Picture Perfect 4.6 Imaging
User Manual

UTC Fire & Security
A United Technologies Company

Contents

Preface

Picture Perfect Imaging is an optional software package designed to run on Picture Perfect. This manual provides instructions for the installation of an Imaging interface for use with Picture Perfect Version 4.6. It is intended for use by the system administrator. Read these instructions and all ancillary documentation entirely *before* installing or operating this product.

Note: A qualified service person, complying with all applicable codes, should perform all required hardware installations.

Conventions used in this document

The following conventions are used in this document:

Bold	Menu items and buttons.
Italic	Emphasis of an instruction or point; special terms.
	File names, path names, windows, panes, tabs, fields, variables, and other GUI elements.
	Titles of books and various documents.
Blue italic	Hyperlinks to cross-references, related topics, and URL addresses.
`Monospace`	Text that displays on the computer screen.
	Programming or coding sequences.

Safety terms and symbols

These terms may appear in this manual:

⚠ **CAUTION:** *Cautions* identify conditions or practices that may result in damage to the equipment or other property.

⚠ **WARNING:** *Warnings* identify conditions or practices that could result in equipment damage or serious personal injury.

Related documentation

For more information, refer to the following:

Picture Perfect 4.6 User Manual

This document includes information for the administrator to set up, configure, and manage the Picture Perfect database for the customer's facility.

Picture Perfect 4.6 Installation Manual

This manual is a step-by-step guide to help the system administrator connect hardware (graphical terminals, serial port adapters, non-graphical terminals, modems, printers, tape drives, client workstations, micros); boot/install the operating system; configure the operating system for the network, micro communication lines, printers and client workstations; install Picture Perfect software and set up client workstations.

Chapter 1 Introduction

This chapter provides an overview of Picture Perfect Imaging, including minimum hardware/software requirements and steps you need to perform before you begin installing, configuring, and using Imaging.

In this chapter:

Product overview

The purpose of the Imaging package is to enable the Picture Perfect system to store and display images, and to store badge designs that may be used to print badges. Picture Perfect includes an integrated badging system as part of the Java client applet.

The types of information and operations that may be performed with data stored by the Imaging package are as follows:

- **Images** (photos and/or signatures) may be captured and displayed in the Images tab of the Personnel form and printed on badges. Badge printing requires installation of the EPIBuilder Imaging installation kit on the client imaging workstation as described in *Chapter 4 Client Installation*.
- **Person and Badge data** (person and badge holder information printed on the badge) may be entered and displayed on several tabs of the Personnel and Badges forms. You may also use the optional Picture Perfect Import/Export package to provide person and badge data to Picture Perfect from an external system.
- **Badge Designs** may be created and edited through the Badge Designs form if the EPIBuilder Imaging installation kit has been installed on the client workstation.
- **Badge Printing** may be performed from the Badge Manager tab of the Personnel form and/ or the Badge form if the EPIBuilder Imaging installation kit has been installed on the client workstation.

Sharing image files in an Enterprise configuration

In an Enterprise Picture Perfect system consisting of a network host and one or more subhosts, you can configure the Imaging software so that images reside physically on the network host, but are accessible from and shared by all subhosts.

Note: If desired, a subhost can be installed to store the imaging database for *local* access to imaging data, however, the subhost cannot be used as the Imaging host for the entire Enterprise system.

If you want to implement image sharing on your system, verify that the network host has sufficient disk space to store all images required for Enterprise operations.

First, install the Imaging package on the Image Server as described in *Chapter 2*. Then, install the Imaging package on the remaining hosts, performing a shared installation as described in *Chapter 3*. Removal of the Imaging software must be performed in the reverse order; that is, the Image Server must be the last host from which the software is removed.

When you are performing a shared installation, access to the Image Server host is required so that the information describing the configuration that was specified during the Image Server standard installation may be used to perform the shared installation. After installation of the Imaging package on the Image Server, but prior to shared installation on the other hosts, update the `/etc/hosts` table on the Image Server to contain an entry for each host that will share image files.

For example, if `subhost1` with IP address `192.9.200.101` and `subhost2` with IP address `192.9.200.102` will be sharing images, these entries are required on the Image Server:

```
/etc/hosts:
    192.9.200.101          subhost1
    192.9.200.102          subhost2
```

What you need before installation

Before beginning the installation process, you need to obtain the following information:

- If the Imaging installation is to be a shared installation, you will be required to provide the host names and IP addresses of the Imaging server and other Picture Perfect host servers.
- If the Imaging installation is to be performed for an Enterprise Picture Perfect configuration, then either the `netlan` or `subhost` package must already have been installed.

Chapter 2 Standard Installation

This chapter guides you through the steps for a standard installation of the Imaging package on a Picture Perfect Image Server host.

In this chapter:

Performing a standard installation

If you plan to install the Imaging package in an Enterprise Picture Perfect environment on a host other than the Image Server host, in a shared configuration, use the installation procedure described in *Chapter 3 Shared Installation*. For all other installations, use the procedure described below.

The following tasks are required:

- Select the package to install.
- Configure the Imaging system.
- Verify the configuration.
- Compute the space required to store images.
- Restore image files.

Note: During the installation you are prompted for answers and default answers are provided. The default is in square brackets [ ], preceding the cursor where you are to enter your answer. In these cases, pressing (Enter) is equivalent to selecting the default answer.

Installing Imaging

Select the package to install

Follow these steps to start the installation of the Picture Perfect 4.6 package.

1. Log on as `ppadmin` and open a terminal window.

2. Type the following to shut down Picture Perfect:

   `. /cas/bin/profile` (Enter)

   `rc.pperf -k` (Enter)

3. Switch users to `root` by typing the following command.

   `su -` (Enter)

   Enter your root password and then press (Enter) .

4. Insert the Picture Perfect 4.6 Installation DVD into your server. Wait for the DVD ROM LED to stop blinking before proceeding.

