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Changes to the original guide are listed below:

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Introduction

This guide provides information about using the Zebra WFC Profile Client.

**IMPORTANT:** If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at: [http://www.zebra.com/support](http://www.zebra.com/support).

**NOTE:** Screens pictured in this guide are samples and can differ from actual screens. Some screen content may have been obscured for the purposes of this guide.

Chapter Descriptions

Topics covered in this guide are as follows:

- **AD Connector Installation and Configuration** provides instructions for the installation and integration.

Notational Conventions

The following conventions are used in this document.

- **Bold** text indicates:
  - Dialog box, window and screen names
  - Drop-down list and list box names
  - Check box and radio button names
  - Icons on a screen
  - Key names on a keypad
  - Button names on a screen

- **Bullets (•)** indicate:
  - Action items
  - Lists of alternatives
  - Lists of required steps that are not necessarily sequential
  - Numbered lists indicate sequential lists (e.g., those that describe step-by-step procedures).
Icon Conventions

The documentation set is designed to give the reader more visual clues. The following graphic icons appear where applicable in the documentation set.

**NOTE:** The text here indicates information that is supplemental for the user to know and that is not required to complete a task.

**IMPORTANT:** The text here indicates information that is important for the user to know.

**CAUTION—EYE INJURY:** Wear protective eyewear when performing certain tasks.

**CAUTION—PRODUCT DAMAGE:** If the precaution is not taken, the product could be damaged.

**CAUTION:** If the precaution is not heeded, the user could receive minor or moderate injury.

**CAUTION—HOT SURFACE:** Touching this area could result in burns.

**CAUTION—ESD:** Observe proper electrostatic safety precautions.

**CAUTION—ELECTRIC SHOCK:** Disconnect the printer power before performing certain procedures to avoid the risk of electric shock.

**WARNING:** If danger is not avoided, the user CAN be seriously injured or killed.

**NOTE:** This is an icon for wired networking notes.

**NOTE:** This is an icon for wireless networking notes.

Related Documents and Software

The following documents provide more information about Zebra Workforce Connect for device users:

- Workforce Connect Voice Client 9 Quick Start Guide - MN-003562-01

For the latest version of this guide and all guides, go to [http://www.zebra.com/support](http://www.zebra.com/support).

Service Information

If you have a problem with your equipment, contact Zebra Global Customer Support for your region. Contact information is available at [http://www.zebra.com/support](http://www.zebra.com/support).

When contacting support, please have the following information available:

- Serial number of the unit
• Model number or product name
• Software/firmware type or version number.

Zebra responds to calls by email, telephone or fax within the time limits set forth in support agreements.

If your problem cannot be solved by Zebra Customer Support, you may need to return your equipment for servicing and will be given specific directions. Zebra is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty.

If you purchased your Zebra business product from a Zebra business partner, contact that business partner for support.

Feedback

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Getting Started

Introduction

This chapter describes the requirements for Active Directory (AD) Connector running on the customer site with the Profile Manager running on the Cloud.

Requirements

Hardware, Software and Network Requirements

- VMware vSphere ESXi 6.0 or greater
- 4 GB memory, 4 processors, and 20 GB hard disk (SCSI)
- A single network connection
- The AD connector OVA file package
- TCP port 443 is open on the firewall to enable access
- Open firewall to download docker images from "profilemanagerdocker.azurecr.io" on port 443.
AD Connector Installation and Configuration

Introduction

This chapter describes how to install and configure Active Directory (AD) Connector running on the customer site with the Profile Manager running on the Cloud.

Installing the AD Connector Virtual Machine

To install the virtual machine, do the following.

1. Install VMware vSphere. Refer to www.vmware.com/products/vsphere.html for more information.
2. Start vSphere.
3. In vSphere, deploy a virtual machine from the OVA file.

   The virtual machine initializes, and the Main Menu for the virtual machine utility appears.

Using the Virtual Machine Utility

The following is the Main Menu for the Virtual Machine Utility.

Figure 1  Main Menu for the Virtual Machine Utility
Use the Virtual Machine Utility to do the following.

- Change the Hostname
- Change the IP Address
- Change the Date and Time
- Check the System
- Configure the System
- Check the System Firewall
- Change the Administrator Password
- Shut Down or Reboot the System
- Use AD-scrapper

**Change the Hostname**

Use this option to change the virtual machine hostname.

1. At the bottom of the Main Menu, type 1 and press Enter.

   The Change Hostname Menu appears.

   ![Change Hostname Menu](image)

2. From the Change Hostname menu, type 1 and press Enter.

3. Type the new hostname and press Enter.

   The Main Menu for the Virtual Machine Utility appears.
Change the IP Address

Use this option to set a static address or set up a DHCP

1. At the bottom of the Main Menu, type 2 and press Enter.

   The Change IP Address Menu appears.

