



## **PrintMAN Utility 1.3**

# **Software Installation and Administration Guide**

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## About Data Synergy



Data Synergy is a British company based in Sheffield. We have over 15 years' experience developing and supporting software solutions for enterprise PC deployment and management. We do not resell other vendors' products and do all our development, sales and support from our UK base.

Our products have evolved through listening to customer ideas and applying our unrivalled knowledge of PC internals. If you have a suggestion for a new product or feature we would love to talk to you.

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## PrintMAN Overview



The Data Synergy PrintMAN utility provides a reliable and consistent mechanism to configure the printers available at each Windows based workstation or physical location.

The tool is necessary because Microsoft Windows assigns shared printers on a per-user basis. This behaviour is often undesirable in roaming user environments such as school classrooms, hospitals, or computer labs. In such an environment it is typically desirable for one printer to be associated with a particular physical location or group of workstations.

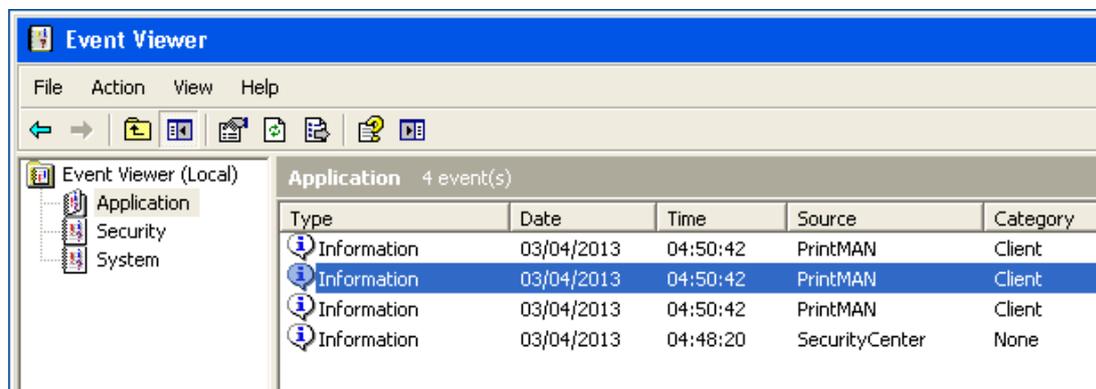
PrintMAN provides a simple solution to ensure the desired printer is always the default printer. The software reduces wasted print jobs, paper and toner resources caused by accidental or unauthorised printing to the wrong printer:

- Assign default printer per workstation
- Assignment based upon printer name and/or port (including wildcard support)
- Deployed and configured via Group Policy, SMS or similar tool
- Optionally delete non-default network printer connections
- Supports Windows XP and later

This document explains how to install and configure PrintMAN. This document is intended for a system / network administrator.

## PrintMAN Event Logging

PrintMAN incorporates a convenient event logging feature. This records significant events, in chronological order, to the **Application** log. This log can be accessed with the standard Windows event viewer tool **Eventvwr.exe**. This information can be useful when investigating problems or fine tuning settings. There is a summary of the most commonly logged events in an appendix at the end of this document.



PrintMAN can be configured to log additional information using the appropriate option under Advanced/Event Logging. The current user must log off before this this change becomes effective.

## Product Installation

### Installation Prerequisites

PrintMAN supports the following client platforms:

- Windows XP Professional
- Windows Vista
- Windows 7
- Windows 8
- Windows 10.0

The PrintMAN software client is a common executable (EXE) on all supported versions of Windows. The client software is available for both 32-bit and 64-bit platforms. The 32-bit version may be used in mixed 32/64-bit workstations estates and offers identical features on 64-bit systems.

PrintMAN is designed to integrate seamlessly with a **Windows Active Directory / Group Policy (GPO)** infrastructure. Alternatively, PrintMAN may be installed with a variety of alternative deployment and configuration methods. Common examples are:

- ZENworks
- LANDesk
- RM Community Connect
- Altiris
- HP OpenView
- SMS
- SCCM
- XCOPY installation (with scripted MSIEXEC.EXE)

The following sections explain the two most common deployment methods using Windows GPO and an SMS/XCOPY installation. It also explains how the registry settings may be created, without an Active Directory infrastructure, using a standard Windows XP or later client computer. The appendices at the end of this guide cover more specific installations for ZENWorks and RM Community Connect.

## Deployment Preparation

Before starting on a PrintMAN deployment there are a few essential steps to prepare:

1. **Determine deployment mode** – There are two different options available:
  - **Demonstration Mode** – PrintMAN will operate without a product key (PID) for 7 days following initial installation. Whilst demonstration mode is active all PrintMAN features are available. When the demonstration period expires PrintMAN will enter reduced functionality mode. In this state the software will cease to modify any printer configuration but may still be used to verify and diagnose printer configuration.
  - **Product Key (PID) mode** – A PID is required to use PrintMAN beyond the initial demonstration period. PID keys usually permit perpetual usage. In some cases a time limited PID key may be issued. When a time limited key expires the software enters reduced functionality mode.

For the purposes of this document the following *fictitious* information is used:

**Organisation:** Example Corporation Limited  
**Product Key:** XGHK-GABQ-GDTH-UJKQ-HYJK-DBKY

NB: This product key is a demonstration key and will not function on a live system. Please remember the client product key and the server product key **are different**.

2. **Select a deployment method** – PrintMAN may be deployed using a variety of methods. The two most common methods, Windows Group Policy and an SMS/XCOPY style deployment are described in the following sections. The appendices at the end of this document contain worked examples for other installation methods.
3. **Select a printer naming strategy** – Whilst any printer names can be used PrintMAN will work best if printer names are assigned based upon location or other unique criteria. A PrintMAN deployment may therefore be the ideal time to rationalise printer names. This step may be especially important if several printers have similar names or you plan to use PrintMAN's wildcard feature to locate the appropriate printer.

## Microsoft Windows Group Policy Deployment Method

The most common way to deploy the PrintMAN client software is using Windows Group Policy. This feature is available on any network running Windows 2000 Server or later. The example below uses the Group Policy Management Console (GPMC) which is available from Microsoft as a free download (this is built into later versions of Windows 2003 Server and later). If GPMC is not available then the older GPEDIT tool (which is built in to Windows) may also be used.

Group Policy Management Console (GPMC) is available from:

<http://www.microsoft.com/downloads/details.aspx?FamilyID=0A6D4C24-8CBD-4B35-9272-DD3CBFC81887&displaylang=en>

PrintMAN client deployment requires two core files. These are the only files you need to perform an installation:



**PrintMAN Setup.msi** contains the PrintMAN program in a deployable form. This may be installed manually or via Windows GPO.

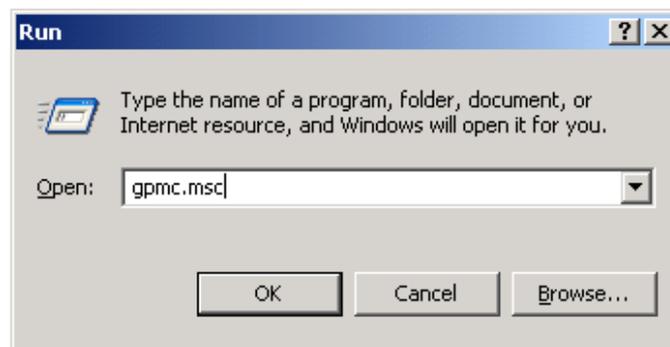


**PrintMAN5.adm** is an Administrative Template that is loaded onto the Windows Server and used to configure the PrintMAN or PrintMAN software. An **ADMX** file is also provided for use on Windows 2008 and later systems. The policy features available are identical. We recommend using the ADMX if supported.

