

FreeMEG Software

Print Map 1.1

A guide to Installing and Configuring the PrintMap Program

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INTRODUCTION

So you have a large number of workstations which print to a myriad of printers in different locations and for different reasons. Your printer login scripts are painfully long and to make a change involves editing the script and testing. If it is a large change, sometimes this can involve a whole re-write of the printer login script.

Enter **PrintMAP!** PrintMAP is a Printer Mapping Utility that runs as part of the login process. PrintMAP will identify your workstation (COMPUTER NAME, NETBIOS NAME), then check against a database for a rule that matches that workstation name. It will then map the printers listed in that rule, assign a default printer. If the database does not have a rule, it can also prompt the user to create one. Thus minimizing the work required by the System Administrator to manage printers.

PrintMAP can use wildcards for rules. Eg. If you have a room full of computers and your workstations are named D8R2C1, D8R4C6 etc, you can specify the rule D8* and all computers with a hostname like D8 will get the appropriate mapping.

SYSTEM REQUIREMENTS

Client

Windows 2000 SP4 Minimum. Tested and found to work great under Windows XP SP3

Servers

Has been tested with Windows 2003 Server and Windows XP computers with Printer Shares. It might work with Samba or Novell. But I will officially say no support for these products.

INSTALLATION

The Printmap files must be installed into a folder that everyone has read/write access to. This is because the backend is Microsoft Access and for the client to run correctly it must make a connection to this database. The Microsoft Access File will write a Lock file into the directory every time it is accessed.

Description of Executables

PMCLIENT.EXE – Call this in your login script. This is what does the actual work.

PMCONFIG.EXE – This is for system administrators to allow them to manage the print mapping rules.

PMCONFIG: THE CONFIGURATION UTILITY

FREEMEG: PrintMap Config Screen

Global Options

- Allow clients to add rules to database
If this option is enabled, when a client computer connects to the database to check for a rule and there is not rule matching that clients computer name, then that client will be prompted to select a printer which will add a rule to the database. NOTE: Users will need write access to the PMDATA.MDB file.
- Clear any network printer connections before adding these rules
If this option is enabled, then all "user" network printer connections are cleared before the PrintMap client adds the appropriate printers based on rules in the database. This only works for user printer connections not system printers(Local Printers) and will only do this if there is a rule in the database.

Networkable Printers

Printer UNC Path	Description	Available
None	No Printer	True
\\TEST2K3\2430dl	KONICA MINOLTA magicolor 2430DL	True

Add Edit Delete Find Printers

Printer Mapping Rules

Computer Name	Printer 1	Printer 2	Printer 3	Printer 4	Default	Active
dsad	None	None	None	None	3	True
sdfds	None	None	None	None	2	True
deephought	None	None	None	None	1	True

Add Edit Delete

The Configuration Screen of PMCONFIG

The main configuration screen of PMCONFIG is divided into three parts. Global options, Networkable Printers, and Printer Mapping Rules

GLOBAL OPTIONS

Allow Clients to Add rules to the database – If this box is ticked then the client will prompt the user for a relevant printer to install if no rule is found that matches the clients computer name in the database. If this box isn't ticked, then the program client simply aborts if no rule is found. **Note: Users must have write access to PMDATA.MDB for this option to work properly.**

Clear any network connections before adding these rules – If a print mapping rule exists for the workstation, the client will clear any existing network printers on the workstation before adding these rules.

NET WORKABLE PRINTERS

This is a list of printers known to the database. You may add printers by clicking add, or by clicking find printers. You may edit the printer description or delete the printer from the database. Note this will not delete the printer from the server. More information can be found below.

