ProximityPrint Q

User Manual

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Address:

Moshav Yaad, D.N. Misgav

Zip 20155, ISRAEL

Tel: +972-4-9909949

Fax: +972-4-9909090

Email: info@smartprinter.co.il

Web: www.smartprinter.co.il

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System Installation

Requirements and Preparations

The PPQ system is composed of physical device controllers and a software server. The software server is based on the IIS web server, and as such, it will only run on computers able to run IIS. The most recommended operating system is Microsoft Windows Server 2003, but for small organizations it is also possible to run it under Windows XP Professional.

PPQ system can be installed on x64 systems, but under certain restrictions and special configurations. If you wish to install PPQ on such operating system, please read the section relating to installation under x64 systems before you continue with the installation.

1. Install IIS (Internet Information Services) on the server system. For more information check Microsoft web-site (http://www.microsoft.com/resources/ documentation/windows/xp/all/proddocs/en-us/iiiisin2.mspx?mfr=true)

2. Install Dot.Net framework 2.0 (http://www.microsoft.com/downloads/details.aspx?FamilyID=0856EACB-4362-4B0D-8EDD-AAB15C5E04F5&displaylang=en)

Installing the software

3. Run SETUP.EXE from the PPQ installation directory and follow the directions on screen. It is preferred that you'll keep the default directories during the installation process.

1. Go to "Services" (Start - Settings - Control Panel - Administrative Tools - Services), Start the PPQ service by right clicking "PPQ" and choose the "Start" option. If the PPQ service doesn't exist, look at the troubleshooting section under: "Failed to add PPQ Service".
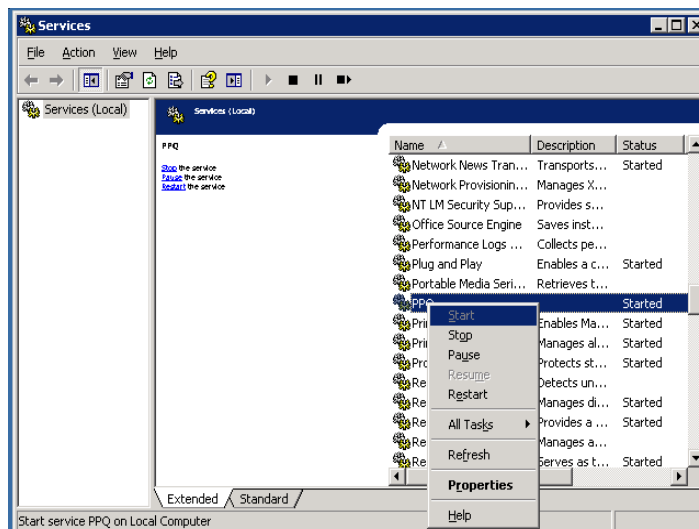
2. Go to IIS Settings (Start - Settings - Control Panel - Administrative Tools - Internet Information Services). Expand "Local Computer\Web Sites\Default Web Site". Right click "PPQ" and choose Properties".
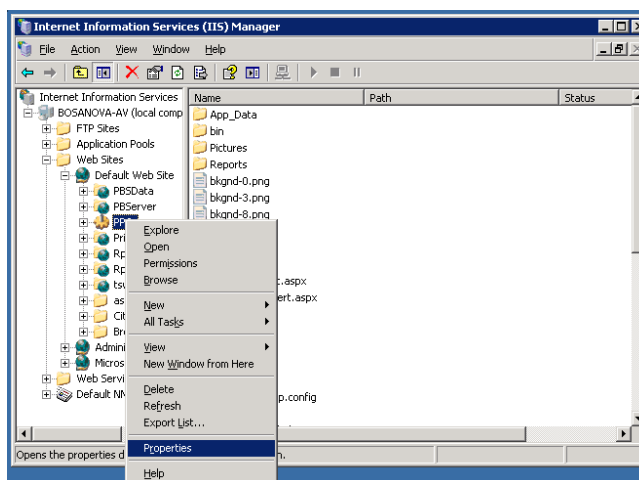
6. Go to "ASP.NET" tab and make sure that the ASP.Net Version is 2.X
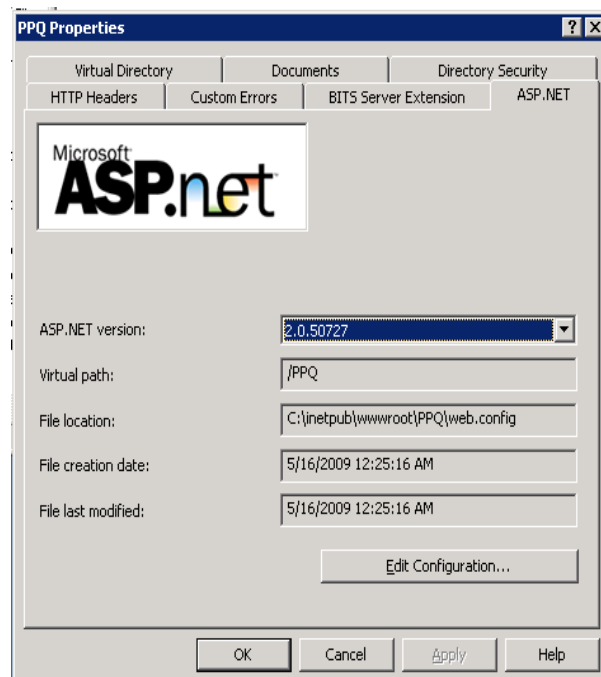
7. Go to the "Directory Security" tab and click the <Edit> button.
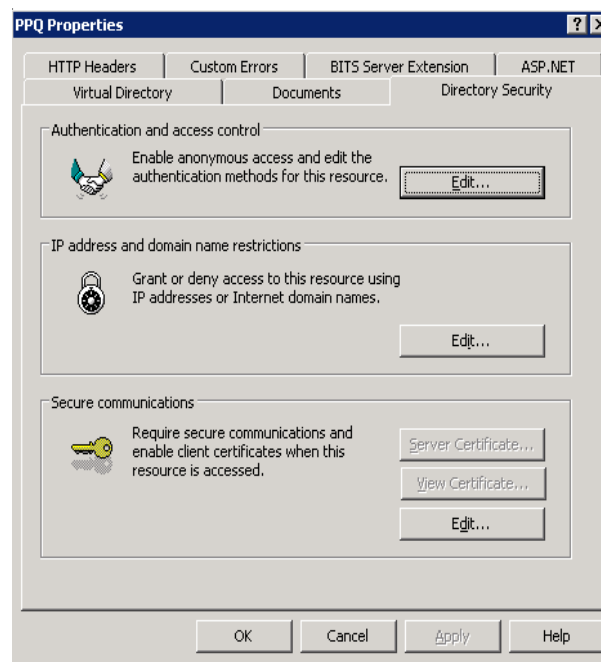
8. Uncheck the "Anonymous access" check-box and check "Integrated Windows Authentication". Click <OK>
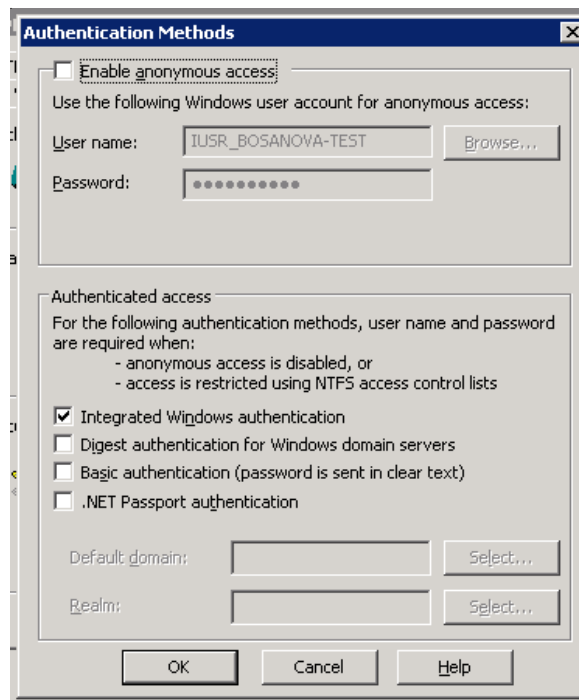
9. Expand the "PPQ" branch, click on "App_Data". Right click "sentinel.mdb" and select "Properties".
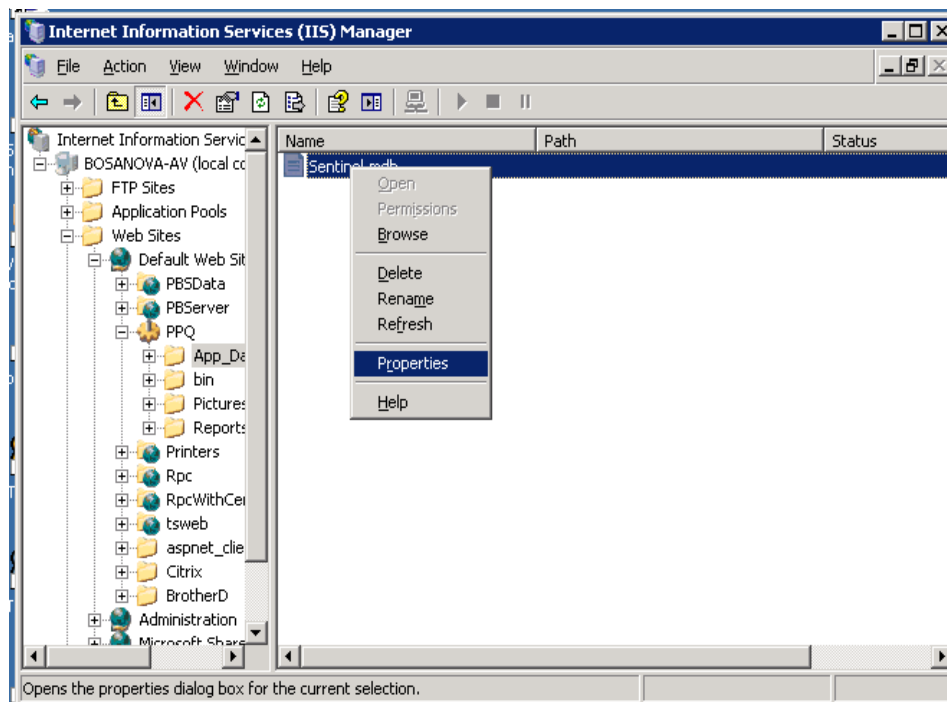
10. On the "File" tab check the "Write" checkbox.

Sentinel.mdb Properties	? X

File | File Security | HTTP Headers | Custom Errors | ASP.NET

The content for this resource should come from:
- ⦿ The designated file
- ○ A share located on another computer
- ○ A redirection to a URL

Local path: \PPQ\App_Data\Sentinel.mdb

☐ Script source access   ☑ Log visits
☑ Read
☑ Write

| OK | Cancel | Apply | Help |
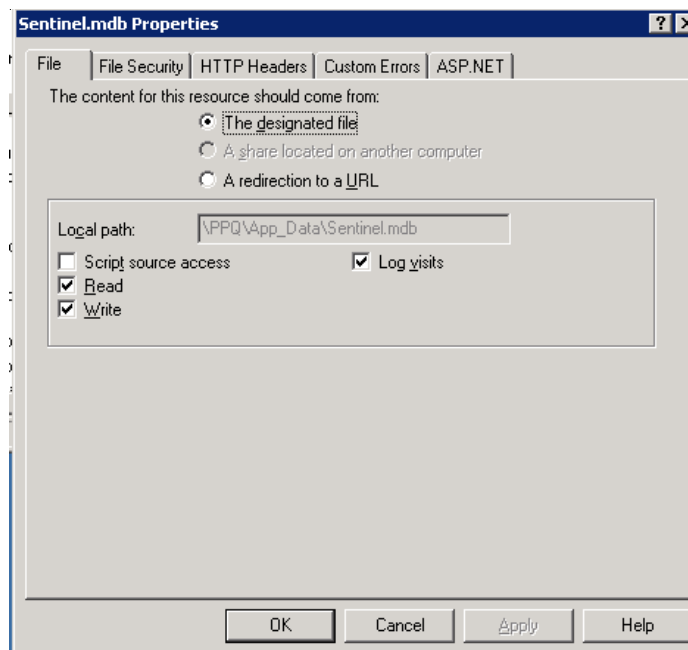
11. Repeat this process with the file "PPQ.ldb" as well. If the file "PPQ.ldb" doesn't exist, start the "Web PPQ" by selecting (Start - Programs - PPQ - Web PPQ). Ignore the errors (if any such appear) and close the browser window. The "PPQ.ldb" file should appear now.

If after starting the service the "PPQ.ldb" still doesn't exist, skip it perform the changes only to the "PPQ.mdb" file.