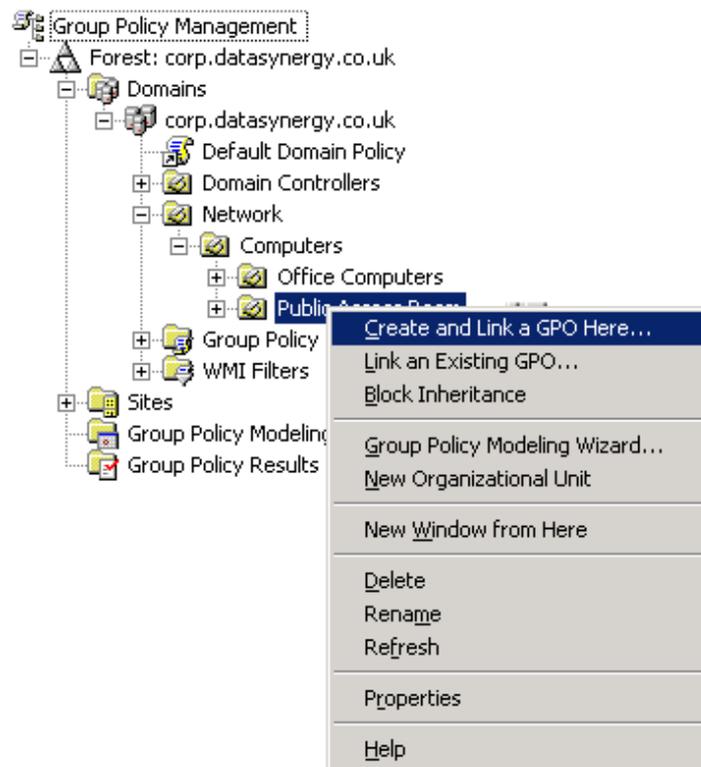
## Group Policy Installation - Worked Example

To install PrintMAN using GPO on Windows 2003 (or later) Server proceed as follows. The procedure for Windows 2008/2012 Server is almost identical:

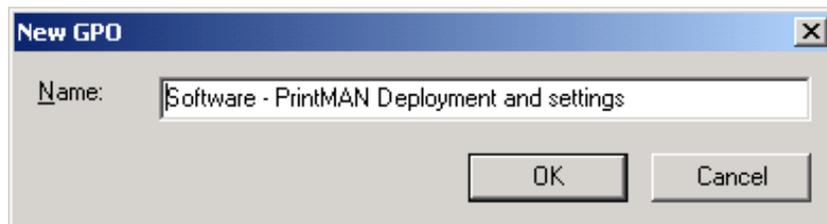
1. Open the Group Policy Management Console (GPMC.MSC):



2. Locate the **Organizational Unit (OU)** that you wish to deploy the software to. The example deploys the software to a OU called **Public Access Room**

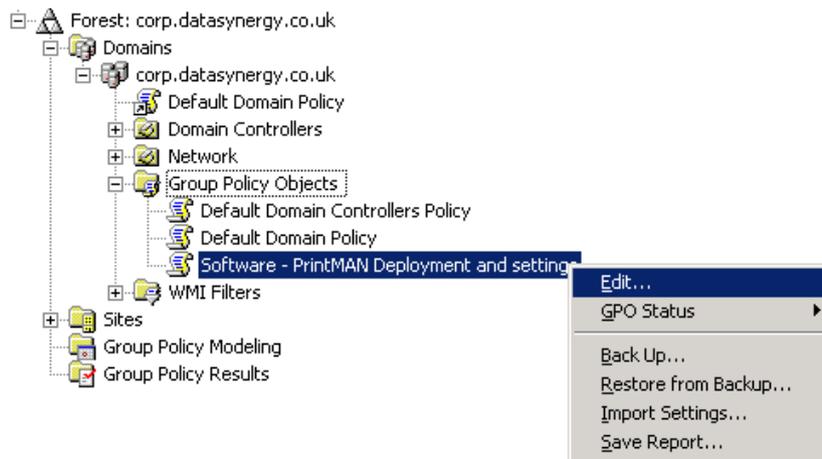


3. Right click the OU and select **Create and Link a GPO here**
4. Enter a name of the new policy and click **Ok**. The example creates a policy called **Software – PrintMAN Deployment and settings**

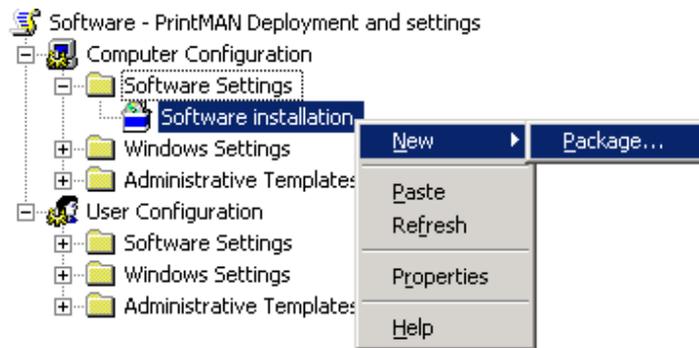


5. Select the newly created policy, right click and select **Edit**

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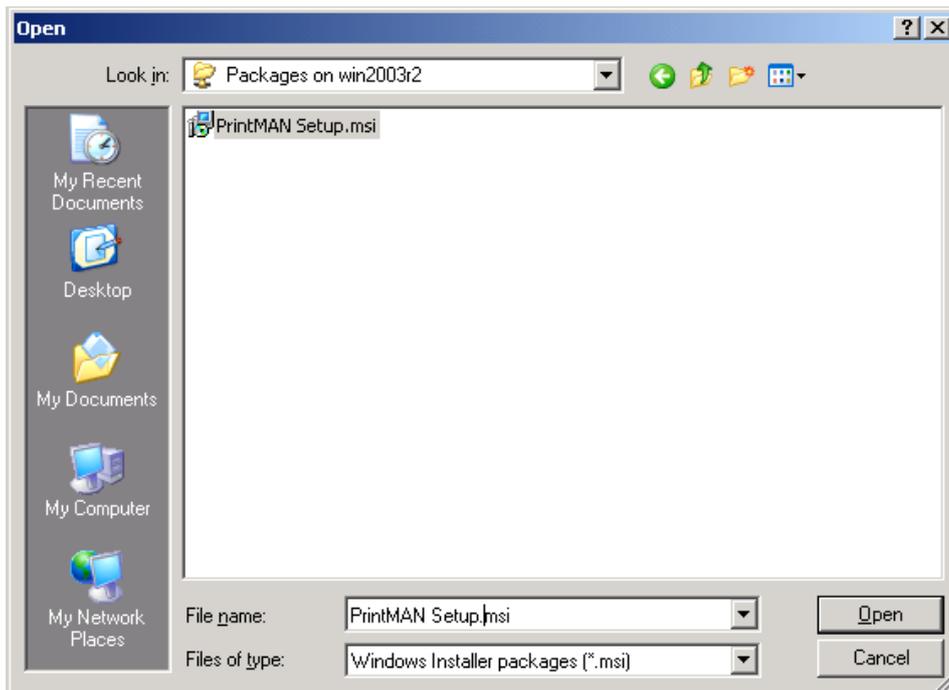