PRINTER MAPPING RULES

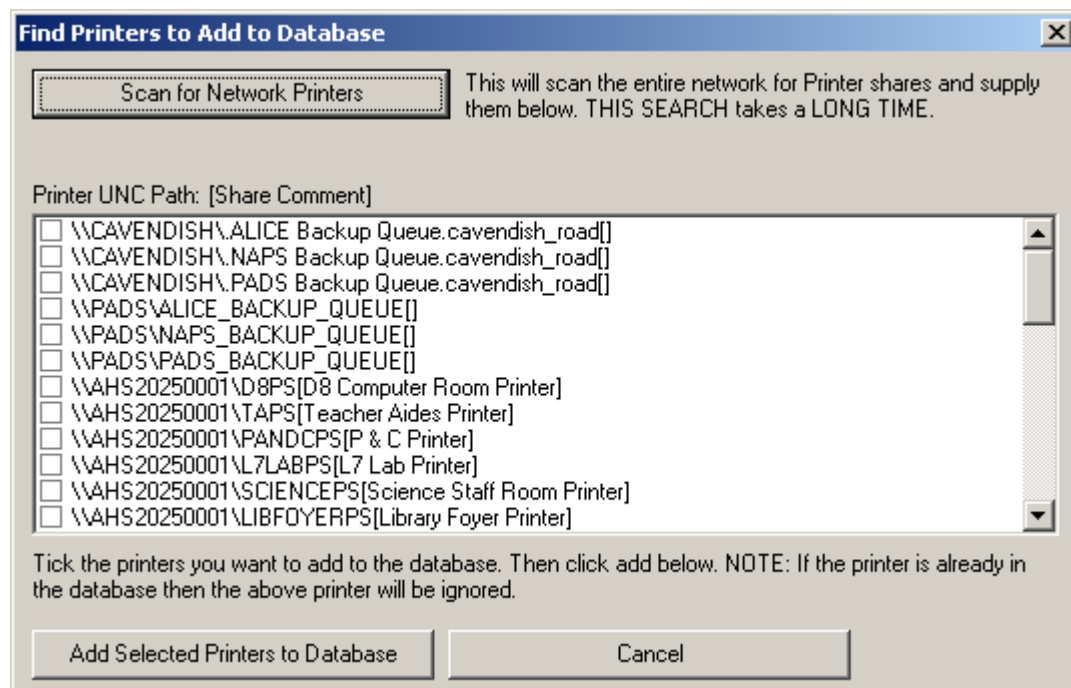
This is a list of mapping rules. What workstations get what printers, whether those rules are active. You may add rules by clicking add, or through the client if this function is enabled. Please note if rules are added by client whilst the PMCONFIG program is running they will show up next time the PMCONFIG program is started. More Information below.

MANAGING NETWORK PRINTERS

The PMCONFIG program makes it easy to add your printers to the list. There are two ways of adding a printer. Using the find printers utility or manually.

USING THE FIND PRINTERS UTILITY

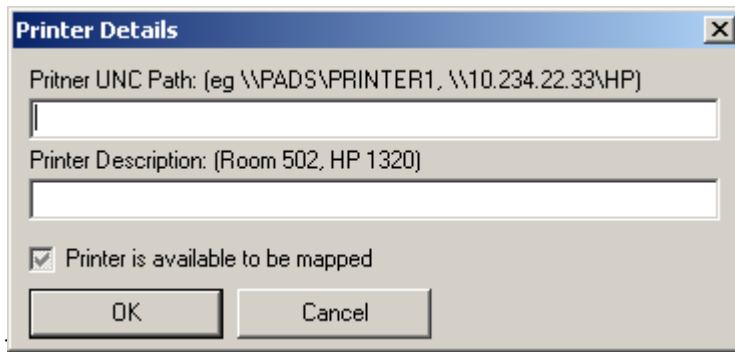
On the main screen click the Find Printers Button. Then Click the Scan for Network Printers Button. The search will scan the entire network for printer shares. Including non-windows networks. It will search all workgroups and domains. It can miss some printers/computers, this isn't a prompt of the PMCONFIG utility but of the windows network, it may be because of the way the network is setup. It may have to be corrected. Eventually you will get a list of printers that look like this:



The Find Printers Screen after a search has been conducted

If you want to add the printer to the database, check the checkbox for the corresponding printers, then click Add Selected Printers to the Database. This will then add all printers that are not already in the database to the database.

MANUALLY ADDING PRINTERS



There are three options you have to enter for it to be validly entered into the database.

The first is the **UNCPATH**. This is the path to the windows printer share. Eg [\\SERVER\PRINTSHARENAME](#) or [\\10.22.332.23\PRINTERSHARENAME](#)

This must be correct because if there is a problem it could potentially lock up the PMCLIENT when it tries to connect to that printer.

The second is **Printer Description**. This is a friendly description of what the printer is. You can put anything here you like.

The third option is **Printer is Available to be Mapped**. If ticked, PMCLIENT will attempt to map the printer. If not ticked, PMCLIENT will ignore this printer and continue to map others in its rule.