5. Unmount the DVD by typing the following command:

   `umount /media/pp46` (Enter)

6. Mount the DVD by typing the following command:

Linux

   `mount /dev/dvd /media` (Enter)

AIX

   `mount -v cdrfs -r /dev/cd0 /mnt` (Enter)

7. Change to the root directory by typing `cd /`(Enter).

8. To display a list of installation options, type:

Linux

`/media/Linux/INSTALL -o` (Enter)

AIX

`/mnt/AIX/INSTALL -o` (Enter)

Messages similar to those shown below display, followed by a list of packages:

```
----------------------------------------------------------------------
          Picture Perfect CD-ROM Installation - 4.6 04/10/11
 Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
----------------------------------------------------------------------
The following BASE OPTIONS product(s) are available:

Prod# Name and Descriptions
----- ----------------------------
0    base    Picture Perfect Base package
1    graph   Picture Perfect Graphics Monitoring and Control package
2    image   Picture Perfect Imaging package
3    impexp  Picture Perfect Import/Export package
4    netlan  Picture Perfect Network System - Host package
5    pprs    Picture Perfect Redundant System package
6    subhost Picture Perfect Network System - Subhost package
7    tours   Picture Perfect Guard Tours package

Enter product number(s), separated by ',' to select, 'q'  to quit:
```

9. To select the Picture Perfect Imaging package, select the appropriate number for the image product and press (Enter).

   Your package selection is displayed, and you are asked to confirm:

   ```
   You have selected the following product(s):
   2              image              Picture Perfect Imaging package
   Is this correct (y/n)? [y]
   ```

10. To make a different selection, type `n`. You are returned to *step 9* and are prompted again for your selection. To continue the installation, type `y`, or press (Enter) to accept the default `(y)`.

    The installation begins, and messages similar to the following display:

    ```
    Installing image...
    Picture Perfect Multi-package Installation - 4.6 04/10/11
    Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
    ```

```
Installing from image in /media/Linux/pp ...

Do you want to install the Picture Perfect IMAGE Package (y/n)? [y] y
```

11. Type y, and then press ⒠Enter⒭ to confirm that you want to install the Picture Perfect Imaging package. Messages similar to the following display:

```
Picture Perfect NLS Text Save - 4.6 01/16/11
Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
Sat Aug 22 08:04:09 EDT 2011

This package has no nls or help files to save...
You selected volume group rootvg


----------------------------------------------------------------------
        Picture Perfect IMAGE Installation - Version 4.6 04/10/11
 Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
----------------------------------------------------------------------


Starting the Informix database.. [Done]

The files have been read from the media.
```

12. If you do *not* have an Enterprise Picture Perfect system, with netlan or subhost installed, continue to section *Compute the space required to store images* on page 9.

If you have an Enterprise Picture Perfect system, with netlan or subhost installed, type y. The following prompt asks if you want to perform a standard or a shared installation.

```
If you are installing the IMAGE package in a Network configuration,
you can store the images on ONE of the hosts and have the other hosts
share the files across the network as described in the Picture
Perfect Image Installation Guide.

Will this host be the one where the images actually reside (y/n)? [y]
```

Since this host will be the Image Server, where the images actually reside, type y to perform a standard installation.

Compute the space required to store images

Continue with the following steps to compute the space required to store the images.

The images are stored in the Informix database images table. Messages similar to the following display:

```
We will now be computing the amount of space needed to store  the images...


Steps that will be performed:
=============================
1.  Determine the type(s) of images that will be stored on the system.
    NOTE: The number chosen affects the amount of space that will be needed to
    store images, so DO NOT over compensate by choosing more types than you
    will be using.
2.  If there are multiple volume groups, determine which one will be used to
    store the Imaging package's database tables.
3.  Based on the number of badges configured when 'base' was installed,
    and the number of image types, determine if enough space exists to store
    the images.
4.  Compute the amount of space needed to store the images based on the
    specified information.
5.  Give the user an opportunity to alter the 'Average image size' (this is
    the average size of the images across the image types that were chosen).
    This may be necessary to get the images to hold in the available space, or
    if the user has knowledge of the actual size of the images that will be
    used.


****************************************************************************

Press <Enter> to continue...

STEP 1: Determine the type(s) of images that will be stored on the system.
        In this step we will determine the types of images that will be
        stored in the images database. The number of image types chosen
        affects the amount of space that will be needed to store images,
        so DO NOT over-compensate by choosing more types than you will
        be using.
```

1. Choose the number of image types that will be stored on the system.

```
The possible image types are:
Badge Photo(type0)
Signature          (type 54)
Fingerprint        (type 55)
Bar Code           (type 56)

Indicate the number of image types you will be using. For example, if
you will have Badge Photos, and Signatures, then you will be using
two (2) image types.
How many of these image types will you be using (1-4)? [1]
```

2. Type the number of image types you will be using with the badging system, and press (Enter).

The number of image types is the count of the different types of images that will be stored. For example, if Badge Photos and Signatures will be stored, then the number of image types is 2.

Note: Do not casually over-estimate the number of image types that you will be using. It is used to compute the space that will be needed in the database to store the images, and every additional image type represents a multiplication factor on the number of images.

You are prompted to verify the number of image types.

```
Number of image types that will be used are: 2
Is this correct (y/n)? [y]
```

3. Type y (Enter) to accept the number of image types you selected, or n to change the number of image types.

If you selected n, you are returned to *step 1* of this section. If you selected y, messages similar to the following display:

```
>>>>>>> STEP 2: If there are multiple volume groups,
>>>>>>> determine which one will be used to store
>>>>>>> the Imaging package's database tables.

Image Volume Group is ................: rootvg

>>>>>>> STEP 3: Based on the number of badges configured when
>>>>>>> 'base' was installed, and the number of image
>>>>>>> types, determine if enough space exists to store
>>>>>>> the images.
>>>>>>> The space required is computed as follows:
>>>>>>>
>>>>>>> (Number of badges configured * Number of image
>>>>>>> types) + (Space to restore images, if any, and
>>>>>>> using the same volume group as the Imaging
>>>>>>> database tables)
Checking ...

>>>>>>> STEP 4: Compute the amount of space needed to store the
>>>>>>> images based on the specified information.
```