6. The **Group Policy Object Editor** should open. This is used to configure the deployment. Navigate to the **Computer Configuration** section and expand **Software Installation**. Right-click and select **New/Package**:



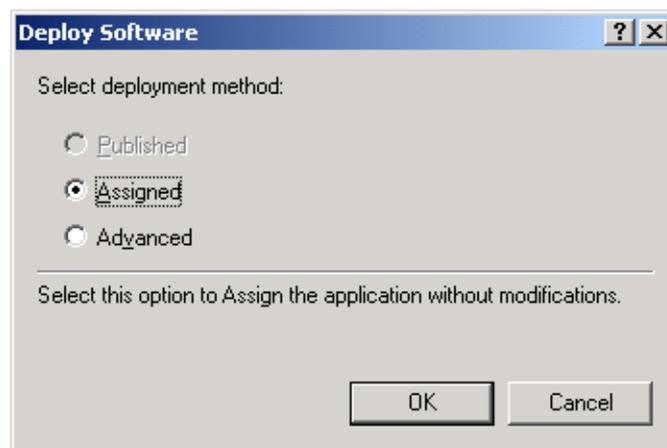
**Remember:** Typically PrintMAN settings are made in the Computer Configuration section of the Group Policy Editor. This is because the software must be deployed to a computer (and not a specific user). It is possible to assign some configuration settings policies to specific users or groups of users but this should only be done in an advanced installation.

7. Browse to the **network share** that contains the **PrintMAN Setup.msi** file and press **Open**.



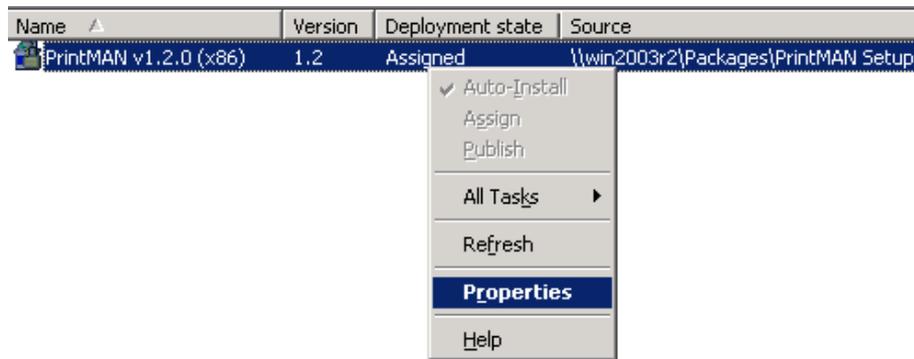
**Remember:** The MSI file should be placed in a **share** on the server that is accessible to the destination computers. A common technique is to grant **Domain Computers** read access of the share and underlying file system. This is explained further in the troubleshooting section below

8. Select **Assigned** as the deployment method. PrintMAN is a system application and therefore it is not appropriate to 'publish' it to users:

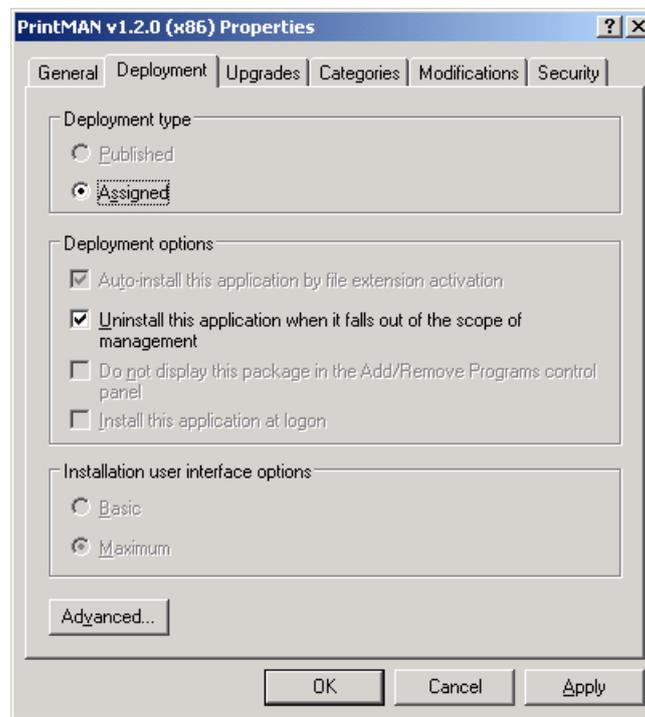


## PrintMAN Utility v1.3

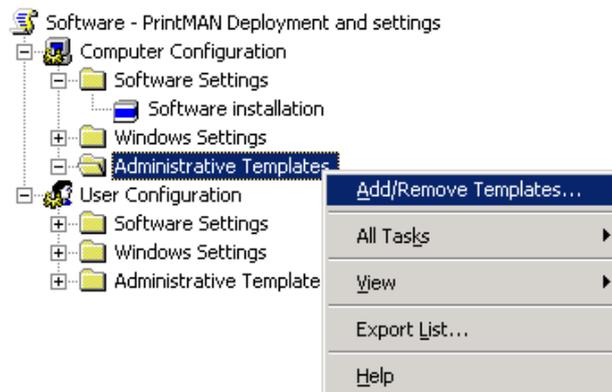
- Right click on the newly created package and select **Properties**:



- Select the **Deployment** tab (Advanced in some earlier service pack revisions) and tick **Uninstall this application when it falls out of the scope of management**. Click **Ok**:



- Navigate to the **Computer Configuration / Administered Templates**, right click and select **Add/Remote Templates**:



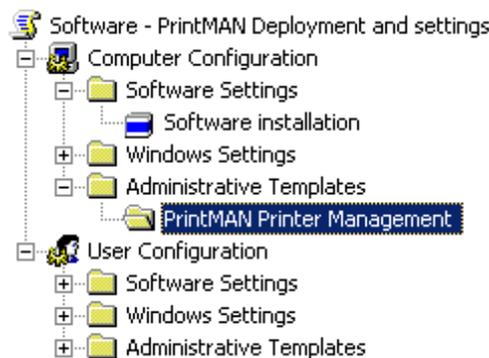
- Click **Add** and locate the **PrintMAN.adm** file supplied. When this is completed click **Close**. It may be helpful to remove the other administrative templates present using the **Remove** button. These are not required for PrintMAN.

**Tip:** An ADMX file is also provided for use on servers running Windows Server 2008 and later. It provides the same features as the ADM file. To install the policy files copy the **ADMX file** and **en-US** folder to the **WindowsPolicyDefinitions** folder on the server and re-open the Group Policy editor. Please see the following microsoft documentation for further information:

<http://msdn.microsoft.com/en-us/library/bb530196.aspx>

- The Group Policy editor should now contain a section for **PrintMAN Printer Management** (other sections may be present depending on server configuration). When using the ADM file method this is located under **Administrative Templates**. On Windows Vista and later this is located under **Classic Administrative Templates**.