12. Go to the IIS PPQ folder (default directory is "C:\Inetpub\wwwroot\PPQ\") and enter the "App_Data" folder. Right click "sentinel.mdb" file and choose "Properties".
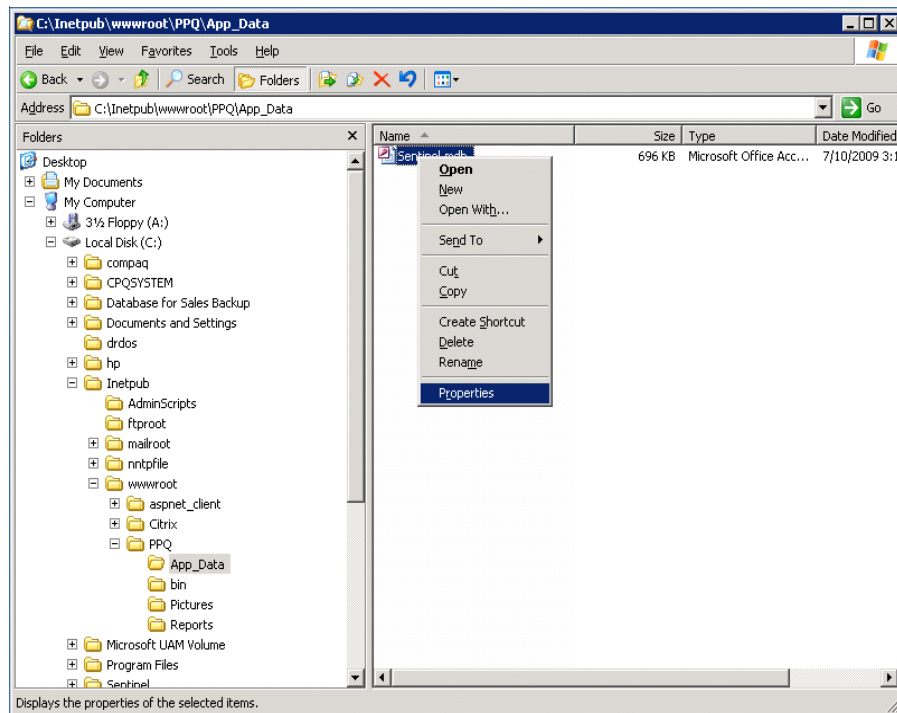
Make sure that the "Read-Only" checkbox is unchecked.
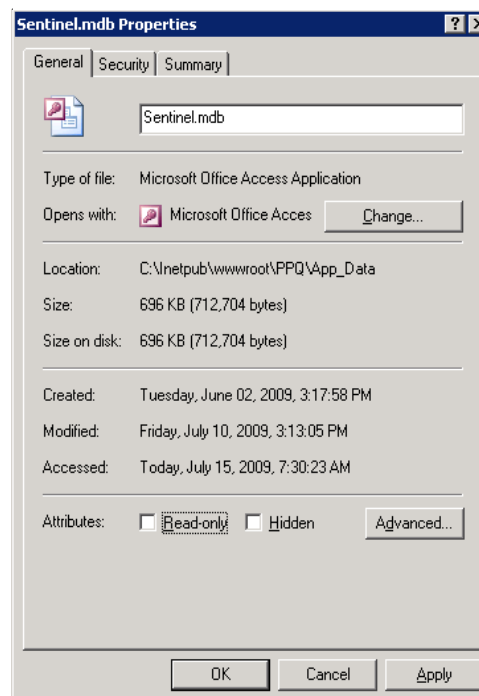
Go to the "Security" tab (if exists in your windows), Click on "Everyone" and select "Full Control" from the list below
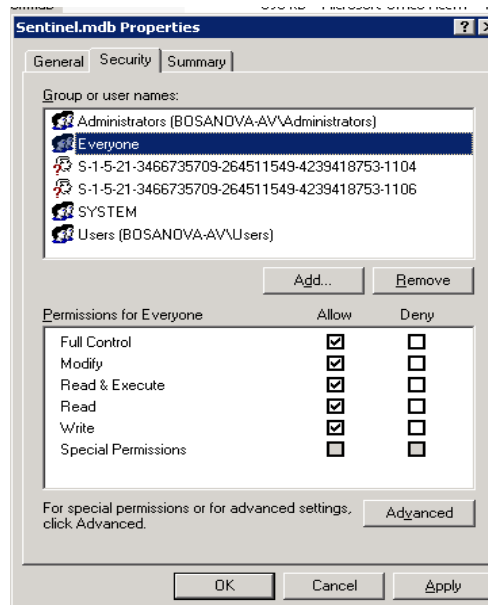
13. Repeat the process for the file "PPQ.ldb" as well.

14. Start the Registry Editor (by clicking Start à Run, and typing the command REGEDIT. Go to following registry key:

HKEY_LOCAL_MACHINE\SOFTWARE\Sentinel

right click it and select "Permissions..."
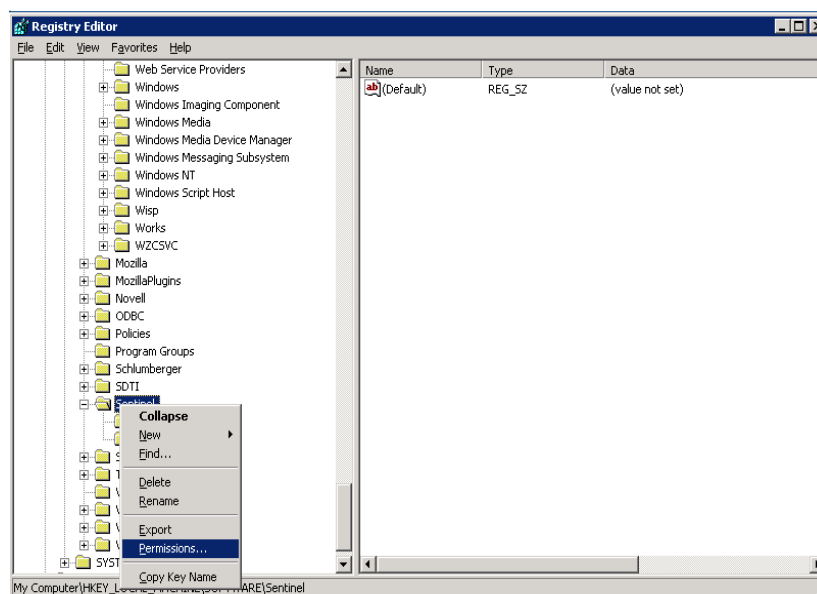
Allow all users (Everyone) Full Control over this registry key.
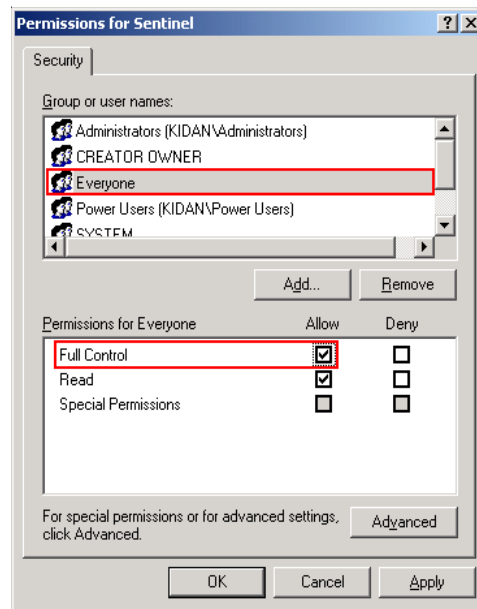
   Note: The registry instructions in the above clause only apply to Windows 2003
   server, If you are using windows 2000/XP operating system, please follow the
   instructions under "Registry permissions in windows 2000/XP"

15. Go to the temporary windows directory (usually c:\windows\temp),
    right click it and select "Properties", go to the "Security" tab and allow all users
    (Everyone) Full Control over this folder.
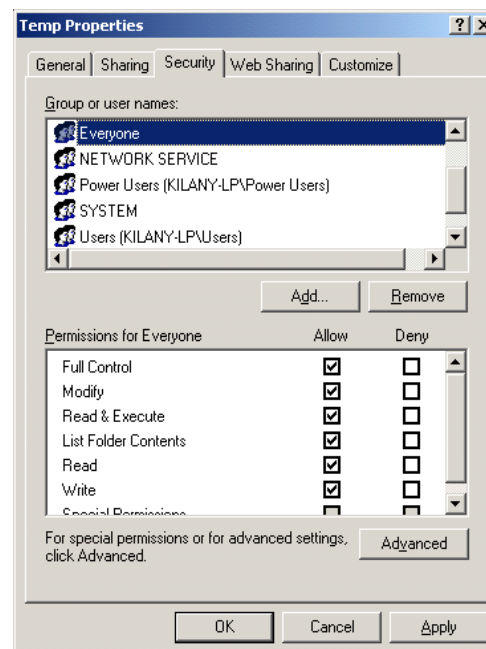
Installation under x64 operating systems

In order to install PPQ under an x64 operating system (OS), you must first install certain components, some of these components are necessary since PPQ under x64 OS can't work with an Access database. This limitation is because there is no "Microsoft Jet 4.0 OLE DB Provider" for the ODBC connection to the Access database under x64 OS (please refer to Microsoft announcement on this issue under: http://support.microsoft.com/kb/957570). Therefore, you must use and SQL server for the PPQ DB, if you don't have a license for a standard SQL server database, you can use the Microsoft SQL express 2008 database (prior versions of the SQL express don't support x64 OS).

In order to install PPQ on an x64 OS with SQL express 2008, you must install the following software before starting with the installation of PPQ:

- Internet Information Services (IIS)

- Not Net Framework 2.0 SP2 for x64

- Windows Installer 4.5

- Dot Net Framework 3.5 SP1 for x64

- Windows Power Shell 1.0

- Microsoft SQL Server Express 2008 for x64

Only after you have installed the above software programs can you continue with the installation of PPQ as described in the previous section.

After you finished installing PPQ according to the instructions, you need to follow these additional steps:

Checking the installation

It is now time to check the server installation. Click "Start - Programs - PPQ - Web PPQ", or go to http://localhost/PPQ in your web browser. After a short time you should see a web page similar to the one below.
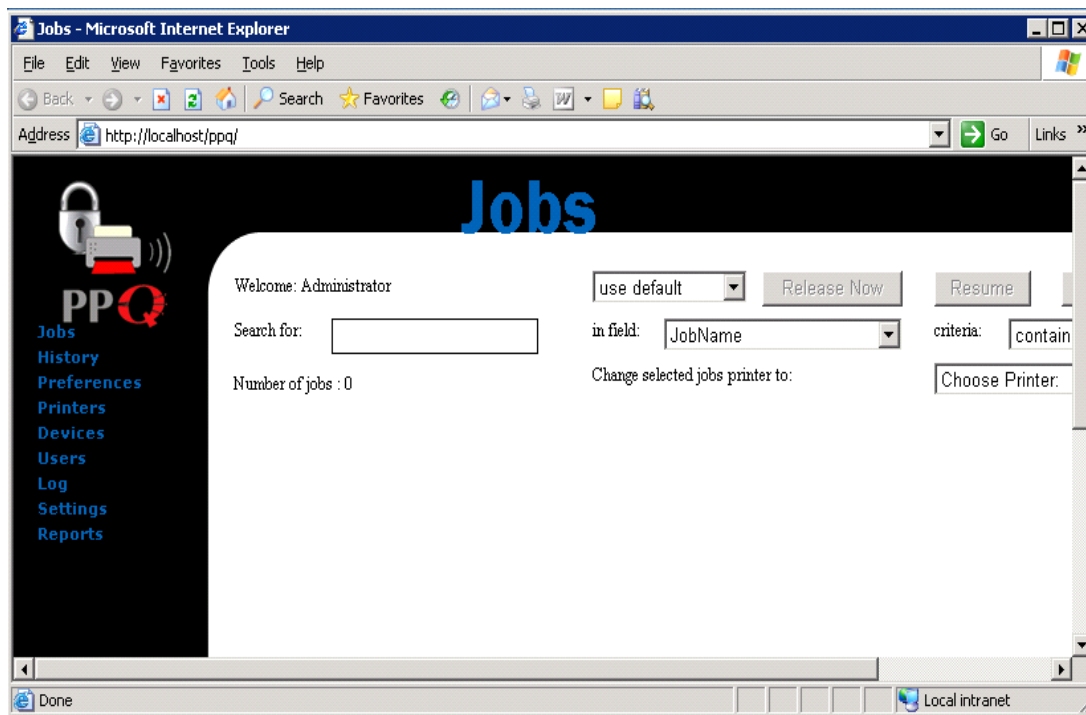
Congratulations! PPQ is up and running!

If you don't see the proper web page, please see the Troubleshooting section of this installation guide.

Firewalls
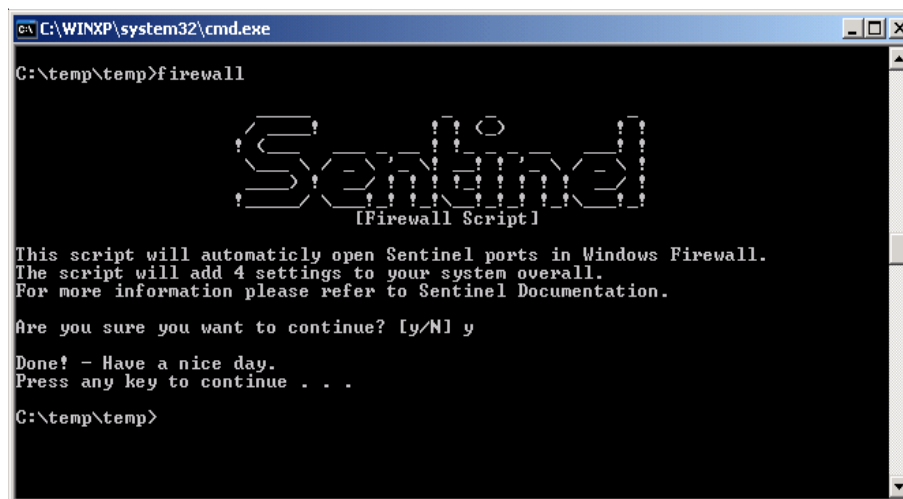
A Firewall is a device or software designed to block un-authorized communication. Some systems (such as Windows XP) have built-in firewall software that blocks PPQ's communication. If a firewall is installed on the server/client's computer, it must be configured properly before use.

The server and clients/devices needs ports 7001/7002 UDP/TCP open for correct communication.

If you wish to connect to the web server from a remote machine you will need to open the IIS server port as well (usually 80/TCP).