4. The size required to store the images is now computed and checked to see if there is enough space to store the image data. If there is insufficient space, you are given the opportunity to alter the **Average Image Size** (defaults to 20 KB) of the images. The **Average Image Size** is the average size of the image types. Therefore, if, for example, you have 2 image types - Badge Photos (approx. 15 KB), and Signatures (approx. 7 KB) - your **Average Image Size** would be 11 KB. If you had defined the maximum number of badges as 300,000, then the approximate total size required to store the images is 11 x 2 x 300,000 / 1024 = 6445MBs.

```
Currently, you have '4071' MBs of free space to store images.
The maximum number of badges you have specified for your system is
'60000'.
You indicated that you will be using a total of '1' image types,
resulting in a maximum of '60000' images.
Using an average image size of '20' KBs, the total space required to
store the images is '1205' MBs.


>>>>>>> STEP 5: Give the user an opportunity to alter the 'Average
>>>>>>> image size' (this is the average size of the images
>>>>>>> across the image types that were chosen), to get
>>>>>>> the images to hold in the available space.
```

5. You are given an opportunity to change the current size selections. If the current selections compute to a size larger than the available free space, you make new choices or exit the installation. If the size computation indicates you have sufficient space, messages similar to the following display:

```
Image Volume Group              : rootvg
Total Number of images          : 60000
Number of Image Types           : 1
Average image size              : 20 KB
Total space required for images : 1205 MB
Are the above values acceptable (y/n)? [y]
***************************************************************
```

6. Type y (Enter) to accept the sizing selections and continue the installation, or type n, to change the **Average Image Size** to something else.

   If you selected y, go to *step 10* of this section. If you selected n, messages similar to the following display:

```
You have the option of altering ONLY the 'Average image size' at this
time, or ALL of the above parameters.
Would you like to change just the 'Average image size' (y/n)? [y]
```

7. Type y (Enter) to change the **Average Image Size** or type n, to change all of the parameters.

   If you selected n, you are returned to *Compute the space required to store images* on page 9.

If you selected y, you are prompted for the new **Average Image Size**, as follows:

```
Enter the new 'Average image size' (in KB):
```

8. Type the new **Average Image Size**, and then press (Enter).

   You are asked to confirm the newly specified size.

```
You have specified the average image size as: 13 KB
Is this correct (y/n)? [y]
```

9. Type y (Enter) to accept your newly specified **Average Image Size** again. If you selected y, the amount of space using the new **Average Image Size** is computed, and you are returned to *step 1* of this section.

   If you selected n, you are prompted to re-enter the **Average Image Size,** that is, you are returned to *step 7* of this section.

10. The database space is created using the computed sizes. Messages similar to the following display:

```
*****************************************************************
Total LV size needed is 37 PPs
Maximum logical volume size is 131072 PPs
Creating 'imagedbs' logical volume of size 37 PPs
Setting ownership & permissions on LV imagedbs
Updating [/etc/udev/rules.d/30-pp.rules] file for imagedbs.
```

11. Continue with the next section.

Restore image files

Continue with the following steps to restore the image files.

Messages similar to the following display:

```
If you have just upgraded, it is STRONGLY RECOMMENDED that you now restore your image
files from the backup made prior to this installation, for example, during the upgrade
procedure.
```

1. Press (Enter) to start the Image Restore Utility.

    Messages similar to the following display:

    ```
    Picture Perfect IMAGE RESTORE UTILITY Version 3.0 02/17/11
    Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.


            Main Menu
            1. Restore image database from tape.
            2. Restore image database from disk file.
            3. Help
            4. Exit
            Please select (1,2,3 or 4):
    ```

2. Select the appropriate option for your restoration needs. Select option 4, if you are not ready
    to restore images at this time. The following messages display:

    ```
                NO database restored
    Images not restored!!

    Your images were not restored at this time.
    You may restore your images at a later time by executing the
    following script:

                imgrestore.sh [ logfile | -? ]
    ```

3. If images are to be restored, select the option appropriate for the media on which the images
    were backed up. It is assumed that cba (the Picture Perfect backup program), was used to
    back up the images.

    The image restoration follows the usual restoration procedure, first the database
    restoration, then flat file restoration (that is the same procedure as when using
    restore.sh).

    For example, a restoration from a disk file (option 3) would result in messages similar to
    the following:

    ```
            Restore database from disk file...
            Enter the full path of the file containing the
            database and press <Enter>: /backimgs/images.bak
    ```

4. As prompted, type the full path to indicate the location of the image database.

    The database is restored and messages similar to the following display:

    ```
    restoring from file '/backimgs/images.bak'
    restore is complete.
    ```

5. The installation now completes. Messages similar to the following display:

    ```
    Adding Imaging table triggers to the database...
    Picture Perfect Imaging has been successfully installed.
    Checking if need to update nls files...
    Picture Perfect NLS Check - 4.6 01/16/11
    Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
    Sat Aug 22 10:16:49 EDT 2011

    No nls files for image package
    Running /cas/bin/fixperm on /tmp/image.perm file...
    No errors detected
    /cas/bin/fixperm finished.
    Installing desired BASE_OPTIONS product(s) was successful.

    The installation has completed.
    The system needs to be rebooted for the changes to take effect.

    Reboot the system (y/n)? [y]
    ```

    If you observe any messages other than these, do not press (Enter). Instead, contact your
    UTC Fire & Security Technical Support representative for additional instructions.

    Remember to remove your installation media following the reboot.

Chapter 3 Shared Installation

This chapter guides you through the steps for a shared installation, where the images reside physically on only one host, typically, the network host, but are accessible from and shared by all hosts.

In this chapter:

Performing a shared installation

A shared installation must be performed in the following order:

1. First, install the Imaging package on the Image Server as described in *Chapter 2 Standard Installation*.

2. Then, install the Imaging package on the remaining hosts, performing a shared installation as described in this chapter.

Note: Removal of the Imaging software must be performed in the reverse order; that is, the Image Server must be the last host from which the software is removed.

The following sections describe the tasks involved in performing the shared installation on the remaining hosts:

- Select the package.
- Define the image server host.
- Complete the installation.

Note: Before proceeding, please review the section: *Sharing image files in an Enterprise configuration* on page 2.