Select the **PrintMAN Printer Management** section:



- The right hand pane will display a list of the available PrintMAN policy settings:

Setting	State
 Product Licensing	Not configured
 Advanced	Not configured
 Default Printer	Not configured

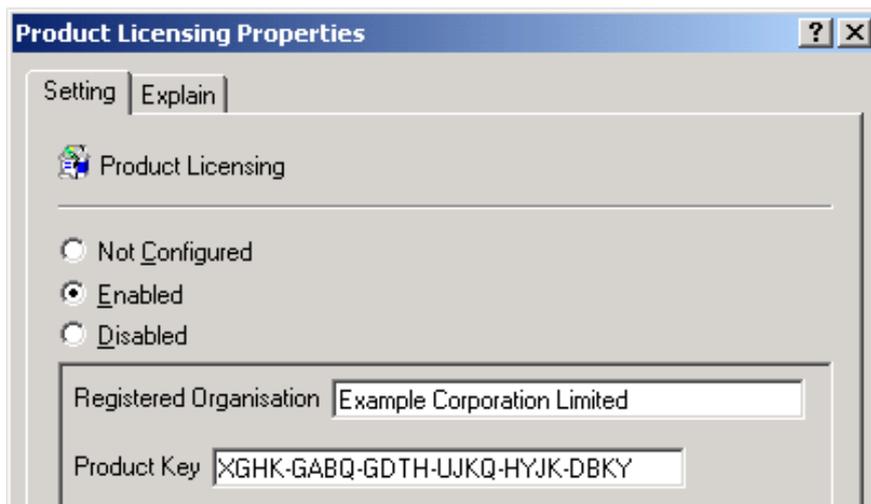
## PrintMAN Configuration Settings

The following PrintMAN configuration sections are available:

Section	Meaning
<b>Product Licensing</b>	Product key settings. These are required for PrintMAN to fully function in normal operating mode.  In Demonstration mode these settings should be set to Not Configured.
<b>Default Printer</b>	Printer configuration settings
<b>Advanced</b>	Advanced configuration and debug settings used to investigate problems

To configure the basic product licensing proceed as follows:

1. Open the **PrintMAN Group Policy** previously created
2. Select **Product Licensing**, right click and select **Properties**
3. Select **Enabled**, carefully enter the product details supplied with the software, and click **Ok**



**Demonstration Mode:** PrintMAN will operate in demonstration mode for 7 days after initial installation. Whilst in demonstration mode all product features are available. To use demonstration mode set the license setting to **Not Configured** and do not enter a product key.

A

4. Close the Group Policy Object Editor and test the policy works by restarting a target computer in the relevant Organisation Unit.
5. As the computer starts you should see the PrintMAN application install prior to the display of the logon prompt. If this does not happen please consult the troubleshooting section below.

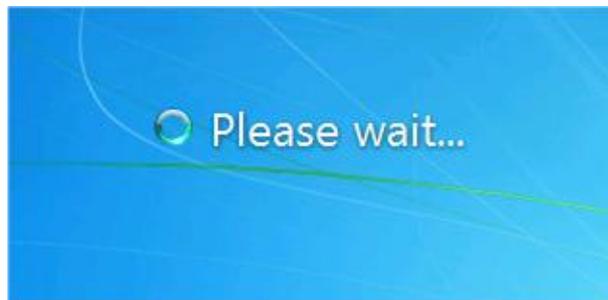
**Tip:** Depending upon server configuration, timing and any other pending updates a second reboot may sometimes be necessary for the client software to complete installation. This is completely normal.

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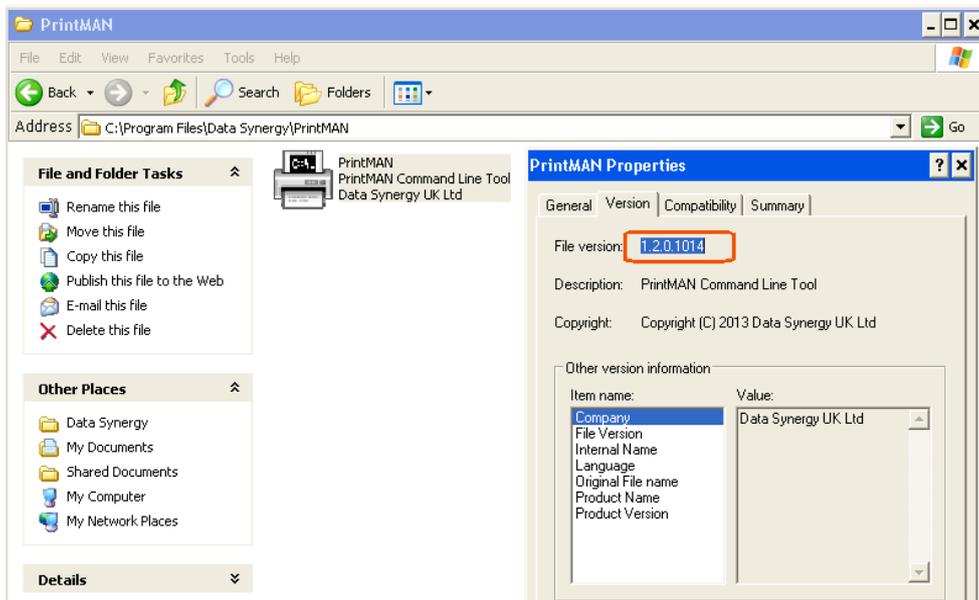
On Windows XP, for example, the following dialogue is displayed:



Whilst on Windows 7 the following dialogue is displayed during installation:



- If necessary you can always verify the version of the PrintMAN software by locating the program in the **\Program Files\Data Synergy\PrintMAN** folder:



**Tip:** The 32-bit distribution of PrintMAN can be installed on 64-bit systems. In this case the software will be located in \Program Files (x86). The functionality of both distributions is identical.

## Alternative SMS / XCOPY Deployment Method

PrintMAN supports a variety of deployment methods. The so-called **XCOPY** method describes a simple technique for installing the program. This may be adapted for environments such as SMS as required. This section explains the key features of such a deployment

- Obtain the PrintMAN installation file and install on the destination PC. There are several alternative ways for an Administrator level user to do this:
  - Double click the MSI file and follow the on-screen prompts



- Copy the PrintMAN setup files to the target workstation and install silently with the following command line:

```
MSIEXEC /I:"PrintMAN Setup.msi" /qn
```

**Remember:** The PrintMAN software must be installed by a user with local administrative rights. It is not normally possible to install PrintMAN using a logon script (which runs as a user). It is possible to install PrintMAN with a computer start-up script. See the following web page for an example:

[http://technet.microsoft.com/en-us/library/cc779329\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc779329(WS.10).aspx)

Deploy the required configuration settings using the Windows **Local Group Policy**, **REG.EXE** or **REGEDIT** tools. The section 'Alternative Configuration Method - Local Group Policy / Registry Settings' at the end of this document explains how this may be done. As noted above the minimal required settings are normally:

- Registered organisation name
- Registered product identification key (PID key)
- Default printer settings

## Deploying PrintMAN in a pre-built software image 'Ghost'-style deployment

PrintMAN fully supports deployment in a pre-built software image. This is sometimes known as a 'Ghost'-style deployment. Typically, in this scenario, PrintMAN is manually installed on a master computer. In some cases some initial settings may be configured using Local Group Policy or similar. This computer is then cloned on to multiple destination computers.

No special preparation is required for a Ghost-style deployment.

