



PrintUsagePro Print Monitor system software

Version:V4.0

User Installation Guide

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1. Term Definition

The following content involves the print or Network-related terminology; in order to avoid confusion, describe these Definitions here.

Print server	Refers to the computer installed on Windows 2003/7/2008/2012, Shared printers and provided user services. The following document, sometimes in order to emphasize the difference between the print server and Hardware, also known as the Windows print server.
The outer print server	A small hardware, can convert one or several parallel port, USB port to connect directly to a printer on the network equipment. For example: HP Jetdirect 500x.
Network printer (hardware)	The built-in network interface directly connected to the printer on a LAN; Through external print servers connected to LPT, USB printer interface, also known as network printers.
Traditional printer (hardware)	Usually refers to the LPT, USB printer;The printer must be connected to a computer to print.
Network printing method	Each customer establishment based on TCP/IP port with local printer to print to the network printer type. This way of printing doesn't need to have a dedicated computer as a print server.
Shared printing method	Refers to each customer to print by connecting the Printer which shared printer for printing type in Windows server. This way, there must be a dedicated computer as a print server.
Active directory domain	The information stored on the object of the network and make these information can be used for users and network administrators. Allow Internet users access to any position on the network with a single login process which allows access to resources.

This document applies to V4.0 PrintUsage print monitoring system V4.0 standard and V4.0 enterprise edition. The following content most are suitable for the two versions. Enterprise edition content will be labeled "(enterprise edition only)".

2. Product Overview

2.1 Product Main function

Monitor print behavior and record to the log.

- Records each print servers, printers, document name, the user, computer, print the number of bytes, print pages, paper size, printing time, color, printing costs, etc.

Save Print contents and reprint (enterprise edition only)

- If use the PrintUsage Universal Driver for deployment, user can print and save with any printers, and view all print content.
- If use the printer manufacturer specific drivers for deployment, user can save the print content and refer any time(Support the printer languages PCL, PostScript, EMF, and XPS)
- Choose to save printer's printing content and converted the resolution of the images. Set up for some users and not to save the print contents.

Print content retrieval(enterprise edition only)

- Use PrintUsage generic driver can extract the part of the text in the Print content.(Note: cannot extract text contained in images).

Force headers, watermarks(enterprise edition only)

- Use PrintUsage generic driver, user can add headers, watermarks, two-dimensional code, Bar/2D code,and others in the Print contents.
- For non PrintUsage part of the printer driver can also add headers, but need according to the actual printer test.

Print billing and Control

- Can be in accordance with the printer, paper, size, color/black and white, single/Duplex side, print/copy/scan/fax respectively set the unit price per page.
- User quota as the main form of cost control, and set fixed quotas, unlimited quota, and according to the year, quarter, month, week, day printing quota.
- From the time, file type, users and many others to print control.

Statement Analysis

- Seven categories of the default report type, from usage, printing costs, printing load and many others provide report with pictures.

Swipe and Print(Extended functions can be purchased separately)

- Support EMID, IC, HID and other smart cards, for user's print jobs, after swiping through certification output the papers.

Swipe and Print version upgrade(Extension function, buy separately)

- Realize the user print from a driver on the same brands and models of printers out of paper

Roaming print(Extension function, buy separately)

- User from a driver to print, and choose any type of printer out of papers. Achieve follow Me Print.

Manually Audited(Extension function, buy separately)

- For some sensitive job or a printer or department personnel, can force to achieve print job manual review. All work must be released after the audit to print.

Client Audit(Extension function, buy separately)

- For some use public print terminal or print environment not well definition print personnel, provides a way of cost allocation.

Multi-function equipment management

- For Toshiba, Kyocera, Sharp MFP, to carry on the function, cost controls.
- Printing Counterfoil of traceability, copy Counterfoil, scan, and fax record.
- Manually Audited.
- Scan to me.
- Automatic registration card number

2.2 Product features

save the print content

- Preserved the entire contents of each print job as Tiff image formats,Can view the Web Page(Enterprise edition only).

Web Page management

- System management and view reports in Web page in each networked computer any time, don't need to install any client application.
- To set a number of different roles and permission administrators, realize multi-level management(Enterprise edition only)
- System only needs to install on the server, to print the client completely transparent, has no effect on the users' printed.
- The user can check user account information via the Web Page and print history.

Centralized management, centralized authentication billing

- As many printers can be incorporated into the management, realize the centralized management, centralized authentication billing, convenient for the users to print resources centralized management and cost control.

Rich Web statements

- In any on a networked computer via a Web page can check the report at any time; don't need to install any client application.
- Seven categories of the default report type, from usage, printing costs, and print the load, provide report with pictures.
- Advanced reporting capabilities, to provide maximum flexibility.
- Support will export a report to Excel format.

Flexible authentication billing model

- Two authentication modes according to the user name or computer name, domain or local area network (LAN) peer-to-peer network model can be a good support.
- Support multiple domain user account to import and unified accounting certification.
- Support for different type of papers, color/black and white, single/Duplex printing, using a different billing rates.
- Support according to the year, quarter, month, week, day, and a fixed value set user print quotas.

Structure is reasonable, the implementation of flexible, easy to extend.

- By site management, central database and monitoring service of three modules, as well as stand-alone installation can also be distributed deployment, meet the application requirements of different size.

Support a variety of database types, meet different application requirements

- Support MS Access, MS SQL Server and MySQL, user can switch at any time and transplantation according to need.

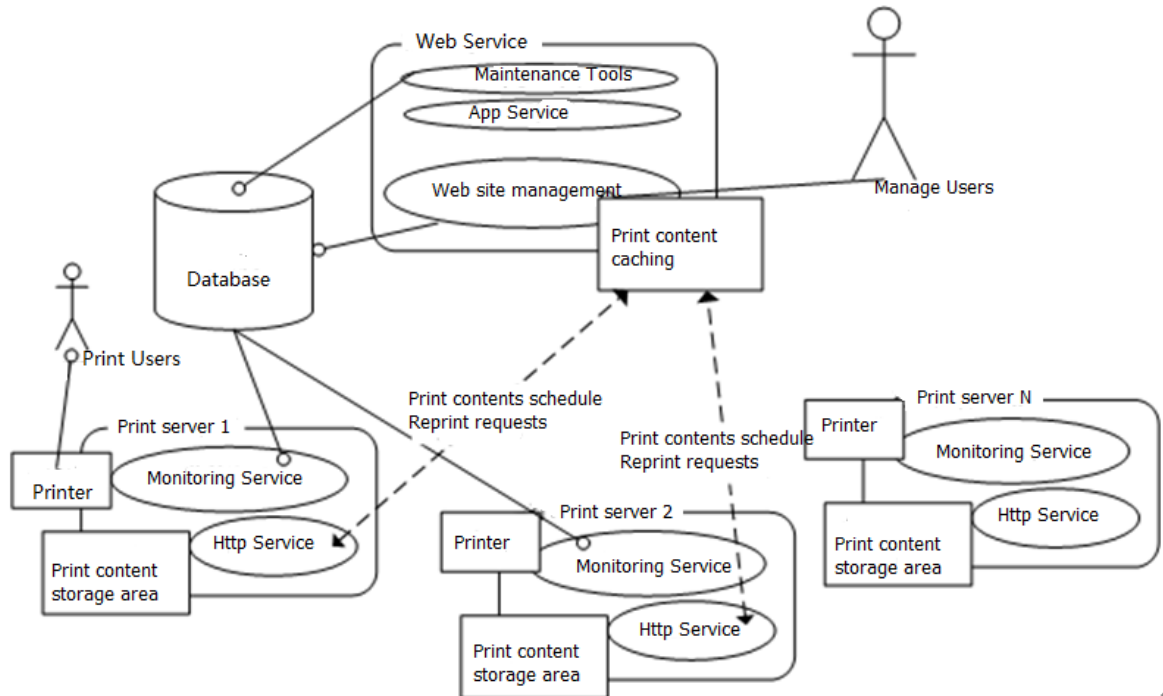
- MS SQL SERVER recommended.

3. Product architecture

3.1 The main modules

The name of the module	Belongs install module	The main role
Web site management	The management server	Realize the centralized configuration, management, view reports and print contents, etc.
Maintenance tools		The migration between different databases, the user account and AD account synchronization, will install with Web site management
The Schedule service		Provide a distributed installation print server database configuration, synchronous clock, monitoring of authorization, perform regular tasks
The central database		Record print log information and configuration information (not stored print content)
Print monitoring service	The Print server	Records, control of print, save print contents, distribution installed on each print server. Print content files stored in each print server
The HTTP service		Provide print content view, reprint the document, auxiliary management and distributed coordination, with print monitoring service installed on each print server

3.2 General framework schematically



- PrintUsage deployment method scalability is very strong, all modules can be installed on a server, can adapt to the distributed installation, and depends entirely on the customer's existing environment and application requirements.
- The central database and Web management only need to install once.
- Print monitoring service and HTTP service according to the need, install each connection has a printer on the print server.
- Print users and manage client don't need to install any of the PrintUsage module.

4. System operation requirements

4.1 Overview

PrintUsage is flexible print monitoring solution, operation requirements according to print volume, the number of servers and performance requirements of different to change.

PrintUsage system environment:

Operating System	Windows 2003/ 7 / 2008 / 2012 32 bit or 64 bit
Database	SQL Server 2000 SP4/ 2005/2008/2012

Web server	IIS 6.0/ 7.0(7.0 need to install the IIS 6.0 compatible management)
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4.2 The recommended configuration

The database server(1)

Hardware:P4 2.0G CPU,512M RAM,5G hard disk space (Can be shared with management server)

The operating system: Windows Server 2003/ 2008

Database management systems and components:

MS SQL SERVER:Microsoft SQL Server 2000 SP4,2005/2008/2012.

The management server(1)

Hardware:P4 2.0G CPU,512M RAM,5G hard disk space(Can be Shared with the database server)

The operating system:Windows Server 2003/ 2008,IIS 6.0,If this is the IIS 7.0 or higher need to install the IIS 6.0 compatible console.

The Print server (1 or more)

Hardware: P4 2.0G CPU, 512M RAM, 20G The above free hard drive space

The operating system: Windows Server 2003/ 2008

Recommend operating system is Windows 2008 server.

Client

Hardware: Anything that can run Windows client

Software: Print customer-without any special requirements, as long as the Windows client can print to the Shared printer

Manage customer-IE Windows client or Firefox 8.0 more than 20.

5. Printer compatibility

Common tasks Monitoring: Support for all supported Windows 2003/7/2008/2012 printers, including one machine or plotter.

- Part of Epson Stylus series printer quota control function is invalid.
- Support all the monitored task of paper types, color, black and white, Single-Duplex and other property records accurate.

Content is saved as image format:

- If using the original drive deployment, Support PCL and PostScript language driver printers. At present, HP, Lexmark, Xerox, Samsung, Sharp, Ricoh series of laser printer can be the perfectly supported. If printer not any brand above, or is not a laser printer or USB interface, may not support saving the Print content.
- If Use the PrintUsage generic driver deployment, support all brands equipment output and print the content view. Save content as reprint file format:
- Support various types of printers, in addition to the part of the Epson printer series.
- Special note: not all printers can save the content, usually PS, PCL5e, PCL6; EMF driver can analyze its content, etc. But not all, please refer to our actual test
- If user has any special request on the printing contents, please use PrintUsage generic driver.

6. Deployment Planning

6.1 Printing method

6.1.1 The company's existing print mode

At present the company printing, is through one of the following three ways, or their combinations:

(1) Network Printer - network print methods

Each print client establishes based on TCP / IP port of a local printer to print to the network printer.

This way of printing doesn't need a dedicated computer as a print server.

(2) network printer - Shared print method

In a dedicated Windows server, install local printer based on TCP/IP port, and share, to provide printing services. This way requires more use of a computer, but some managerial functions, the network cannot replace the print way.

(3) Traditional printer—Shared print method

Use department server or someone working machine, connect the LTP or USB printer and share, to provide the department or the nearest office users to print. This is the most convenient and flexible way, but is difficult to print management.

6.1.2 PrintUsage printing method

PrintUsage can be monitored in the printing way②③,does not support ①. Does not support network printing,Does not mean that a network printer cannot use PrintUsage monitoring, as long as converted into the shared print mode, can realize perfect monitoring, the following will introduce how to remodel.

6.1.2.1 Transform the network print way for sharing printing

If user wants to deploy PrintUsage, need to change the network printing to share printing, the specific approach is:

(1) Use one (or more) dedicated computer (A PC also can be A Server), install local printer based on TCP/IP port, and Shared out, as a print server, and installed the PrintUsage on these computers.

(2) Each client to delete the original TCP/IP port printer, to connect the Shared printer for printing on the print server.

(3) With this transformation, printed data streams through have been installed the PrintUsage computer, so it can achieve the print task of monitoring and controlling

(4) But after doing this, someone who has a technical basis, can still through the creation of TCP/IP port local printer to print, data flow without through print server, sent directly to the network printer, thus bypassing the monitoring. So, need to network printer or set on the outer print server, only allow IP connection from the print server, IP connection from the client is not allowed.

6.2 Authentication mode

PrintUsage is a full print billing system, the key for billing is to record each print is "who", playing the "who" is the user authentication. PrintUsage provides two kinds of user authentication:

According to the user name authentication	This way set the user name sent to the print job as a basis for billing and control. If a user is logged on with a domain user account, then this is the domain user name, otherwise the machine user name. This way is PrintUsage default authentication way, also is the recommended way. This way is suitable for "domain" or "active directory" network model.
According to the computer name authentication	In this mode, users use the username of the machine to login, but the local login name on the print server and not recognized. Each print task is recorded as "Guest" users to print, so the computer name is used for printing the basis of billing and control. This way is suitable for peer to peer network mode.

6.3 Selection database

PrintUsage currently supports three kinds of commonly used database. Select the database mainly depends on the print size and print architecture, details in below table:

The database selection reference table

Type	Instructions	Suitable size	Considered point
Access	Free file-type database	Stand-alone installation Monthly print volume <5000 pages	Free, simple installation, only Single machine use > 5000 record efficiency bottleneck
MSSQL	Large and medium-sized commercial database	Distributed installation Monthly print volume <500000 pages	Does not need to install any database connector on the print server Cost-effective, easy to use, easy to manage and maintain, Stable performance Recommended to use
	MSDE	Distributed installation Monthly print volume <50000 pages	Free, desktop version of MSSQL Management, backup slightly inconvenient
MySQL	A free, open source of small and medium-sized database	Distributed installation Monthly print volume <200000 pages	Free, when a small amount of data the efficiency is very high Cross-platform ability Needs of each print server installation MyODBC
It is recommended to use MS SQL SERVER 2000 SP4 above. SQL SERVER EXPRESS is also a good choice.			

6.4 Storage space planning

PrintUsage mainly focused on two aspects to the demand of storage space:Database and print content file(Enterprise edition only).

The database server:

Database is mainly used for storing print log and configuration information, print log grows along with time. But each log takes up less than 1 k, the entire database in extreme cases, rarely more than 1 G.

The management server:

Some pages files and temporary files, when viewing the print content cache files requires very little hard disk space, 1 GB space which is enough.

The Print server:

(Enterprise edition only) Will save each print content and kept on each print server. Please note that this feature, the requirement on the print server, according to the size of the print, planning and hard disk space. Specific estimation methods are as follows:

Needed hard disk space = Monthly print volume * content should be preserved the months * number of bytes each the saved file

When PrintUsage save printing content are images, will use the high compression ratio Tiff format G4, precision can vary from 75 dpi to 600 dpi, Bytes per A4 print files from an average of 10 k to 200K, depending on the printout and save the precision. The default resolution is 300 dpi, estimates of 30K per page.

We assume that a print server, a monthly print volume 100,000 pages, need to save the contents of three months, so

Need to hard disk space = (100 k/month) * (three month) * (30 K) = 9G

If PrintUsage saved reprint document options, reprint the document space is larger than the Tiff format (its size depends on the content of the print documents and printer type), the average per A4 printing reprint the document, usually ranging from dozens to hundreds of K, estimates desirable 100 K per page.

7. PrintUsage detailed installation instructions

7.1 Preparation of the installation

7.1.1 Uninstall previous PrintUsage version

Suggest uninstalling the old version or trial version before installing PrintUsage. The installers itself also detects and automatically uninstall the existed PrintUsage. Uninstall program will retain the original version of the database and print content file, the default is as follows:

1. If use Access database as the original version will stay file:C:\Program Files\PrintUsage\Data\PrintUsage.mdb,this is the original version of the database..
2. Using MSSQL or MYSQL database on the database server.
3. If the installation is the enterprise edition, save the file C: \ Program Files \ PrintUsage \ the Content directory, this directly stored all the print Content files. For convenient upgrade in the future, it is recommended that this directory will be set up in other place, do not set in under the same directory of PrintUsage.

If user wants to keep the original data and print content files, please don't delete these files and directories. When user install the new version, simply install into this directory can be covered(The installer will prompt PrintUsage directory already exists, confirm to continue).

If user wants a fresh installation, no need to retain the original data, user can delete the C: \ Program Files \ PrintUsage directory delete. If it is MSSQL or MYSQL database, can delete the PrintUsage database in database manager.

7.1.2 Ensure that the used database server has been installed and running

Access: the installation package will automatically install.

MSSQL: User should select user authentication mode as the "mixed mode" during installation, detail info see" SQL Server installation considerations". Recommend to use: SQL SERVER, can also use SQL SERVER EXPRESS.

7.1.3 Install the appropriate database provider

If user chooses to use the Access and MSSQL/MSDE, skip this step;

If user chooses to use MySQL, user need to install MyODBC, go to MySQL's official website free download: <http://dev.mysql.com/downloads/>.

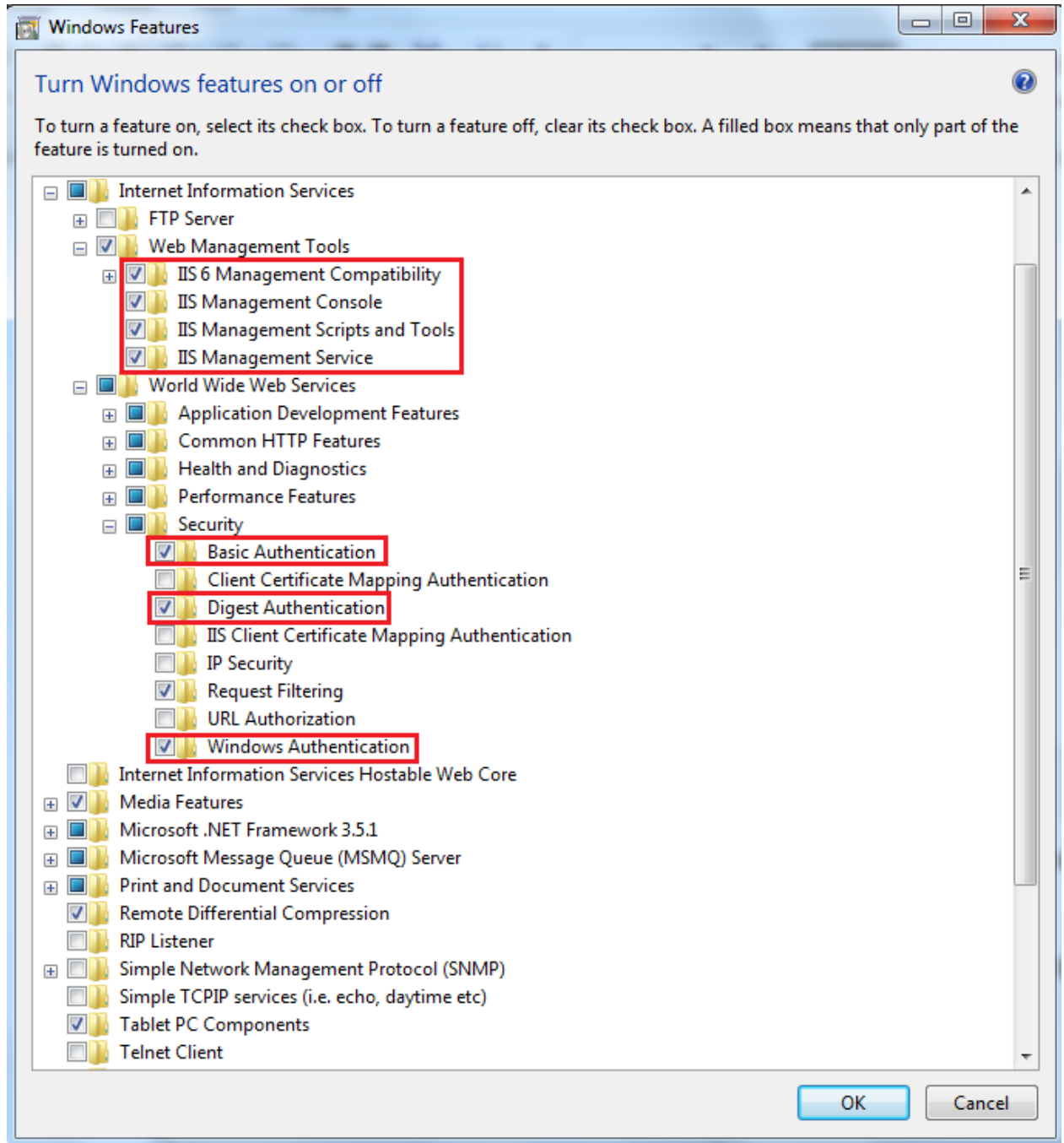
7.1.4 Install IIS components

For Windows Server 2003 IIS is installed by default for Windows 2003 Standard Edition, Enterprise Edition, 7, 2008, the default is not installed; user needs to add IIS system components.