Note: During the installation, whenever you are prompted for an answer. If there is a default answer, it is in square brackets [ ], preceding the cursor where you are to enter your answer. In these cases, pressing (Enter) is equivalent to selecting the default answer.

Installing Imaging on shared installation

Select the package to install

Follow these steps to start the installation of the Picture Perfect Imaging package.

1. Log on as `ppadmin` and open a terminal window.

2. Type the following to shut down Picture Perfect:

   `. /cas/bin/profile` (Enter)
   `rc.pperf -k` (Enter)

3. Switch users to `root` by typing the following command.

   `su –` (Enter)

   Enter your root password, and then press (Enter).

4. Insert the Picture Perfect 4.6 Installation DVD into your server. Wait for the DVD ROM LED to stop blinking before proceeding.

5. Unmount the DVD by typing the following command:

   `umount /media/pp46` (Enter)

6. Mount the DVD by typing the following command:

Linux

   `mount /dev/dvd /media` (Enter)

AIX

```
mount -v cdrfs -r /dev/cd0 /mnt  Enter
```

7. Change to the root directory by typing `cd /` Enter .

8. To display a list of installation options, type:

Linux

```
/media/Linux/INSTALL -o  Enter
```

AIX

```
/mnt/AIX/INSTALL -o  Enter
```

Messages similar to those shown below display, followed by a list of packages:

```
----------------------------------------------------------------------
         Picture Perfect CD-ROM Installation - 4.6 04/10/11
 Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
----------------------------------------------------------------------


The following BASE OPTIONS product(s) are available:


Prod# Name and Descriptions
----- --------------------
0    base    Picture Perfect Base package
1    graph   Picture Perfect Graphics Monitoring and Control package
2    image   Picture Perfect Imaging package
3    impexp  Picture Perfect Import/Export package
4    netlan  Picture Perfect Network System - Host package
5    pprs    Picture Perfect Redundant System package
6    subhost Picture Perfect Network System - Subhost package
7    tours   Picture Perfect Guard Tours package

Enter product number(s), separated by ',' to select, 'q'  to quit:
```

9. To select the Picture Perfect Imaging package, select the appropriate number for the image product and press Enter .

```
Your package selection will now be displayed, and you will be
asked to confirm:
```

```
You have selected the following product(s):
2    image    Picture Perfect Imaging package
Is this correct (y/n)? [y]
```

10. To make a different selection, type `n`. You are returned to *step 9* of this section and are prompted again for your selection. To continue the installation, type `y`, or press Enter to accept the default (`y`).

The installation begins, and messages similar to the following display:

```
Installing image...
Picture Perfect Multi-package Installation - 4.6 04/10/11
Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
Installing from image in /media/Linux/pp ...


Do you want to install the Picture Perfect IMAGE Package (y/n)? [y]
```

11. Type `y` and press (Enter) to confirm that you want to install the package.

    Messages similar to the following display:

```
Picture Perfect NLS Text Save - 4.6 01/16/11
Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.


Sat Aug 29 07:47:21 EDT 2011
This package has no nls or help files to save...
You selected volume group rootvg


----------------------------------------------------------------------
        Picture Perfect IMAGE Installation - Version 4.6 04/10/11
 Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
----------------------------------------------------------------------
Starting the Informix database.. [Done]
The files have been read from the media.
```

12. You are now asked if you wish to perform a standard or shared installation.

```
If you are installing the IMAGE package in a Network configuration,
you can store the images on ONE of the hosts and have the other hosts
share the files across the network as described in the Picture
Perfect
Image Installation Guide.


Will this host be the one where the images actually reside (y/n)? [y]
```

    Type `n` to perform a shared installation.

Define the Image Server host

Continue with the following steps to specify the host where the images are stored.

```
Please enter the name of the host where the images reside:
```

1. Enter the name of the Image Server host where you performed a standard Imaging installation.

    The following message displays on the screen:

    ```
    Are you sure (y/n)? [y]
    ```

    Type `n` to change the name of the Image Server or `y` to accept the name.

    If you entered `n,` you are prompted to re-enter the Image Server host name. If you entered `y`, the `/etc/hosts` file is checked to see if there is an entry for that host. If there is an entry for that host, installation continues with *step 3* of this section. Otherwise, the following message displays:

    ```
    Please enter the IP address of the host with the image files:
    ```

2. Enter the IP address of the Image Server host.

    If you entered an incorrect IP address, the message "That is not a valid IP address" is displayed and you are asked to re-enter the IP address. If you enter an IP address that is already assigned to another host, the message "That IP address is already in use" is displayed and you are asked to re-enter the IP address. If the IP address is valid, the following message displays:

    ```
    Are you sure (y/n)? [y]
    ```

    Type `n` if you wish to change the IP address or `y` if you wish to accept the IP address.

3. The installation script attempts to access the Image Server host to obtain information about the Imaging installation that was performed there. That information is used to perform the shared installation on this host. If the Image Server host is accessed successfully, installation continues with *Complete the installation* on page 20. Otherwise, messages similar to the following display:

    ```
    Unable to access host 'nethost'.
    Verify that host 'nethost' is operational and configured as follows:
    File /etc/hosts contains the entry '192.9.200.101 subhost1'

    Enter 'y' to retry the access or 'n' to abort the installation.
    Do you want to retry access to host 'nethost'(y/n)? [y]
    ```

    Verify that the Image Server host is operational and is configured correctly. You may cancel the installation by typing `n`. Type `y` to retry the access to the Image Server host. If you entered `n,` the installation is aborted. If you entered `y,` the installation script obtains the information from the Image Server host on the type of imaging system in use and configures this host to share access to the image files on the Image Server.

Complete the installation

It takes a few moments for the system to generate the Imaging package. Messages similar to the following display:

```
Picture Perfect on the Image Server 'bctottawa' will need to be
stopped, then re-started, to enable communication between its
Informix database, and this 'bctwunan' host's.

Stopping Informix to update /cas/db/etc/sqlhosts with 'bctottawa'
Stopping Informix database... [Done]
Starting the Informix database.. [Done]

Adding Imaging table triggers to the database...
Picture Perfect Imaging has been successfully installed.
Checking if need to update nls files...
Picture Perfect NLS Check - 4.6 01/16/11
Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.

Sat Aug 29 07:51:48 EDT 2011

No nls files for image package
Running /cas/bin/fixperm on /tmp/image.perm file...
No errors detected
/cas/bin/fixperm finished.

Installing desired BASE_OPTIONS product(s) was successful.

The installation has completed.
The system needs to be rebooted for the changes to take effect.

Reboot the system (y/n)? [y]
```

Remove your installation media before pressing (Enter) (defaults to `y`).