## Initial Printer Configuration and Testing

Microsoft Windows allows printers to be installed in two distinct ways:

- **Local printers** – The printer driver is present on the local workstation. The printer may be physically connected to the computer or connected via a network interface. The printer is only available to other computers if it is **shared**.
- **Network printers** – The printer driver is on a remote workstation or print server. The printer is accessed via a share name.

PrintMAN provides several convenient command-line tools to determine the installed printers and change the default printer. These commands support the same wildcards as the PrintMAN policy settings and may therefore be used to test settings prior to deployment or debug configuration problems.

The PrintMAN distribution includes a standalone copy of PRINTMAN.EXE. This may be used in scripts or during configuration preparation or subsequent technical support.

To launch the command line tool:

1. Open a command prompt (CMD.EXE)
2. Navigate to the PrintMAN folder with:

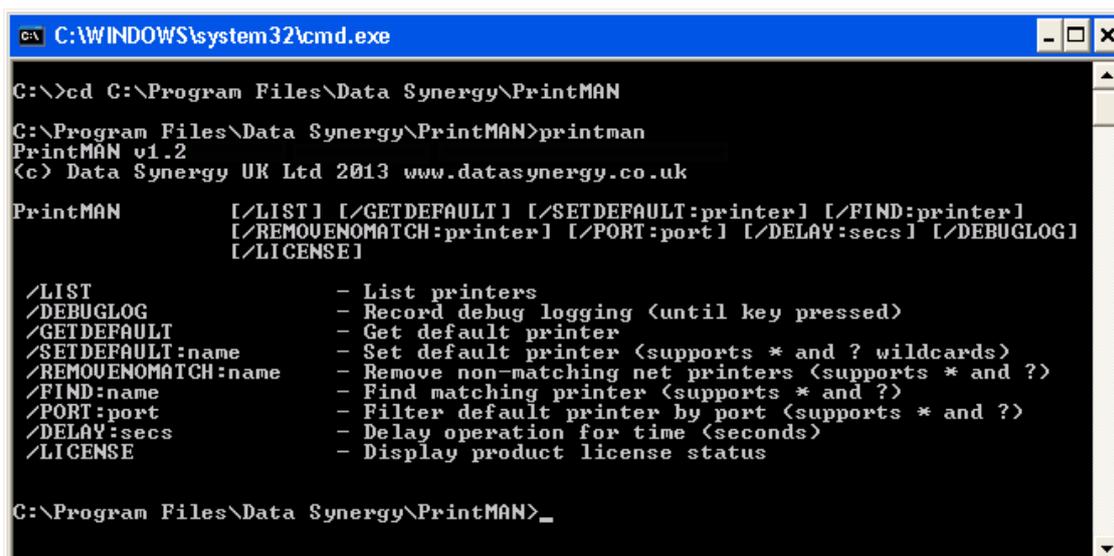
```
CD \Program Files\Data Synergy\PrintMAN
```

Or on a 64-bit workstation running 32-bit PrintMAN with:

```
CD \Program Files (x86)\Data Synergy\PrintMAN
```

3. Launch PrintMAN with one of the supported commands. For instance:

```
PRINTMAN /LIST
```



```
C:\WINDOWS\system32\cmd.exe
C:\>cd C:\Program Files\Data Synergy\PrintMAN
C:\Program Files\Data Synergy\PrintMAN>printman
PrintMAN v1.2
(c) Data Synergy UK Ltd 2013 www.datasynergy.co.uk

PrintMAN      [/LIST] [/GETDEFAULT] [/SETDEFAULT:printer] [/FIND:printer]
              [/REMOVENOMATCH:printer] [/PORT:port] [/DELAY:secs] [/DEBUGLOG]
              [/LICENSE]

/!LIST        - List printers
/!DEBUGLOG    - Record debug logging (until key pressed)
/!GETDEFAULT  - Get default printer
/!SETDEFAULT:name - Set default printer (supports * and ? wildcards)
/!REMOVENOMATCH:name - Remove non-matching net printers (supports * and ?)
/!FIND:name   - Find matching printer (supports * and ?)
/!PORT:port   - Filter default printer by port (supports * and ?)
/!DELAY:secs  - Delay operation for time (seconds)
/!LICENSE     - Display product license status

C:\Program Files\Data Synergy\PrintMAN>_
```

## Finding Installed Printers

To find the installed printers on the current workstation use the /FIND command:

For example:

```
PRINTMAN /LIST
```

May return the following:

```
Found 6 printers
0      Local   USB001      Samsung Universal Print Driver
1      Local   USB001      Samsung ML-1520 Series
2*     Network 192.168.3.6 Samsung CLP-310 Series
3      Local   PDFCreator: PDFCreator
4      Local   XPSPort:    Microsoft XPS Document Writer
5      Local   SHRFAX:     Fax
```

PrintMAN reports the printer location, port and full printer name. In the above example the software reports:

- 6 printers are present
- 5 printers are local printers and 1 is a network printer (Samsung CLP-310)

## Verifying Printer Wildcard Settings

The /FIND command can be used to verify planned printer wildcard settings. For instance, in the above example:

- Find any Samsung printer:

```
PRINTMAN /FIND:*Samsung*
```

- Find the Samsung ML-1520 printer:

```
PRINTMAN /FIND:"Samsung 1520*"
```

- Find any printer at the specified network address:

```
PRINTMAN /FIND:* /PORT:192.168.3.*
```

- Find the Samsung printer at the specified network address:

```
PRINTMAN /FIND:*Samsung* /PORT:192.168.3.6
```

- Find the first local printer of any type:

```
PRINTMAN /FIND:* /PORT:LocalDevice
```

**Tip:** PrintMAN printer names and port names may be wrapped with quotation marks if they include space characters. Printer names and ports are deliberately case **insensitive**. This avoids problems caused by minor differences in printer naming. Internally Windows printing IS case sensitive. This is historically the cause of some frustration to system administrators.

## Changing Default Printer from Command Line

The /SETDEFAULT command can be used to change the current user's default printer from the command line. The command follows the same syntax as the /FIND command.

For instance, in the above example:

- Set the default printer to be Samsung ML-1520:

```
PRINTMAN /SETDEFAULT:"Samsung 1520"
```

- Set the default printer to be any Samsung device:

```
PRINTMAN / SETDEFAULT:*Samsung*
```

- Set the default printer to any Samsung device at the specified network address:

```
PRINTMAN /SETDEFAULT:*Samsung* /PORT:192.168.3.6
```

The settings used for /FIND, /SETDEFAULT and /PORT are the same as those used in the PrintMAN policy settings. The /FIND tool is therefore an ideal way to verify and test proposed settings.

## PrintMAN Configuration Settings Reference

### Product Licensing

The **Product Licensing** settings are used to configure the unique organisation product license. These **MUST** be configured for PrintMAN to function:

License Setting	Meaning
<b>RegisteredOrganisation</b>	The organisation that PrintMAN is licensed to. This must be spelled <b>exactly</b> as supplied.  e.g. Example Corporation Limited
<b>RegisteredProductKey</b>	The unique product key (PID) required to activate the software. This is <b>exactly</b> six groups of four characters separated by five dashes.  e.g. XGHK-GABQ-GDTH-UJKQ-HYJK-DBKY

### Default Printer Configuration

The **Default Printer** settings are used to configure the printer configuration for the target workstation. These are required for PrintMAN to provide core functionality:

Printer Setting	Meaning
<b>Printer Name</b>	Defines the name of the target printer.  This setting supports * and ? wildcards. If no specific printer is targeted (for instance because the default selection is based upon the port) then use * for this setting.  To determine a complete list of the installed printers and ports use the /LIST command line option. To test a setting for wildcard match use the /FIND command line option. In many cases it will be appropriate to prefix or suffix the printer name with *.  e.g. *Samsung* e.g. *Room A10*
<b>Printer Port</b>	Defines the port of the target printer.  If no specific port is targeted (for instance because the default selection is based upon the printer name) then use * for this setting.  To determine a complete list of the installed printers and ports use the /LIST command line option. To test a setting for wildcard match use the /FIND command line option. In many cases it will be appropriate to prefix or suffix the printer name with *.