Noted that, after Windows 7.user need to install IIS6.0 Management Compatibility.

Note: If installed IIS in win7 and Win2008, after the installation is complete need to install IIS6 to management compatibility and .NET Framework 3.5.1.User can in Start -> Control Panel ->

Programs -> Turn Windows features on or off to find them. Please ticked refer the below red draw circle in turn then click the OK button to complete the installation of these components.



Detailed installation steps, please see section "Frequently Asked Questions".

7.1.5 Adding firewall exception

If user have firewall and opened the firewall in system, please make sure that open the operating system TCP80, 8100, 8200, 8090, 8200, 8082, 8300, 8600, UDP8600 port.

7.1.6 Preparations list

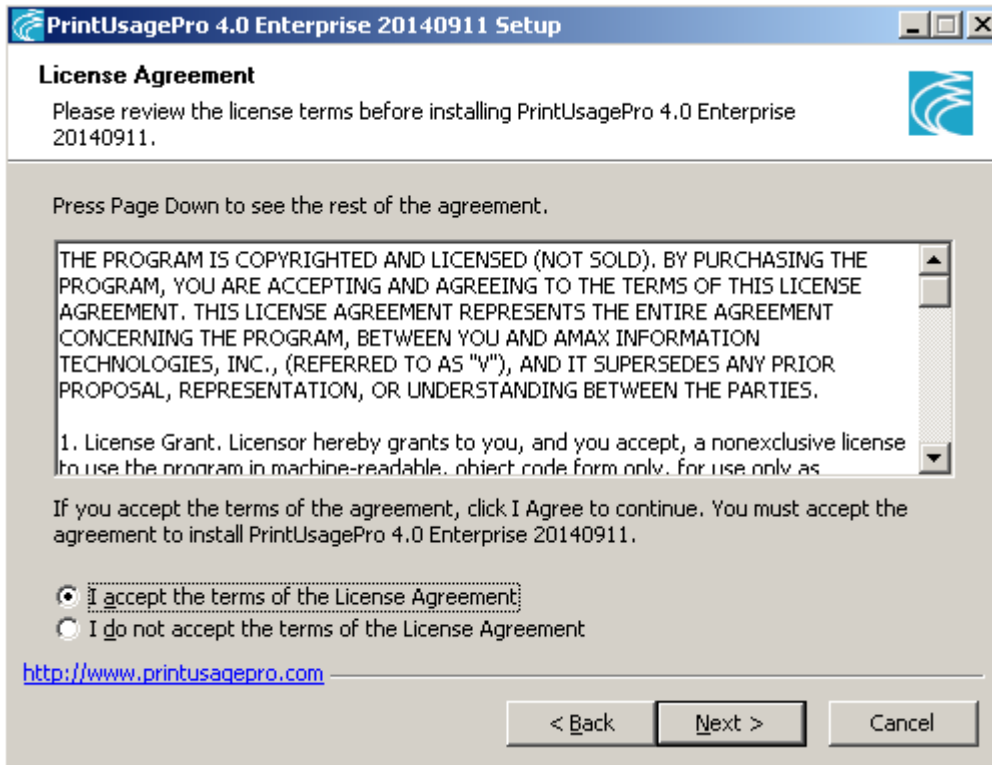
Preparations	Annotation
Uninstall previous PrintUsage	Uninstall PrintUsage previous versions or trial version
Make sure the used database has been	Ensure that the database can be used normally

installed and running successfully	
Install the appropriate database provider	Database connection parts need database vendors provide support program
Install IIS components	Win7 and Win2008 system need to install IIS 6 compatible management
Adding firewall exception	In operating system to ensure open the port such as TCP80,8100,8200,ect

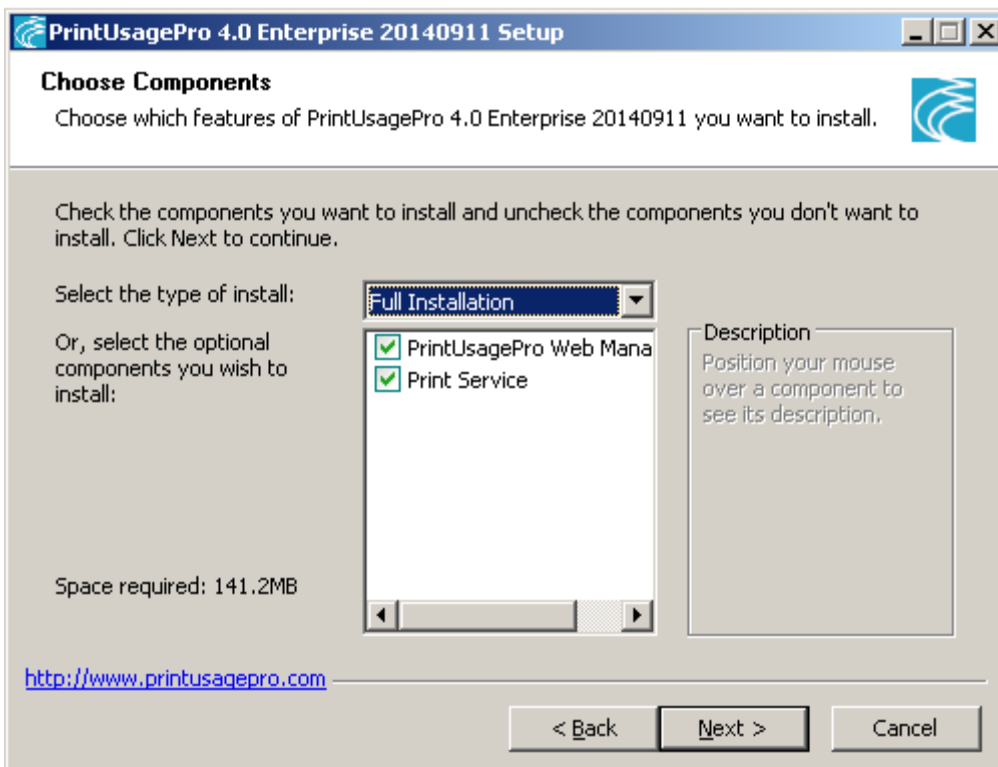
7.2 Start the installation



Perform PrintUsage installation package, user must have this computer administrator privileges before installation. It is strongly recommended before the installation continue please close other running applications, so as to avoid conflict in the process of installation.



Read the license agreement please read the End User Software License Agreement carefully, user must accept the agreement to continue the installation.



Select the components user want to install, user can install on the same server or choose distributed installation. The following detailed explain the difference between different installation type.

7.2.1 Full Installation

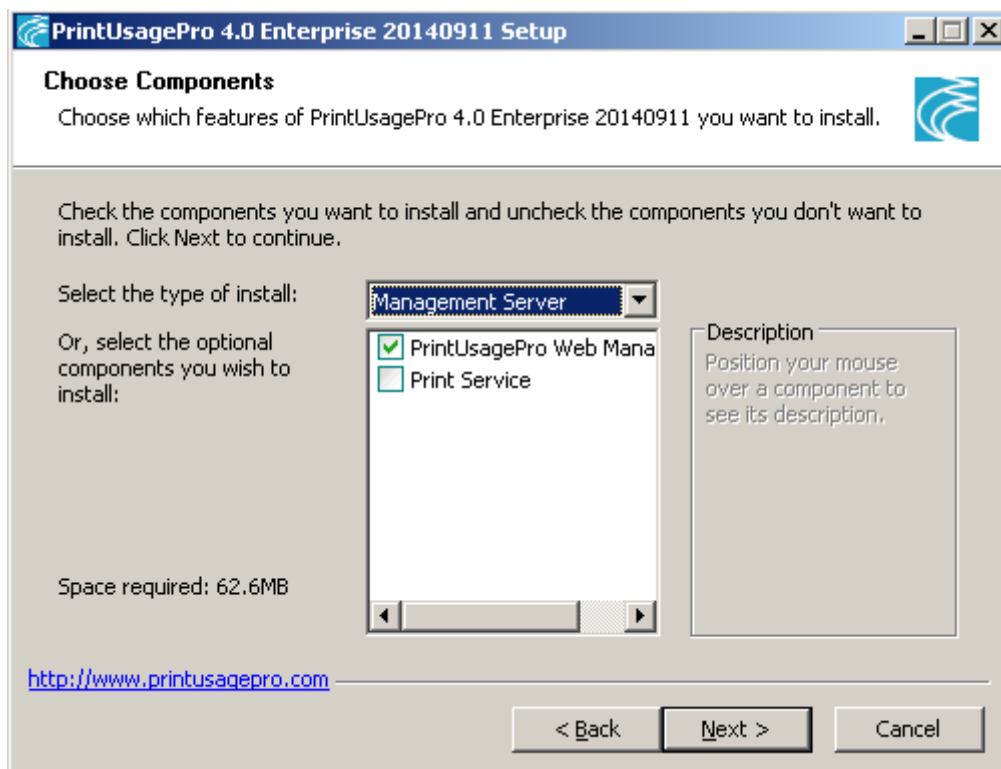
Full installation method installs the printUsagePro web management and print server on the same

computer. The following two cases, user should choose this kind of installation method:

1. If user only have a print server, and just want to use the print server as the management server, or just want to try out PrintUsage, should choose "full installation".
2. This machine is one of the print servers, and user wants this server as management server.

Note: if user are the second condition, that is, if there are any other print server need to be installed, then user cannot choose the Access database, only MSSQL, MSDE and MySQL database can be choose. If it is the first kind of circumstance, user can choose any kind of support of the database.

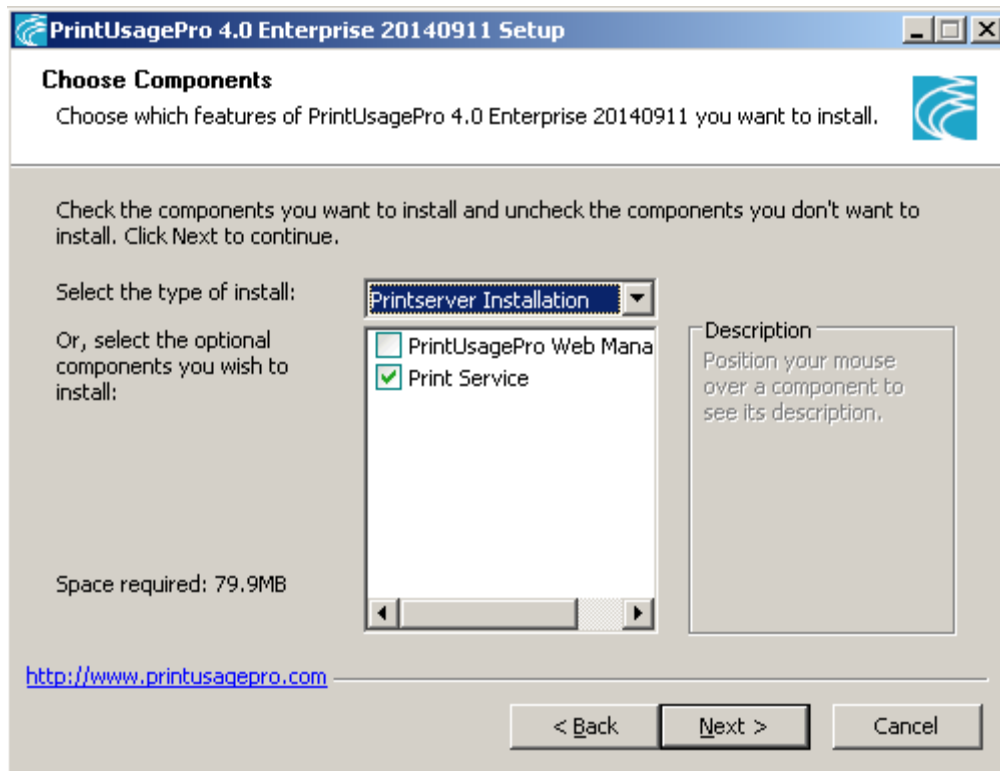
7.2.2 Management Server Installation



Management server installation, the management server is installed on a separate computer. The computer is no longer used as print server. When deployed to print monitoring service, user only needs to install a management server. During installation, the installation wizard will help user to create the database structure and user accounts, such as initial setup configuration. After the management server installation is complete, user also need to install at least one "print server" to make the system work normally.

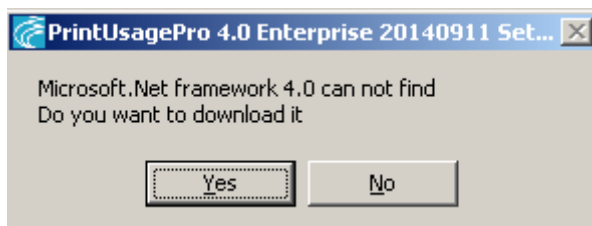
Note: The Management Server installation cannot select the Access database, MS SQLSERVER and MySQL can only choose one of them The database server can use this machine also can be another computer. The installer is only generate the PrintUsage data table structure, does not contain a database management system itself.

7.2.3 Print Service Installation

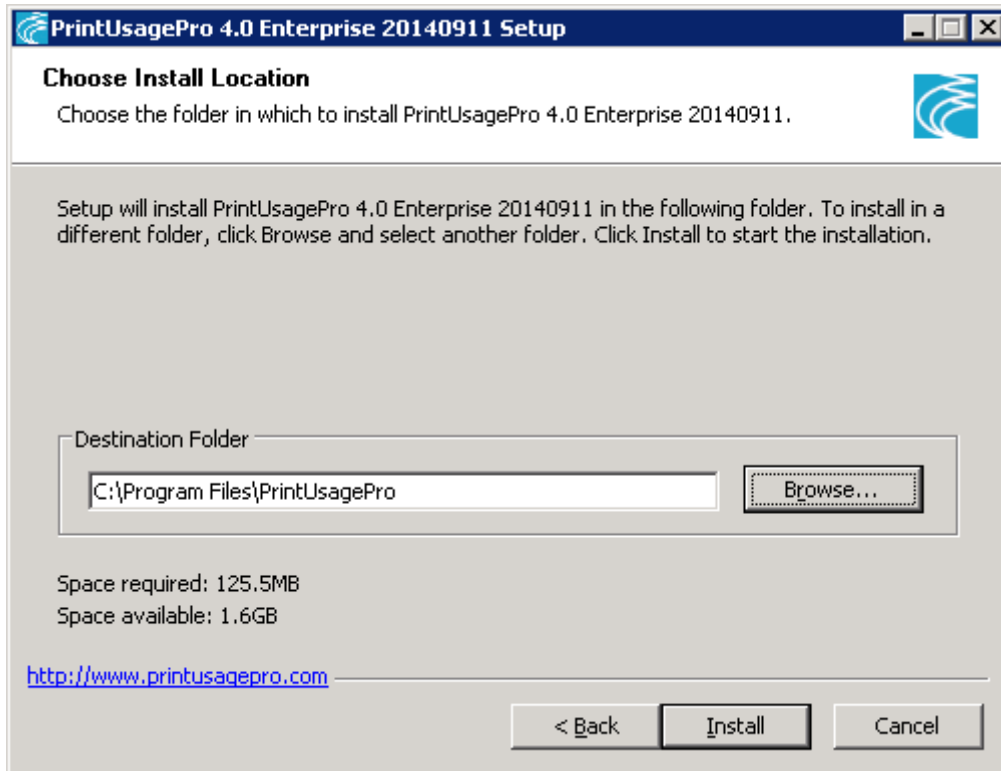


Print server installation, it will installed the print monitor in a separate computer. The print server to accept the management server Unified management. After the installation complete, the print server will explore to try to automatically find Management server through the network and connect with them. Normal circumstances, after the installation completed no configuration needed to start print monitoring service. If there is no automatic discovery management server, need to manually configure print monitoring service, specific please refer to 7.3 for associated Settings.

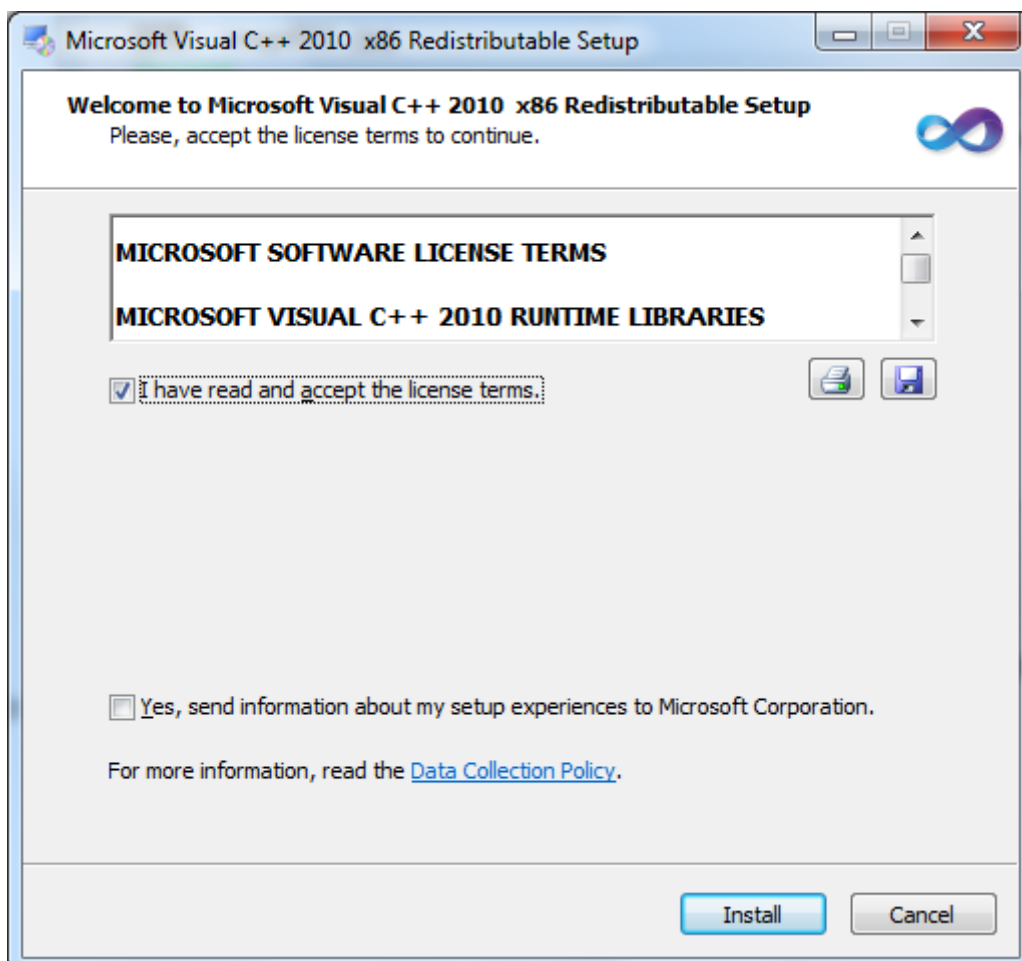
Choosing components required to install, click next.