If you observe messages other than these, do not press (Enter). Instead, contact your UTC Fire and Security Technical Support representative for additional instructions.

Chapter 4 Client Installation

This chapter guides you through the steps to set up a client as an Imaging workstation.

In this chapter:

Setting up an imaging workstation

To set up the Picture Perfect imaging workstation, perform the following steps. Each step is detailed in the following pages:

- Install the Imaging package on the host
- Install .NET Framework 3.5 SP1
- Install a capture card (optional)
- Install signature pad drivers (optional)
- Install Java
- Disable caching
- Disable client Java Virtual Machine automatic updates
- Install EPIBuilder on the workstation
- Install Mifare Generic Encoder (optional)
- Install EPI Mifare Adapters (optional)
- Create an Imaging workstation record
- Install the software license key
- Set up cameras and lighting (optional)

Install the imaging package on the host

If not already installed, install the Image package on the host. See *Chapter 2 Standard Installation* or *Chapter 3 Shared Installation* for information on installing the host software.

Install Microsoft .NET Framework 3.5 SP1

Picture Perfect 4.6 workstations require Microsoft .NET Framework 3.5 SP1. If you have any other version of .NET on your client workstations, you must uninstall it, and then install the version that is available from the Picture Perfect 4.6 Webtop.

Note: If your imaging workstation runs on Windows 7 (32-bit), you do not need to install .NET 3.5. Windows 7 already comes preinstalled with .NET 3.5.

To install Microsoft .NET Framework 3.5 SP1:

1. Remove any existing instances of .NET from the workstation as follows:
   a. Click Start, Control Panel, and then Add/Remove Programs.
   b. From the list of currently installed programs that display, select an instance of .NET.
   c. Click Remove. The Add or Remove Programs window opens asking you to confirm the action. Click Yes.
   d. When uninstall is complete, click Finish, then exit the Add/Remove Programs window and the Control Panel.

2. Access the Picture Perfect host web page from the workstation as follows:
   a. Open Internet Explorer.
   b. Type in a URL to connect to the Picture Perfect server. For example:
      `http://<hostname>/Picture`
   c. The Picture Perfect Webtop opens.

3. From the Picture Perfect Webtop, click DotNet 3.5 SP1 Installation link to install .NET 3.5 SP1 on the workstation. Click Run, use the defaults provided, and click Next as required.

Install a capture card (optional)

To capture your images, you can use any device that has a TWAIN, WINTAB, or Video for Windows (VFW) driver installed. Follow the instructions provided by the device manufacturer for installing the device.

Install the badge printer driver.

The Imaging package requires the installation of badge printer drivers. Refer to the instructions shipped with your badge printer.

Install signature pad drivers (optional)

Depending on the signature pad you are using, you may need to install additional TWAIN or WINTAB drivers to make them compatible with the Imaging package. After installing the pad, install a TWAIN or WINTAB driver for the pad.

Install Java

The Picture Perfect 4.6 client requires Java version 1.6.0_26. If you have any other version of Java on your client workstations, you must uninstall it, and then install the version that is available from the Picture Perfect 4.6 Webtop.

To install Java Runtime Environment (JRE):

1. Remove any existing instances of Java Runtime Environment (JRE) from the workstation as follows:

    a. Click Start, Control Panel, and then Add/Remove Programs.

    b. From the list of currently installed programs that display, select an instance of Java.

    c. Click Remove. The Add or Remove Programs window opens asking you to confirm the action. Click Yes.

    d. When uninstall is complete, click Finish, then exit the Add/Remove Programs window and the Control Panel.

2. Access the Picture Perfect host web page from the workstation as follows:

    a. Open Internet Explorer.

    b. Type in a URL to connect to the Picture Perfect server. For example:
       `http://<hostname>/Picture`

    c. The Picture Perfect Webtop opens.

3. From the Picture Perfect Webtop, click JRE Java Runtime Environment (JRE) link to install the Java Runtime Environment on the workstation. Use the defaults provided, and then click **Next** as required.

Note: Picture Perfect 4.6 supports the following browsers:
• Internet Explorer 8.0 on Windows XP and on Windows 7 (32-bit and 64-bit)
• Firefox: 3.6.10 or later (32-bit)

Enable/disable caching on the client

By default, Java file caching is enabled on the client. Whenever a patch is applied to the Picture Perfect server, or if the Picture Perfect server is upgraded to a new version, the cache should be cleared and disabled. Once the changes to the server are complete, you may re-enable caching.

To clear and disable caching:

1. Click Start, Settings, Control Panel, and then double-click Java (Control Panel). The Java Control Panel opens.

2. On the Java Control Panel, click the General tab.

3. On the General tab, Temporary Internet Files, click Settings.

4. Click Delete Files to remove the Java Cache. Make sure the Keep temporary files on my computer check box is not selected. Click OK.

5. On the Java Control Panel, click Apply to save the changes. Close the Java Control Panel by clicking on the X in the upper right hand corner of the page.

Disable client Java automatic updates

By default, the Java plug-in is set to periodically check for updates. You **must** disable this feature so that the plug-in does apply updates that may adversely affect Picture Perfect operations.

To disable Java automatic updates:

1. Click Start, Control Panel, and then double-click Java (Control Panel). The Java Control Panel opens.

2. On the Java Control Panel, click the Update tab.

3. On the Update tab, make sure that the Check for Updates Automatically check box is not selected.

4. On the Java Control Panel, click Apply to save the changes, and then close the Java Control Panel.

Install EPI Builder on the client workstation

From the Picture Perfect Webtop, click the <u>EPIBuilder Imaging Installation</u> link to install Imaging software on the client workstation. Use the defaults provided, and then click **Next** as required.