   **Figure 3** Change IP Address Menu

   ![Change IP Address Menu]

2. From the Change IP Address menu, type the number for the option that you want and press Enter.

**Table 1** Options for Change IP Address Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) Static</td>
<td>To update the IP address manually and restart the AD-connector service. The utility prompts you for the information needed for Static IP address setup.</td>
</tr>
<tr>
<td>2.) DHCP</td>
<td>To update the IP address automatically and restart the AD-connector service.</td>
</tr>
</tbody>
</table>

The Main Menu for the Virtual Machine Utility appears.

Change the Date and Time

Use this option to change the date and time.

1. At the bottom of the Main Menu, type 3 and press Enter.

   The Date and Time Menu appears.

   **Figure 4** Change Date and Time Menu

   ![Change Date and Time Menu]
2. From the Change Date and Time menu, type the number for the option that you want and press Enter.

**Table 2  Options for Change Date and Time Menu**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) Change Date Using NTPD</td>
<td>To update the date and time automatically</td>
</tr>
<tr>
<td>2.) Change Date Manually</td>
<td>To update the date and time manually.</td>
</tr>
<tr>
<td>3.) Change Date to UTC</td>
<td>The utility prompts you to enter date and time information in UTC format</td>
</tr>
</tbody>
</table>

The Main Menu for the Virtual Machine Utility appears.

**Check the System**

Use this option to check the system.

1. At the bottom of the Main Menu, type 4 and press Enter.

The System Check Menu appears.

**Figure 5  System Check Menu**

```
# System Check Menu #
#\n#  1.) Check CPU
#  2.) Check Drive Space
#  3.) Check Top
#  4.) Ping Network Address
#  8.) Exit Menu
#\nEnter your menu choice [0-4]: _
```

2. From the System Check Menu, type the number for the option that you want and press Enter.

**Table 3  Options for System Check Menu**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) Check CPU</td>
<td>To display the CPU utilization of the virtual machine</td>
</tr>
<tr>
<td>2.) Check Drive Space</td>
<td>To display the memory utilization of the virtual machine</td>
</tr>
<tr>
<td>3.) Check Top</td>
<td>To display running processes and process details. To exit the screen that displays the processes information, type q and press Enter.</td>
</tr>
<tr>
<td>4.) Ping Network Address</td>
<td>To display network latency details. The utility prompts for an IP address or DNS.</td>
</tr>
</tbody>
</table>

The Main Menu for the Virtual Machine Utility appears.
AD Connector Installation and Configuration

Configure the System

Use this option to configure the system.

1. At the bottom of the Main Menu, type 5 and press Enter.

   The Configuration Menu appears.

**Figure 6  Configuration Menu**

```
1. Check Server IP
2. Check DNS Server
3. Check NTP Configuration
4. Check Machine ID
5. Exit Menu

Enter your menu choice (0-4):
```

2. From the Configuration Menu, type the number for the option that you want and press Enter.

**Table 4  Options for Configuration Menu**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Check Server IP</td>
</tr>
<tr>
<td>2</td>
<td>Check DNS Server</td>
</tr>
<tr>
<td>3</td>
<td>Check NTP Configuration</td>
</tr>
<tr>
<td>4</td>
<td>Check Machine ID</td>
</tr>
</tbody>
</table>

The Main Menu for the Virtual Machine Utility appears.

Check the System Firewall

Use the System Firewall menu to check the firewall status, shows ports, add ports, and remove ports for the virtual machine, including setting connectivity to admin-service running in cluster / port 443. To confirm the System Firewall information to use, contact the Zebra Profile Manager team.

1. At the bottom of the Main Menu, type 6 and press Enter.

   The Firewall Menu appears.
2. From the Firewall Menu, type the number for the option that you want and press Enter.

Table 5 Options for Firewall Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) Show ports</td>
<td>To display the open ports for the virtual machine.</td>
</tr>
<tr>
<td></td>
<td>After selecting this option, the utility automatically changes back</td>
</tr>
<tr>
<td></td>
<td>to the System Firewall menu after a few seconds.</td>
</tr>
<tr>
<td>2.) Add TCP ports</td>
<td>To add TCP ports.</td>
</tr>
<tr>
<td></td>
<td>After entering a TCP port number and pressing Enter, the port is</td>
</tr>
<tr>
<td></td>
<td>added and the utility automatically changes to the show ports screen.</td>
</tr>
<tr>
<td>3.) Remove TCP ports</td>
<td>To remove TCP ports.</td>
</tr>
<tr>
<td></td>
<td>After entering a TCP port number and pressing Enter, the port is</td>
</tr>
<tr>
<td></td>
<td>removed and the utility automatically changes to the show ports screen.</td>
</tr>
<tr>
<td>4.) Add UDP ports</td>
<td>To add UDP ports.</td>
</tr>
<tr>
<td></td>
<td>After entering a UDP port number and pressing Enter, the port is</td>
</tr>
<tr>
<td></td>
<td>added and the utility automatically changes to the show ports screen.</td>
</tr>
<tr>
<td>5.) Remove UDP ports</td>
<td>To remove UDP ports.</td>
</tr>
<tr>
<td></td>
<td>After entering a UDP port number and pressing Enter, the port is</td>
</tr>
<tr>
<td></td>
<td>removed and the utility automatically changes to the show ports screen.</td>
</tr>
</tbody>
</table>