Provide Microsoft.Net Framework4.0 does not exist, user need to download and install it or directly installing the downloaded components.

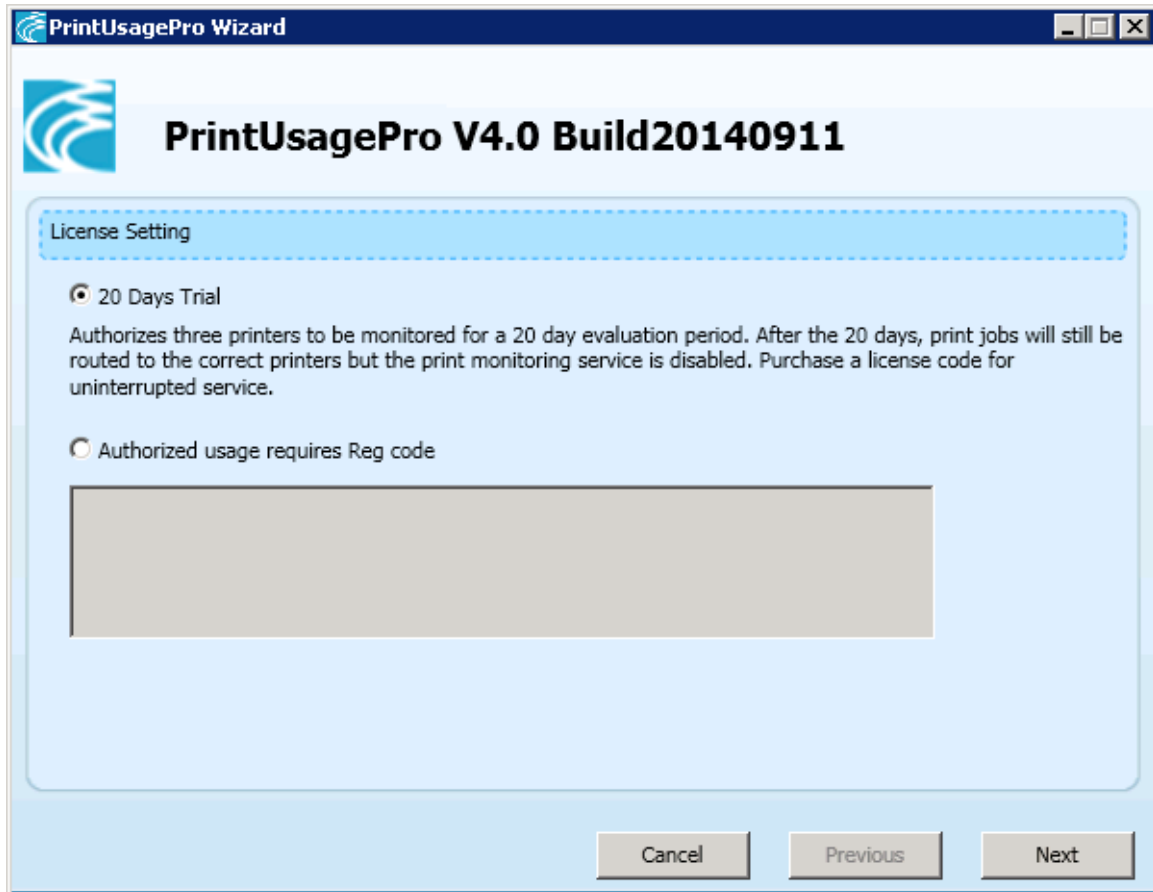


Choose the PrintUsage installation path, click install for the next step.
If the operating system is not installed VC10, user need to install.



7.3 Relevant settings

7.3.1 Select Install License



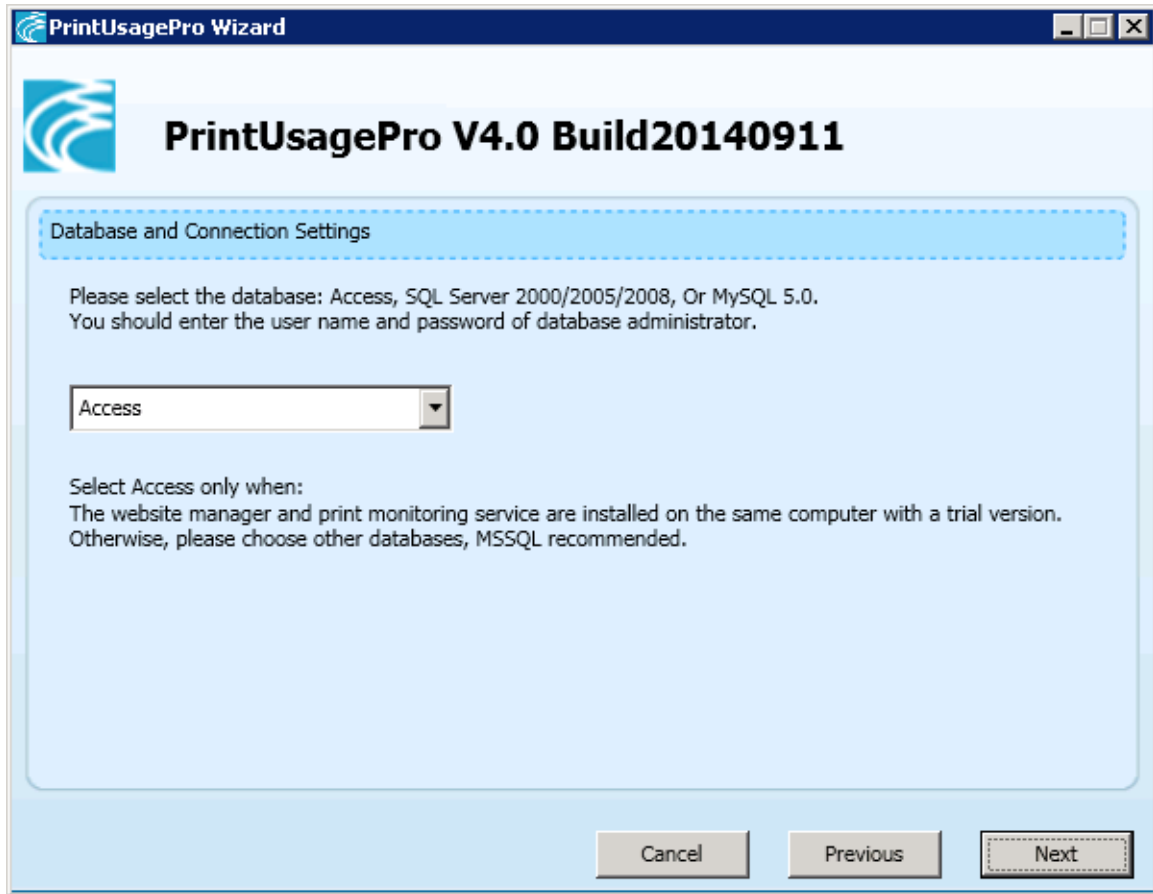
Trial user, please select "20 days trial ". Trial license can be fully functional trial 20 days, limit monitoring three printers. After the trial expires, the print monitoring service will not start, but not affect the user to print, just cannot catch a new print job. Web site management can still login and use normally.

After the official version of the user selected the "Authorized usage requires Reg code" user need to enter your registration code information, the installation program will automatically display the registration number of the authorization information in the "licensed to" text box, in general, should be your company's full name.

7.3.2 The database type selection and connection Settings

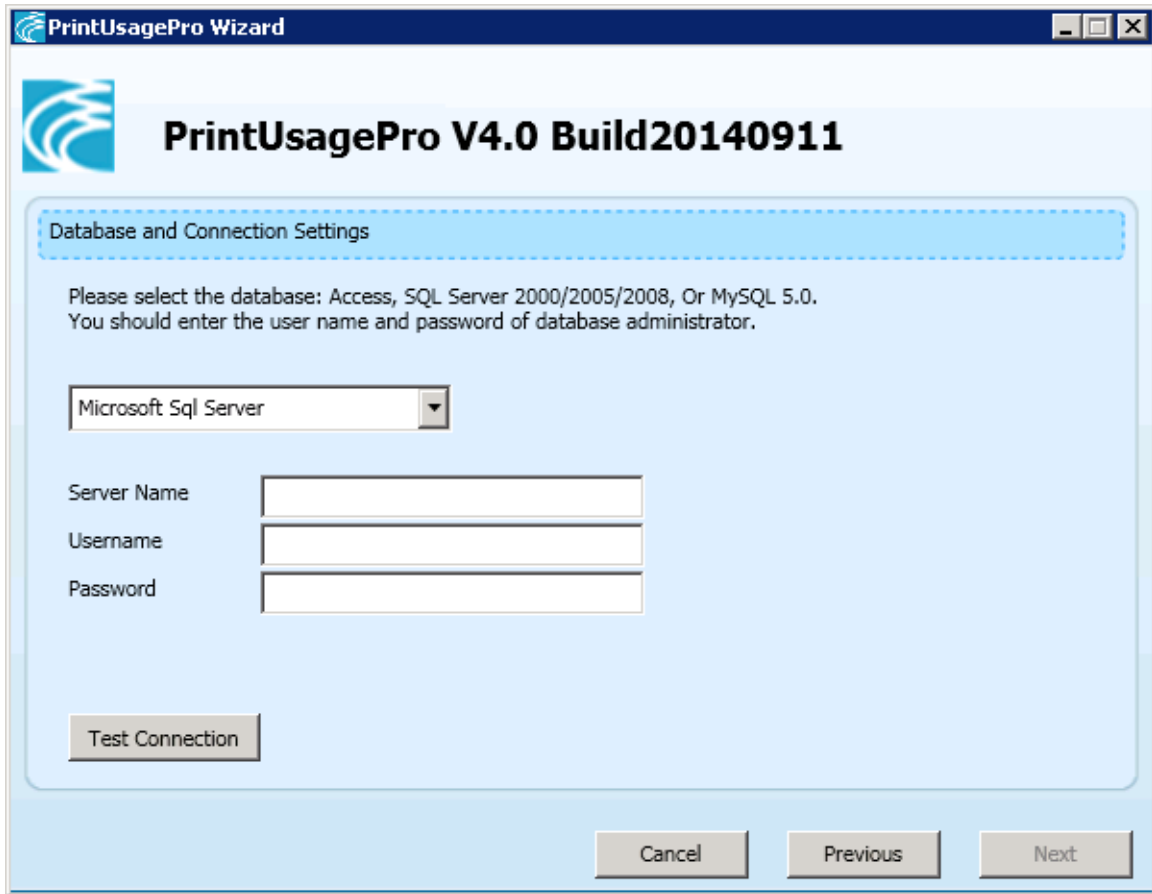
Choose what type of database, depending on the amount of data and application requirements, please refers to 6.3 sections.

- Access type configuration



Access database does not require any configuration, simply select "Microsoft Access 2000 / XP". The installer will create an empty database named PrintUsage.mdb in a subdirectory under the installation directory of Data.

- MSSQL/MSDE Configuration



PrintUsagePro Wizard

PrintUsagePro V4.0 Build20140911

Database and Connection Settings

Please select the database: Access, SQL Server 2000/2005/2008, Or MySQL 5.0.
You should enter the user name and password of database administrator.

Microsoft Sql Server

Server Name

Username

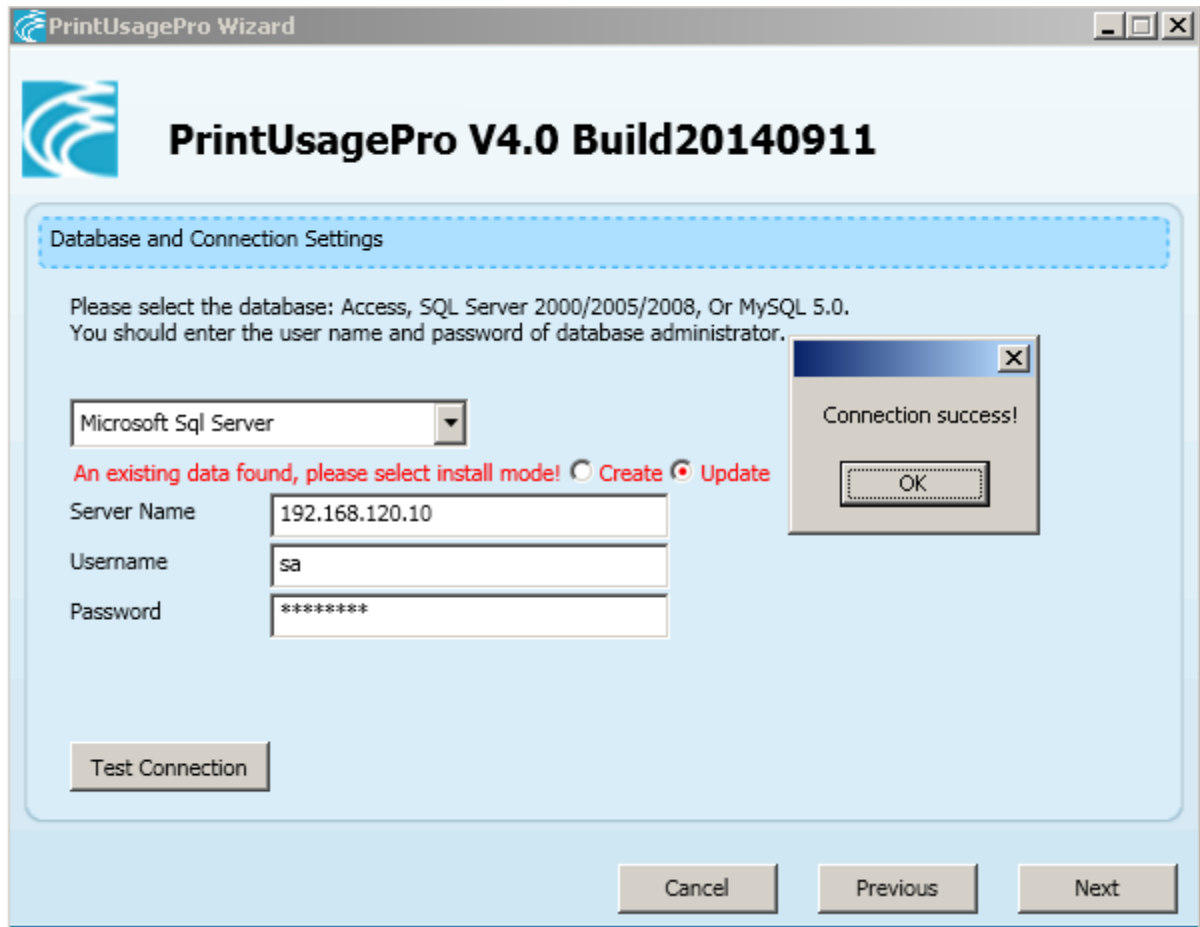
Password

Test Connection

Cancel Previous Next

MS SQL Server 2000 SP4/ 2005,SQL SERVER EXPRESS database need to select "Microsoft SQL Server". Server name is the installed MS SQLSERVER computer name or IP address (strongly recommend the use of IP address) corresponding to the instance name. Username server has an account on the SQL Server database administrator privileges, normally use "sa".(If user can't use "sa", at least need a privileges to create database login account)Here is not a Windows account. Password is the SQL login account password, pay attention to the case.

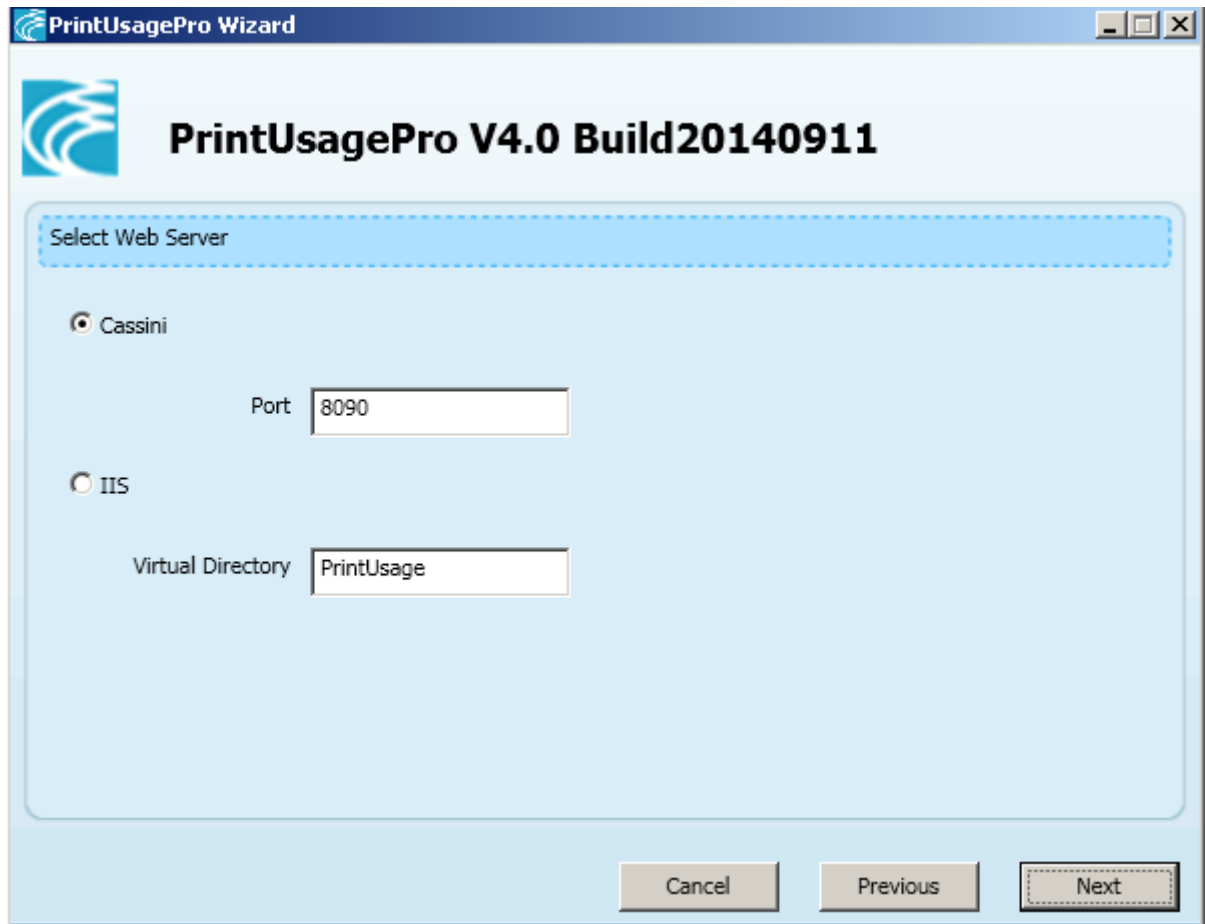
When Input is completed, click on the "Test Connection" button, if test passed, then click "next". If the test fails, please make sure the inputs are correct, and MSSQL service is running. If the input is computer name, user needs to ensure that the computer name can be parsing correctly.



No matter what type database used, if the installation program found the original database exists, it will be prompted to select, prompts user to cover the original data. Select "Create", the installer will delete the original database, a new installation. If user selects "Update", the system will retain the original data. If the original data is the structure of the old version, the installation program will automatically upgrade to the latest version, and data will not lost.

After select "Update", because the user data, such as configuration information is already in the database, unless user need to modify, otherwise in the installation wizard steps, such as import users, set the default value can choose to skip.

7.3.3 Select Web server



The image shows a Windows-style dialog box titled "PrintUsagePro Wizard". The main title is "PrintUsagePro V4.0 Build20140911". The dialog is titled "Select Web Server" and contains two radio button options: "Cassini" (which is selected) and "IIS". Below the "Cassini" option is a text box labeled "Port" containing the value "8090". Below the "IIS" option is a text box labeled "Virtual Directory" containing the value "PrintUsage". At the bottom right of the dialog are three buttons: "Cancel", "Previous", and "Next". The "Next" button is highlighted with a dashed border, indicating it is the active button.