We provide a script that can be used to automate the port opening process for "PPQ" on Microsoft Windows Firewall service. The script (Firewall.bat) can be found on the installation directory (default to "C:\Sentinel\").

```
C:\WINXP\system32\cmd.exe                                    _ | □ | X |

C:\temp\temp>firewall

                        Sentinel
                     [Firewall Script]
This script will automaticly open Sentinel ports in Windows Firewall.
The script will add 4 settings to your system overall.
For more information please refer to Sentinel Documentation.

Are you sure you want to continue? [y/N] y

Done! - Have a nice day.
Press any key to continue . . .

C:\temp\temp>
```

After running the script you will find 4 additional rules for PPQ(Sentinel) on the firewall. If you are using a 3rd party firewall, please contact your systems/security administrator.

Configuring PPQ Server Settings

To configure the system you should log-in to the PPQsite. Click "Start - Programs - PPQ - Web PPQ", or go to http://localhost/PPQ in your web browser. Please note that in order to be able to configure the PPQ server, you must log-in while you are signed-on as a local administrator of the computer in which PPQ is installed in. After you have logged-in to the system, select "Settings" from the left menu panel. If the left menu panel only shows the "Jobs" and "History" options, it means the system didn't identify you as an administrator.
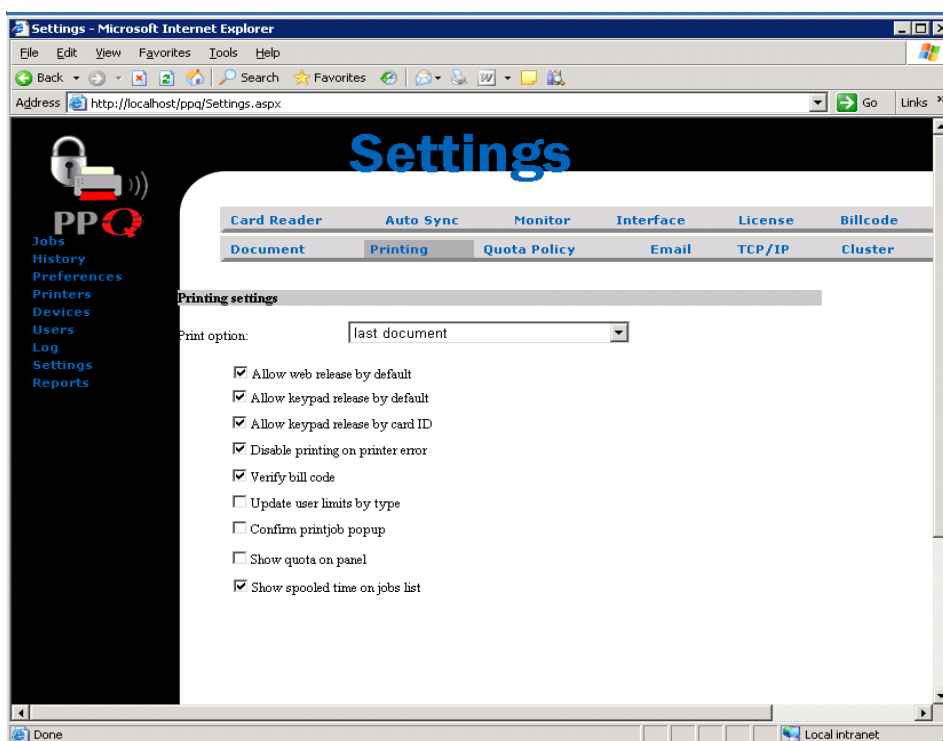
In the Settings screen, you can set up the system configurations. These configurations are divided into several tabs you can choose from. After you make changes to any of the parameters you must click the <Save Settings> button on the top-right corner of the screen.

Card Reader

The card reader settings set up the options related to the decoding of the card number read by the RFID reader and other options related to timeouts of the messages sent from the server to the device.

- · Timeouts: the time period (in seconds) that the device will display messages on the screen before it will reset back to the default "Place card or enter code" message.

  - o Timeout showing information: Time period to display information messages, such as "no jobs waiting for user", etc…

  - o Timeout showing error: Time period to display error messages, such as "unidentified card was used", etc...

  - o Timeout showing selection: Time period to display the selection of print jobs to be released when the print option for the user is "select by keypad".

  - o Timeout showing copy: Time period that the device will open the copier and allow the user to make copies, this timeout will renew after each copy was made, so only if after this period of time no copy is performed, the copier will lock.

- · Card number conversion will cause the PPQ to convert the card number read by the RFID reader at the device from representation to another. . This is used to verify that the correct card number is matched against the number in the users table.

  - o Convert Decimal To Hex: Will convert the card number from decimal to hexadecimal representation.

- o   Read characters from card (Right): Will take only the X rightmost characters of the card number.

- o   Read characters from card (Left): Will take only the X leftmost characters of the card number.

- o   Convert Hex To Decimal: Will convert the card number from hexadecimal to decimal representation.

- o   Ignore card leading zero: If checked, will ignore all leading zeros read by the card reader.

- o   Increment constant number: Will mathematically add the card number that was read to this number.

Document

- Delete unprinted jobs after [X] hours: In here you can specify how much time PPQ will keep a print job in its queue in case a print was made by a user but never released using the device. After this period of time, the job will be cleared, but an entry will be placed in the history so there is an ability to issue reports about these cleared print jobs.

- Clear history after [X] days: In here you can specify the time PPQ should keep the print jobs on the "History" screen.

- Device active from time, & Device active to time: In here you can set the default activity time for all devices, if left empty then the devices are always active. To set an activity time, type the desired from and to times in the following syntax: HH:MM, where the HH is in 24 hour format   e.g. to set the default activity time from 8AM to 5:30PM, type: 08:00 and 17:30 respectivly.

Auto Sync

The Auto Sync settings set up the options related to the automatic synchronization of the Users Table with external resources, such as the Active Directory or external SQL databases containing information about the users and their card numbers.

First you need to check the "Auto Sync" checkbox, and then you can choose one of three synchronization options to work with:

- Use LDAP to get users from active directory: This option will cause the PPQ system to connect to the Active Directory (AD) using LDAP for each new user printing through the system and retrieve its card number from a specific field in the AD. You need to fill in the domain name and an AD user name and password which have permissions to access the AD and get information. You also need to fill in the name in the AD in which you placed the card numbers for your users.

- Use SQL Server to get users: you need to fill in the connection string to the SQL server, and the name of the table in which the users exists. The PPQ will compare the username arrived from the metadata of the print job with the one at the "user field name" and if they match then the data in the Card ID, first and last names will be updated in the internal users table.

- Use Random Sync to get users and Card ID: Will cause each new user printing through the system to be added automatically to the users table, and a random card ID will be issued to each user. This is useful in case the system is installed without any physical devices (with virtual 0.0.0.0 devices intended only for monitoring purposes without physical release).

Printing

- Print Option: If several print jobs are waiting for the user, you can select one of the following options:

  o All Documents: means that the user gets all of his jobs at once.

  o Last Document: means that each time the user places his card he will get the last job waiting for him. The order is LIFO (last in first out).

  o Select By Keypad: means that after the user places his card, if there are more then 2 jobs waiting for this user, they will appear on the device's LCD and the user can choose which jobs to release. If there is just one print job waiting for the user, it will be printed.

- Allow Web release by default: This option decides if the default option for users will allow them to release print jobs from the web interface or not.

- Allow Keypad release by default: This option decides if the default option for users will allow them to release jobs by typing their keypad code on the PPQ device's keypad or not.

- Allow Keypad release by Card ID: This option decides if the users are allowed to release their print jobs by typing their card ID number (unlike the keypad code) on the PPQ device's keypad.

- Disable printing on Printer error: This instructs the PPQ server to check the status of the destination printer before releasing print jobs to it. If the printer status is error, then the print jobs will not be released.

- Verify billing code: When using a popup to select a billing code, this checkbox decides if only billing codes that exist on the billing code table will be allowed to be selected, or any billing code, even if it doesn't exist yet.

- Update user limits by type: Checking this checkbox will cause all limits to be updated at the same time, so if a user printed 1 B/W page, all limits will be decreased by 1 and not just the B/W limit.

- Confirm print job popup: When using a popup to select a billing code, this checkbox decides if after the initial popup selection, another popup will be shown to the user with the billing code description, in order to confirm that this is indeed the billing code he intended to.

- Show quota on panel: Checking this checkbox will instruct the PPQ, after the user has been identified, to show on the device's display how many pages are left in his quota.

- Show spooled time on jobs list: When using the "Select by keypad" print option, all print jobs appear on the device's display and you can select which print jobs you want to release. Because of the limit of 16 characters, and in order to make it easier to find a specific print job, the first 5 characters on the screen are the time in which this job was spooled. If you uncheck this checkbox, then the time is not shown and the job name has 5 more characters in it.

Monitor

·   Monitor jobs on printers with error status: Checking this checkbox will cause the
    PPQ monitor process to look for printers with error status with print jobs that have
    not spooled yet and therefore have not been submitted into the PPQ, andl submit
    the print jobs anyway.

·   Monitor and activate the PPQ service: Check checking this checkbox, the PPQ will
    start another process called "SNTMON.EXE" this process will send the standard
    PPQ process "COMTCP.EXE" a UDP message every several seconds. If the
    standard process doesn't response to 3 consecutive messages, the monitor
    process will kill the standard process and restart it. After checking the monitor
    checkbox, you must type in the IP address of the PPQ server in the appropriate
    checkbox.

Quota Policy

Quota policy allows you to increment or set the quota limit of each page type (B/W, Color, copies) automatically every certain period of time. You can define several quota policies, and for each user select a different policy.

Quota Policy Settings

Default quota policy:	None ▾
Select policy to edit/delete:	▾

Add Policy Edit Policy Delete Policy

Policy name:	SPS	
Update quota policy on day:	1	of the month, and perform update every: 1 months

Undefined Amount:		⦿ Increment ○ Reset to
B/W Amount:	100	⦿ Increment ○ Reset to
Color Amount:	200	○ Increment ⦿ Reset to
Cheques Amount:		⦿ Increment ○ Reset to
Copy Amount:		⦿ Increment ○ Reset to

[Add]

· Default quota policy: is the quota policy that will be selected to new users.

· For each policy, you need to select in which day of the month, and every how many months the policy rules will be performed.

· For each policy, and for each page type, you need to select how many pages and how the system will increment the existing quota by this amount or set the quota to the specified amount.

Interface

- Seconds before AutoRefresh (0 for never): this will cause the web interface to be refreshed automatically every certain period of time.

Email

- Email Settings: This place allows you to set different mail settings (server, address and report types) for real time monitoring of different aspects.

License

- License Code Settings: This area contains your current license for PPQ.

TCP/IP

- TCP/IP Settings: These settings allow you to change the working communication port of the system and LPR printing setting. Please note that changing these settings can prevent the system from functioning properly.

Billcode

Bill Code Settings

Default BillCode: ▢
Description: ▢

Add Bill Code:

BillCode: ▢   Search BillCode
Description: ▢   Add Billcode

	BillCode	Description
Edit Delete	111	Customer1
Edit Delete	222	Customer2
Edit Delete	333	Customer3

The system can assign to each print job a billing code. This code can then be used in order to issue reports according the customers to which the jobs were printed and not according to who printed the jobs.

Cluster

The PPQ system supports clustering. In order to set up the system to use clustering, you need to first write the cluster name in the appropriate textbox.

You also need to take care of these settings:

- The PPQ Database can be accessed from all nodes of the cluster.

- The PPQ queue directory (by default c:\Sentinel\queue) is common to all cluster nodes.

- The PPQ print processor needs to be manually added to the cluster virtual printing itself (copy the PPQ.dll file to the proper print processor DLL folder, and add the print processor registry keys).
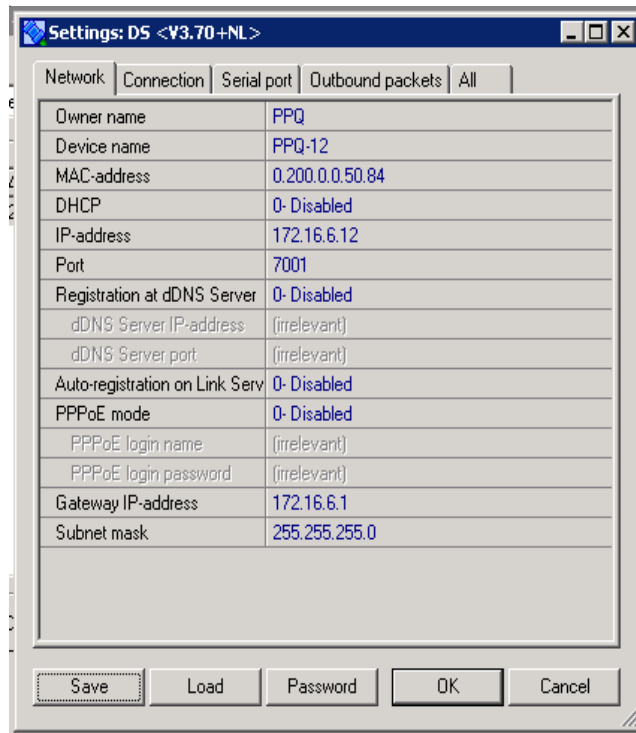
Adding a new device to the system

Before using a new device, it must be configured properly.