	<p>Use "LocalDevice" to define any local printer.</p> <p>e.g. *</p> <p>e.g. LocalDevice</p>
<b>Remove non-default connections</b>	<p>Remove network printer connections that do not match the default criteria defined by printer name and port. This option removes alternative network printers.</p>

## Advanced Settings

Finally, PrintMAN supports the following **Advanced** settings. These are intended for resolving configuration options and should normally be used only under the supervision of Technical Support.

<b>Advanced Setting</b>	<b>Meaning</b>
<b>Modify Period</b>	The amount of time following user logon that PrintMAN is active for. This is typically a few minutes.
<b>Event Logging</b>	The amount of information reported in the Event Log. This setting may be changed to increase or reduce the amount of information reported.
<b>Debug Log</b>	Recorded detailed information about the current printer configuration in the Application event log every few seconds following user logon. This logging continues for the modify period. This option can be used to understand transactional changes that occur during logon. Only enable this option if it is strictly required.

## PrintMAN Troubleshooting

PrintMAN is a very reliable program but problems do sometimes happen. Most issues arise during installation and can normally be solved quickly. The following section details some of the most common issues and explains possible solutions for them:

### Problem: PrintMAN does not deploy correctly using the GPO method

This can occur for a number of reasons. The following should be considered:

1. Do other programs deploy correct via Group Policy?
2. Is the client computer within the correct Organizational Unit (OU)?
3. Are there any errors in Event Log?

If PrintMAN is the first program to be deployed via GPO there may be an underlying problem with the domain or active directory configuration. The following should be checked:

- Do other applications deploy successfully using the group policy mechanism from the same file-share? Sometimes applications are inadvertently configured to deploy from a local drive letter (on the server) and not a publically available share.
- The client computer is within the correct Organisational Unit (OU). This can be checked with the **Active Directory Users and Computers** snap-in (dsa.msc)
- The PrintMAN.MSI is in share accessible (read access) to the **computer account** of the client PC. Sometimes there may be NTFS access restrictions that are stricter than the share permissions. Both types of permission should be checked. The easiest way to achieve this is to grant a Read Access to the group **Domain Computers**.

**Remember:** The Windows group policy engine runs in the security context of the computer account. Therefore the share and underlying NTFS permissions must grant access to this account. The effective permissions are the lowest common denominator of the share and NTFS permissions.

- Another policy or application may be preventing installation. This can be checked with the Resultant Set of Policy (RSOP.MSC) tool provided with Windows. The error tab contains information about policy deployment problems.
- Is the problem resolved by disabling Asynchronous policy deployment (see **Computer Configuration\Administrative Templates\System\Logon** in the Group Policy Object Editor)?
- Is the problem resolved by restarting the computer twice? Depending upon other group policies scheduled for installation and removal it can take up to two additional reboots for PrintMAN to install. This situation can also happen if the MSI and license settings are deployed separately because PrintMAN will not start until the product license key is present.

Microsoft also provides some advice on debugging GPO based deployment issues:

[http://technet.microsoft.com/en-us/library/cc787386\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc787386(WS.10).aspx)

[http://technet.microsoft.com/en-us/library/cc775679\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc775679(WS.10).aspx)

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Microsoft also documents a scenario where a network timeout problem can prevent effective Group Policy application. The following document explains this and provides links to the necessary Windows hotfix:

<http://support.microsoft.com/kb/840669>

In some cases it may be necessary to investigate further by enabling 'verbose' MSI logging. This can be enabled on the client computer by creating the following Registry value:

**Key:** HKEY\_LOCAL\_MACHINE\Software\Policies\Microsoft\Windows\Installer

**REG\_SZ:** Logging

**Value:** voicewarmup

This will create log files in the %temp% folder (\Windows\Temp for standard Group Policy MSI deployment. The users' own temporary folder for manual MSI deployment). This following document explains this in detail:

<http://support.microsoft.com/kb/223300>

After this setting has been enabled, reboot the PC, and allow Windows to attempt the MSI installation again. When this process has completed (or nothing has happened) log into the machine and check the log files created in the \Windows\Temp folder.

If this technique does not reveal the cause of the problem it may also be useful to enable 'verbose' logging for the Windows Group Policy engine. Please remember that this is an advanced technique and it may take some time to decipher the log files. You can enable this logging by creating the following registry value. It may also be necessary to create the Diagnostics key if one is not already present.

**Key:** HKEY\_LOCAL\_MACHINE\Software\Microsoft\Windows NT\CurrentVersion\Diagnostics

**REG\_DWORD:** AppMgmtDebugLevel

**Value:** 0x4b

After this setting has been enabled, reboot the PC, and repeat the installation process described above. The Group Policy engine will create a file called Appmgmt.log in the C:\Windows\Debug\Usermode folder. This is further explained here:

<http://support.microsoft.com/kb/246509/>

NB: You may also need to create the Usermode folder if it does not already exist.

### **Problem: The PrintMAN application appears to deploy okay but the configured policy does not deploy consistently**

This is commonly caused by attempting to apply invalid printer settings. Please check the Application Event Log to determine the cause of the problem and verify the target printer using the /LIST and /FIND command line options.

This problem can also be caused by attempting to configure the PrintMAN policy settings against a User object rather than a computer. The following guide lines should be applied:

- The PrintMAN application should be deployed to computers (not users)
- The majority of the settings should also be deployed to computers
- If a specific user policy is required this should be deployed using a **separate group policy** to the users

**Problem: PrintMAN appears to be installed but will not start****OR PrintMAN starts and then stops again**

PrintMAN is designed for simple, single-file, deployment and does not depend on any non-Windows components or external frameworks (such as Microsoft .NET).

This problem most commonly occurs when the demonstration period has expired or the product license key settings are invalid. Please check the Application Event Log to determine the cause of the problem and check the license settings with the /LICENSE command.

**Using the PrintMAN command line to investigate problems**

Sometimes PrintMAN policies may not behave as expected.

As described above this can happen for a number of reasons. The most common are:

1. Expired demonstration period / PID key invalid or expired
2. Incorrect default printer name or port

PrintMAN includes a feature that, when enabled, will dump useful system state information to the event log every few seconds. This feature can result in very large logs and therefore should only be enabled when investigating a problem.

To enable this feature: Set **Advanced/Event Logging** to **All Information** and then log off / on again.