The default is Cassini, if need to use IIS for deployment, please see 7.1.4 section.

7.3.4 Printer Server settings

PrintUsagePro Wizard

PrintUsagePro V4.0 Build20140911

Print Server Settings

Manager Center Port
Data Server that record print detail job information.

Normal Print Server Port
Normal print monitor service that use Raw protocol for printing.

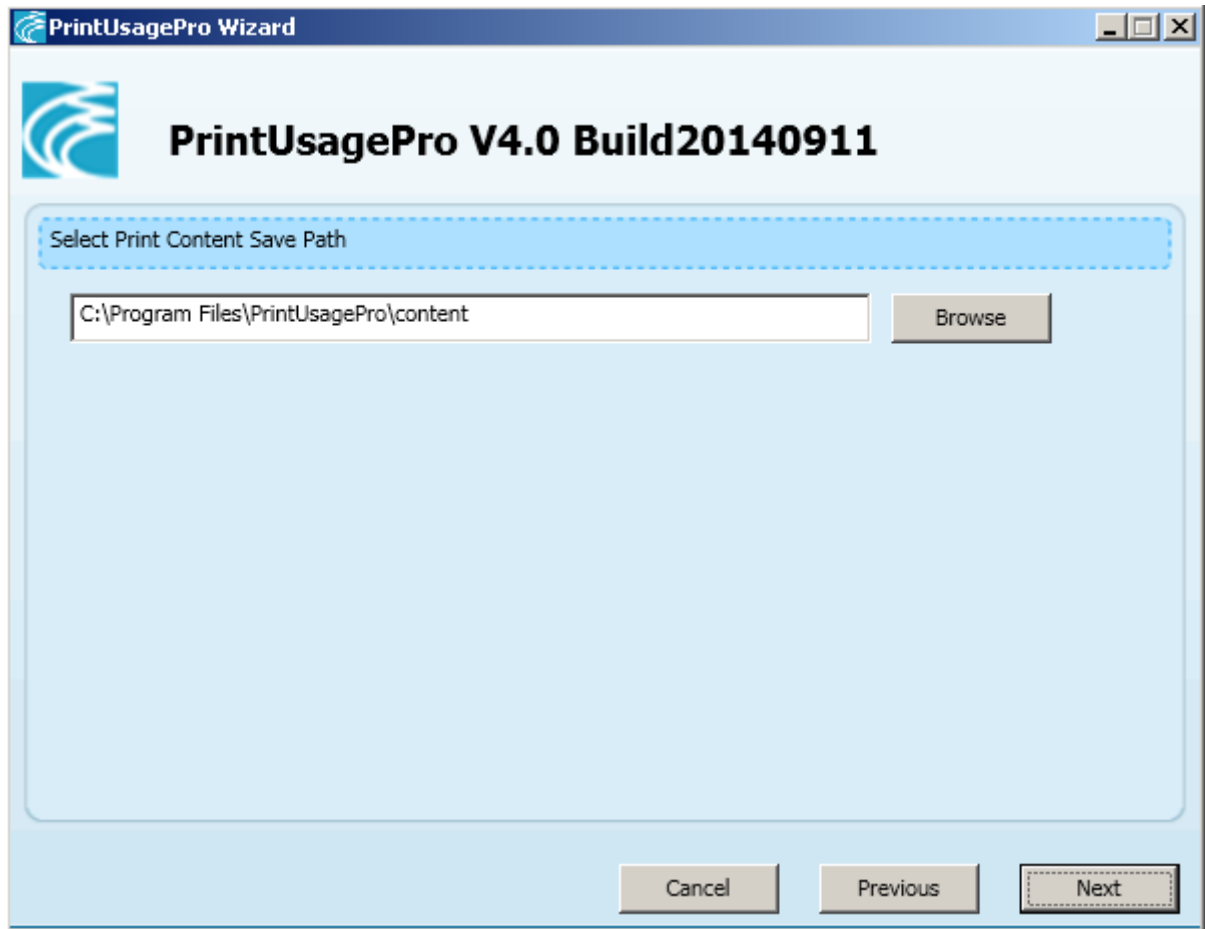
Advanced Print Server Port
Advanced print monitor service that use LPD protocol for printing.

Http Server Port
Http Server that monitor print monitor services.

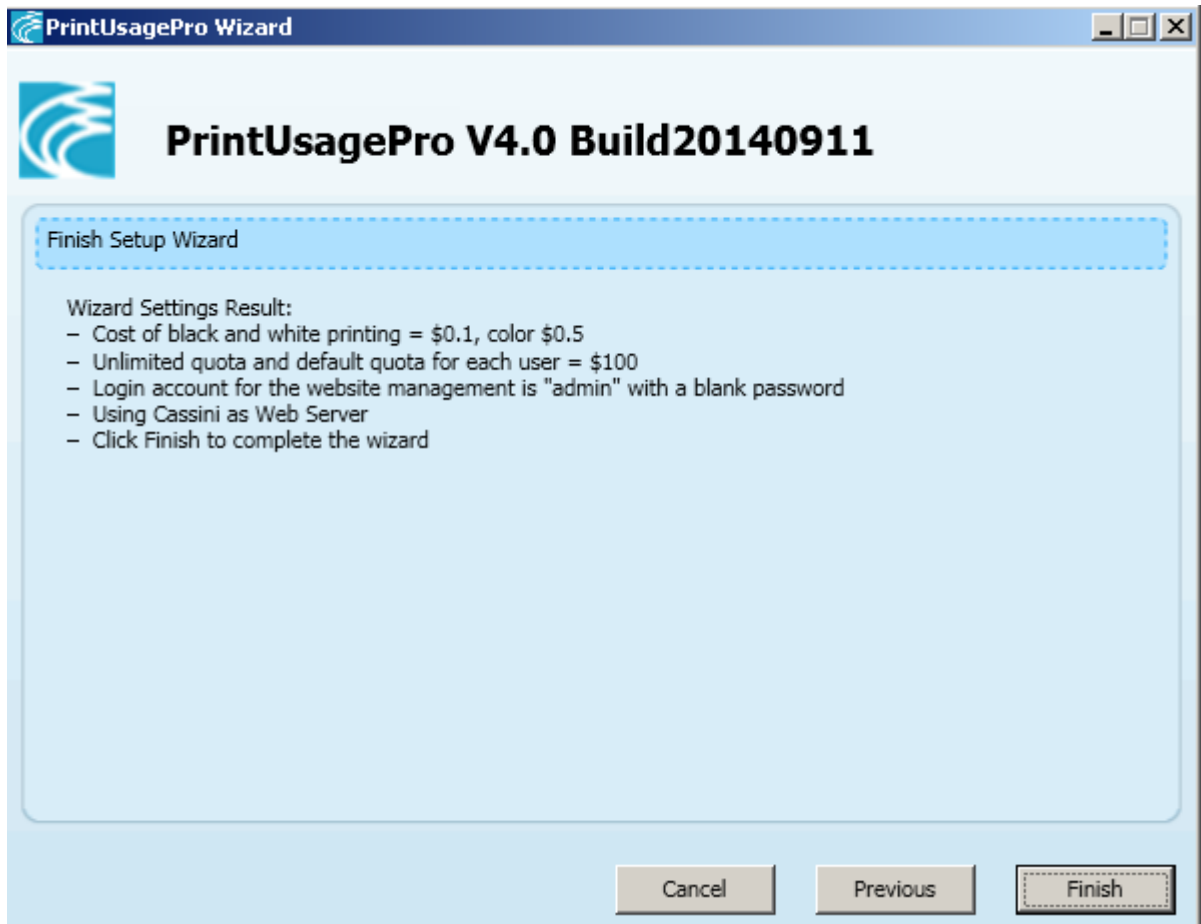
Cancel Previous Next

Please ensure that the firewall settings are correct when users configure the port, and these ports can be monitored normally.

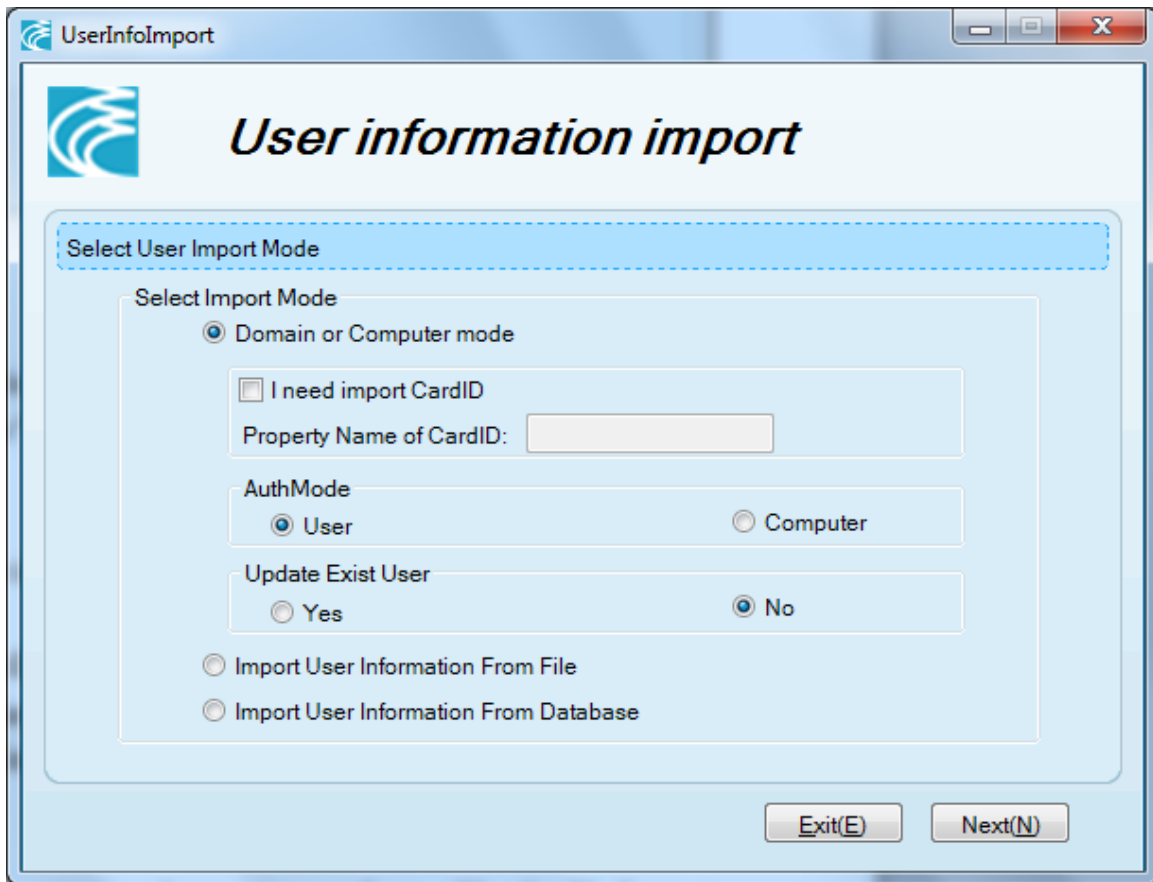
7.3.5 Select Print Content save Path



7.3.6 Configuration item overview



7.3.7 User import tool



Authentication mode selection: Refer to 6.2 section; Basic rule is domain or active directory, select "Domain or a Computer mode", choose AuthMode as "User"; Peer-to-peer network working group, choose AuthMode as "Computer".

Select the user authentication, the default will be imported to user groups and user account from the active directory.

Select the Computer authentication, Installer will traverse of all working group on the net, the workgroup name as user group name, set computer name as the user account import to the system. Note: only opened machine computer can be imported. No imported computer, after the installation is complete, In Web management site can manually to add.

Select the "user authentication", the default from activities also can import from a file, the file format support XLS, XLSX, CSV, TXT, the format of the file needs to be a line, each user account to allow user id, user name, User Full Name, user groups, card number, email address five field, field between half Angle in English ", "catalog segmentation into user groups and user account. Here is an example:

Tom, Tom Cruse, Personnel Department, 123456, Tom_Cruse@printusage.com
Jean, Jean Leo, sales Department, 654321, Jean_Leo @printusage.com
Jack, Jack Hanks, sales Department, 555555, Jack_Hanks@printusage.com

After such a TXT or CSV file to import, the system will be established two user groups the personnel and sales departments, Zhang, Wang, Li three user, Zhang belongs to the personnel department, Li and

Wang belongs to the sales department. This way very suitable for when the domain of grouping and cost accounting group without corresponding, can export account from personnel system or the management system and import into the PrintUsage.

In addition, the import tool also supports importing from a database; currently supported database type is Access, SQL Server.

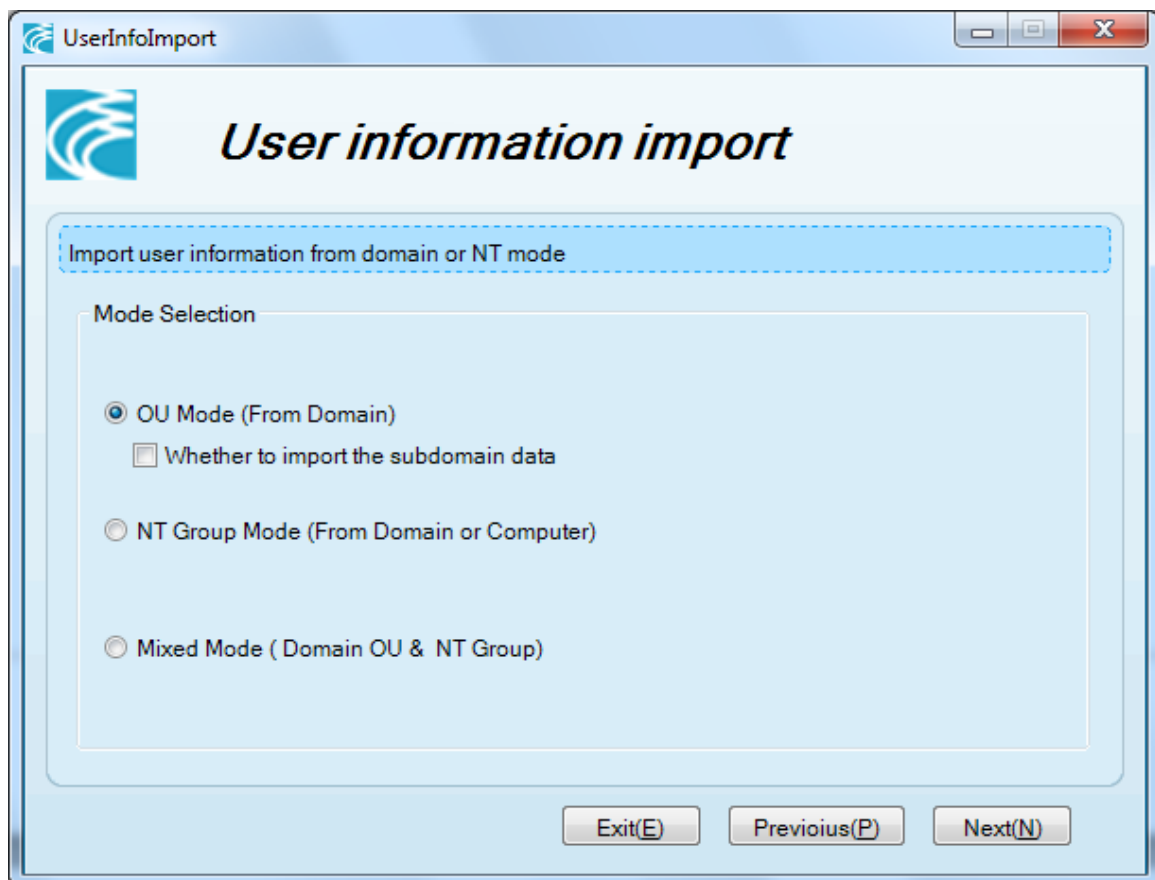
7.3.7.1 Basic Settings

"Whether to update existing users",select "Update",If user attributes as card number, email address information is consistent with the data source; If choose "no update", User attributes the card number, email address information remains the same. **Worth mentioning is that whether-choose update user group or not, will be consistent with the current data source.**

7.3.7.2 From Domain or Computer

"I need to import the card number", memory card number by a field from the domain import into the database, fill the corresponding field name in "card corresponding attribute name."

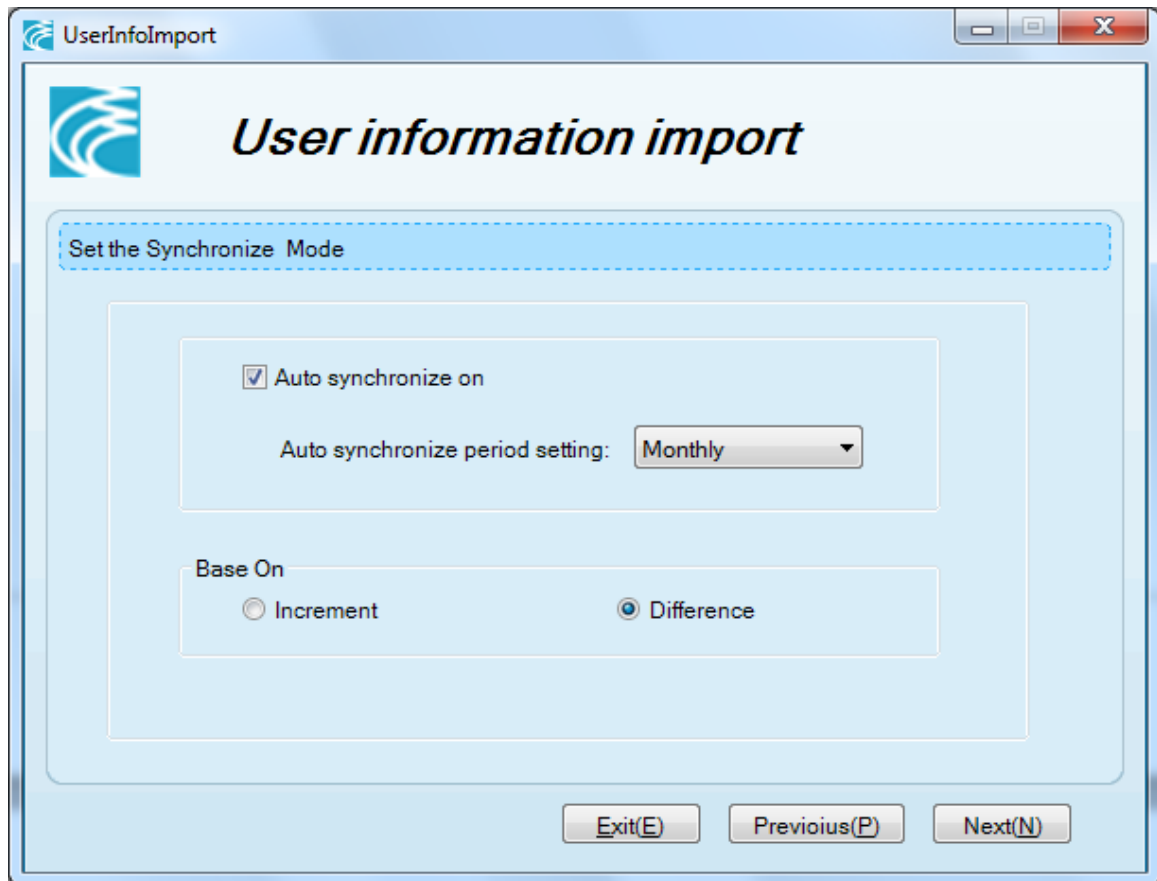
1)OU Mode:According to the domain organization unit imported



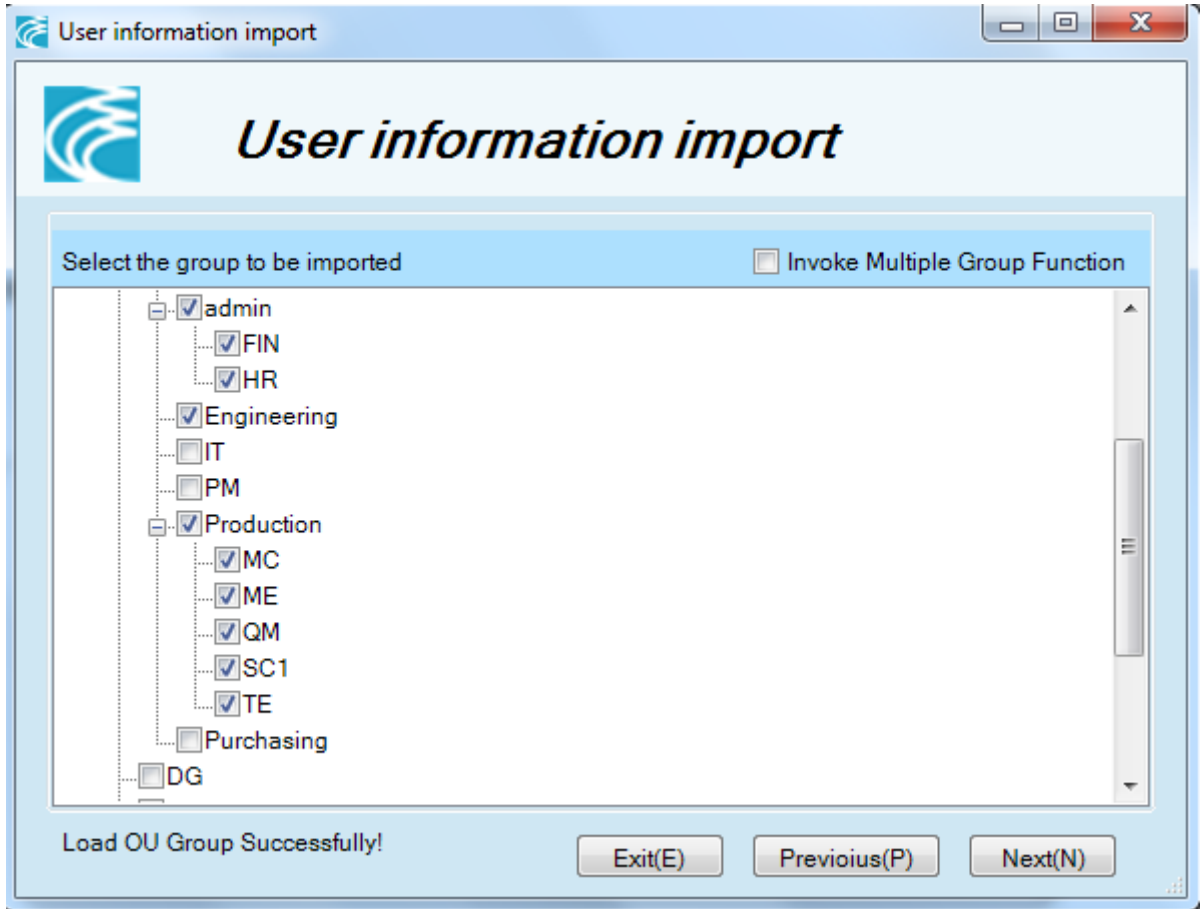
"Whether to open the automatic synchronization", checked open.