Optional: After installing the EPIBuilder Imaging software, download and install the desired language pack from the Picture Perfect Webtop.

EPI Capture

To enable the EPI capture window to open on Picture Perfect 4.6 imaging workstations using Windows XP or Windows 7, you must provide all users with full permissions in the ImageWare application.

To provide all users with full permissions in the ImageWare application:

1. On the imaging workstation, log off Picture Perfect 4.6.

    Note: To modify user permissions, you need to either log in as the local administrator or have the local administrator password to execute the following steps.

2. Click Program Files, and then right-click ImageWare Systems. The ImageWare Systems Properties page opens.

3. On the Security tab, select the group or user names, and then click Edit. The Permissions for ImageWare Systems page opens as shown below.

4. In Permissions for Users, make sure all Allow check boxes are checked.

Figure 1. ImageWare Permissions for Users
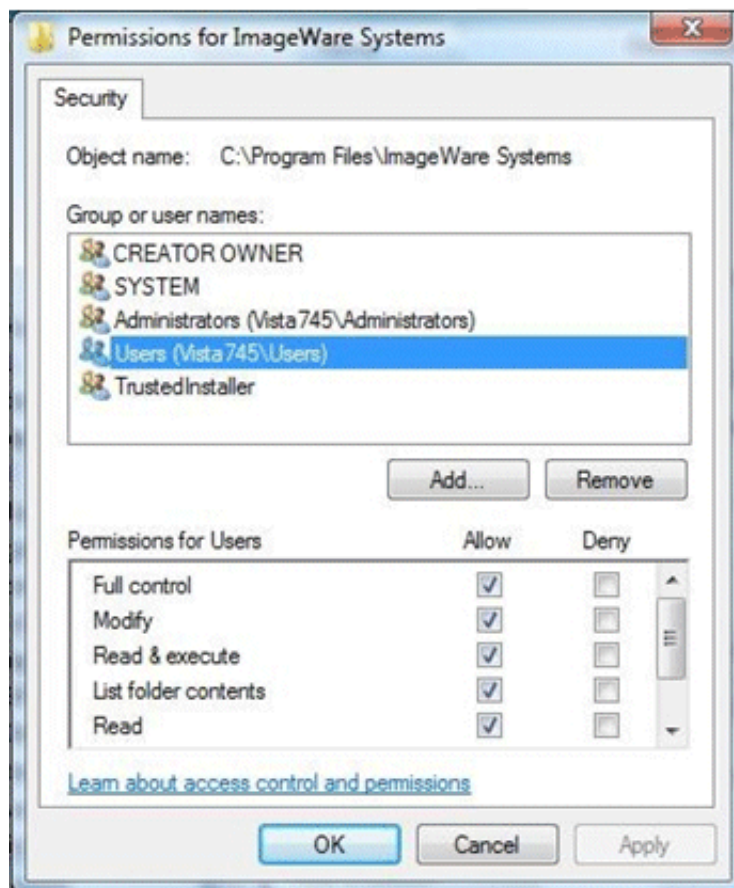
5. Log on to the Picture Perfect 4.6 imaging workstation.

Install Mifare Generic Encoder (optional)

If your system uses Mifare technology, install the Mifare Generic Encoder on the imaging workstation.

To install the optional Mifare Generic Encoder:

1. Access the Picture Perfect host web page from the workstation as follows:

   a. Open Internet Explorer.

   b. Type in a URL to connect to the Picture Perfect server. For example:
      `http://<hostname>/Picture`

   c. The Picture Perfect Webtop opens.

2. From the Picture Perfect Webtop, click the [Mifare Generic Encoder Installation](#) link to install the Mifare Generic Encoder on the imaging workstation. Click Run, use the defaults provided, and then click Next as required.

Install EPI Mifare Adapters (optional)

Note: You must install the Mifare Generic Encoder application prior to installing the EPI Mifare Adapters application.

To install the optional EPI Mifare Adapters:

1. Access the Picture Perfect host web page from the workstation as follows:

   a. Open Internet Explorer.

   b. Type in a URL to connect to the Picture Perfect server. For example:
      `http://<hostname>/Picture`

   c. The Picture Perfect Webtop opens.

2. From the Picture Perfect Webtop, click the [EPI Mifare SDI010 Adapter Installation](#) link to install the adapter on the workstation. Click Run, use the defaults provided, and then click Next as required.

3. From the Picture Perfect Webtop, click the [EPI Mifare Omnikey5x21 Adapter Installation](#) link to install the adapter on the workstation. Click Run, use the defaults provided, and then click Next as required.

Create an Imaging workstation record

To create an imaging workstation record:

1. Click the Picture Perfect link in the upper left hand corner of the Picture Perfect host web page. The system prompts you to acknowledge the signed Java certificate, and then the Picture Perfect Operator Login window opens.

2. Type your login ID and password, and then click Log on.

3. Click on a facility to select it or click Select All to select all available facility sets. Click Ok.

4. Create a Workstation record as follows:

    a. From the Setup menu, select Workstations, then click the Workstations tab.

    b. Click New. Enter a description, facility, and the IP address or hostname of the workstation.

    Note: The workstation IP address and hostname must also be specified in the Picture Perfect server system file/etc/hosts file.

    c. Select the Imaging Workstation check box.

    d. Click Save to save the record.

    e. Exit the Picture Perfect application window and Webtop. You must log into the application again in order to use the imaging features.

Install the software license key

Be sure you have the imaging license key to activate the optional Image package installed on the host. See the *Picture Perfect 4.6 Installation Manual* for details.

Set up cameras and lighting (optional)

Refer to the *Image Quality Enhancements* document on your documentation CD for helpful information on camera and lighting setup.

Note: If you are upgrading from Picture Perfect 4.0 to Picture Perfect 4.6, the first time you log on to an Imaging workstation, you may experience a slight delay while the system updates your badge designs. This process may take several minutes depending on the number of badge designs in your database.

Chapter 5 Troubleshooting, Maintenance, and Support

This chapter provides information to help you troubleshoot problems, perform simple preventive maintenance procedures, and contact technical support in case you need assistance with your equipment.