1. Attach the new device to the network.

2. Click Start - Programs - PPQ - DS Manager

3. The D.S. Manager program will run and start looking for new devices.
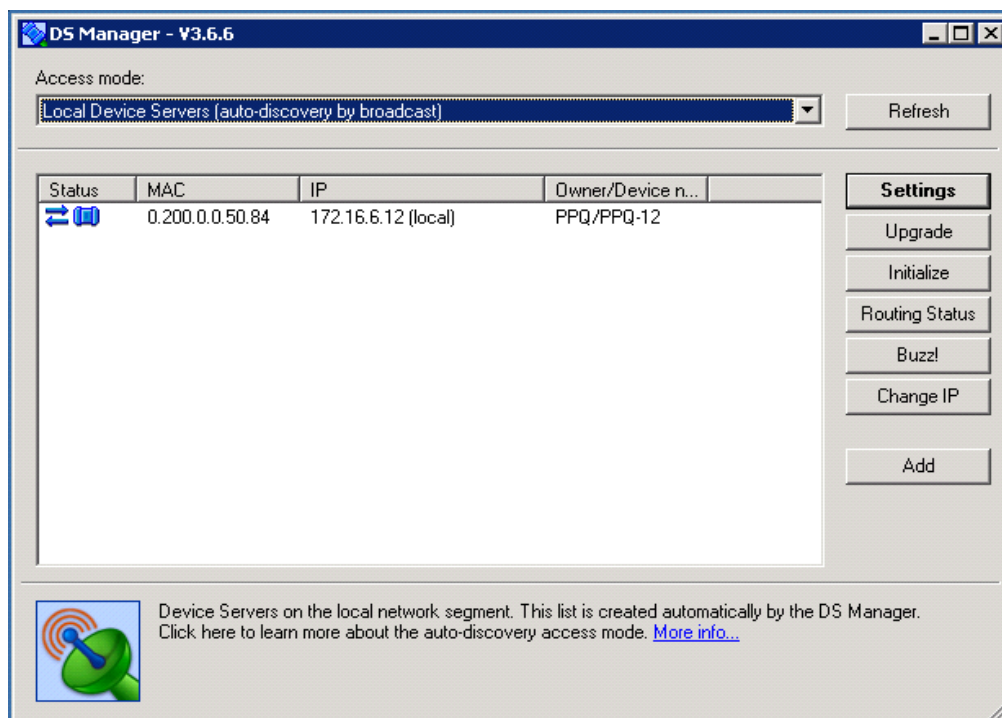
4. From the device list, select the device you want to configure, and double click it, the device's settings window will appear:

5. Click the <Load> button and select the predefined settings file from the PPQ path. This will load all the standard settings for the device
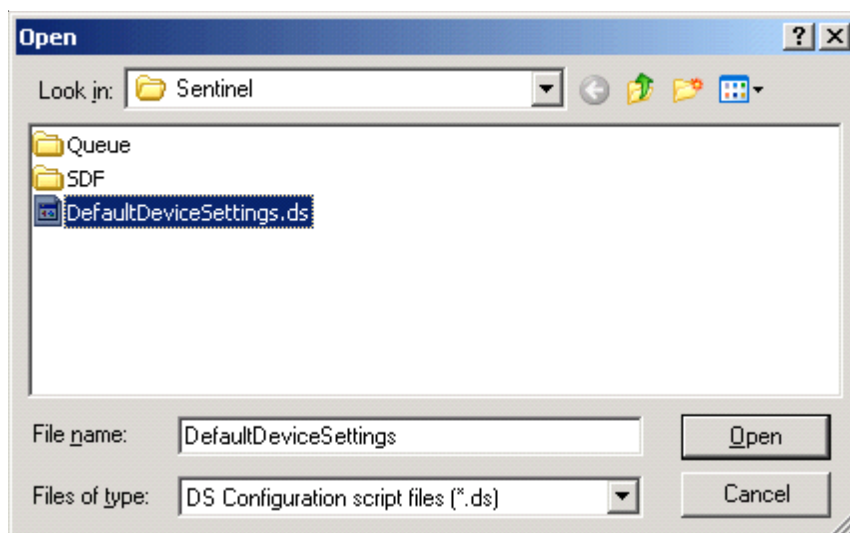
6. now you need to set up the specific definitions which will match your network environment and your PPQ system, these settings include:

    IP-address

    Gateway IP-address
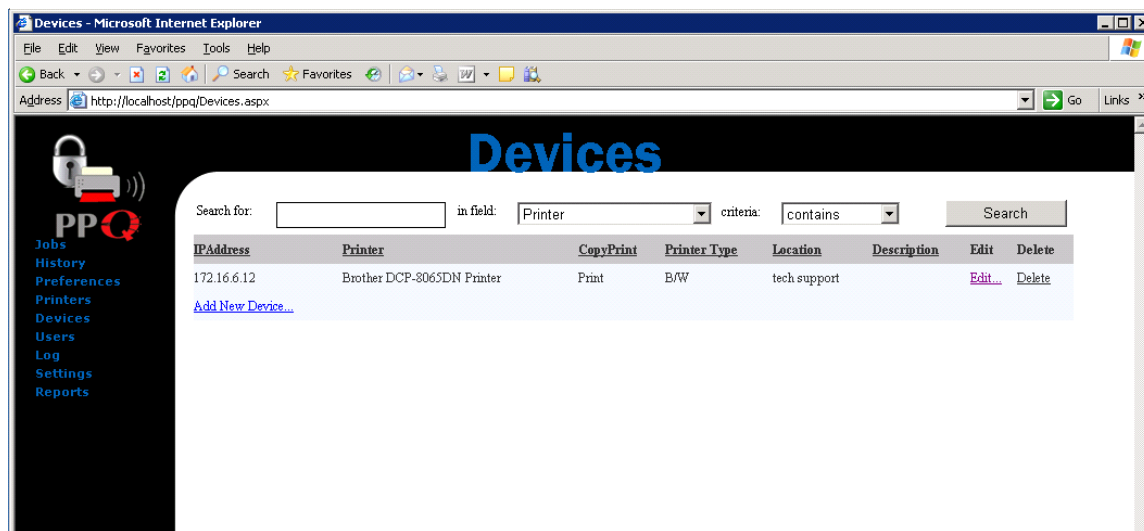
    Subnet Mask

    Destination IP-address

After configuring the device itself we must configure PPQ to use it.
After logging to the system (click Start - Programs - PPQ - Web PPQ, or go to http://localhost/PPQ in your web browser) click "Devices" on the left menu.
On the screen you should see all the devices currently configured. Pressing "Edit…" will let you edit the settings for the selected device.

To add a new device, click on "Add New Device" at the bottom of the table.

After clicking the link you will get the "Add Device" form.

- IP Address: Enter the IP Address of the new device.

- Location: In here you can describe the device location.

- Description: In here you can enter the device description.

- Print or Copy: In here you choose what is your machine type, it can be a printer, a copier or a multifunction machine.

- Printer: Here you get to choose which printer is attached to the device.

- Copier: If the device is attached to a copier machine that is not a printer, you need to give it an identification name since it doesn't appear in the windows printers list.

- Alternate Printer: Select an alternate printer to print the jobs if the main printer is failing, this is only if the jobs are printed automatically and no card is used.

- Heavy Duty Printer: If the "Maximum Pages to Change Printer" is lower then the number of pages in the current job, the job will be printed on this heavy duty printer, this is only if the jobs are printed automatically and no card is used.

- Printer Type: Select the type of the printer (Black and White / Color / Cheques/ copy or undefined)

- Activity Time: Select the time in which the device is active. If the fields are left empty, then the activity time is taken from the default value in the settings. If the activity time in the settings is also empty, the device is always available.

- Default Printer Permission: Select which PPQ should allow prints from everyone (with exceptions) or should deny all prints (with exceptions)

- Printer Group: In here you can add a printer group name. This field is used only in the reports as an informative field.

- Printer Group: In here you can add a printer group name. This field is used only in the reports as an informative field.

- Fixed Monthly Rental Cost: This field is used only in the reports as an informative field.

- Adjust Copy: Some printers report back, via the foreign interface cable, a wrong number of copies (e.g. a printer always reports back that 1 extra copy was made). Using this field, you can fix such problem.

- Maximum Pages to confirm: This is used only for virtual devices (non physical devices which are defined as IP 0.0.0.0). Here you can choose the number of pages that will cause PPQ popup to start and ask for a confirmation in the user's workstation before releasing the print job.

- Maximum Pages to Change Printer: Here you can choose the number of pages that will cause PPQ to switch the printer to the Heavy Duty one.

- Force Bill Code: When using the pop-up client, this will define the number of pages that can be printed without entering a bill code.

- · Count PS/PCL: This setting defines the way PPQ counts pages. You should leave this box unchecked unless a different count way is required by the system.

- · Printer Exception Users: Whatever you choose "Allow all" or "Deny all" on "Default printer Permission", you can add the exceptions here. Select the user from the users list and press <Add User> in order to add a user. To remove a user, select it from the Exceptions list and click <Remove>.

- Prices: you can put in the prices per page for each of the page types, these prices will appear on the reports generated by the system.

When done, Click <Insert> to add the new device to the devices list.

Upgrading the device's network firmware

Sometimes there is a need to upgrade the device's network firmware. Normally such action is required only if the vendor's helpdesk advise you to do so. In order to upgrade the device's network firmware (Tibbo unit) you first need a firmware file (*.bin).
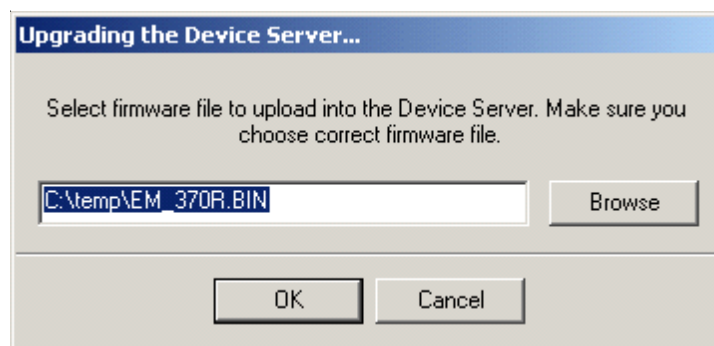
1. Attach the device you want to upgrade to the network.

2. Click Start - Programs - PPQ - DS Manager"

3. Browse for the *.bin file supplied to you, and click the <OK> button.

The D.S. Manager program will run and start looking for new devices.
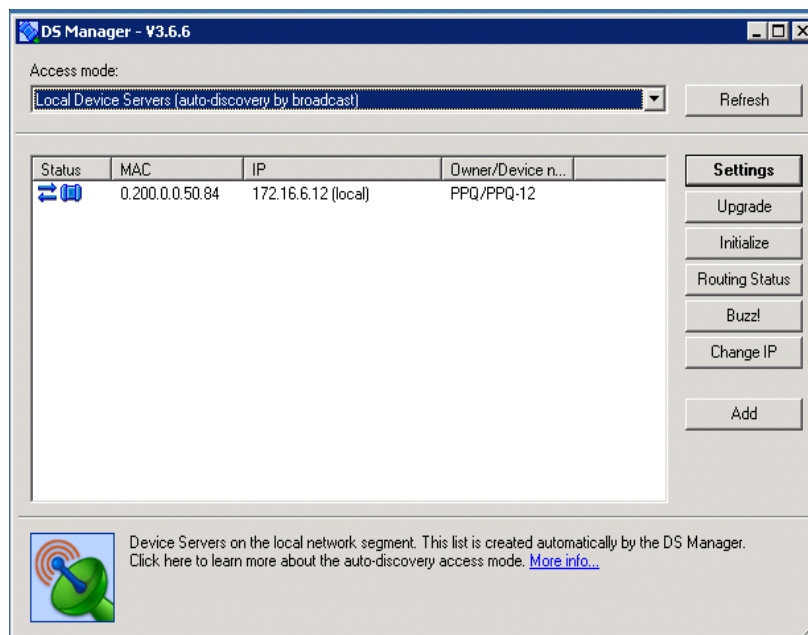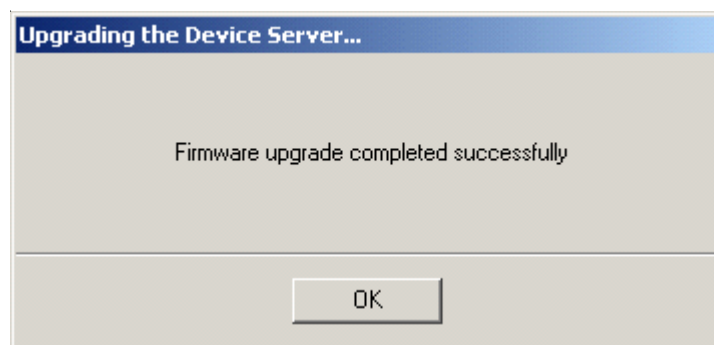

4. Select the device you want to upgrade and click the <Upgrade> button.

5. Browse for the *.bin file supplied to you, and click the <OK> button.

6. The new device firmware will be loaded into the device, and the following message should appear, click the <OK> button.

7. If the following message appears, click the <Retry> button and wait for the process to finish.

Adding New Users

Before a user can print using PPQ he must be added to the system.

There are several options to instruct the system to automatically synchronize with external sources such as the Active directory or an SQL server. To learn about how to configure such automatic synchronization, please see "Configuring PPQ Server Settings" under the "Auto Sync" Tab.