**Other Deployment Resources**

The following Microsoft resources may also be useful:

[302430](#) How to assign software to a specific group by using Group Policy

[224330](#) Assigning a Windows Installer Package with minimal interaction

[257718](#) How to create a third-party Microsoft Installer package (MSI)

[278472](#) Packages assigned to computers with Group Policy are not installed

## Appendix A – PrintMAN Command line options

PrintMAN supports the following command line options:

```
PrintMAN    [/LIST] [/GETDEFAULT] [/SETDEFAULT:printer] [/FIND:printer]
            [/REMOVENOMATCH:printer] [/PORT:port] [/DELAY:secs] [/DEBUGLOG]
            [/LICENSE]
```

These may be used by an administrator to manually configure the service and report on the current installation status:

Command*	Meaning
<b>/LICENSE</b>	Display current license information
<b>/LIST</b>	List currently present printers and printer ports
<b>/GETDEFAULT</b>	Report current default printer
* <b>/SETDEFAULT:name</b>	Set default printer to specified print name.  Supports * and ? wildcards. This command may optionally be modified by the /PORT option.
* <b>/REMOVENOMATCH:name</b>	Remove network printer connections that do not match the specified printer name.  Supports * and ? wildcards. This command may optionally be modified by the /PORT option.
<b>/FIND:name</b>	Determine if the specified printer is present. This may be used with /LIST to identify and then test a default configuration prior to deployment.  Supports * and ? wildcards. This command may optionally be modified by the /PORT option.
<b>/PORT:port</b>	Modify the behaviour of /SETDEFAULT, /REMOVENOMATCH and /FIND
<b>/DELAY:secs</b>	Delay operation for specified number of seconds
<b>/DEBUGLOG</b>	Log workstation printer configuration until any key is pressed. This should typically be launched via START.EXE so further commands may be run.  e.g START PRINTMAN.EXE /DEBUGLOG

\*Commands marked are only available with a valid product key or whilst in a demonstration period

## Appendix B – PrintMAN Configuration with Novell ZENworks

Recent versions of Novell's ZENworks product directly support deployment and configuration of applications using a Group Policy based method. This approach is similar to the native Windows Group Policy method and is the simplest approach for deploying PrintMAN in a Novell based environment.

The following section describes the basic approach for ZENworks 6.5. A similar method may be used for other versions of ZENworks. This method assumes the **Novell ZENworks agent** to be already deployed and the **Workstation Manager** component is enabled.

To configure PrintMAN using ZENworks 6.5 proceed as follows:

1. Locate the PrintMAN **PrintMAN.adm** file supplied with PrintMAN



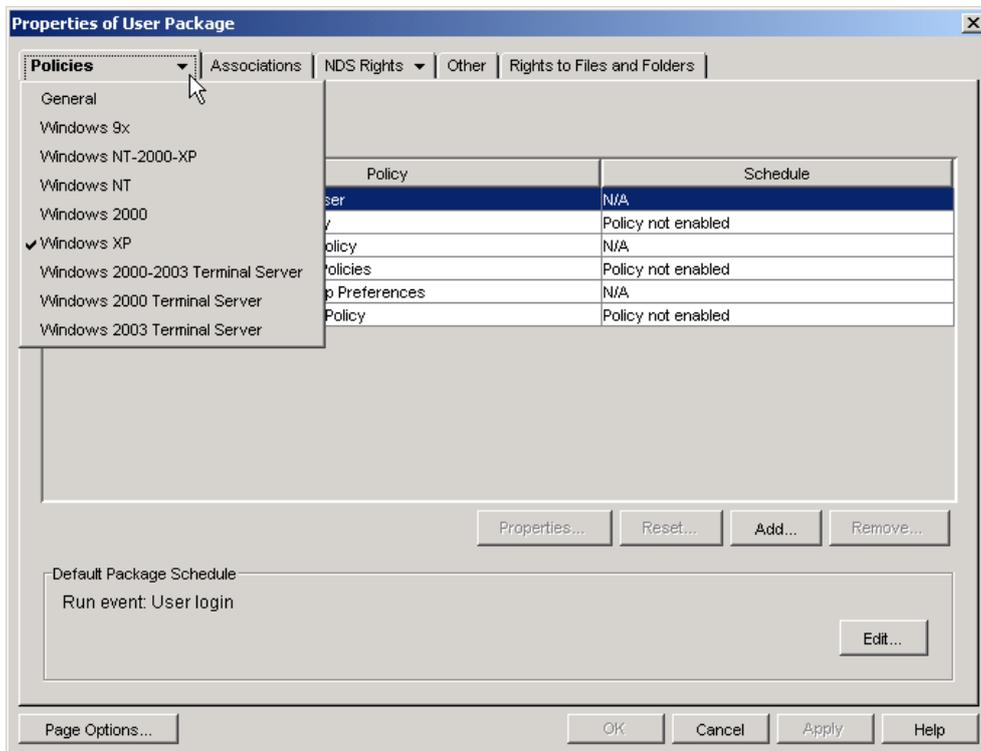
2. Open the **ZENworks ConsoleOne** tool and locate the container where you wish to create the PrintMAN policy. This should be an appropriate container for policies based upon your tree design.

NB: If this is your first policy then the container where the workstations you wish to manage are located may be an appropriate place to start.

3. Right Click and select **New Policy Package**
4. Select **Workstation Package** and click **Next**



- Click the **Policies** tab and select the operating system(s) you wish to deploy PrintMAN to:



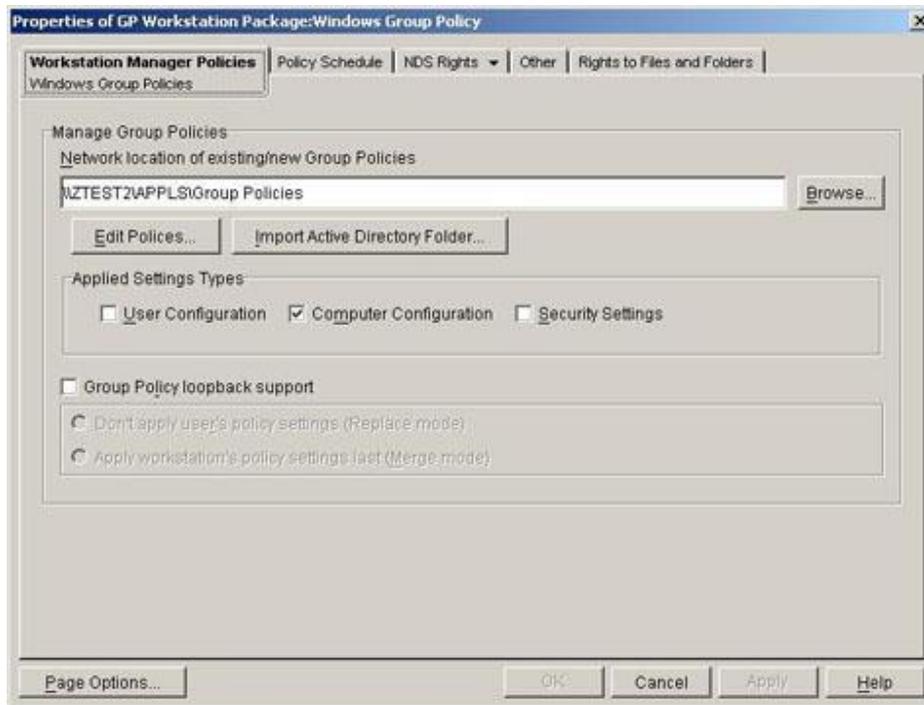
**Remember:** It is strongly recommended that you create a separate policy for each supported operating system. Whilst ZENworks does allow a unified (multiple operating system) policy to be created Novell recommend that the policy for each operating system be configured from a client running that operating system. In other words the Windows XP policy should be configured on a Windows XP client and the Windows Vista policy should be configured on a Windows Vista client.