"Auto sync interval time setting", Can follow the daily / weekly / monthly / quarterly / annual user synchronization. If the selected day, expressed next morning to start the synchronization, the synchronization time can be set in the configuration file.

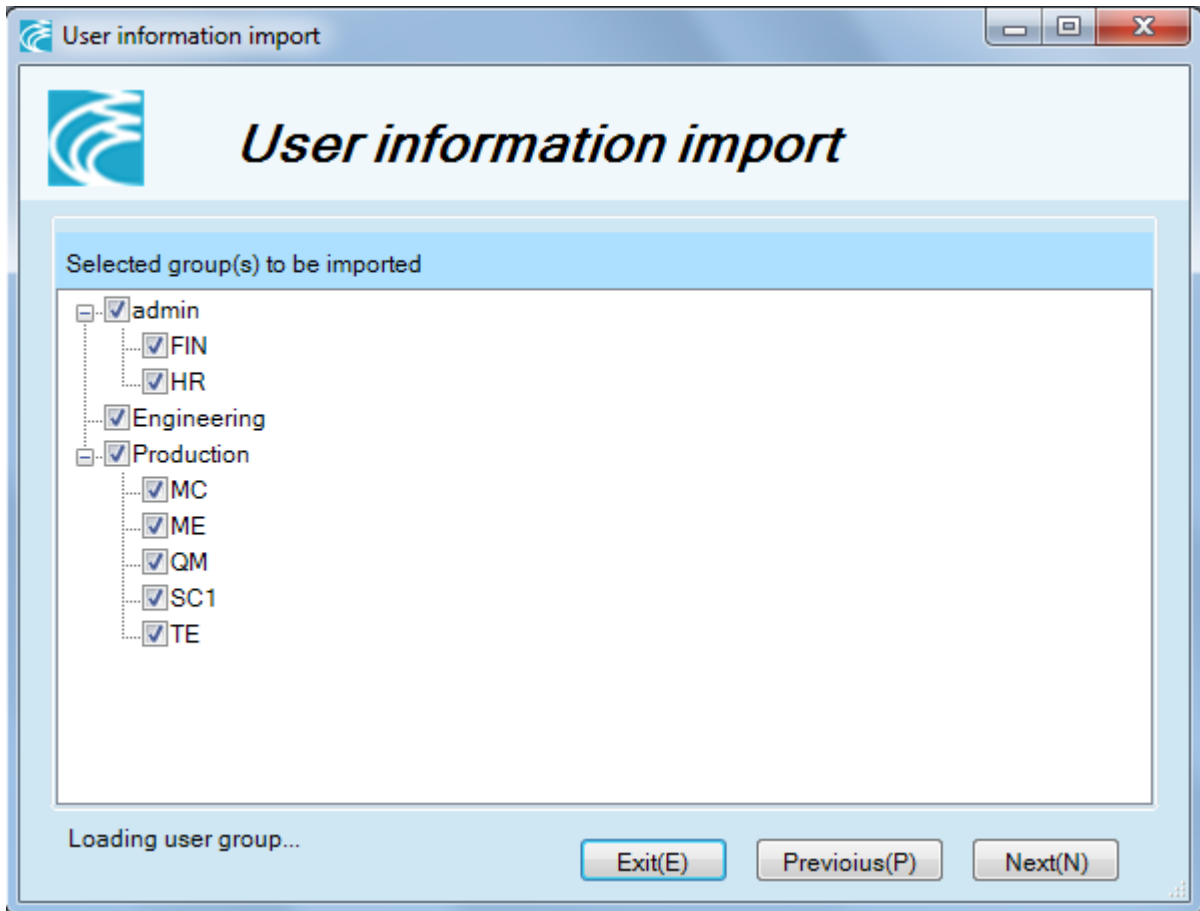
"Synchronous method "expressed the increment based on the data source added, PU database also increased; Delete the data source, PU database unchanged. Based on the difference, said data source increased, PU database also increased; data sources deleted, PU database corresponding deleted.



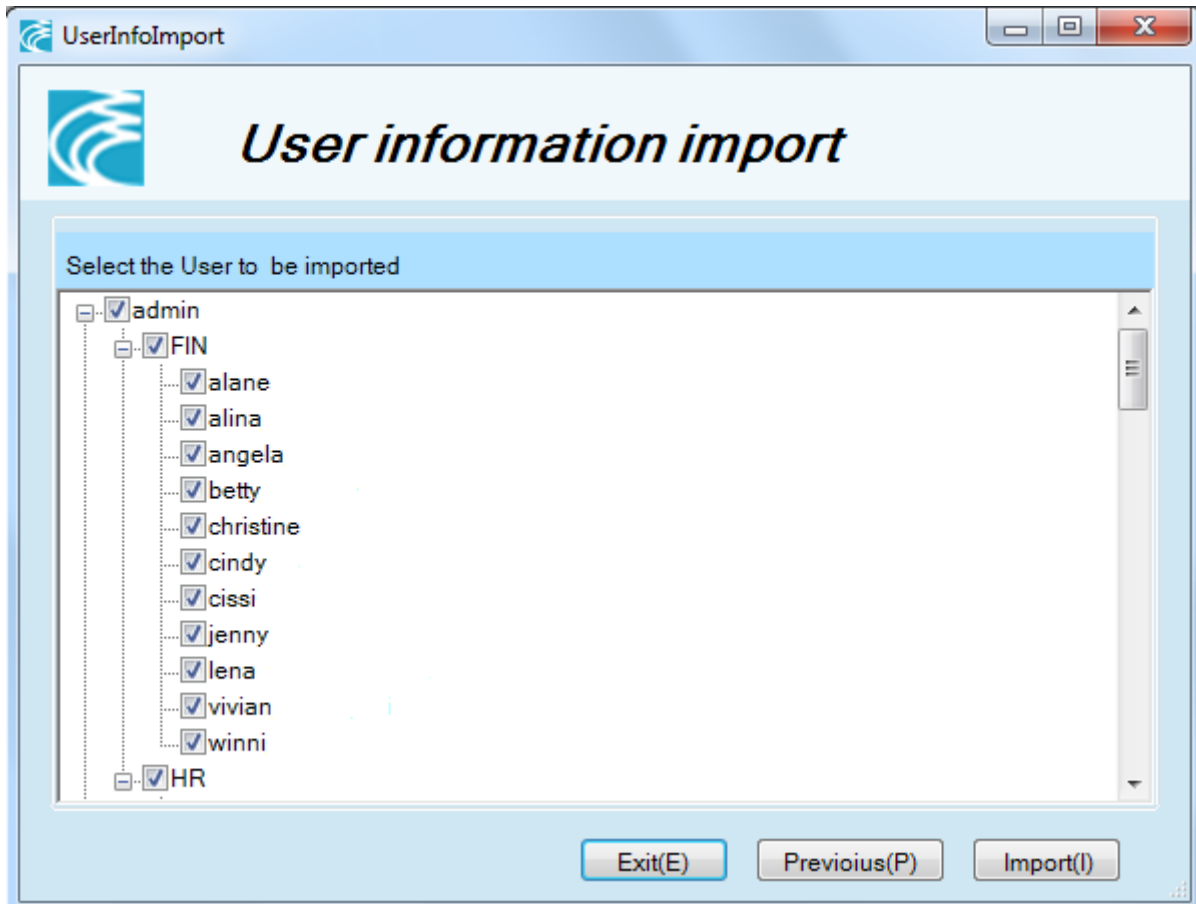
Select the root node, select only after load the root node and it's all subgroups, click next after selection.



Confirm that user needs to import the user group, click next.



Choose the required import users, click next after confirmation.



Click Import to perform operations.

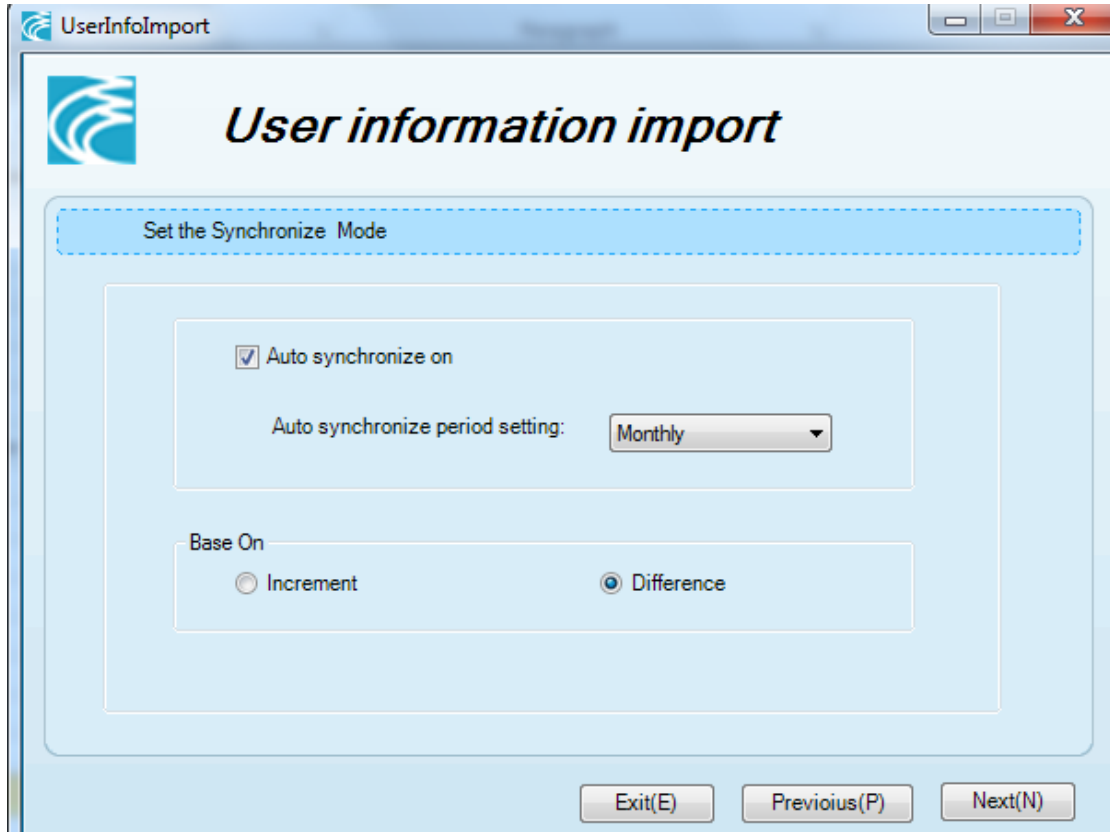
2)NT mode:NT Group the local account imported

Generally applicable to the environment without using a domain account to deploy. Click next to synchronize settings page.

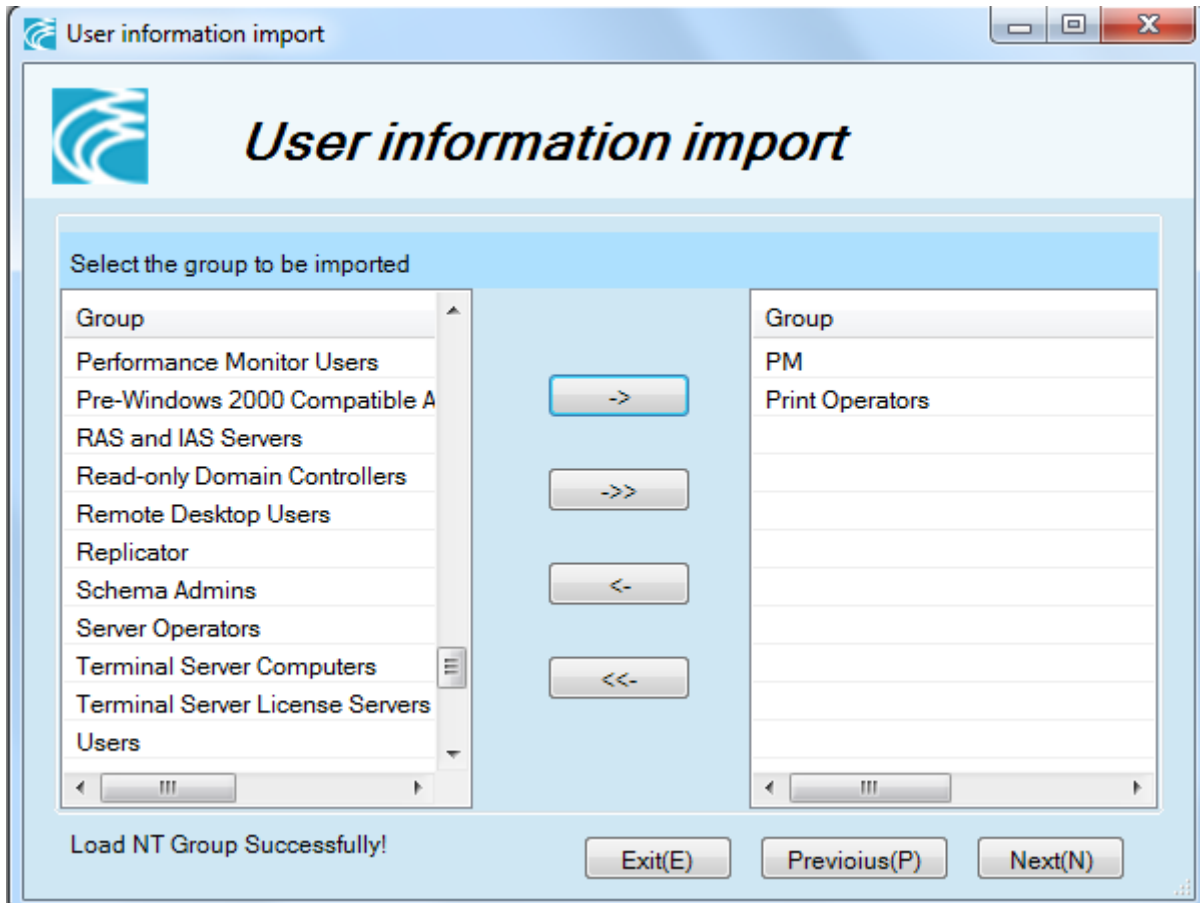
"Whether to open the automatic synchronization", checked open.

"Auto sync interval time setting", can follow the daily / weekly / monthly / quarterly / annual user synchronization. If the selected day, expressed next morning to start the synchronization, the synchronization time can be set in the configuration file. If the selected month, expressed early morning start on the 1st of the month, the synchronization time can be set in the configuration file.

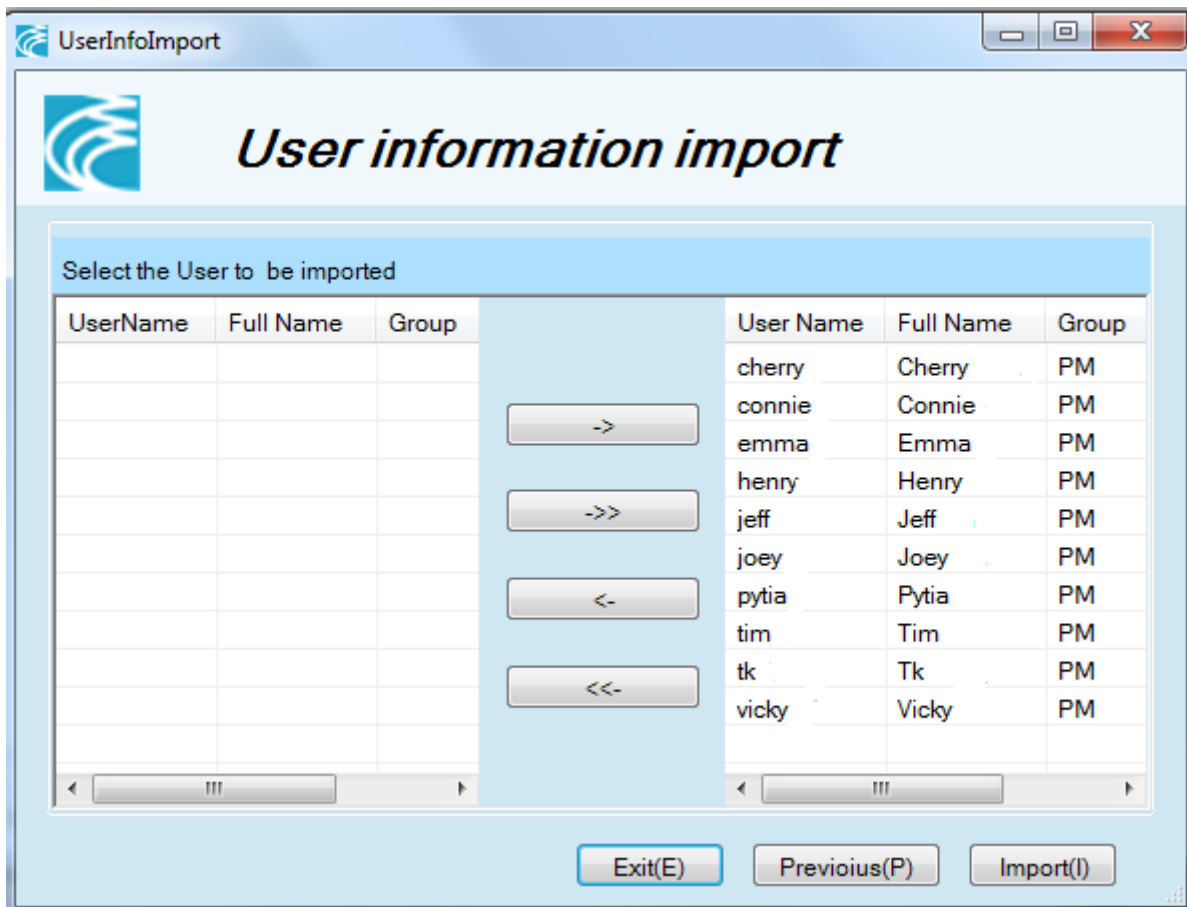
"Synchronous method "expressed the increment based on the data source added, PU database also increased; Delete the data source, PU database unchanged. Based on the difference, said data source increased, PU database also increased; data sources deleted, PU database corresponding deleted.



