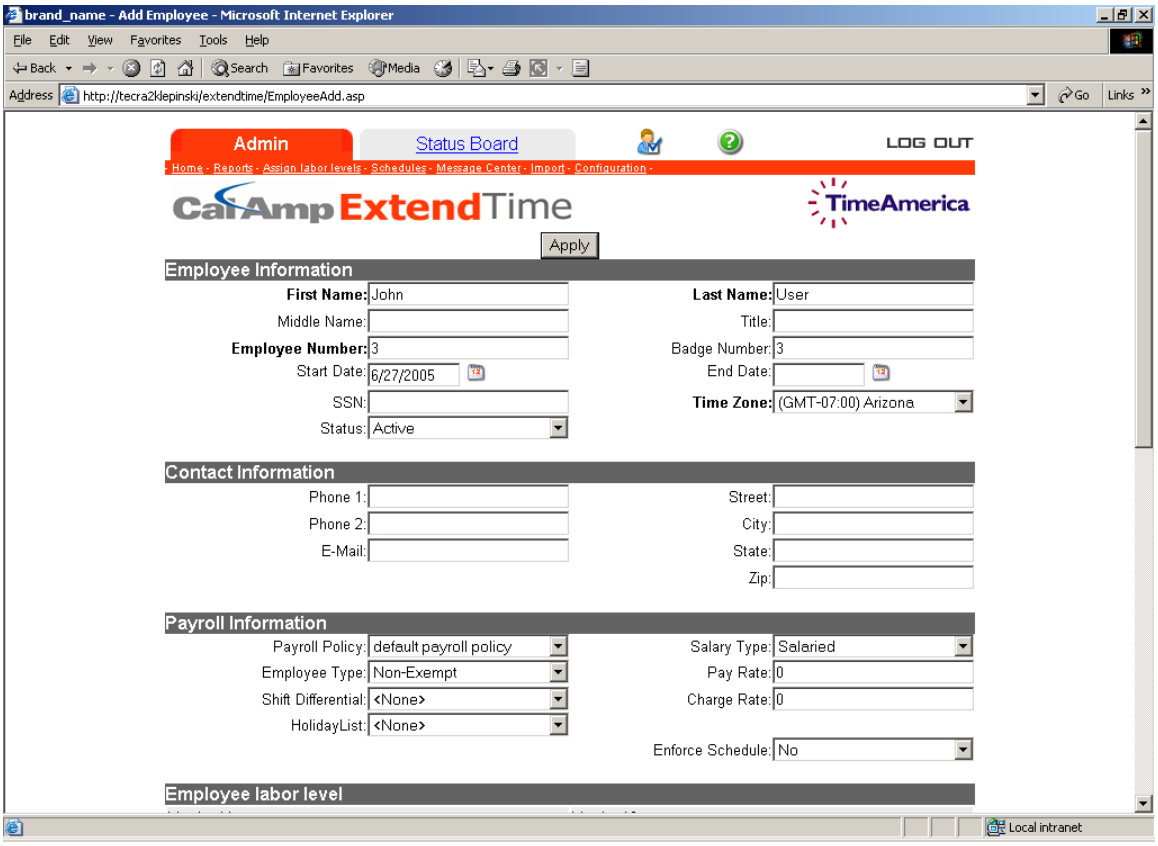
Step	Description
3.	Specify the **First Name**, **Last Name**, **Employee Number**, and **Badge Number**. The **Badge Number** is the login ID that the employee uses to log into the ExtendTime web application from the IP telephones. 