The Main Menu for the Virtual Machine Utility appears.
Change the Administrator Password

Use this option to change the administrator password.

1. At the bottom of the Main Menu, type 8 and press Enter.
   The Change Admin Password menu appears.

   **Figure 8** Change Admin Password Menu

   ```
   Change Admin Password
   Are you sure you want to change the password of admin? 1 for yes 2 for no 3 for exit
   ```

   2. To confirm and continue with changing the administrator password, type 1 for yes.

   **Figure 9** New Password Screen

   ```
   chmod: cannot access '/home/log/pwd.1210': No such file or directory
   Password Rules: Password has to be 8 characters or longer.
   *2.) Password has to have 1 UpperCase Character.
   *3.) Password has to have 1 LowerCase Character.
   *4.) Password has to have 1 Numerical Character.
   Enter New Password: ...
   ```

   The Main Menu for the Virtual Machine Utility appears.

Shut Down or Reboot the System

Use the Shutdown or reboot system menu to initiate a graceful shutdown or reboot of the virtual machine. In a graceful shutdown or reboot, data that is queued, but not transmitted, can be sent before the connection is closed.

1. At the bottom of the Main Menu, type 9 and press Enter.
   The Shutdown Menu appears.

2. From the Change IP Address menu, type the number for the option that you want and press Enter.

   **Table 6** Options for Shutdown Menu

<table>
<thead>
<tr>
<th>Number</th>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.)</td>
<td><strong>Shutdown System</strong></td>
<td>To initiate a graceful shutdown of the virtual machine</td>
</tr>
<tr>
<td></td>
<td><strong>Gracefully</strong></td>
<td></td>
</tr>
<tr>
<td>2.)</td>
<td><strong>Reboot System</strong></td>
<td>To initiate a graceful rebook of the virtual machine</td>
</tr>
<tr>
<td></td>
<td><strong>Gracefully</strong></td>
<td></td>
</tr>
</tbody>
</table>

   The Main Menu for the Virtual Machine Utility appears.
Use AD-scrapper

Use this option to install, update and check status of the AD-connector service.

1. At the bottom of the Main Menu, type 10 and press Enter.
   The AD-scrapper Menu appears.

   **Figure 10**  AD-scrapper Menu

   ![AD-scrapper Menu]

2. From the AD-scrapper Menu, type the number for the option that you want and press Enter.

   **Table 7**  Options for AD-scrapper Menu

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.) New Install</td>
<td>To install AD-scrapper for the first time on the virtual machine. See <a href="#">New Install of AD-scrapper</a> for important prerequisites and required information.</td>
</tr>
<tr>
<td>2.) Update AD-scrapper</td>
<td>To update the version of the AD-scrapper service that is running on the virtual machine. See <a href="#">Update of AD-Scrapper</a> for important prerequisites and required information.</td>
</tr>
<tr>
<td>3.) Check AD-scrapper status</td>
<td>To view the status of the AD-scrapper service on the virtual machine. After selecting this option, at the prompt to do so, press Enter to return to the Virtual Machine Main menu.</td>
</tr>
</tbody>
</table>
New Install of AD-scrapper

Prerequisites
Before installing AD-scrapper for the first time, make sure the following prerequisites are met.

- Profile Manager DNS
- Container Registry [DEFAULT: "profilemanagerdocker.azurecr.io"]
  Unless a different value is provided, press Enter to use default value.
- Customer AD Hostname, Username and Password.
- ESN-manager API Key

Procedure: AD-scrapper Installation

1. After selecting the **New Install** option, the AD-scrapper installer prompts for the following information.

   Enter loadbalancer DNS of Profile Manager:

   Enter the container registry [DEFAULT: "profilemanagerdocker.azurecr.io"]
   (Press Enter to use default value):

   Do you want to proceed with the install? [Enter y to continue]

   Enter AD_CONNECTOR_LDAP_USER_DN:

   Enter AD_CONNECTOR_LDAP_USER_PASSWORD:

   Enter AD_CONNECTOR_LDAP_HOST:

   Enter AD_ESN_API_KEY:
2. After providing the information above, the AD-scrapper installer prompts for confirmation of the information entered.