However, you can always add users to the system manually. To manually add a user, log on to the PPQ web interface and click "Users" on the left menu.
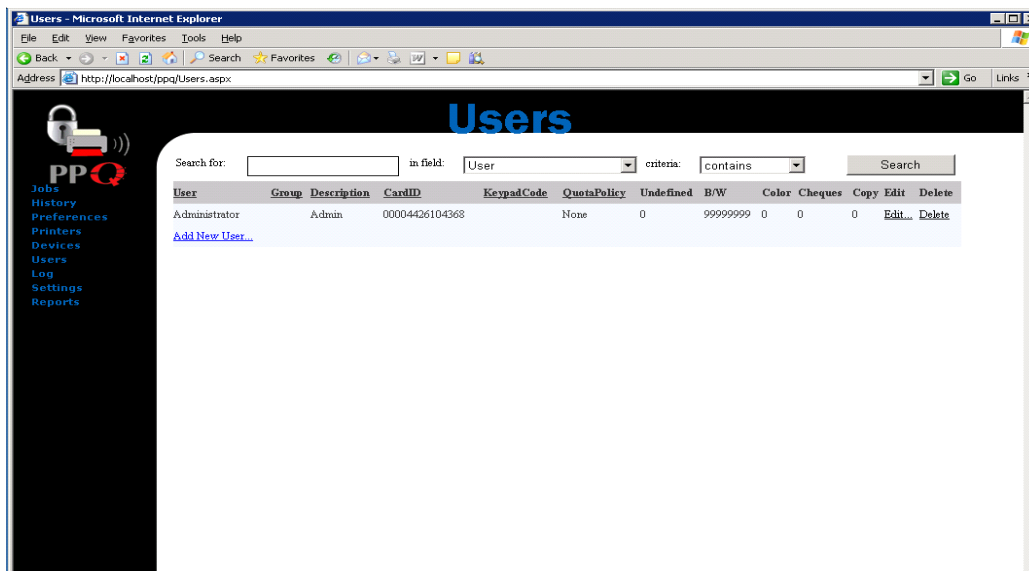
On the screen you should see all the users currently configured on the system. To edit a user click the <Edit…> link. To add a new users click <Add New User…>

You should see the "Add User" form.

- User: Enter the name of the user. This name must be the same as the user login name on the Windows system.

- Description: Add here any description you want about the user.

- Card ID: Enter the card ID of the user.

- Group: Enter the group to which the user belongs.

- Mail: Enter the user's email address

- Print Options: This setting override the same settings as defined on the General Settings page. To keep the default settings, set it to "use default". To see the meaning of each of the options, see "Configuring PPQ Server Settings" under the "Printing" Tab.

- Administrator: Checking this box will set the user as an administrator for the PPQ system. An administrator can connect to the PPQ web interface from remote machines and get the administrator menu as shown above (non administrators will only see their own print jobs).

- Exception User: This is an informative field in the database that can be used for external purposes.

- Save jobs: Checking this checkbox will cause all print jobs sent by this user to be saved into a folder. This allows the system administrator to reprint the user's jobs and see what was printed by this user.

- Auto print: Checking this checkbox will cause all print jobs sent by this user to be automatically released and not wait for the user to place its card. However, the print job information is still logged into the database.

- Allow Web Release: Selecting the "Allow" option in this combo box will allow the user to log on to the PPQ server web interface and release his jobs without using the reader device.

- Allow keypad release: Selecting the "Allow" option in this combo box will allow the user to release print jobs by typing his card ID or keypad code in the keypad of the device. If the "Deny" option is selected, then the user must use only his card.

- Alternate user: In here you can select another user name (hereafter: user2), and the first user can release the print jobs for the second user as well. E.g: if you have a manager that has several assistants, you can put the manager's user name as the Alternate user in each of the assistants, and then all of them can release print jobs for the manager.

- Keypad code: Sometimes the card code is very long, and if the user wants to be able to type the code on the keypad of the device instead of using a card, it is a very long code to type. In here you can add another number that will be the user's keypad code.

- Temp card ID: If a user forgot his card, you can write here another card number that will be used for this user, this allows you to give the user a temporary card without deleting the original card number for this user.

- Quota Policy: In here you can select the quota policy for this user.

- Update limits now: After selecting a quota policy, you can force the PPQ system to update the user's limits according to the quota policy. The default value for a new user is to update the quota and the default value when editing an existing user is not to update the quota.

- Force Bill Code: When using the pop-up client, this will define the number of pages that can be printed without entering a bill code. This definition overrides the definition selected in the Device for the specific user.

- Maximum Pages to confirm: This is used only for virtual devices (non physical devices which are defined as IP 0.0.0.0). Here you can choose the number of pages that will cause PPQ popup to start and ask for a confirmation in the user's workstation before releasing the print job. This definition overrides the definition selected in the Device for the specific user.

- Message: A message that will be presented to the user while accessing the web interface.

- [X] Limit: These areas allow you to set a printing limit to different print types (B&W prints, color prints, etc…). Please note that setting the fields to 0 (zero) will disable all the prints for the current type. To set fields to "unlimited" leave it blank.

After configuring the user press <Add> to apply the settings.

Databases

The standard installation of the PPQ server is using the Microsoft Access Database to store all the data related to the PPQ activity. Microsoft Access itself is not required to be installed on the computer. PPQ is using the MDB file directly. However, if you choose (and have a proper license for it), you can install Microsoft Access and use it to open the PPQ Database file (usually located under C:\Inetpub\wwwroot\PPQ\App_Data\PPQ.MDB) and then you can make additional reports and further use the data collected in the system.

Changing the Access Database into SQL Database

If you don't want to use the Microsoft Access Database, you can set the PPQ server to work with an SQL server database, to set this up, follow these instructions:

1. Edit the file C:\inetpub\wwwroot\PPQ\web.config according to the following scheme:

   <add name="DatabaseConnection"
   connectionString="Provider=SQLOLEDB.1; *Server=<SERVER_NAME>;*
   Database=PPQ;Uid=<USER_ID>;Pwd=<PASSWORD>;"
   providerName="System.Data.OleDb" />

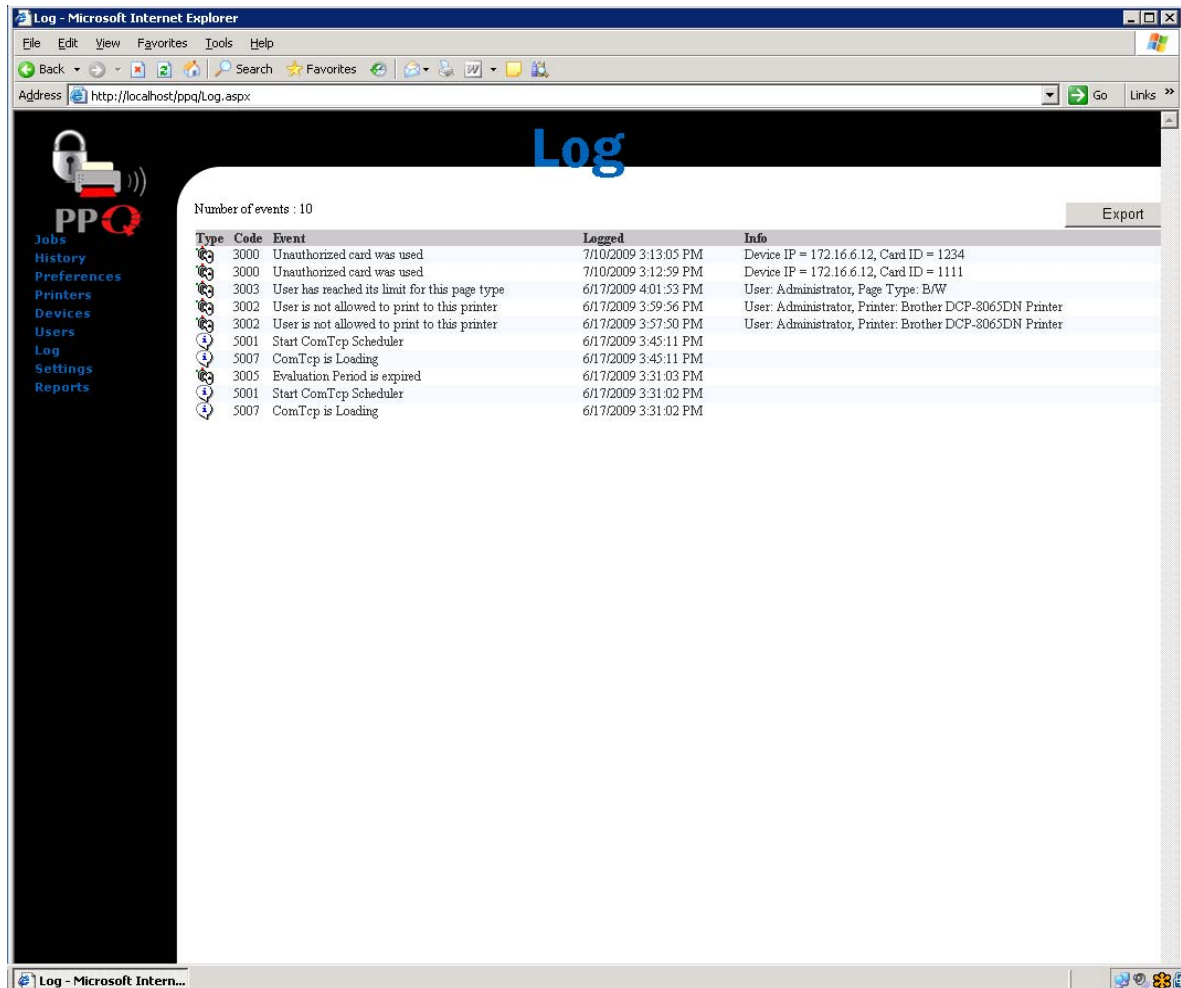   Note: usually there is a line in the file that starts with:
   <add name="DatabaseConnection1"…
   This line is intended for the SQL connection string, and you can remove the "1" from this line, add the "1" to the line above that was without it and edit only the <Server Name> <User ID> <Password> fields.

1. Open the registry by clicking "Start - Run" and typing "regedit", and browse to the key

2. Start the Registry Editor (by clicking Start - Run, and typing the command REGEDIT). Go to following registry key:
   HKEY_LOCAL_MACHINE\SOFTWARE\Sentinel\Settings\
   and edit the value "DbConnectionString" to be the same as the value you typed in the web.config file.

3. Adding the database to the SQL Server:

   A. Build a new database with the name "PPQ".

   B. Right click the new database, and select Tasks - Import.

   C. Select the MDB file under C:\Inetpub\wwwroot\PPQ\App_Data\PPQ.MDB and choose a destination – SQL.

   D. Select the "Copy Data" option (not "Write") and choose "Select All".

   E. Mark the "Execute immediately" option.

4. Go to the PPQ - Tables and right click the first table, choose the "Modify" option (in SQL 2005) or the "Open Design" option (in SQL 2000). Then make the following modifications to each of the tables:

   A. In each ID field, verify that the "Identity Specification" = YES.

   B. If the function "Allow Null" is checked, uncheck it.

   C. Verify in all tables that no field is defined as "Float" field type, and if so change it to "Integer" field type.

Logging and Errors

The log is where you can see all events, errors and warnings occur is the system. To get to it, simply click "Log" on the left menu.

Reports

After the system is running for a while, you will probably want to issue some reports to better understand and improve the behavior of your organization's printing system.

In order to generate reports, simply click "Reports" on the left menu
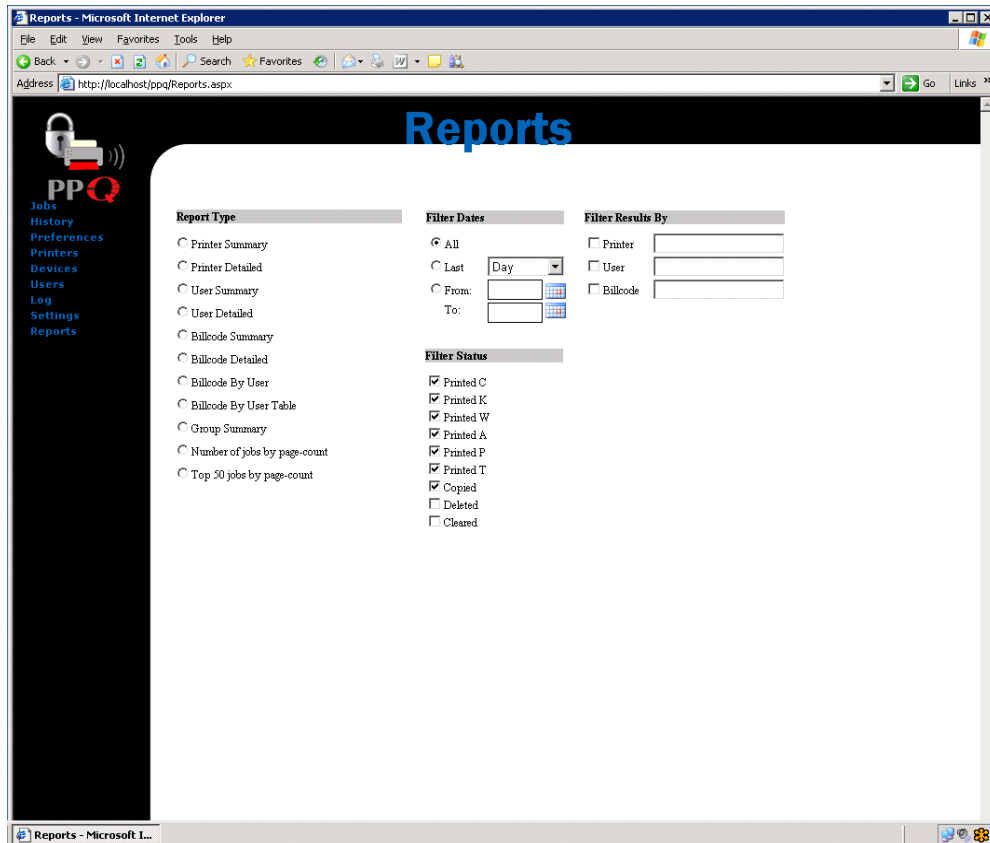
There are several types of reports that can be issued from the system, each of these reports can be filtered according to dates, according to the job status and according to some data fields such as printer, user and billcode.