Select the groups need to be imported.



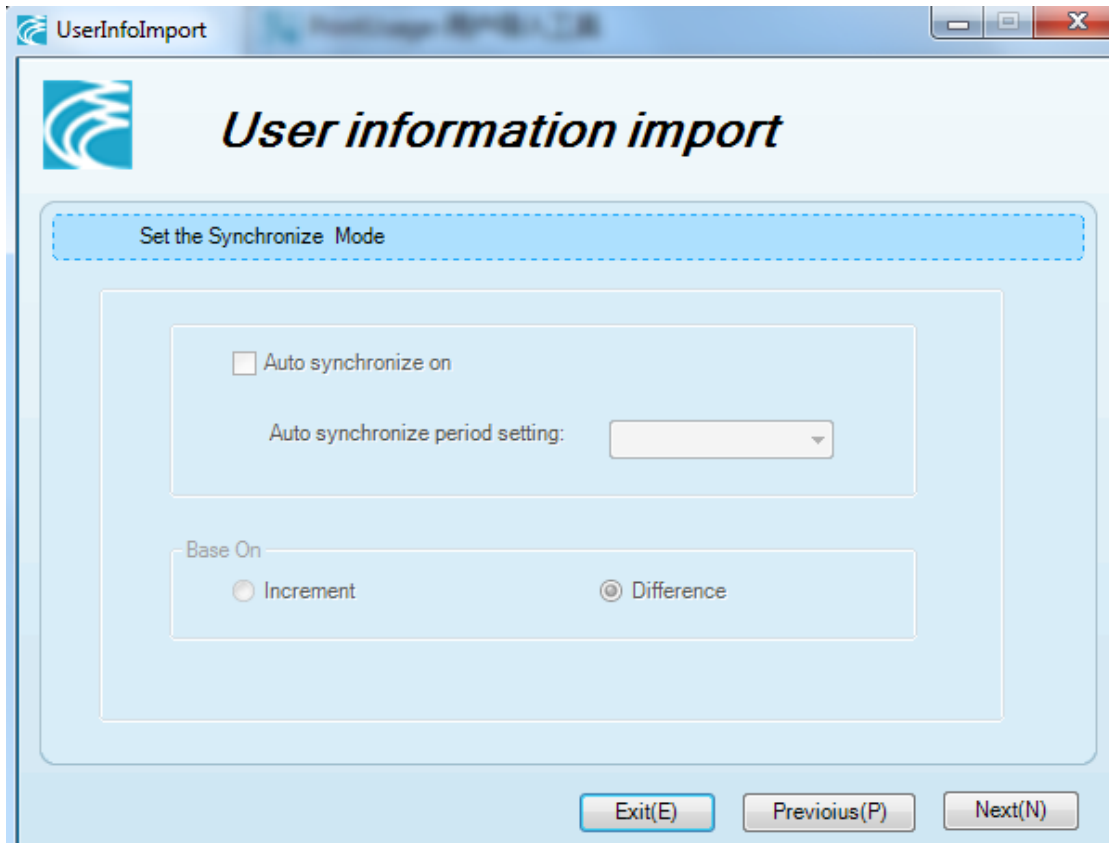
Click next to import users.



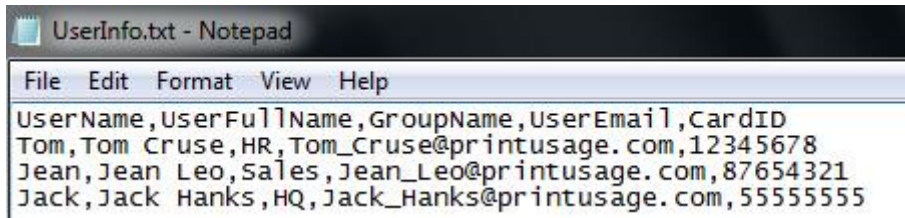
Click Import to complete the operation.

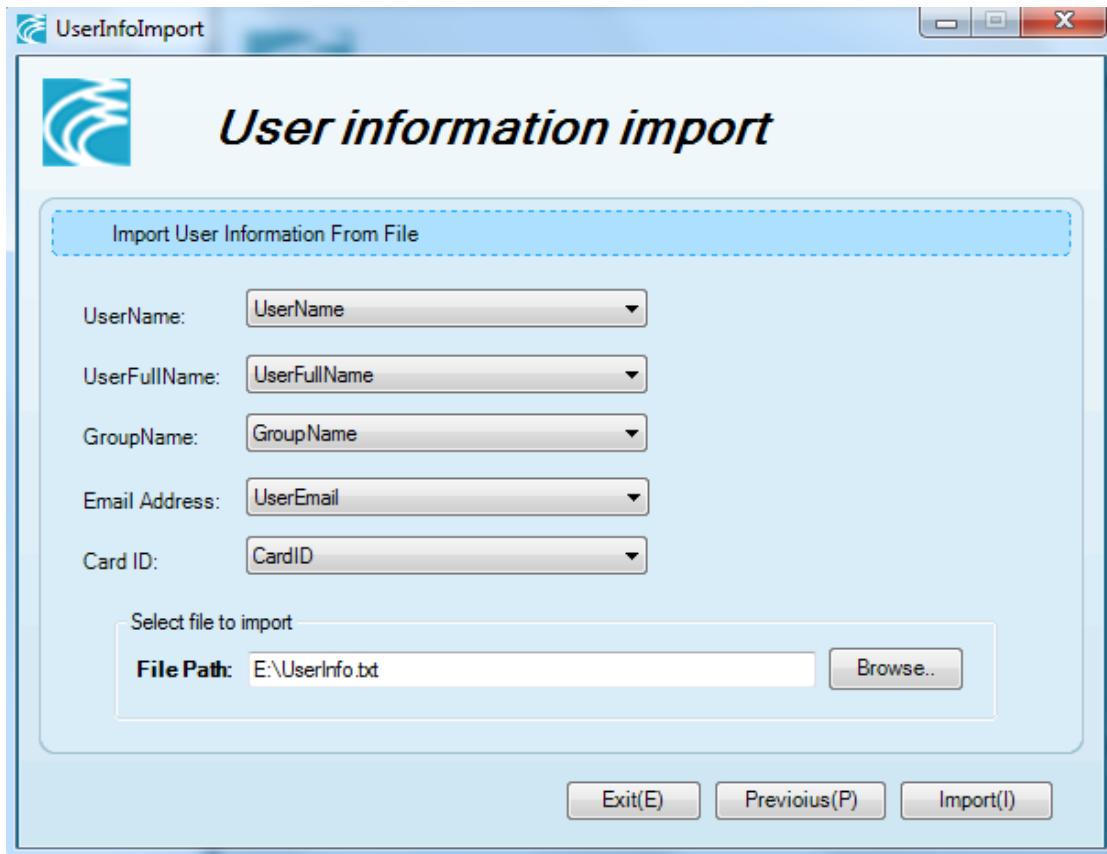
7.3.7.3 File Import

Current document does not support automatic synchronization.



Load documents required to import and select the appropriate field name.





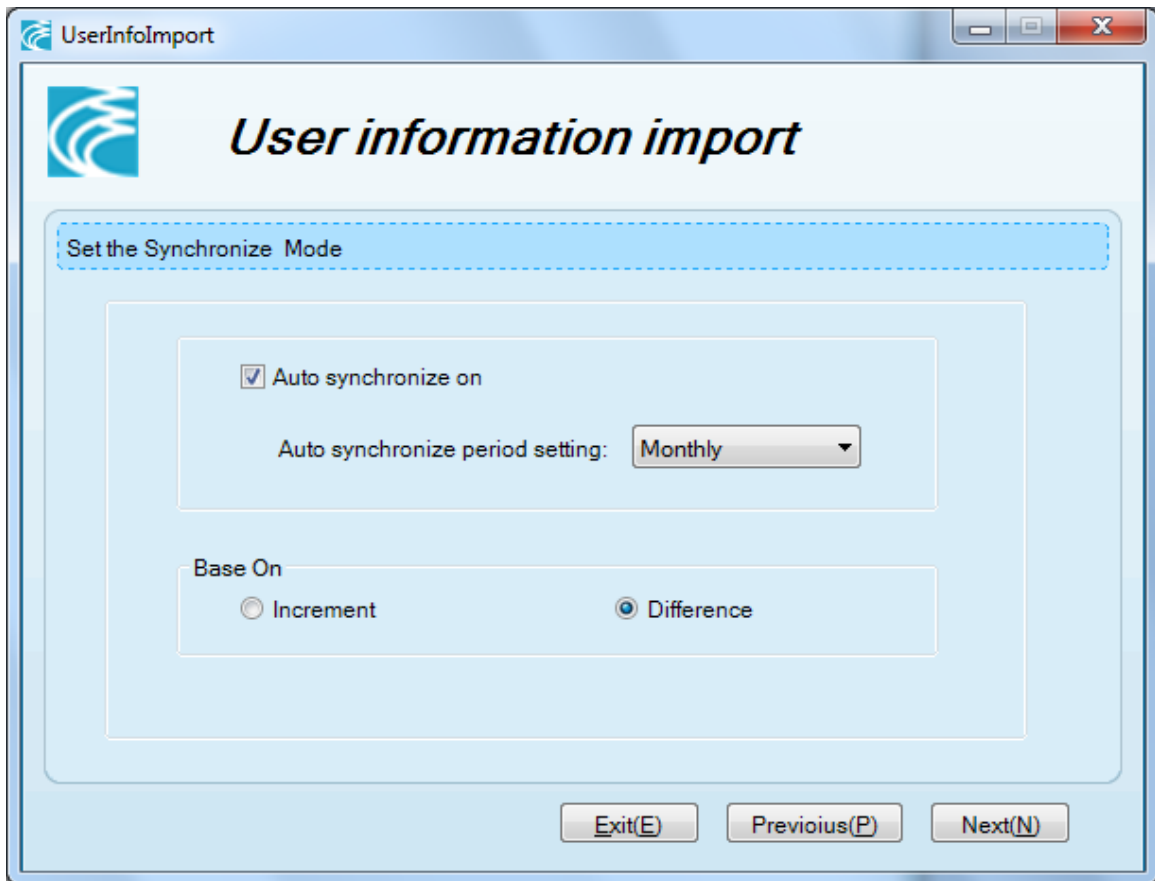
Click Import to complete the operation.

7.3.7.4 Database Import

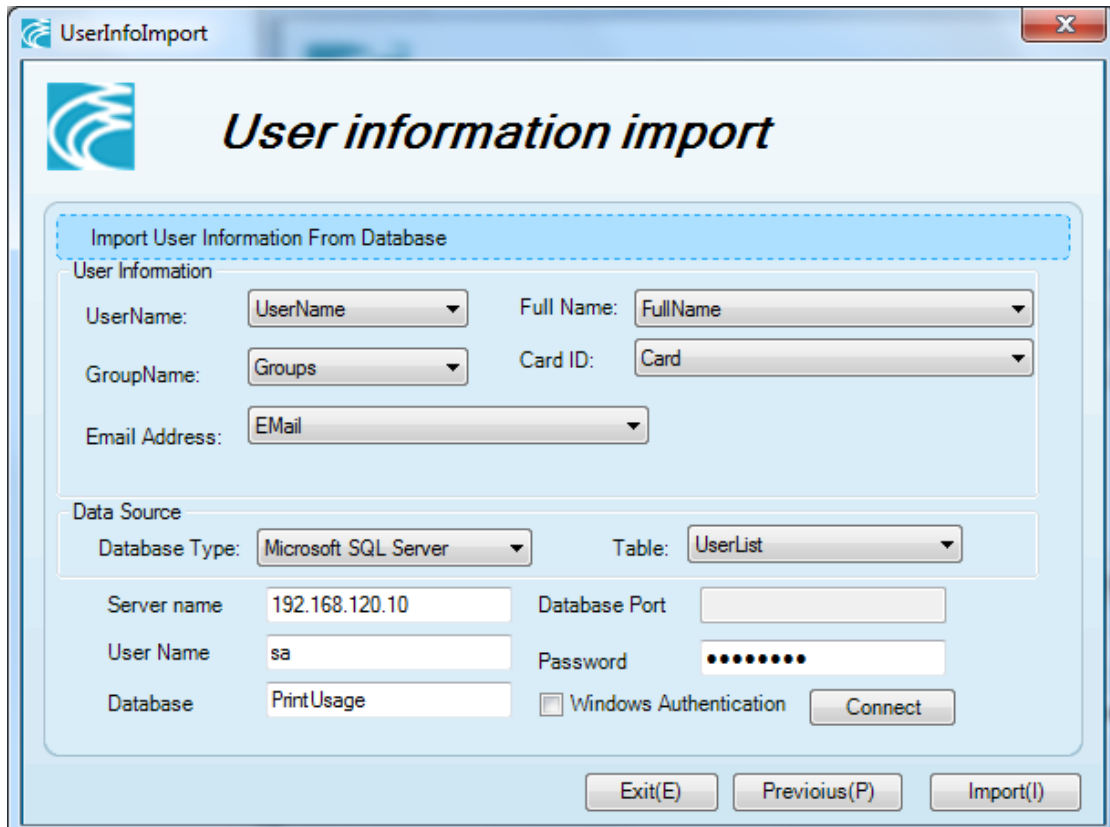
"Whether to open the automatic synchronization", checked open

"Auto sync interval time setting", user can follow the daily / weekly / monthly / quarterly / annual user synchronization. If the selected day, expressed next morning to start the synchronization, the synchronization time can be set in the configuration file. If the selected month, expressed early morning start on the 1st of the month, the synchronization time can be set in the configuration file.

"Synchronous method "expressed the increment based on the data source added, PU database also increased; Delete the data source, PU database unchanged. Based on the difference, said data source increased, PU database also increased; data sources deleted, PU database corresponding deleted.



Set the database connection and configure the appropriate fields.



Click import button to complete.

