

PowerMAN - Non-Active Directory Configuration Strategies

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Overview

Data Synergy PowerMAN Power Manager is an advanced software product giving organisations of all sizes a simple and effective solution to manage PC running costs. PowerMAN complements the built-in power management features of Microsoft Windows® by providing:

- **Comprehensive, centralised, configuration of PC power management**
- **Web-based, organisation-wide reporting of PC assets, usage and costs**

PowerMAN permits both power management and reporting to be managed on a 'granular' basis. This means that different power policies may be assigned to different users, computers or locations.

Similarly the reporting feature may be used to group similar computers together for reporting purposed by location, department, function or any other desirable property. Each reporting group is known as a **site**. Sites may be nested within one another to reflect a logical hierarchy for the organisation. This is known as the sub-site feature. The exact hierarchy is determined at configuration time and may be amended at any point in the future.

Data Synergy recommends that the reporting system is configured with sufficient granularity that different physical locations or computer functions are recorded distinctly. At a minimum a separate reporting category (site) should be used for each area/computer group with a distinct power management strategy. In practice many deployments will benefit from having a reporting configuration that is more detailed than the underlying power management configuration. This will allow the effect of the strategy to be measured in each area, problems spotted and the configuration refined as necessary.

PowerMAN is designed to function in multiple environments and is agnostic to the exact configuration deployment mechanism used. The software retrieves settings from the local Windows Registry. The Registry settings are documented in the PowerMAN Administration Guide. Any method may be used to supply initial settings to the Registry.

PowerMAN with Active Directory

In a typical deployment the PowerMAN settings are deployed using the Windows Group Policy feature. This is built upon Microsoft Active Directory (AD) technology. This arrangement makes granular assignment of PowerMAN settings using the supplied ADM file both quick and simple.

Alternative Directory Systems

Some enterprise environments use alternative directory systems. In many cases these are functional similar to AD. For instance, Novell based environments may use the eDirectory system to perform a similar function. Often these alternative systems support the Microsoft ADM file format and therefore PowerMAN may be configured with little difficulty.

Non-Directory Systems / Directory unsuitable for power management

Some environments do not use a directory or the existing directory may be unsuitable for the desired power management strategy. For instance, the existing directory may be relatively flat or orientated around characteristics that do not lend themselves easily to power management. This can especially be the case where the existing directory does not group workstations or users by physical location or function.

In many cases simple changes to an existing directory can resolve matters without breaking existing configurations or orientating the directory around power management alone. A common strategy is to sub-divide existing management groups into further sub-groups suitable for power management. In many cases this can be done quite simply and will not cause further complications. However, in other cases this process may be impractical or undesirable.

Some enterprise management products implement their own internal directory system. This operates in parallel with the existing system and requires configuration and on-going maintenance to be made in multiple systems. In some rare cases this may be desirable but in most cases this is seen as undesirable and a burden on IT administration resources. Data Synergy understands that every organisation is different and recognises that most IT administrators will want to minimise on-going management costs. This is why PowerMAN is designed to work with the leading directory systems and not replicate them.

The following sections explain how PowerMAN may be configured in environments that do not use a directory or where the existing directory is not being used for complete product management. The key steps are:

- a. Client software deployment
- b. PowerMAN reporting configuration
- c. Power management configuration

Tip: PowerMAN reporting and power management are completely independent. In many cases workstation reporting groups will mirror power management groups. However, this does not need to be the case. We recommend that reporting is **at least** as granular as the power management strategy.

Client software deployment

PowerMAN is designed to be deployed in a variety of ways. The product is supplied as both an industry standard MSI file and an EXE capable of self-installation. In both cases only a single file is necessary. The PowerMAN Administration Guide explains several deployment strategies.

In most cases the MSI method is preferable as it provides a Windows-standard installation/uninstallation mechanism and integrates with the built-in Windows application management system. An MSI based installation is visible in the 'Add/Remove Programs' applet and similar management systems that use the internal application registry. The PowerMAN executable includes commands for service installation and removal. These were originally designed for SMS installations but may be used wherever the MSI method is unsuitable.

In both cases the essential steps of an installation are the same:

- a. Copy (single) file to client workstation
- b. Execute command to invoke installation

PowerMAN reporting configuration

Several settings are used to configure the reporting system. The principal settings are:

- a. Reporting server address
- b. Workstation group identity (SiteGUID)

The reporting server details are common for all computers with the enterprise. This allows them to be assigned globally or during workstation deployment.

The SiteGUID setting is not global and in practice will only be common amongst a group of related computers. Therefore this setting must be assigned based upon either directory information or client-side logic. The most common non-directory approach is to select and populate the SiteGUID setting at start-up using a computer start-up script. The selection may be made using any available (non-directory) means such as computer name or the presence (or absence) of a particular file, program or other object.

The SiteGUID is, strictly, only required to register the workstation with the server and, depending on server configuration, may not be required again if the server is configured to 'lock' workstations to the reporting hierarchy. In some cases this behaviour may be used to simulate a complex reporting environment using a single SiteGUID. A typical approach would be:

- a. Enable workstation locking on the server (called 'Auto Move' in the user interface)
- b. Assign a single, global, SiteGUID. This may be performed at initial deployment
- c. Allow workstations to register with the server as normal
- d. Use server-side logic (e.g. a stored procedure, UPDATE query etc.) to re-assign workstations to the desired groups. Periodically re-execute this procedure to ensure new workstations are correctly assigned.

Power management configuration

The power management configuration must be handled separately to reporting. In practice many groups of computers or users may share a common power management policy and therefore the number of distinct policies may be considerably less than the number of reporting groups. This may be used to greatly simplify the power management configuration.

Tip: Most universities and colleges find that the majority of computers can be covered by a public workstation policy and a staff workstation policy. In some cases further sub-groups (such as 24-workstations and daytime-only workstations) may also be required. However, even if this is the case, the number of policies may remain in single digits.

The basic approach is as follows:

- a. Prepare policy templates using a standalone workstation (see the Local Group Policy section of the PowerMAN administration guide). Test the policy works as intended.
- b. Use client-side logic (e.g. a start-up script or similar) to determine the required power management policy
- c. Apply the previously prepared policy. This is normally achieved by restoring a Registry backup file from either a local or network location

This strategy may be further refined by creating a single Registry policy template that contains all of the required policies and either copying (or renaming) the template Registry key to the appropriate PowerMAN Registry key.

Summary

The techniques suggested in this document may require some small initial preparation time to setup and test. They use common, industry-standard, techniques to apply client-side logic at computer start-up. In practice the techniques proposed should be familiar to all systems administrators with little effort. The gains from effective power management are likely to greatly outweigh the small initial implementation cost in all cases.

Please contact Data Synergy Technical Support if you require any further advice or assistance.

Policy Preferences Feature (v5.2 and later)

PowerMAN v5.2 and later includes a 'Policies Preferences' feature. This is effectively a built-in mechanism to apply a power management policy from a pre-defined template. The feature allows the user to select the policy at logon from a list defined by the system administrator. However, if desirable, the administrator may use a single Registry setting to pre-set the selection. In this case no user selection is required. This setting may be assigned by policy or client-side logic.

PowerMAN v5.2 and later also allows the SiteGUID (reporting) setting to be assigned from an alternate Registry location. In some cases this may be useful to de-couple centrally, policy assigned settings, from locally-assigned reporting groups.

In both cases the changes in v5.2 and later do not completely remove the need for client-side logic but reduce the configuration required to two simple Registry values.

About Data Synergy



Data Synergy is a British company based in Sheffield. We have over fifteen 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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