In this chapter:

Troubleshooting

This chapter shows you how to verify your installation and provides the steps for removing the Imaging software, should the need arise. It also offers technical support contacts in case you need assistance. (See *Contacting technical support* on page 32.)

Verifying the installation

Before using the Imaging system, you should verify that the system was installed properly. If you encounter any problems, contact your UTC Fire & Security Technical Support representative for assistance. You should be logged on as `root`.

Check /etc/hosts

1. Type the following command:

   `more /etc/hosts` ⎡Enter⎤

2. Inspect the output for any Imaging workstations you specified and verify that the Internet addresses are correct. Make sure all other hosts and workstations are also listed, and that their addresses are correct.

   If you need to add an entry to the hosts table, follow this procedure:

   a. Type the following command: `aa` ⎡Enter⎤

   The following menu displays:

   ```
   ----------------------------------------------------------------------
            aa - add address utility version - 1.2 01/29/03
   Copyright (C) 1989-2011 UTC Fire & Security Americas Corporation, Inc.
   ----------------------------------------------------------------------

      (a)dd address
      (d)elete address
      (l)ist addresses
      (e)xit
      (?)help
      (!)shell escape

    Action:
   ```
   At the `Action:` prompt, type `a` to add an address.

   b. At the `Name of host or terminal?` prompt, type the name of the missing machine, then press ⎡Enter⎤.

   c. At the `Internet Address:` prompt, type the address of the missing machine, then press ⎡Enter⎤.

   d. When the menu displays, type `l,` then press ⎡Enter⎤ at the `Action:` prompt to list the addresses. Make sure the machine you added appears on the list.

   e. When the menu displays, type `e` at the `Action:` prompt to exit this program.

   f. Shut down, and then restart the system.

Removal

Follow these steps to remove the software:

1. Log in as `root`.

2. From a command prompt, open a terminal window.

    You should see a `#` prompt.

3. Type: `cd /` (Enter)

4. Start the removal program by typing: `ppr` (Enter)

    Messages similar to the following display:

    ```
    Picture Perfect Package Removal - /custom_pp/bin/ppr 4.6 04/10/11
    Copyright (C) 2011 UTC Fire & Security Americas Corporation, Inc.
    WARNING:
    THIS PROGRAM WILL COMPLETELY REMOVE PICTURE PERFECT PACKAGES
    AND ANY DATABASES USED BY THE PACKAGE.
    SELECTING 'base' OR 'all' WILL REMOVE PICTURE PERFECT ENTIRELY.
    ARE YOU SURE YOU WANT TO PROCEED?

    (Type 'yes' and press the <Enter> key to proceed) yes
    To continue, type: yes
    ```
    (Enter)

    If you entered `yes`, a list of the Picture Perfect packages currently installed is displayed. You are then asked which package you would like to delete.

    ```
    The following Picture Perfect packages are currently installed:
    base
    image


    Enter the name of the package to remove:
    ```

5. Type: `image` (Enter)

    Messages similar to the following display:

    ```
    Removing the image package.
    Removing Picture Perfect Imaging package.
    The Imaging package has been removed.
    The removal process has completed. Program Exiting.
    ```

6. The removal of the Imaging package has been completed, and you are returned to the `#` prompt.

Contacting technical support

For assistance installing, operating, maintaining, and troubleshooting this product, refer to this document and any other documentation provided. If you still have questions, you may contact technical support during normal business hours (Monday through Friday, excluding holidays, between 8 a.m. and 7 p.m. Eastern Time).

North America

T 888 437 3287

F 561 998 6224

Asia

T 65 639 19314

F 65 639 19306

Australia

T 61 3 9239 1200

F 61 3 9239 1299

Canada

T 800 267 6317

F 613 737 5517

EMEA

T 48 58 326 22 40

F 48 58 326 22 41

Latin America

T 503 691 7294

F 561 994 6572

Email: rs-bctsupport@fs.utc.com

Web site: www.utcfireandsecurity.com

Appendix A Importing/Exporting Images

This appendix provides information on importing and exporting images.

In this chapter:

Introduction

The sections that follow describe how to import an arbitrary number of images and signatures into the Imaging database. The import operation must be performed on the Picture Perfect host where the image database resides using the `eirs` utility. Image and signature files are imported as separate operations.
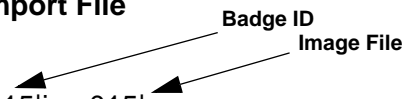
There is no limitation on the image size during import. It is recommended that you resize images to 512k or less prior to importing.

Note: All photos and signatures must be in JPEG format, in order for the import utility to determine the pixel height and width.

Prepare for the import

1. On the host, where the image database resides, log on as the `root` user.

2. Create a directory where the image or signature files to be imported can be placed temporarily, for example: `mkdir /import/images`. Use a different directory for image and signature files. For the purposes of this document we will use `/import/images` and `/import/signatures` in the examples that follow.

3. If the image or signature files reside on the host system, copy them to the newly created directories. If the files are located on a PC, use `ftp` to transfer them to the newly created directories on the host. Be sure to set the `ftp` mode to binary prior to the transfer of the files. The file names must have the three-character extension `.jpg`.

4. Create an import file on the host in each of the newly created directories that identifies for each image or signature file, the badge holder id (usually the badge id [`bid`]) of the badge owner and the name of the file. The import file is in a field-delimited format using the vertical bar character (|) to separate the fields as illustrated by the sample shown below. Remember that the file names are case-sensitive. If the import file is located in a directory or subdirectory that is different from the directory where the image or signature files are located, a relative or absolute path can be used to specify the location of the image or signature file. For the purposes of this document, we will use `import.dat` as the name of the import file in the examples that follow. If you are importing both images and signatures, you will require two import files, one in the directory with the image files and the other in the directory with the signature files.

Sample Import File Badge ID
Image File

0000000015	img015
0000000016	img016
0000000017	img017
0000000018	../relative-directory/img018
0000000019	/absolute-directory/img019

Perform the import

Run the `eirs` utility to import the files into the image database. The utility will notify you if any problems are encountered during the import operation.