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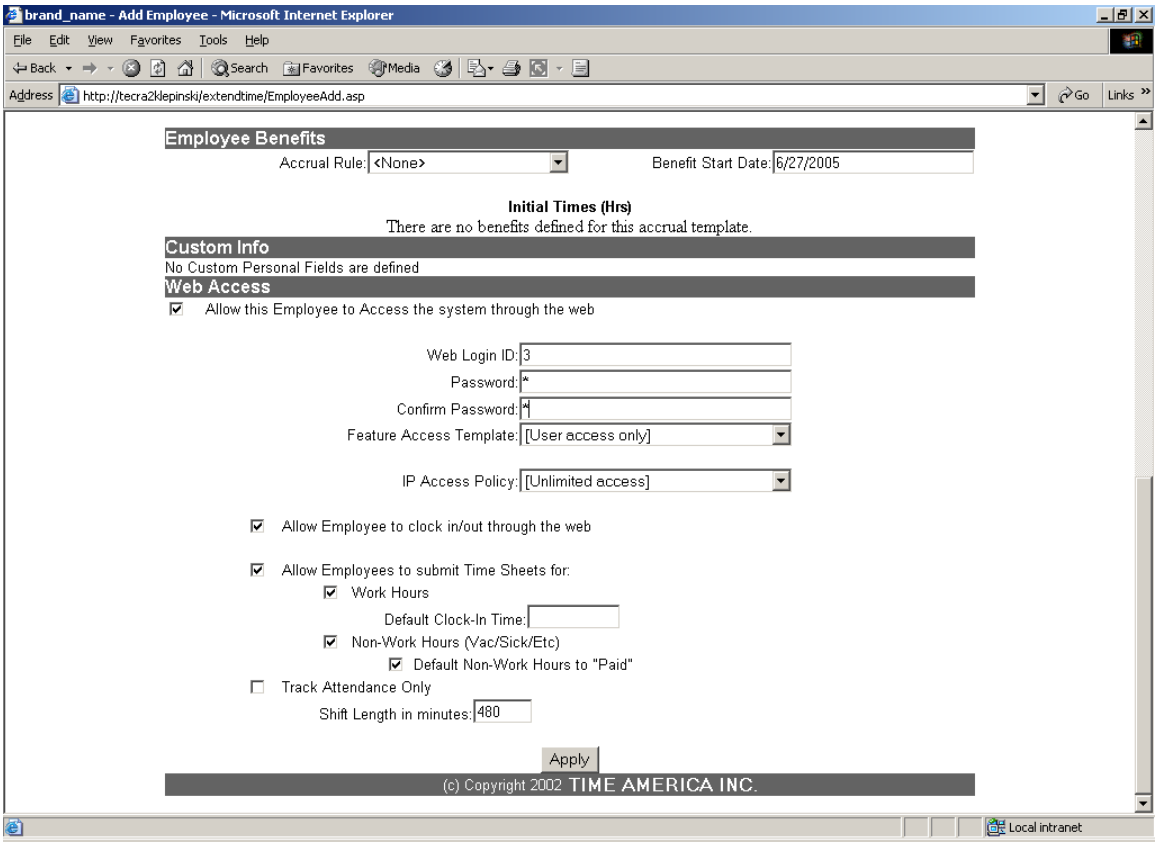
Step	Description
4.	Scroll down and complete the **Web Login ID**, **Password**, and **Confirm Password** fields. The Web Login ID is intended as a web administration login ID, which can be used to configure the ExtendTime application. Click on "**Apply**". 

5. Interoperability Compliance Testing

The interoperability compliance testing included feature functionality and serviceability testing. The feature functionality testing evaluated ExtendTime web application usability on the Avaya IP Telephone web browser interfaces. The serviceability testing introduced failure scenarios to determine if the ExtendTime web application is accessible and operable after failure recovery.

5.1. General Test Approach

The general approach was to exercise ExtendTime menus and hyperlinks, and perform web application actions from the Avaya 4610, 4620, and 4625 IP Telephones web browser interfaces. The main objectives were to verify that:

- ExtendTime Clock Punch (Clock In/Out, Break On/Off, Lunch On/Off, Work Transfer), View (Messages, Schedules, Hours, Benefits), and Directory search operations are

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successful when the IP telephone is in various call states, including idle, active, hold, consult transfer, and consult conference.

- The page navigation functions (scroll up/down/top/bottom of page, Back, Home, Refresh, Page Left, Page Right) on the IP telephone work correctly with ExtendTime.
- The IP telephone users may switch back and forth between the telephony and ExtendTime displays without losing content or state.
- When the ExtendTime display is active, the calling/called phone numbers are displayed on the top line of the phone display on incoming/outgoing calls.
- The ExtendTime web application functions properly on the IP telephone after resets of the IP telephone and the ExtendTime server.
- The ExtendTime web application functions properly on the IP telephone when the telephony functions on the IP telephone are down (for example, due to Avaya Communication Manager reset).
- The telephony features of the IP telephone function properly when the ExtendTime server is down.

5.2. Test Results

All test cases completed successfully, with the following observation obtained from testing:

1. The View Schedules and Review Hours pages contain entries that when selected, returned the message "Web 500: Internal Server Error". CalAmp provided a resolution where those entries point to the current page, essentially performing a refresh. This resolution was deemed acceptable because those entries were not intended as hyperlinks (were not intended to provide more detail), but rather static information. CalAmp expects to include the resolution in a future release of ExtendTime.

6. Verification Steps

The following steps may be used to verify communication between ExtendTime and Avaya web browser enabled IP Telephones, and to check the configuration:

1. Ping each Avaya web browser enabled IP Telephone from the ExtendTime server and verify connectivity.
2. On each IP telephone, press the "**Web**" softkey and verify that the ExtendTime web login screen appears on the telephone display.
3. On each IP telephone, log into the ExtendTime web application and exercise the menus and hyperlinks, and perform ExtendTime application actions.

7. Support

For technical support on the CalAmp ExtendTime application, contact CalAmp Technical Support at extendtime@calamp.com.

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8. Conclusion

These Application Notes illustrate a compliance-tested configuration comprised of Avaya web browser enabled IP Telephones and the CalAmp ExtendTime application. ExtendTime is a web-based time and attendance application that may be accessed through the web browser interfaces of Avaya IP Telephones. During compliance testing, ExtendTime features and functionality were successfully exercised from the web browser interfaces of Avaya 4610SW, 4620SW, and 4625SW IP Telephones.

9. Additional References

Product documentation for Avaya products may be found at http://support.avaya.com.

Product documentation for the CalAmp ExtendTime application may be found at http://calamp.com/pro_ip.html.

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