After you finished selecting the report type and the filters, click the <Execute> button to view the selected report.

Troubleshooting

Failed to add PPQ Service

<u>Symptoms</u>

When trying to start the PPQ service, you see that there is no such service added to the system. If you look at the file "c:\Sentinel\service.log" you see the following error: " Failed to create service PPQ, error code = 1073".

<u>Cause</u>

Sometimes there are other services that may use the same name "PPQ" and when the installation program tries to install the service it fails.

<u>Resolution</u>

Change the name of the service and try to add it manually. Follow these steps:

1. Open the file "c:\Sentinel\service.ini" using notepad.

2. Under the section [Settings] change the key "ServiceName" to something else, for example change it to: ServiceName = SPSPPQ

3. Save the file.

4. Open a DOS box command line, and change the directory to "c:\Sentinel".

5. Write the command "service –i".

6. Open the services and check to see if the PPQ service was added in the new name.

Failed to access IIS metabase

Symptoms

When trying to start the PPQ web page, you get the following error:

Server Error in '/PPQ' Application.

Failed to access IIS metabase.

Description: An unhandled exception occurred during the execution of the current web request. Please review the stack trace for more information about the error and where it originated in the code.

Exception Details: System.Web.Hosting.HostingEnvironmentException: Failed to access IIS metabase.

The process account used to run ASP.NET must have read access to the IIS metabase (e.g. IIS://servername/W3SVC). For information on modifying metabase permissions, please see http://support.microsoft.com/?kbid=267904.

Source Error:

```
An unhandled exception was generated during the execution of the current web request. Information regarding the
origin and location of the exception can be identified using the exception stack trace below.
```

Stack Trace:

```
[HostingEnvironmentException: Failed to access IIS metabase.]
   System.Web.Configuration.MetabaseServerConfig.MapPathCaching(String siteID, VirtualPath path) +3492122
   System.Web.Configuration.MetabaseServerConfig.System.Web.Configuration.IConfigMapPath.MapPath(String siteID, VirtualPath vpath) +9
   System.Web.Hosting.HostingEnvironment.MapPathActual(VirtualPath virtualPath, Boolean permitNull) +163
   System.Web.CachedPathData.GetConfigPathData(String configPath) +582
   System.Web.CachedPathData.GetConfigPathData(String configPath) +243
   System.Web.CachedPathData.GetConfigPathData(String configPath) +243
   System.Web.CachedPathData.GetApplicationPathData() +68
   System.Web.CachedPathData.GetVirtualPathData(VirtualPath virtualPath, Boolean permitPathsOutsideApp) +3385651
   System.Web.Configuration.RuntimeConfig.GetLKGRuntimeConfig(VirtualPath path) +189
```

Cause

Version Information: Microsoft .NET Framework Version:2.0.50727.42; ASP.NET Version:2.0.50727.42

This error usually occurs when the IIS was installed after the DotNet Framework 2.0 was already installed. Then the rights to the ASPNET user are not set correctly. The DotNet Framework must be installed after the IIS.

Resolution

Run the command

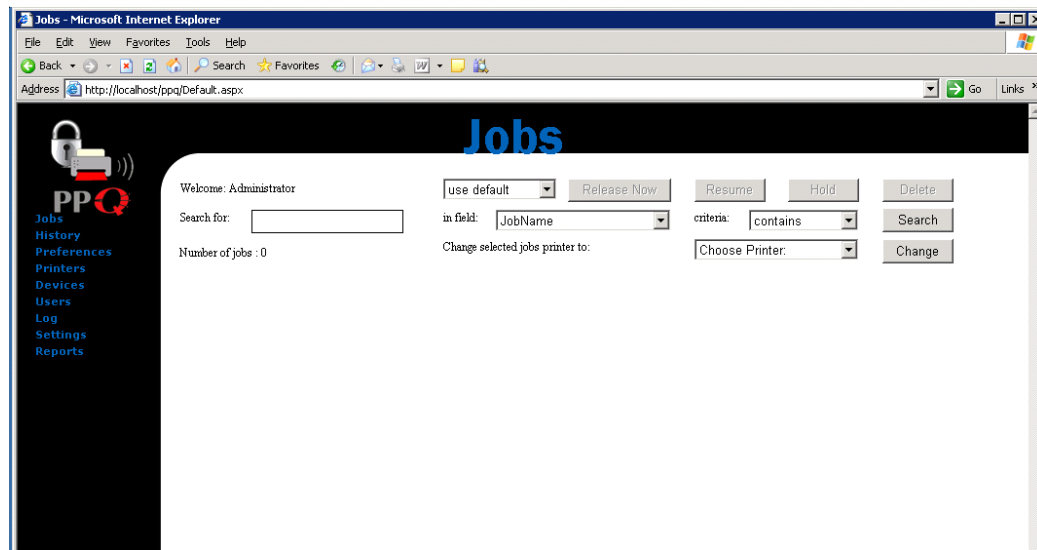**"C:\WINdows\Microsoft.NET\Framework\v2.0.50727\aspnet_regiis -i"**

If it fails, try the following course of action:

1. Uninstall PPQ, DotNet Framework 2.0 and IIS.

2. Install IIS.

3. Install DotNet Framework 2.0.

4. Install PPQ.

Wrong user name appears in the web interface

Symptoms

When running the web interface, the same user name always appears (usually starts with the prefix "IUSR_":

Cause

This error occurs when the IIS is using the "Anonymous access" instead of the "Integrated Windows authentication".
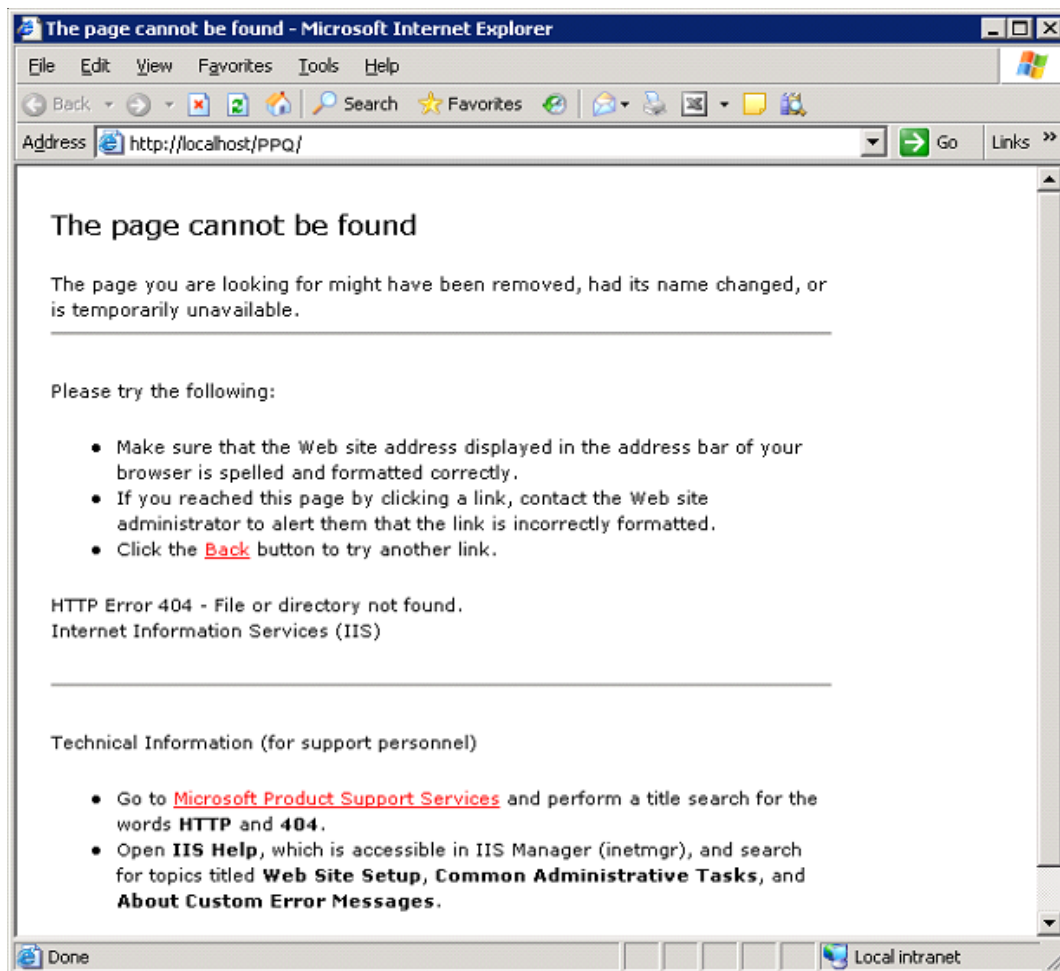
Resolution

Follow step No. 8 in the installation process to set the proper settings.

HTTP Error 404 - File or Directory not found

Symptoms

When trying to start the PPQ web page, you get the following error: "HTTP Error 404 - File or Directory not found":


Cause

By default, when IIS is installed on any version of the Windows Server 2003 family, IIS only serves static content (HTML).

Resolution

First check that the IIS is running, and the "Default Web Site" is not stopped. If it is running, and you may need to permit IIS to serve content that requires a specific ISAPI or CGI extension that is already listed in the Web service extensions list, follow these steps:

1. Open IIS Manager, expand the master server node (that is, the Servername node), and then select the Web service extensions node.
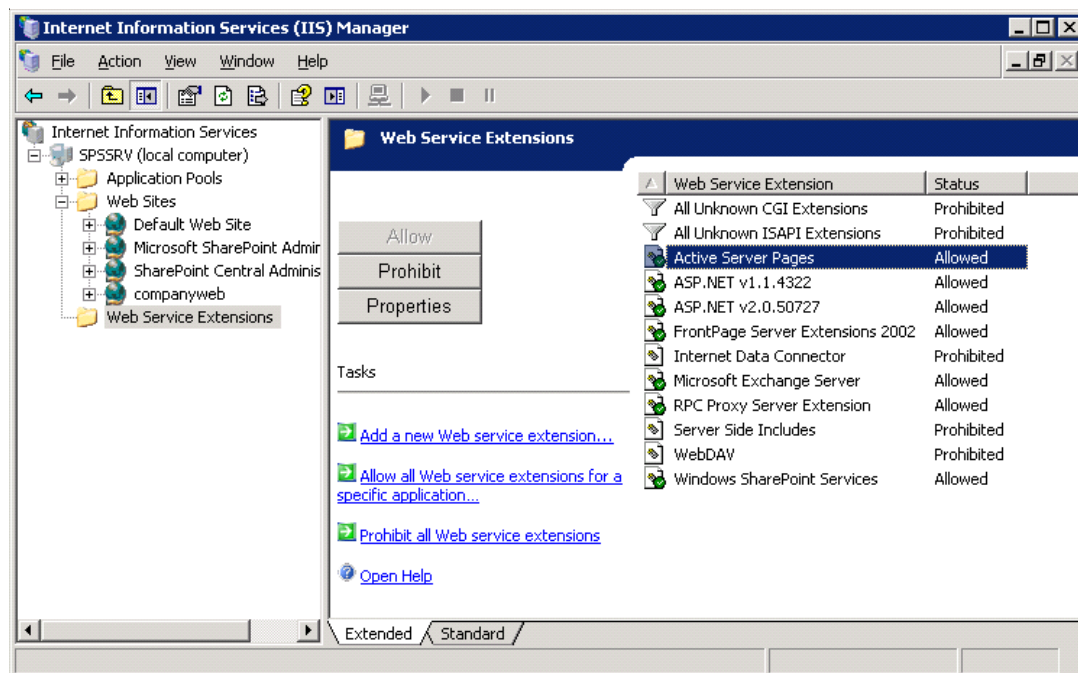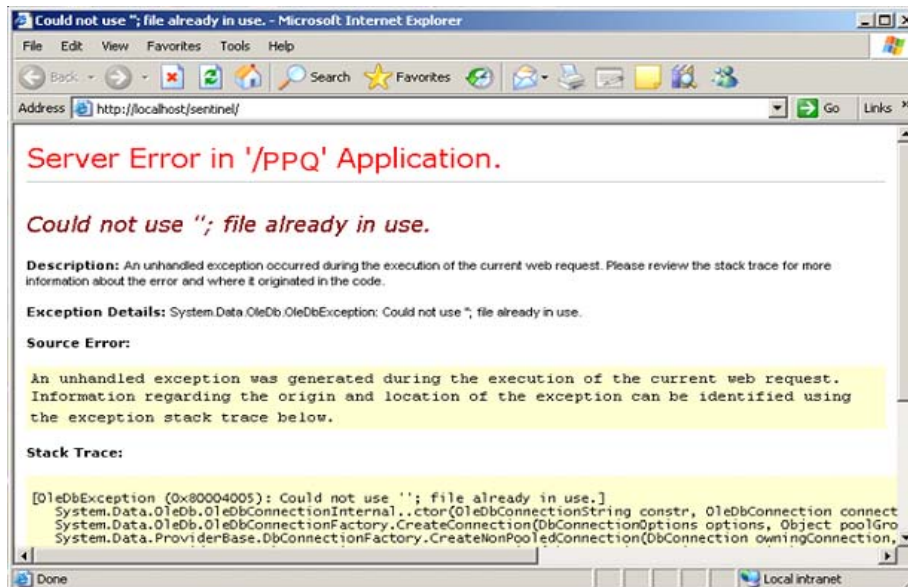

2. In the right pane of IIS Manager, make sure that the "Active Server Pages" extension is allowed and that the ASP.NET v2.0.50727 is allowed.

3. Reset the IIS service by typing "IISRESET" in the command line.

Could not use "; file already in use.