- To import the `image` files, enter this command:

  ```
  /cas/bin/eirs -a -l import.dat -d /import/images -t0
  ```

- To import the `signature` files, enter this command:

  ```
  /cas/bin/eirs -a -l import.dat -d /import/signatures -t54
  ```

Exporting images from the imaging database

The sections that follow describe how to export an arbitrary number of images or signatures from the Imaging database. The export operation must be performed on the Picture Perfect host where the image database resides using the `eirs` utility.

Prepare for the export

1. On the host, where the image database resides, log on as the `root` user.

2. Create a directory where the image or signature files to be exported can be written. Use a different directory for image and signature files. For the purposes of this document, we will use
   `/export/images` and `/export/signatures` in the examples that follow.

3. Create an export file on the host that identifies, for each image, the badge holder id (`bid`) of the badge holder whose image is to be exported. Each line of the export file should contain only a single entry as illustrated by the sample shown below. The export file can be located in a directory that is different from the directory where the images will be exported. For the purposes of this document we will use
   `/export/images/export.dat` and `/export/signatures/export.dat` as the names of the export files in the examples that follow.

   Sample export file

   ```
   |0000000015|john_doe.jpg|
   |0000000016|jane_doe|
   |0000000017|john_q_public|
   |0000000018|bob_smitz|
   |0000000019|james_bond|
   ```

Perform the export

Run the `eirs` utility to export the files from the image database. The utility will notify you if any errors occurred during the export operation.

- To export the `image` files, enter this command:

  ```
  /cas/bin/eirs -x -l export.dat -d /export/images -t0
  ```

- To export the `signature` files, enter this command:

  ```
  /cas/bin/eirs -x -l export.dat -d /export/signatures -t54
  ```

Command reference for the eirs utility

Usage information for the `eirs` utility is as follows:

```
eirs  -a -l input_file        [-d directory] [-t type] [-f] [-v level]
OR
eirs  -a -k key -i image_file [-d directory] [-t type] [-f] [-v level]
OR
eirs  -r -l input_file        [-d directory] [-t type] [-v level]
OR
eirs  -r -k key [-o out_file] [-d directory] [-t type] [-v level]
OR
eirs  -x -l input_file        [-d directory] [-t type] [-v level]
OR
eirs  -x -k key  -o out_file  [-d directory] [-t type] [-v level]
OR
eirs  -a -k badge_design_id -i badge_design_filename -t 98
```

`-a`

Add (import) the specified image(s). Either an input file is used to indicate the key, image file, and optionally the type (this method is primarily used for adding multiple images), or a key, image file, and optional type are used from the command line for a single image insertion. If not specified, the directory is the current directory, and the type defaults to type 0 (Badge Photo).

Note: Only JPEG format images may be added.

`-r`

Remove (delete) the image record(s) from the database. Either an input file is used to indicate the key and optionally the type of the image(s) (this method is primarily used for deleting multiple image records), or the key of the image record to be removed is specified from the command line. If not specified, the directory is the current directory, and the image type defaults to type 1000 (ALL Types).

`-x`

Extract (export) the specified image(s). Either an input file is used to indicate the key, the file to extract to, and optionally the image type of the image being extracted (this method is primarily used for extracting multiple images), or the key for the single image to be

extracted and the file to extract to, are specified on the command line. If not specified, the directory is the current directory, and the type defaults to type 0 (Badge Photo).

`-d directory`

Directory that will be used when the utility executes (default is current directory). The utility sets the current working directory to this location when it executes. All file specifications must be relative to this directory or fully pathed.

`-f`

Force addition of image(s) without performing a check for a later version already present in the image database. This option is only valid with the `-a` (ADD) operation.

`-i image_file`

The JPEG format image file that is to be added. A `.jpg` file extension is assumed if not specified. This option is only valid with the `-a` (ADD) operation.

`-k key`

Key identifying the image(s) to add, remove or extract.

`-l input_file`

The input file containing a list of the images to be added, removed or extracted. The format of lines in the file is different for each type of operation as indicated below.

```
Add:       |<key>|<image_file>|[type|]
Examples:  |1234567890|john_doe.jpg|0|
           |1234567891|joe_public|54|
           |1234567892|jane_doe.jpg|
```

```
Remove:    |<key>|[type|]
Examples:  |1234567890|0|
           |1234567891|1000|
           |1234567892|
```

```
Extract:   |<key>|<out_file>|[type|]
Examples:  |1234567890|john_doe.jpg|0|
```
Output file is `john_doe.00.jpg`
```
           |1234567891|joe_public|54|
```
Output file is `joe_public.54.jpg`
```
           |1234567892|jane_doe.jpg|
```
Output file is `jane_doe.nn.jpg`
where `nn` is the type specified on the command line.

The vertical bars are required as delimiters.

`<key>`

Key identifying the image to add, remove or extract.

`<image_file>`

The name of the image file being added into the images database. A `.jpg` file extension is assumed if not specified.

`<type>`

Type of image to add, remove or extract. It is optional. If not specified, the type value specified with the `-t` type option will be used.

`<out_file>`

An output file that will contain the image after extraction. The created file will end with `.nn.jpg`, where `nn` is a two digit number indicating the image type (`00`, `54`, `55` or `56`).

`-o out_file`

An output file that will contain the image after extraction or removal. The created file will end with `.nn.jpg`, where `nn` is a two digit number indicating the image type (`00`, `54`, `55` or `56`).

`-t type`

Type of image(s) to add, remove or extract. Defaults to `0` (Badge Photo) for add or extract and 1000 (ALL Types) for remove.

Note: Types specified in an input_file override this value. When adding or extracting an image, the ALL Types value 1000 *cannot* be selected.

0	Badge Photo
54	Signature
55	Fingerprint
56	Bar Code
1000	All Types
	(valid only with -r option)

`-v level`

Debug output level. The default is `0` (None).

0	None
1	Minimum
2	Medium
3	Maximum

`[>/tmp/logfile 2>&1]`

Optional file redirection specification to save diagnostic and error information to a text file. By default, if any errors occur, they will be written to the screen. If you want to have them logged, use file redirection; for example:

```
eirs -x -k '0000001234' -o photo -d /export/images -t0 -v2 >/tmp/
export.log 2>&1
```