Are the above values correct? [Enter y to continue or n to re-enter value(s)]

If the installation is successful, the following message displays.

Successfully installed AD-scrapper service

If there is problem during the installation, the following message displays.

There is problem installing AD-scrapper, please contact admin

If the status message of “Restarting” displays on the console at any time during this procedure, contact your administrator. An example of the “Restarting” status message is shown.

Figure 11  “Restarting” Status Message

At the prompt to do so, press Enter to return to the Virtual Machine Main menu.

3. To confirm that the Active Directory Connector installation was successful, open Zebra Profile Manager and navigate to the “Active Directory Import Management” tabs. If the installation is successful, the “Import jobs”, “Import Job Notifications” and “Import Job Scheduler” tabs will load.

Update of AD-Scraper

Prerequisites
Before updating AD-scrapper, make sure to have the following information.

- The current version of AD-scrapper
  
  You can get this value from selecting the option 3 from the AD-scrapper Main Menu.

- The newer version of AD-scrapper (the version of the update to be applied)

Procedure: AD-scrapper Update

1. After selecting the **Update AD-scrapper** option, the AD-scrapper update prompts for the following information.

   Enter the current AD-scrapper version:

   Enter the new AD-scrapper version:
2. After providing the information above, the AD-scrapper installer prompts for confirmation of the information entered.

   Are the above values correct? [Enter y to continue or n to re-enter value(s)]

   If the update is successful, the following message displays.
   Successfully updated AD-scrapper service

   If there is a problem during the update, the following message displays.
   There is problem updating AD-scrapper, please contact admin

   If the status message of “Restarting” displays on the console at any time during this procedure, contact your administrator. An example of the “Restarting” status message is shown.

   **Figure 12** “Restarting” Status Message

   ![Status Message Table]

   At the prompt to do so, press Enter to return to the Virtual Machine Main menu.

3. At the bottom of the Main Menu, type 10 and press Enter.

   The AD-scrapper Menu appears.

4. On the AD-scrapper Menu, type 3 and press Enter. (Option 3 is to check AD-scrapper status. See the “Check AD-scrapper Status” procedure.

5. To confirm that the AD-scrapper update was successful, make sure that the AD-scrapper status is “Up”. If the AD-scrapper status on the console is “Restarting”, contact your administrator.

**Check AD-scrapper Status**

**Procedure: Check AD-scrapper Status**

1. After selecting the **Check AD-scrapper status** option, the AD-scrapper displays status information.

   The meaning of each status is described in the following table.

   **Restarting**: The AD-connector service started but it is not stable. Contact your administrator.

   If the status message of “Restarting” displays on the console at any time during this procedure, contact your administrator. An example of the “Restarting” status message is shown.

   **Figure 13** “Restarting” Status Message

   ![Status Message Table]

   **Up**: The AD-connector service started and is running without any issues. Any number of days that displays after the “Up” status indicates the number of days since the last restart of the AD-connector service.
2. At the prompt to do so, press Enter to return to the Virtual Machine Main menu.

Change AD-scrapper User Password

Prerequisites:

- Old password of the LDAP user.
- New password of the LDAP user.

**IMPORTANT:** New password field must have a value.

Procedure: Change AD-scrapper User Password

1. After selecting the "Change AD-scrapper User password" option, the console prompts for the following information.

2. Enter the Old Password :  

   **IMPORTANT:** If the old password entered is incorrect, the script doesn’t proceed further until you enter the correct old password.

3. Enter the New Password :  

   **IMPORTANT:** The script doesn’t proceed further until you enter a new password. This value cannot be null.

   The console prompts for confirmation of the information entered.

4. To confirm the information entered is correct and to continue, type y and press Enter. 

   To re-enter value(s), type n and press Enter.

   If the update is successful following message displays

   **Successfully updated password for AD user and started AD-scrapper service**

5. If something is incorrect during the update, the following message displays.

   **There is problem updating password for AD user, please contact admin**

   If the status message of “Restarting” displays on the console at any time during this procedure, contact your administrator. An example of the “Restarting” status message is shown.

![Figure 14](image.png)

Test LDAP

Prerequisite

1. Installation of AD-connector is complete.

Procedure: Test LDAP

1. At the AD-scrapper Main Menu, type 5 and press Enter.

   Test LDAP performs a pull of a single user from AD to confirm successful connectivity between AD-connector and AD server.
2. At the prompt to do so, press Enter to return to the Virtual Machine Main menu.

**NOTE:** To confirm successful connectivity between AD-connector and AD server, for all AD users, open the Zebra Profile Manager UI and Navigate to the "Import jobs", "Import Job Notifications" and "Import Job Scheduler" tabs to see information.

**Closing the Virtual Machine Utility**

To close the Virtual Machine Utility, close the terminal window where the utility is running.