Symptoms

When trying to start the PPQ web page, you get the following error:

Cause

The database is currently locked by the PPQ service because the right permissions haven't been set on it. To verify that this is indeed the problem - stop the PPQ service - Go to "Services" (Start - Settings - Control Panel - Administrative Tools - Services), Stop the PPQ service by right clicking "PPQ" and choose the "Stop" option. Now go back and refresh the Web PPQ page and it should load without the problem.

Resolution (1)

1. Make sure the service in running. If you stopped it – start it again (In the services section – click on the PPQ service and click on the start button).

2. Open the File Explorer and navigate to:
   C:\Inetpub\wwwroot\PPQ\App_Data\

3. Right click on the file "Sentinel.mdb" and click properties.

4. Click on the Security tab. If you don't see a security tab, close the properties window and open the Tools menu and click Folder Options. Click on the view tab and remove the "V" mark from the last option: "use simple file sharing (Recommended)".
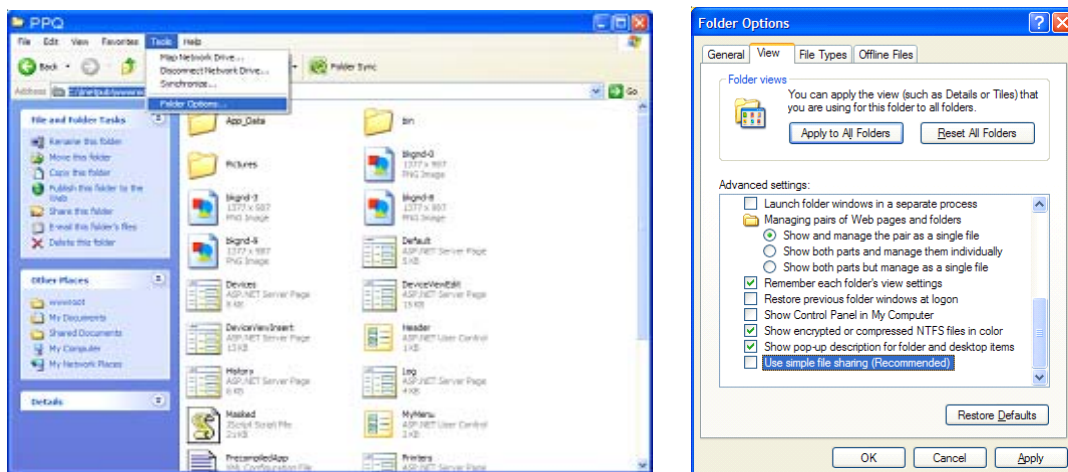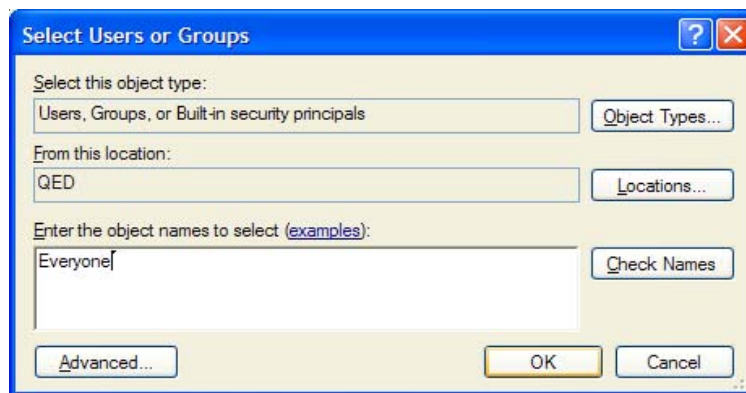

Click OK, confirm and go back to the folder.

1. Right click on the "Sentinel.mdb" file and choose properties. This time you should see a security tab, choose it and Click the "Add" button.
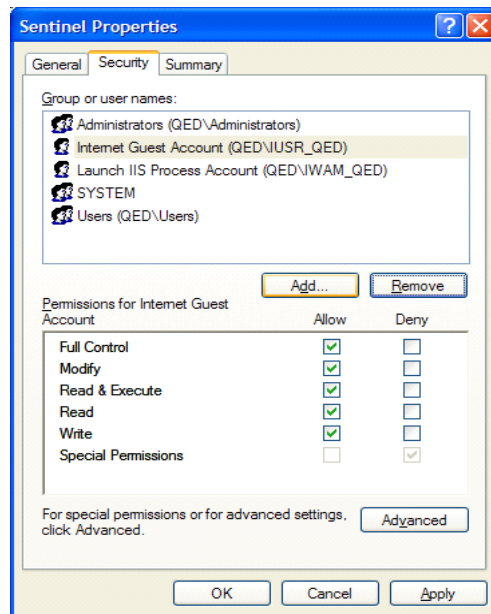
In the Textbox type "Everyone" and click ok.

Then click on "Everyone" and mark the checkbox in the "Full Control" box under

"Allow". It will automatically mark all other checkboxes under "Allow". Click OK.

1. Repeat these actions with the file "sentinel.ldb".

2. Now you can access the web PPQ with the service running.
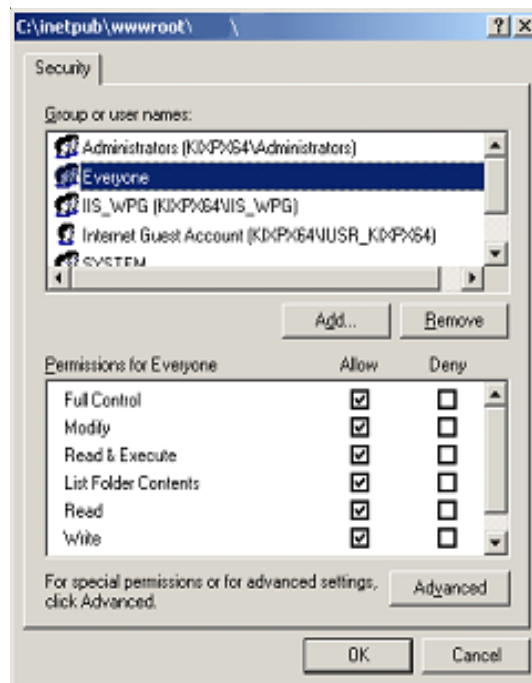
Resolution (2)

If after the first resolution you still have the same problem, follow these steps:

1. Open IIS Manager, expand the master server node (that is, the Servername node), and then under Web Sites - Default Web Site, select PPQ site. Right click the site and select Permissions.
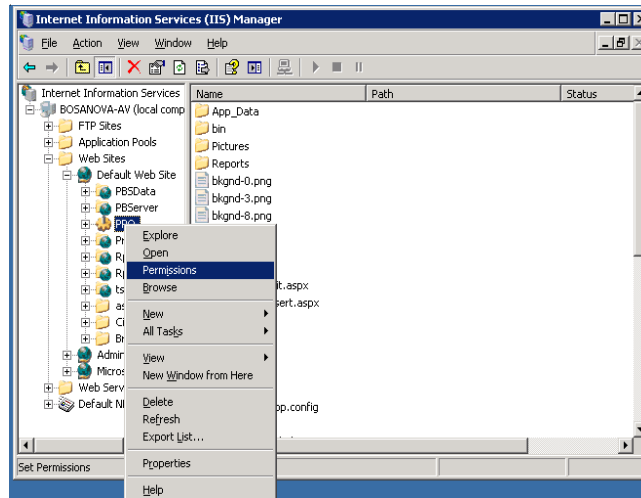
2. Click on "Everyone" and mark the checkbox in the "Full Control" box under "Allow" column.

Configuration Error

Symptoms

When trying to start the PPQ web page, you get the following error:
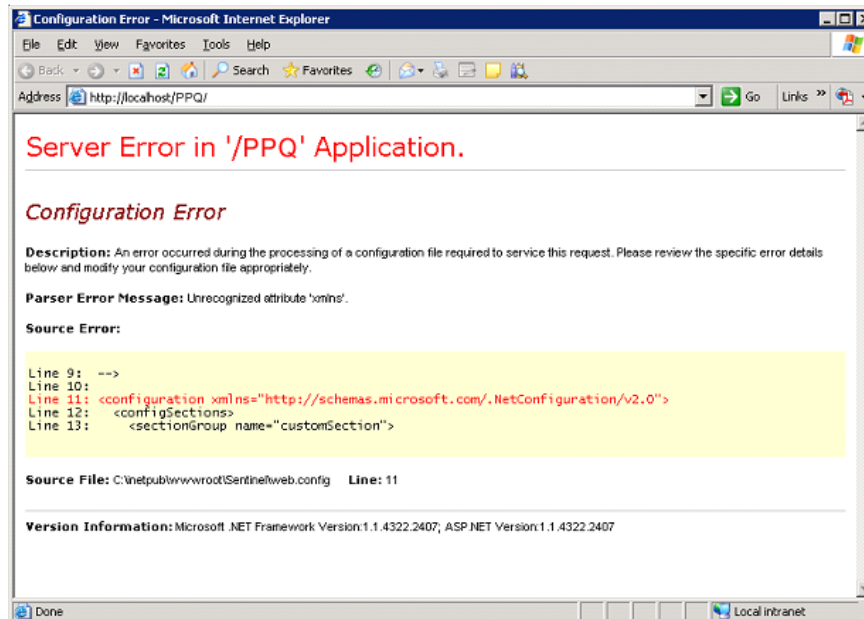
Cause

This error occurs when the PPQ is using after the DotNet Framework 1.4 instead of

the DotNet Framework 2.0.

Resolution

Go to IIS Settings (Start - Settings - Control Panel - Administrative Tools - Internet Information Services). Expand "Local Computer\Web Sites\Default Web Site". Right click "PPQ" and choose Properties".

Go to "ASP.NET" tab and make sure that the ASP.Net Version is 2.X

Service Unavailable Error

<u>Symptoms</u>

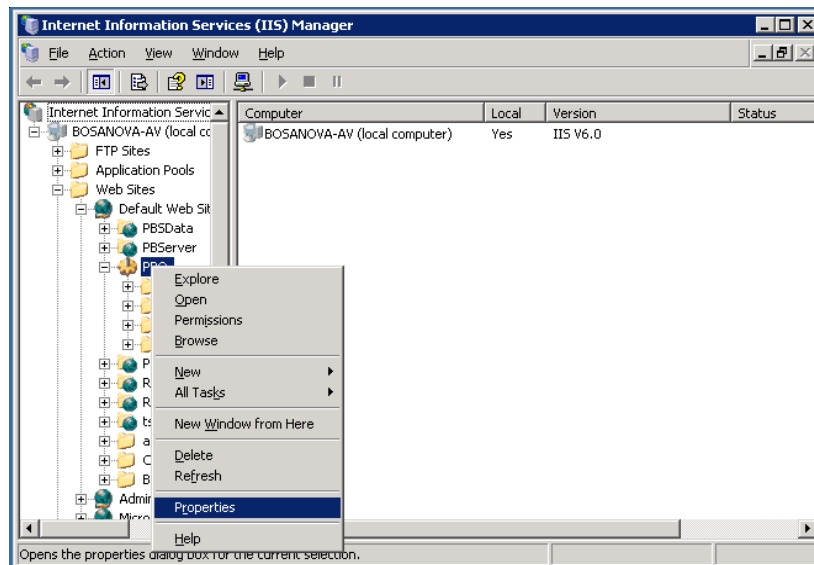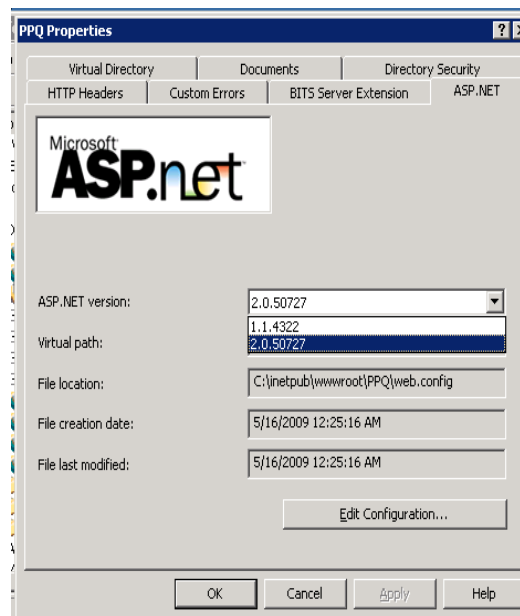When trying to start the PPQ web page, you get the following error: "Service Unavailable"

<u>Cause</u>

This issue may occur if the server that is running Microsoft Internet Information Services (IIS) 6.0 is also a domain controller. The problem occurs because the Application pool is using the NT Authority\Network Service account, and the NT Authority\Network Service account may not have permissions to access the required folders.

<u>Resolution</u>

To resolve this problem, manually set permissions on the folders for the IIS_WPG group, and then set permissions on the folders for the NT Authority\Network Service account.

To set permissions on the folders for the **IIS_WPG** group and the **NT Authority\Network Service account**, follow these steps:

1. Start Windows Explorer, and then open the following folder:
    %systemroot%\Help\iisHelp

2. In the right pane, right-click the **Common** folder, and then click **Sharing and Security**.

3. Click the **Security** tab, click **Add**, type **IIS_WPG**, and then click **OK**.

1. With **IIS_WPG** selected, click to select the following check boxes under the **Allow** column, and then click **OK**:

   - Read and Execute

   - List Folder Contents

   - Read

2. Repeat the above step with the **NETWORK SERVICE** instead of **IIS_WPG**.

3. Open the following folder:

   %systemroot%\system32\inetsrv

4. In the right pane, right-click the **ASP Compiled Templates** folder, and then click **Sharing and Security**.

5. Click the **Security** tab, click the **IIS_WPG** group, and then click to select the **Full Control** check box under the **Allow** column. Click **OK**.