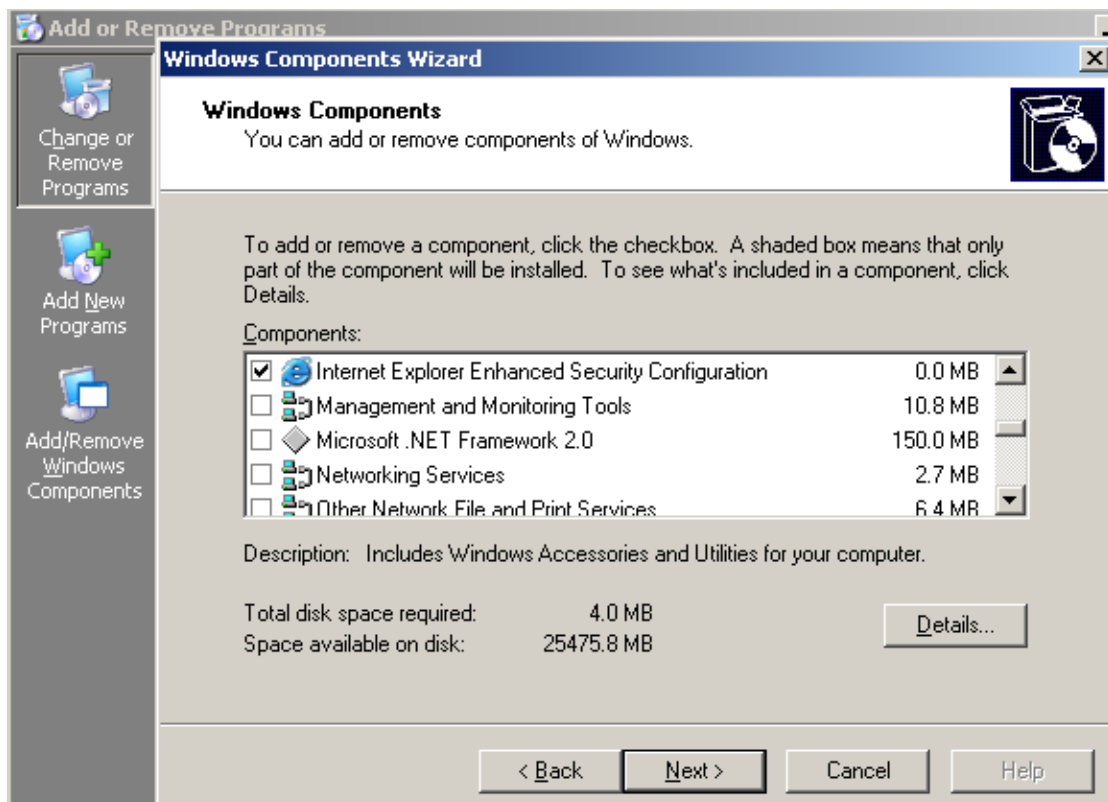
7.4 Complete the installation

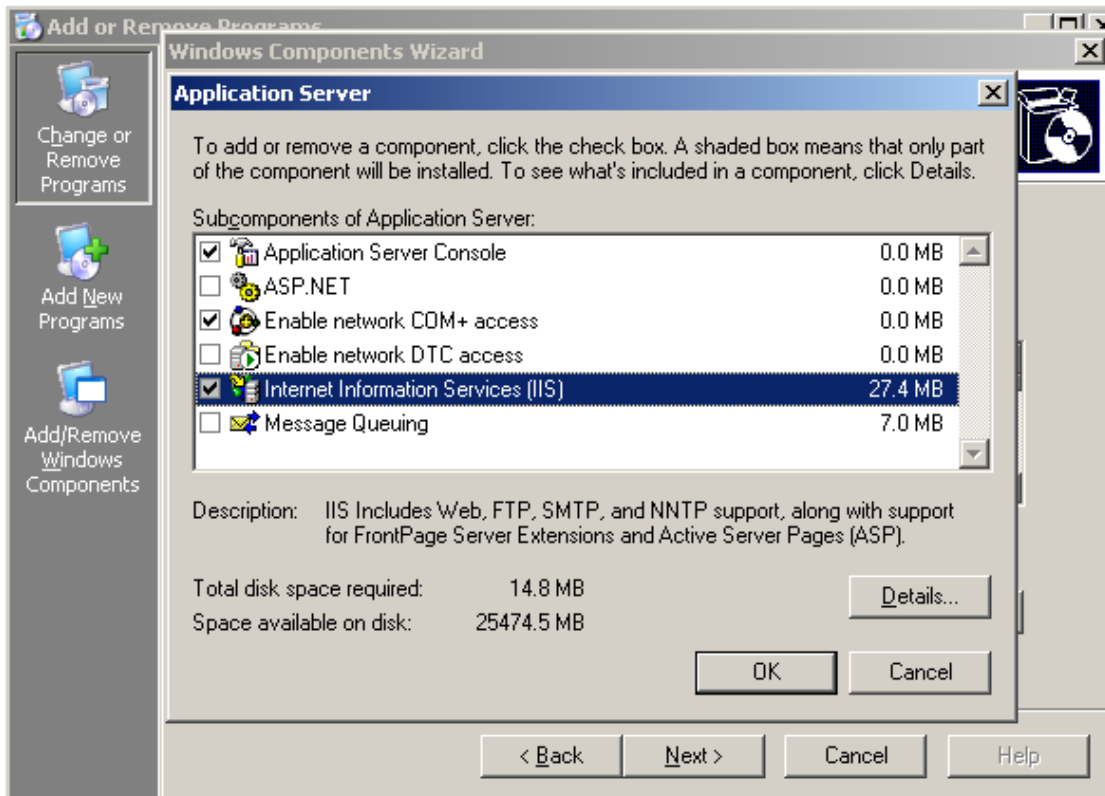
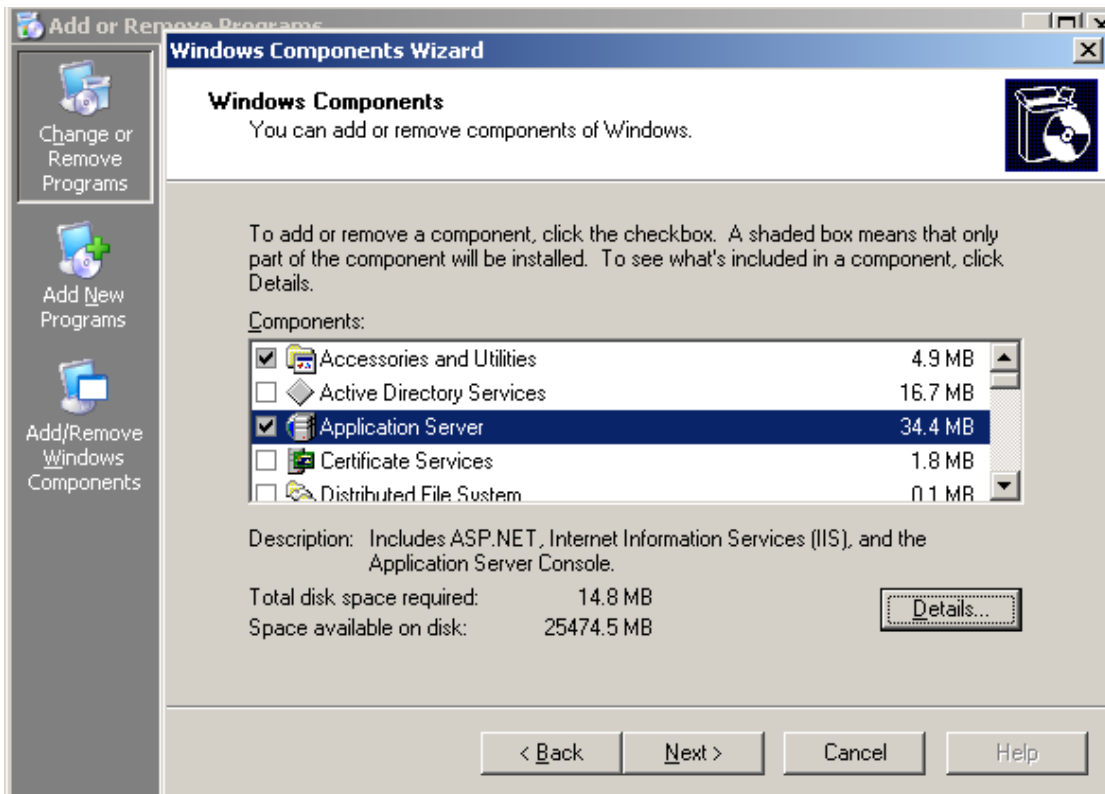
PrintUsage related services will start automatically after the installation complete, and PrintUsage have successfully installed on your server.

8. Frequently Asked Questions

8.1 Configuration PRINTUSAGE in IIS 6

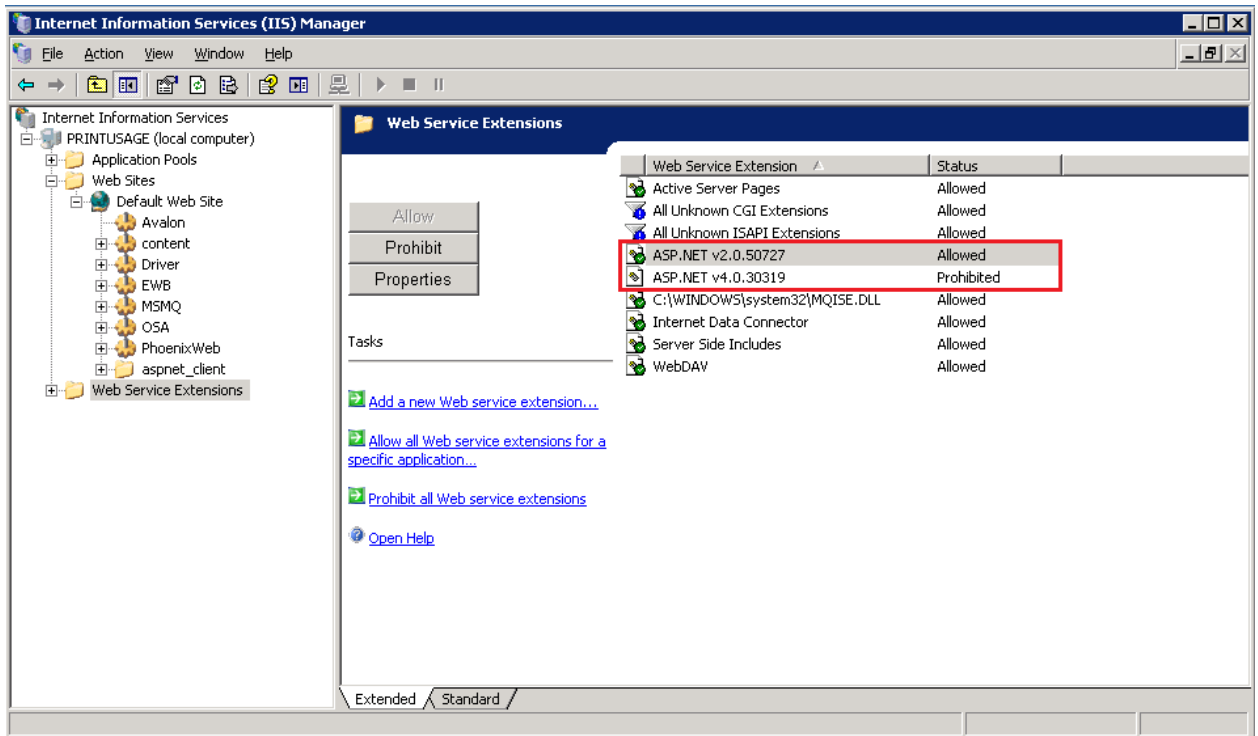
8.1.1 Install IIS



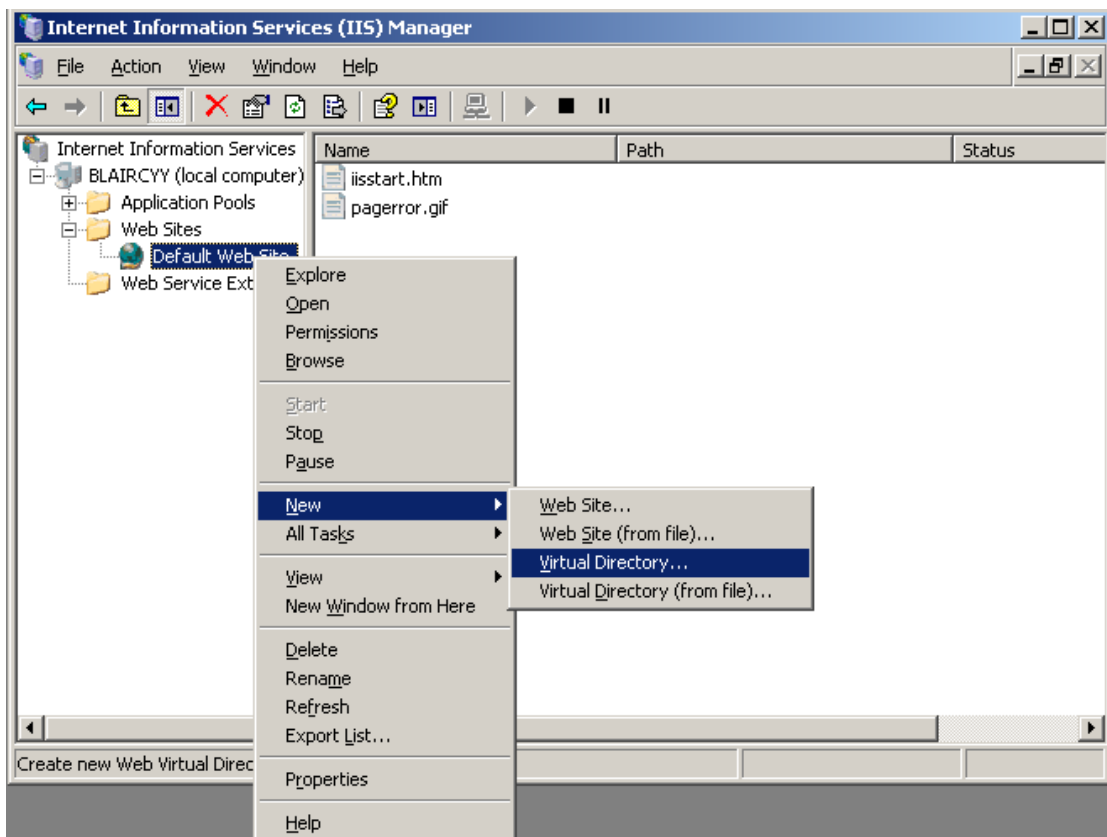


8.1.2 Enable ASP.NET in IIS

In Windows 2003 enable ASP.NET



8.1.3 Creating virtual directory



Virtual Directory Creation Wizard [X]

Virtual Directory Alias

Specify a short name, or alias, for this virtual directory.

Type the alias you want to use to gain access to this Web virtual directory. Use the same naming conventions that you would for naming a directory.

Alias:

< Back Next > Cancel

Virtual Directory Creation Wizard [X]

Web Site Content Directory

Where is the content you want to publish on the Web site?

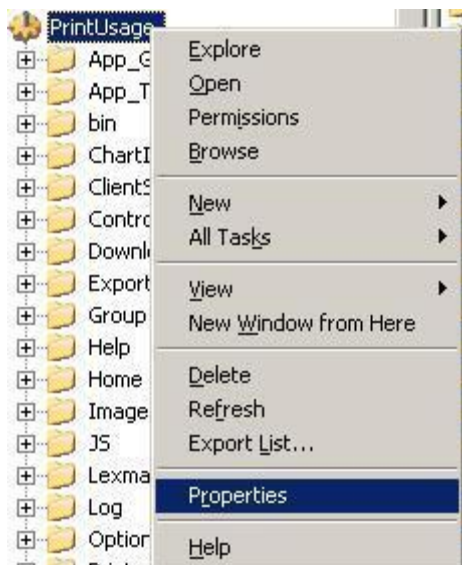
Enter the path to the directory that contains the content for this Web site.

Path:
 Browse...

< Back Next > Cancel



8.1.4 Configuration Properties



PrintUsage Properties [?] [X]

The content for this resource should come from:

A directory located on this computer
 A share located on another computer
 A redirection to a URL

Local path:

Script source access Log visits
 Read Index this resource
 Write
 Directory browsing

Application settings


Application name:

Starting point:

Execute permissions:

Application pool:

PrintUsage Properties [?] [X]



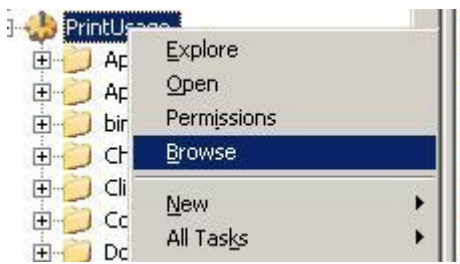
ASP.NET version:

Virtual path:

File location:

File creation date:

File last modified:



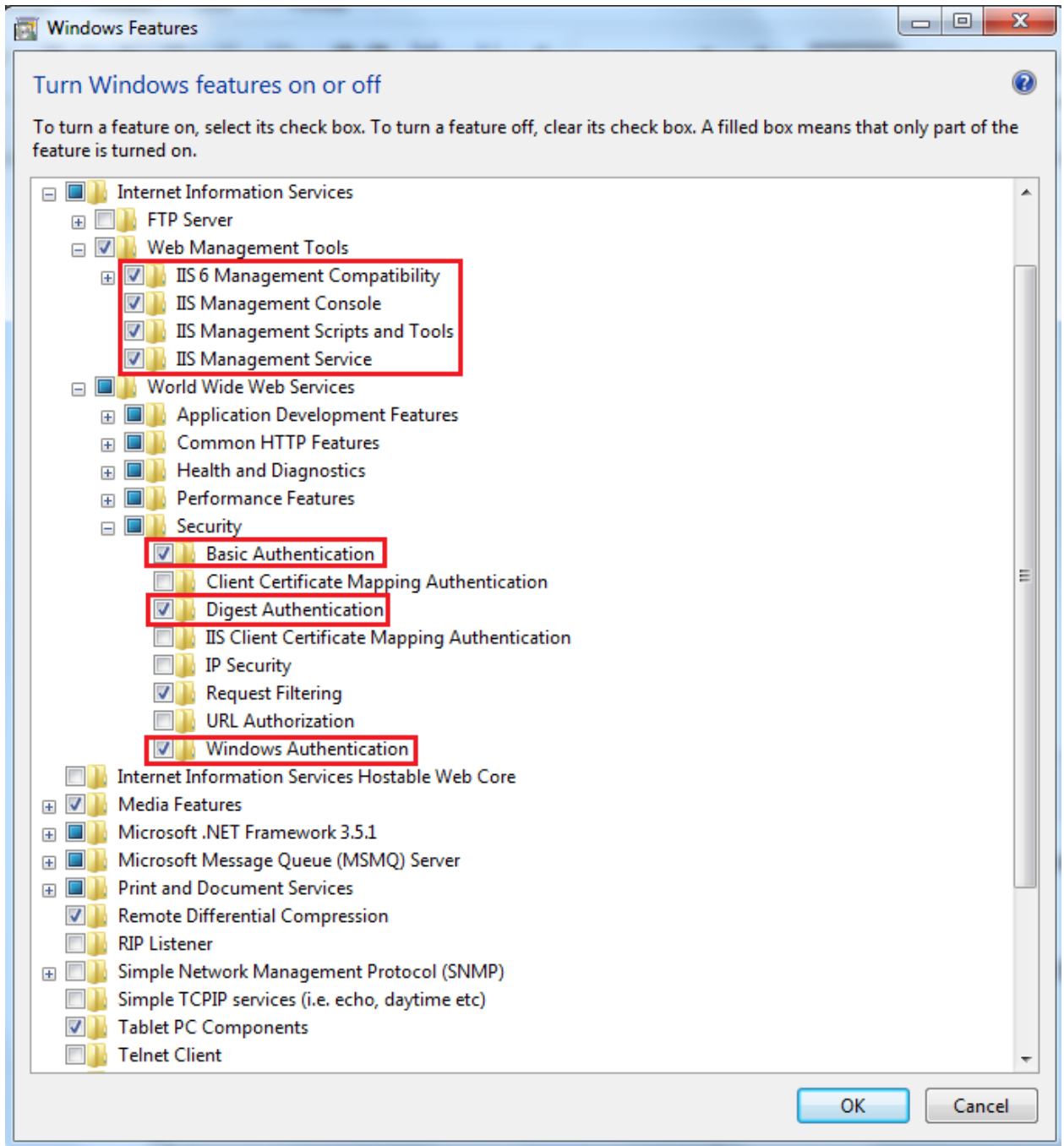
8.2 Configuring PrintUsage in IIS7

8.2.1 Install IIS

For Windows Server 2003 IIS is installed by default for Windows 2003 Standard Edition, Enterprise Edition, 7, 2008, the default is not installed; user needs to add IIS system components.

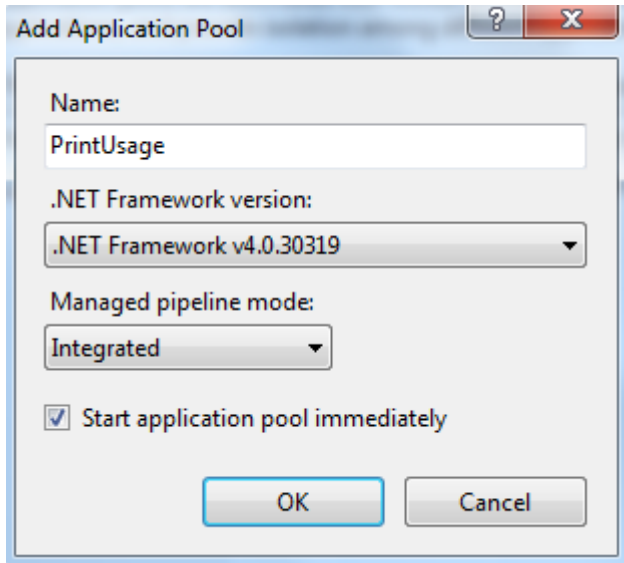
Noted that, Windows 7.user need to install IIS6.0 Management Compatibility.

Note: If installed IIS in win7 and Win2008, after the installation is complete need to install IIS6 to management compatibility and .NET Framework 3.5.1.User can in Start -> Control Panel -> Programs -> Turn Windows features on or off to find them. Please ticked refer the below red draw circle in turn then click the OK button to complete the installation of these components.



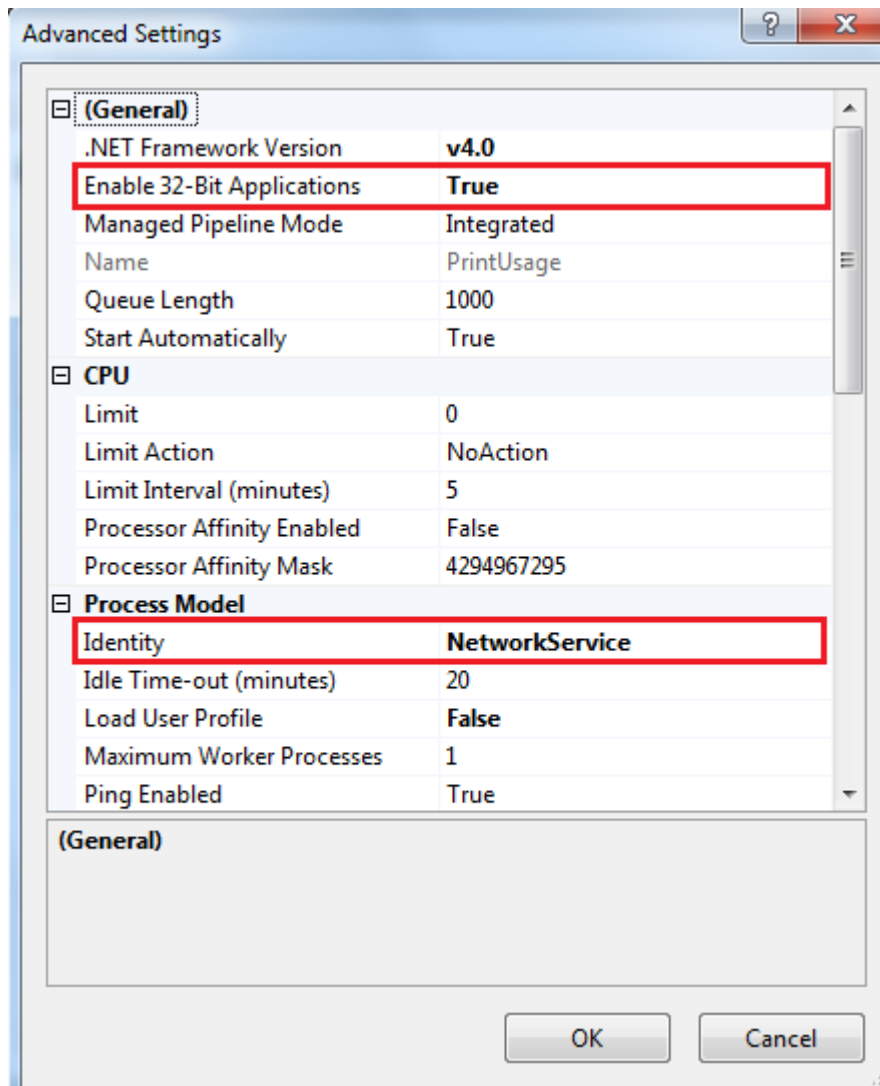
8.2.2 Create an application pool

In Windows 7/2008 create an application pool. Named as PrintUsage or other names. Choose v4.0.