- Tick the **Windows Group Policy** option and click **Properties**

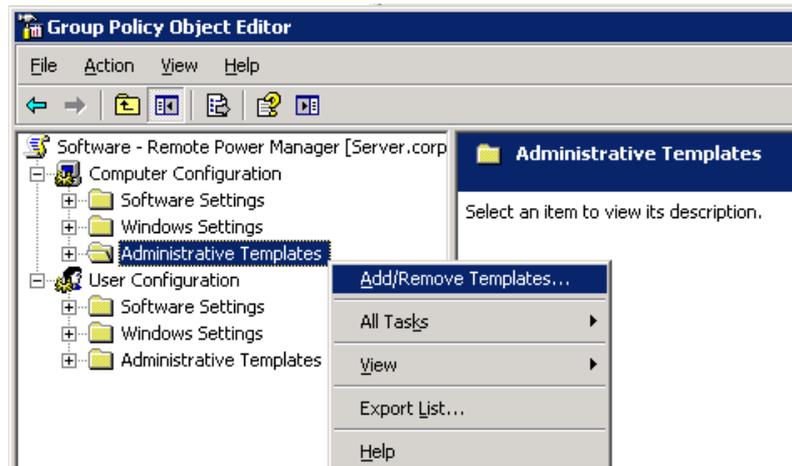


- Tick **Computer Configuration**
- Click **Browse** and locate the UNC path where you wish to store the resulting .POL file.

NB: A UNC path should be used to avoid problems with drive letter mapping. This path should be accessible to workstation objects that you wish to configure.



9. Select **Edit Policies**. The **Windows Group Policy Object Editor** will open
10. Navigate to the **Computer Configuration / Administered Templates**, right click and select **Add/Remote Templates**:



11. Click **Add** and locate the **PrintMAN.adm** file supplied.

NB: It may be helpful to remove the other administrative templates present using the **Remove** button. These are not required for PrintMAN.

12. The **Administrative Templates** section should now contain a section for **PrintMAN Printer Management** (other sections may be present depending on server configuration). Select the **PrintMAN Printer Management** section and configure the appropriate PrintMAN settings.

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13. For instance, to configure the license settings select **Product Licensing**, right click and select **Properties**
14. Select **Enabled**, carefully enter the product details supplied with the software, and click **Ok**



15. When the appropriate settings have been configured close the Group Policy Object Editor and return to the ZENworks package settings
16. Open the **Policy Schedule** tab, drop down **Schedule Type**, and select **Event**
17. Configure the policy to apply on the **Service Startup** event.
18. Open the **Associations** tab and select the container(s) you wish to associate this settings package with.
19. Click **OK** to complete the package configuration

There is further information about Group Policy based workstation packages on the Novell website:

<http://www.novell.com/documentation/zenworks65/?page=/documentation/zenworks65/dmadmin/data/a777rvi.html>

## Appendix C – PrintMAN Configuration with RM Community Connect 3/4

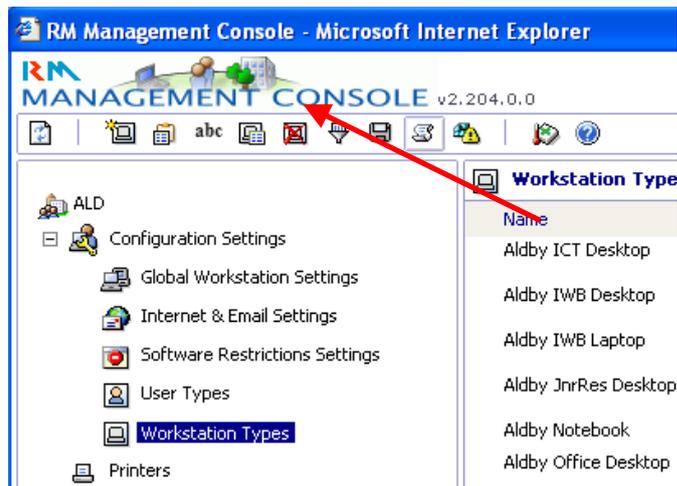
The following section describes the basic configuration approach for RM Community Connect 3. A similar method may be used for other versions of Community Connect (CC).

To configure PrintMAN using RM Community Connect proceed as follows:

1. Locate the PrintMAN ADM file and copy it to the location where group policies are stored on the server.

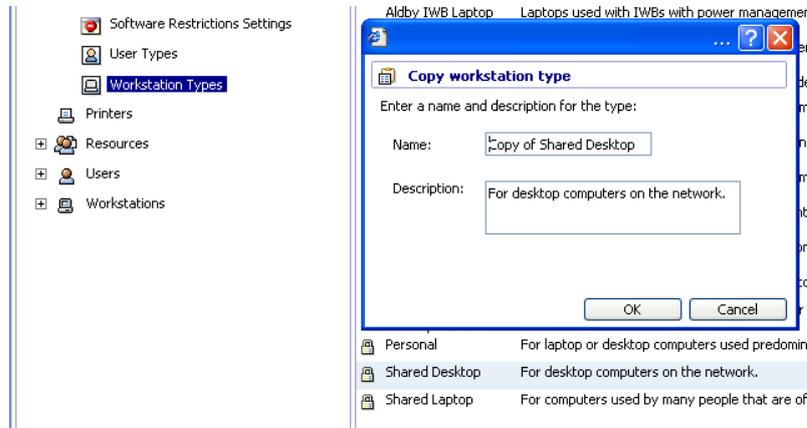
NB: On a workstation, this folder is normally L:\Type Manager\ADM (e.g. the RMMManage share) or if at the server, it is D:\RMDelivery\RMMManage\Type Manager\ADM.

2. Login to the RM Management Console (RMMC) as System Admin.
3. Expand Configuration settings and click on 'Workstation Types' and then on 'Type Options' at the top (4<sup>th</sup> button from the right).



4. A drop down list will appear. Tick the new policy and click OK.
5. The new policy will be applied to a group of computers. To create a workstation type (it is not possible to change the properties of standard RM workstation types), select an appropriate workstation type to copy, e.g. Shared Desktop. Right-click on it, select copy and then give the workstation type a meaningful name.

**Hint:** Avoid using a name with something which is exactly the same as your 3-letter establishment code as this can sometimes cause confusion in Active Directory. In the example above and below, the code is ALD but workstation type names start with Aldby.



6. Edit the properties of the new workstation type. Double click the new type and select the PrintMAN Printer Management option from the drop-down list.
7. Configure the product licence details and other PrintMAN settings as required.

**Hint:** It can be helpful to configure 'AppAgent' and 'WinAccs' as protected programs. This will avoid the computers suspending whilst lengthy updates are being installed.

8. Finally select a workstation computer to test the policy. Apply the policy to this workstation by assigning that workstation to the new workstation type. To do this locate the PC in the RMMC, select it's properties, and on the General page, change the workstation type to be the new one. Restart the computer (a second reboot may sometimes be required) and the policy should be applied.

**Hint:** A useful tip is to make a change to the screen-saver, or the colour of the pre-login desktop at the same time as you are making other policy. Then when you see that, you know that the other policy will be in effect, too.