6. Repeat the above step with the **NETWORK SERVICE** instead of **IIS_WPG**.

7. Open the following folder: %systemroot%

8. In the right pane, right-click the **IIS Temporary Compressed** folder, and then click **Sharing and Security**.

9. Click the **Security** tab, click the **IIS_WPG** group, and then click to select the **Full Control** check box under the **Allow** column. Click OK.

10. Repeat the above step with the **NETWORK SERVICE** instead of **IIS_WPG**.

11. After you have completed these steps, restart the IIS Admin service from the Services snap-in or from the Computer Management snap-in.

Registry permissions in windows 2000/XP

<u>Overview</u>

The PPQ installation requires you to change the permissions of some registry entries, and enable "Everyone" to read/write to it. The reason is that the last job number is stored in the registry. However, if you are using Windows 2000/XP and the way to change the permissions is different then Windows 2003.

<u>Details</u>

To edit the registry permissions in the Windows 2000/XP operating system

1. Press **Start** - **Run**, and then type **regedt32 or regedit**.

2. Go to HKEY_LOCAL_MACHINE\SOFTWARE\Sentinel.

3. From the **Edit** menu (or **Security** menu in Windows 2000), select Permissions. Check to see if **"Everyone"** appears in the list. If **"Everyone"** is listed, complete procedure A. Otherwise, complete procedure B.

    A. If **"Everyone**" appears in the list:

        a. Select **"Everyone"**, and then select the **Full Control** and **Read** checkboxes in the Allow column.

        b. Click **Apply** and **OK**, and then exit the registry editor and restart your computer.

    B. If **"Everyone"** doesn't appear in the list:

        a. Click the **Add** button.

        b. Type **"Everyone"** in the **Enter the object names** box (or select the local network in the **Look in** box in windows 2000).

a. Click the **Check Names** button, and wait until **"Everyone"** is underlined.(or select **"Everyone"** and click the **Add** button in windows 2000) , and click OK

b. Select **"Everyone"**, and then select the **Full Control** and **Read** check boxes in the Allow column.

c. Click **Apply** and **OK**, and then exit the registry editor and restart your computer.

Job ID number is inconsistent or not advancing

Symptoms

The PPQ is saving the last job number as a key in the registry, this key must have write access permission to all the users using the system. If you forgot to allow writing access for all users (usually everyone à full control, for this specific registry key), then PPQ can't advance the last job ID and the job numbers are staying the same. Another possibility is that PPQ can't access the registry key at all, in this case PPQ will assign a random number as a job ID, but if there are many jobs, this number can sometimes collide.
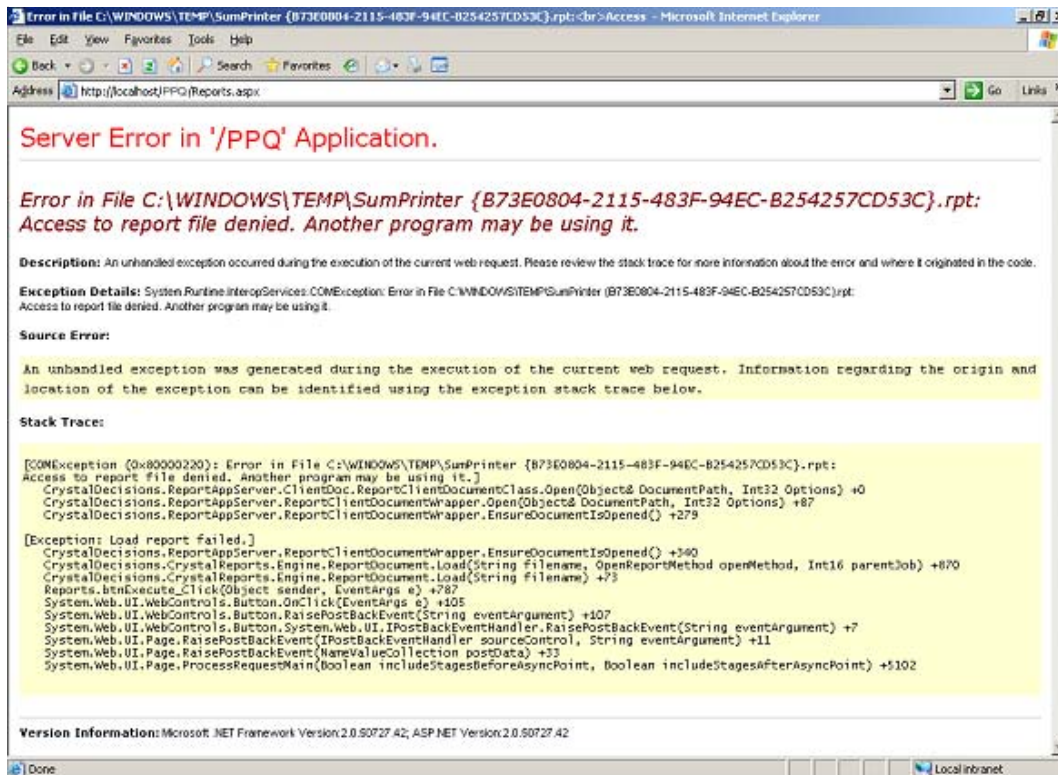
Resolution

Add a writing permission to the PPQ registry key as described in the installation process.

Error in File C:\WINDOWS\TEMP… when trying to make reports

Symptoms

When trying to make any report from the PPQ system, the following error is received:

Cause

The PPQ is using Crystal Reports to create its reports, and it requires access to the windows temp folder to make some temporary calculations before generating the reports. This error occurs when the Crystal Reports don't have access to the windows temporary folder (usually c:\windows\temp).
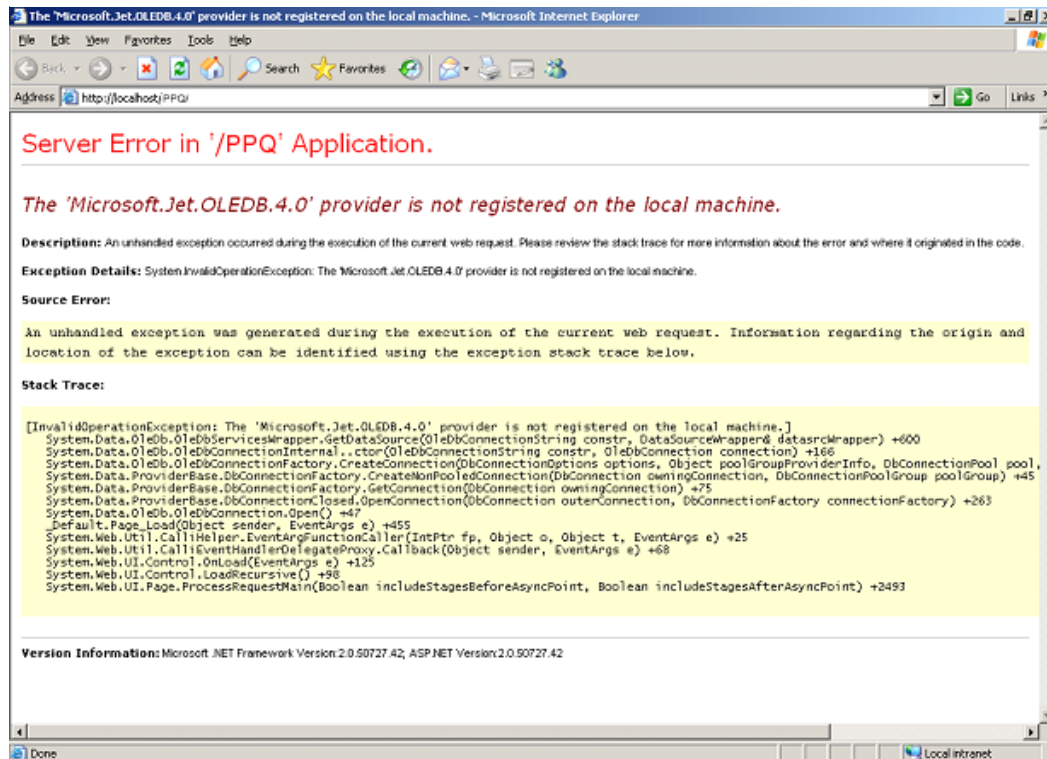
Resolution

Add a writing permission to the windows temp folder as described in the installation process.

The 'Microsoft.Jet.OLEDB.4.0' provider is not registered

Symptoms

When running the web interface, the following error appears on the browser:

Cause

This error occurs if there is no corrects ODBC driver installed that PPQ can use to reach the Access database. This usually occurs if you are running x64 operating system that has no such ODBC driver.
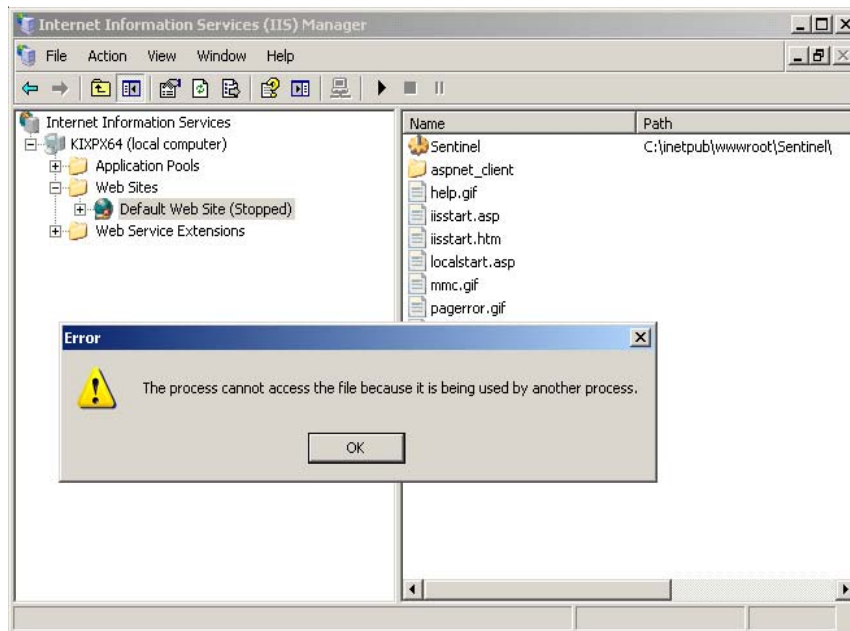
Resolution

Follow the installation instructions for x64 operating systems in order to configure PPQ to work with SQL express database instead of with Access.

The process cannot access the file

<u>Symptoms</u>

You can't use the web interface since the default web site is stopped, but when you go to the IIS Manager and try to start the web site, you get the following message:

<u>Cause</u>

This error usually occurs when the web port (usually port 80) is taken by another application.
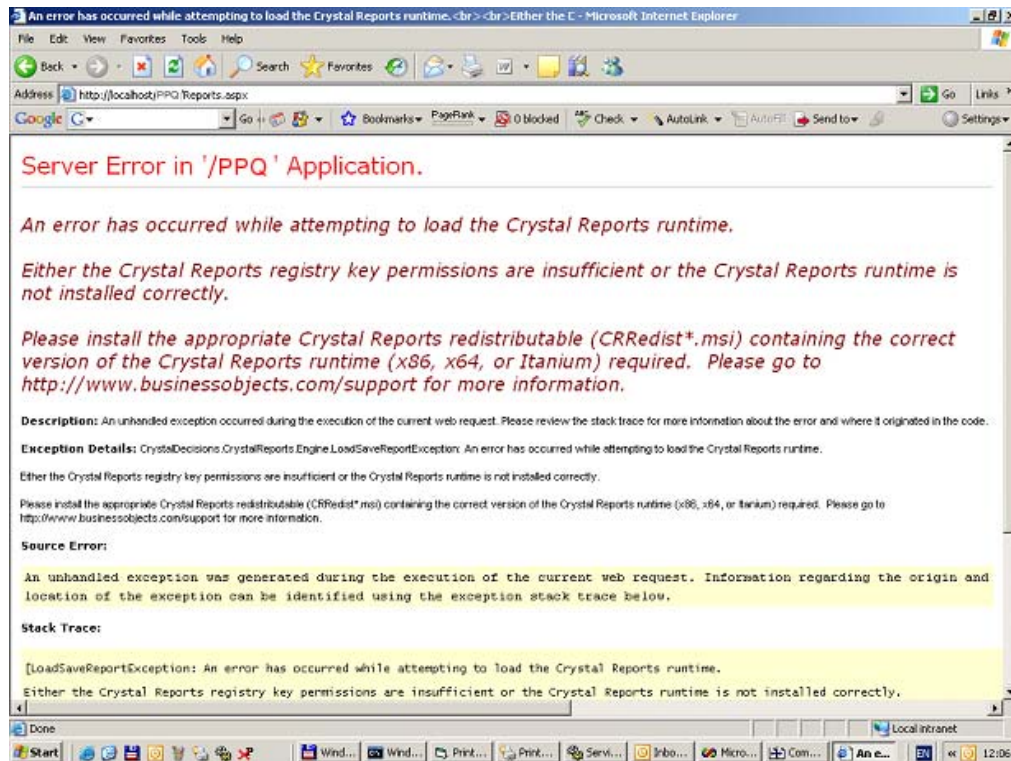
<u>Resolution</u>

See the following article for assistance: http://support.microsoft.com/kb/890015. Try to look for application that may take the web port (such as skype) and close them.

An error has occurred while trying to load the Crystal Reports

Symptoms

When trying to make any report from the PPQ system, the following error is received:

Cause

This error usually occurs when the wrong Crystal Reports runtime is installed, usually when your operating system is x64 and the installed crystal reports runtime is 32 bit version.

Resolution

Follow the installation instructions for x64 operating systems, and install the 64 bit version of Crystal Reports runtime.