VARIABLES IN UNC PRINTER PATH

The UNCPATH can contain variables that the PMCLIENT program will then attempt to populate. These can be environment variables or simply variables given on the PMCLIENT command line. (See PMCLIENT Command Line options) A variable name is qualified when it is surrounded by two '%' symbols. In much the same way a batch file works.

For example a UNC path could contain [\\%logonserver%\printersharename](#) where logon server is replaced by the name of the server a client logged onto. Or it could contain [\\%computername%\printersharename](#) which would be the name of the computer running the PMCLIENT. More specifically it could be [\\%clientname%\printersharename](#) which is the override computer name given at the command prompt when running PMCLIENT. It can in actual fact be any environment variable at all and you can have as many variables in a UNCPATH as you like. [\\%username%\%specialprinter%](#) would work if you had a scenario where %specialprinter% and %username% are able to be populated by PMCLIENT with valid UNC Data.

EDITING PRINTERS

Select the printer from the list to edit and click edit. You are presented with the same options as manually adding a printer.

DELETING PRINTERS

You can delete any printer you select except the one labelled **None**. This one is here to maintain the integrity of the PrintMap System.

PRINTER MAPPING RULES

There are two ways to add Printer Mapping Rules:

- Using PMCONFIG
- Via the PMCLIENT

USING PMCONFIG

On the main PMCONFIG Screen under the Print Map Rules Click Add, the following screen will appear:

Mapping Rule Details

The printer mapping rules are based on COMPUTER NETBIOS NAMES. When the client is run, it will check the NETBIOS name then check the database for the first matching rule. You can specify the * wildcard which will apply the rule of any matching computer to it. eg if D8* is specified as the rule, then computers D8R3C4, D8R4C2 will have the rule applied to them.

Where Computer Name matches or is like:
deephthought

This Rule is Active

The Default Printer is Mapping Number:
(Select 5 to leave local printer as default)
1

Map 1st Printer as:
\\TEST2K3\2430dl

Map 2nd Printer as:
None

Map 3rd Printer as:
None

Map 4th Printer as:
None

OK Cancel

Adding a printer rule in PMCONFIG

Where Computer Name matches or is like: This is the rule name and doubles as which computer this rule affects. It can be a single computer: eg D8R3C2 which means the computer with name D8R3C2 will get the following printers assigned or it can be a Wildcard: eg where D8* will do any computer with D8 as a prefix (D8R4C2, D8R4C1, D8Computer, etc) You may have the * wildcard once per rule. It can be used like this *x or x* or x*x.

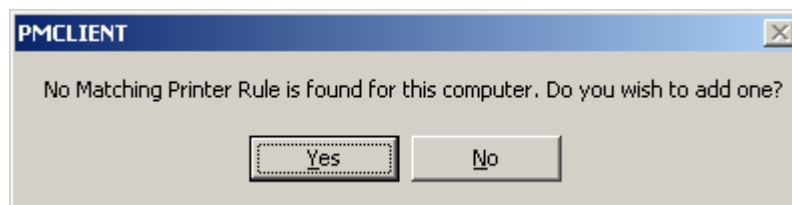
This Rule is Active: If ticked then PMCLIENT will map the printers assigned. If not ticked PMCLIENT will ignore the rule.

The Default Printer is Mapping Number: This number corresponds to the printer mappings on the right hand side. For example: if Printer mapping 2 (“Map 2nd Printer As”) is to be the default, then this section should read 2. If this section is set to 5 then none of the mapped printers on the right are made the default and which ever of the existing printers on the machine is the default will remain the default.

Map x Printer As: You can map up to four network printers through this system. Select one of the active printers from the list. And the PMCLIENT will map these printers for the matching rule. If you select None or the field is left blank then no printer will be mapped. Its logical to fill the top down with printers, then assign the default to the 1st printer.

THROUGH PMCLIENT

When Allow Clients to Add Rules to Database is Ticked in PMCONFIG in the Global options section. PMCLIENT the has the ability to add a new rule for a workstation if there is no existing rule that matches.



If you say yes here the same "Mapping Rule Details" screen from PMCONFIG will appear in the client. The only different being the rule name is completely locked to that workstation name.

EDITING PRINTER RULES

Select the printer rule from the list to edit and click edit. You are presented with the same options as adding a print rule.