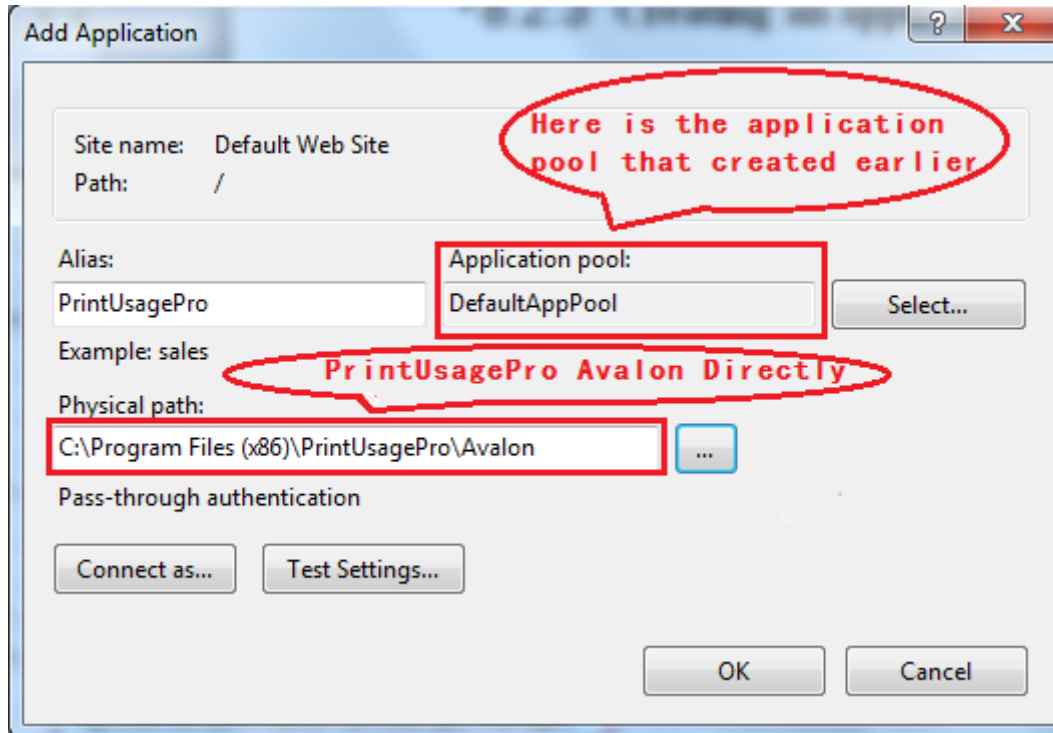
The application pool, advanced settings.

NETWORKSERVICE. "Enable 32-bit applications" is set to true; Identity is set to NETWORKSERVICE.



8.2.3 Creating an application

Create a PrintUsage application in the default Web site. Figure



8.2.4 Update Avalon access right

The Network service will full control permissions to Avalon directly

8.3 Use SQL SERVER 2005 as PRINTUSAGE Database Considerations

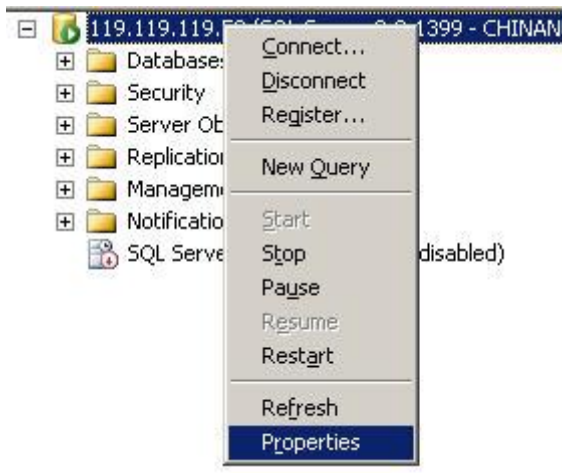
When use SQL Server 2005/2008 as the database and install model as distribution, It usually will cause PrintUsage monitoring service cannot connect to the database, Use SQL Server 2005/2008 as PrintUsage database, even with ODBC also cannot connect to the database, now, for example with Windows 2003 With SP1 + SQL Server 2005 Developer Edition, using SQL Server 2005 database and distributed installation..

8.3.1 Set up the database for mixed authentication mode

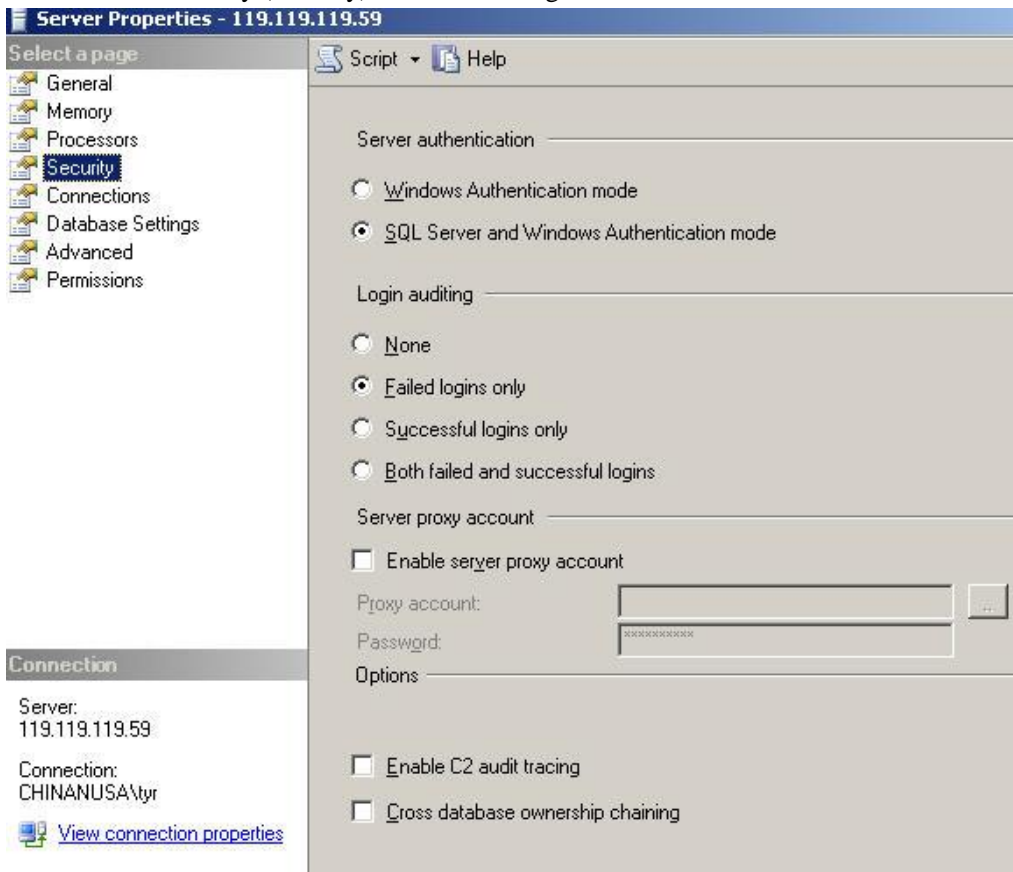
Enable SQL Server Management Studio

Connect to the database server

Right-click on the database server, and select Properties (attributes), as shown in Figure



Click on Security (security), as shown in Figure::



Select SQL Server and Windows Authentication mode;

8.3.2 Setting SQL Server port number

Usually if without making any changes, the port number is 1433, if the firewall is set, please open this port. Setting SQL Server port number as follows steps:

Open SQL Server Configuration Manager from the Start menu

Expand SQL Server 2005 Network Configuration

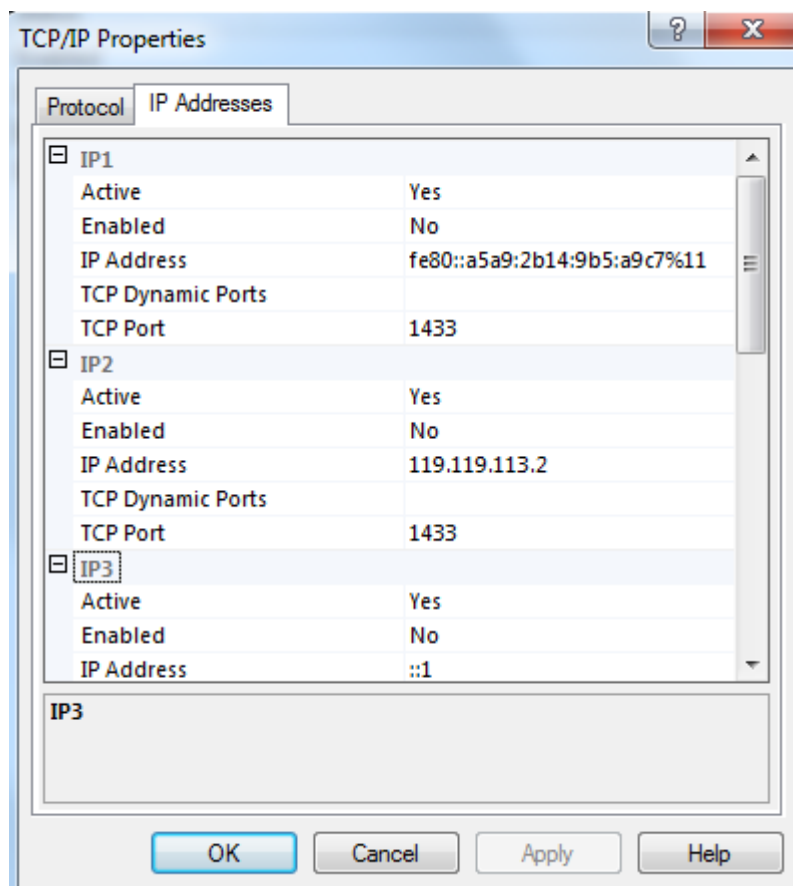
Display Protocols for MSSQLSERVER



Confirm the right of the TCP / IP is not disabled, if yes, to enable

Right-click on TCP / IP, select Properties

Select IP Addresses



Modify TCP Port: 1433

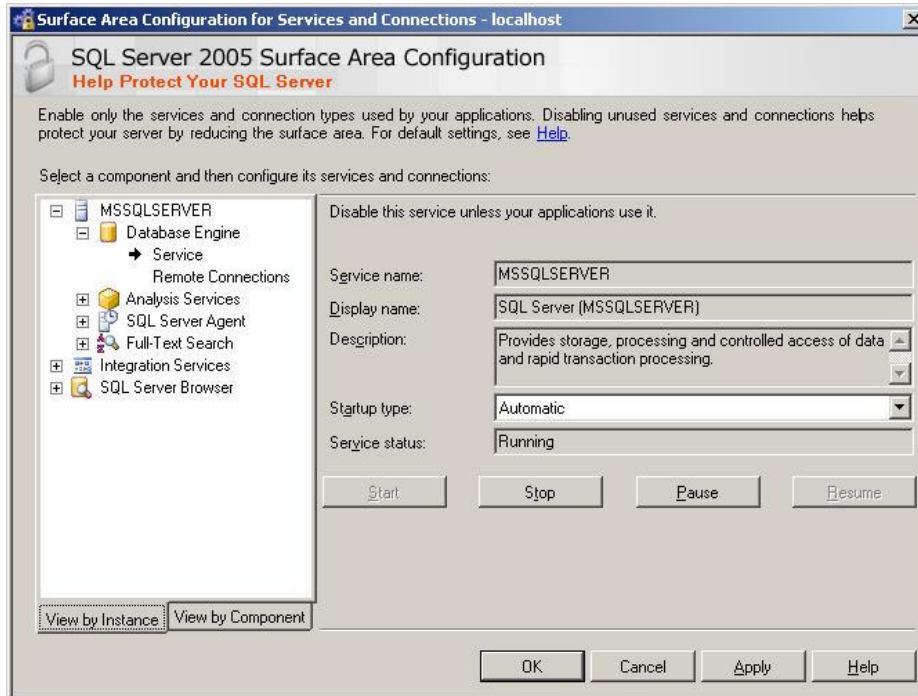
Click Ok and exit

8.3.3 Enable TCP / IP network connection with the pipeline

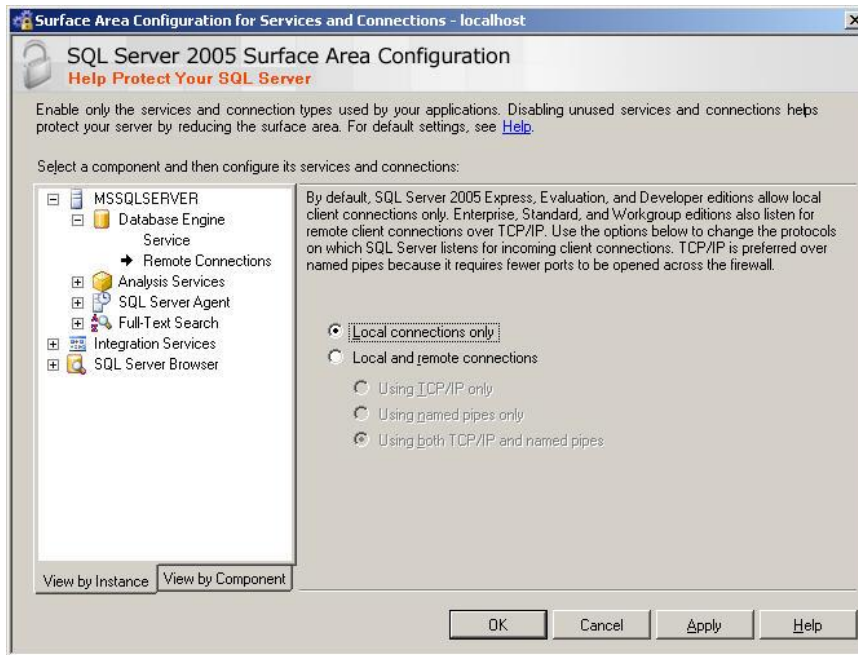
Running SQL Server 2005 Surface Area Configuration from the Start menu.



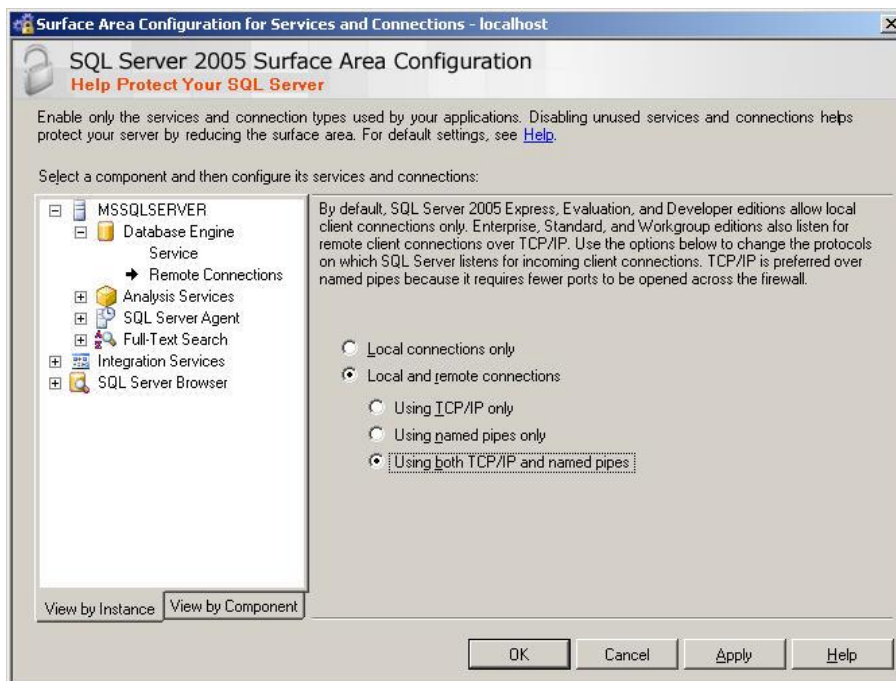
Click Surface Area Configuration for Services and Connections



Expand MSSQLSERVER-->Database Engine-->Remote Connections












Modify the default database connection, Modified Local Connections Only as Local and Remote Connections, and choose Using Both TCP / IP and named Pipes.



Save and Exit

Note: Any of the above changes are needed to restart the SQL Server service.

 Special Administration Console ...	Allows adm...		Manual	Local System
 SQL Server (MSSQLSERVER)	Provides st...	Started	Automatic	Local System
 SQL Server Active Directory Hel...	Enables int...		Disabled	Network S...
 SQL Server Agent (MSSQLSERV...	Executes j...		Manual	Local System
 SQL Server Analysis Services (...)	Supplies on...	Started	Automatic	Local System
 SQL Server Browser	Provides S...	Started	Automatic	Local System
 SQL Server FullText Search (MS...	Quickly cre...	Started	Automatic	Local System
 SQL Server Integration Services	Provides m...	Started	Automatic	Network S...
 SQL Server VSS Writer	Provides th...		Manual	Local System

Restart display highlighted services will be ok.

8.4 SQL SERVER Firewall Script

```
@echo ===== SQL Server Ports =====
```

```
@echo Enabling SQLServer default instance port 1433
```

```
Netsh firewall set portopening TCP 1433 "SQLServer"
```

```
@echo Enabling Dedicated Admin Connection port 1434
```

```
Netsh firewall set portopening TCP 1434 "SQL Admin Connection"
```

```
@echo Enabling conventional SQL Server Service Broker port 4022
```

```
Netsh firewall set portopening TCP 4022 "SQL Service Broker"
```

```
@echo Enabling Transact-SQL Debugger/RPC port 135
```

```
Netsh firewall set portopening TCP 135 "SQL Debugger/RPC"
```

```
@echo ===== Analysis Services Ports =====
```

```
@echo Enabling SSAS Default Instance port 2383
```

```
Netsh firewall set portopening TCP 2383 "Analysis Services"
```

```
@echo Enabling SQL Server Browser Service port 2382
```

```
Netsh firewall set portopening TCP 2382 "SQL Browser"
```

```
@echo ===== Misc Applications =====
```

```
@echo Enabling HTTP port 80
```

```
Netsh firewall set portopening TCP 80 "HTTP"
```


@echo Enabling SSL port 443

Netsh firewall set portopening TCP 443 "SSL"

@echo Enabling port for SQL Server Browser Service's 'Browse' Button

Netsh firewall set portopening UDP 1434 "SQL Browser"

@echo Allowing multicast broadcast response on UDP (Browser Service Enumerations OK)

Netsh firewall set multicastbroadcastresponse ENABLE

8.5 Enable Windows account print method

1,By default,XP disabled Guest accounts.

2,By default, XP local security policy prohibits Guest user from the network access.

3,By default, the local security policy of XP -> security options, "account: use an empty password users "only console login" is enabled, that is to say, any account empty password cannot be accessed from the network only local login, the Guest password default as empty .

So, if user needs to use the Guest user access XP, need to set the above three Settings: enable Guest, modify the security policy to allow Guest from the network access, disable 3 security policies or add a password to Guest.

Sometimes meet another another situation: access XP, the user name login dialog is grey, is always a Guest user, cannot enter the other user account.

Reason is that it's security policy(Administrative tools -> local security policy -> security options -> "Internet access: local account sharing and safe mode).By default, Windows XP access is a "Guest" only way, then user visit it, of course, is fixed for the Guest cannot enter a different user account

"Account: use an empty password users "only console login" is enabled

Network access: Local account sharing and safe mode classic- local users with their own authentication

8.6 How to open the SQL Server Express open SA landing permissions

No SSMS environment.

Open the registry regedit

HKEY_LOCAL_MACHINE\Software\Microsoft\Microsoft SQL Server\MSSQL.1

The key value: LoginMode

1 Change to 2 enters the following command in the command line.

```
Sqlcmd -E -S\< Instance name > -d master
```

```
ALTER LOGIN sa ENABLE
```

```
ALTER LOGIN sa WITH PASSWORD = "
```

Go

Open 1433 TCP, This will not give a screenshot.

Restart the SQL server service