DELETING PRINTER RULES

You can delete any printer rule on the system by simply clicking on it and clicking delete.



The Client Screen of PMCLIENT

The client needs to run as part of the login script. The only parameters of the PMCLIENT command is the /S switch which will run it silently. The client will automatically look for the PMDATA.MDB file in the same folder as it is in. If it doesn't find it, it will generate an error. User must have read access (at minimum) to this folder for this command to work.

THE LOGIC OF THE CLIENT

The Client will connect to the database and look for a rule that matches the computer name. If it finds an active one, it will connect the active printers in the rule and assign the appropriate default.

If it doesn't find the rule it will check to see if Clients are allowed to add printers (Tick Box in PMCONFIG) If they are it will prompt the user and ask them to add a printer. If the user agrees then they can add a printer and then those rules will be mapped. Otherwise the Client will abort.

Note: If an error occurs while mapping a printer PMCLIENT will do one of two things:

- *Ignore the error, abort mapping that particular printer and continue installing*
- *Display an error message if allowed to.*

COMMAND LINE OPTIONS FOR THE CLIENT

PMCLIENT [switches]

/S Run Silently without showing the splash screen and mapping status

/Q Quiet Mode: Do not show any errors.

/CLIENTNAME=newname Overrides the computer name PMCLIENT will use to determine the mapping. By default PMCLIENT gets the NETBIOS name of the windows machine. However in some cases. Like mapping in a terminal services environment this is not appropriate.

You can use any name here or an environment variable.

For example `/CLIENTNAME=%clientname%` on an Windows Terminal Server will use the real netbios name of the computer running the terminal services client as opposed to grabbing the netbios name of the terminal services server.

/[othervariablename]=othervalue

PMCLIENT can take anything from the command line and use it as a variable when mapping printers. That is you can have a Printer with the name %othervariablename% and PMCLIENT will automatically make the %othervariablename% become othervalue.

Here is one example:

You have a terminal server environment and want to add an Epson printer locally shared on the terminal server client computer which might have a random name. When you are logged onto the terminal server.

Inside PMCONFIG You can create a new printer called "Terminal Server Client Printer EPSON" which has a UNC (Print Share) Path of [\\%terminalclient%\epson](#)

Then with the PMCLIENT once logged onto the terminal server you can run PMCLIENT `/CLIENTNAME=%clientname% /TERMINALCLIENT=%clientname%`

Note: In actual fact you can use [\\%clientname%\epson](#) in PMCONFIG because CLIENTNAME is a special variable that overrides the computername used in determining rules.

In this instance PMCLIENT will start and look for rules associated with /CLIENTNAME it will then locate the EPSON rule, and replace %terminalclient% with the name of the client computer. So if the client at the time was called DSK-BOXES then the full name is now [\\DSK-BOXES\EPSON](#)

TROUBLESHOOTING

I PUT MY RULE IN BUT THE CLIENT ISN'T MAPPING IT

PMCLIENT is not smart, it will not attempt to connect by guessing printer names, drivers etc. It will only work if all these options are correct:

- You are mapping a printer on a Windows Server or Windows Computer
- The drivers for the client's operating system are installed or matching on the share.
- The user logged onto the client has access to print to the shared printer
- The user logged onto the client has rights to install printers on the local computer.
Note: All printers mapped using this utility are USER printers not SYSTEM printers.
- The Client Operating System is either Windows 2000, Windows XP, Windows 2003 or Newer
- The UNC Name of the Printer Share is 100% correct.
- The printer is using digitally signed drivers.
- Workstation has already been authenticated to the Server or Computer with the shared printer.
- Are any %variables% specified in printer names correct and able to be populated by PMCLIENT

PROBLEMS CONNECTING TO DATABASE

- Check user has read/write access to PMDATA.MDB and the directory it is in
- Check PMCLIENT.EXE is in the same folder as PMDATA.MDB
- Is the database corrupt??? Restore from Backup

PROBLEMS ADDING PRINTER RULES FROM CLIENT

- Check that the user has write access to PMDATA.MDB
- Are you sure the Allow Clients to Add Rules box is ticked in PMCONFIG?

ROW CANNOT BE ADDRESS FOR UPDATING ERRORS IN PMCONFIG

I do not know what causes this at the moment. The best thing to do is make sure you are the only one using PMCONFIG on the network and that there are no clients adding printer rules. This will minimize these errors.

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