

BootManage Administrator

Managing Windows Answer Files
(unattend.txt / sysprep.inf / unattend.xml)

Version 1.0 / 2008-11-26



Licensed Software

The software described in this guide is furnished under a license agreement and may be used only in accordance with the terms of the agreement.

NO WARRANTY

The technical documentation is being delivered to you AS-IS, and bootix Technology makes no warranty as to its accuracy or use. Any use of the technical documentation or the information contained therein is at the risk of the user. Documentation may include technical or other inaccuracies or typographical errors. bootix reserves the right to make changes without prior notice.

Copyright

Copyright © 2008 bootix Technology GmbH. All rights reserved.

Any technical documentation that is made available by bootix Technology is the copyrighted work of bootix Technology and is owned by bootix Technology. No part of this publication may be reproduced in any form or by any means - graphic, electronic or mechanical, including photocopying, recording, taping, or storage in an information retrieval system - without the express written permission of bootix Technology GmbH.

Trademarks:

bootix, the bootix logo, and BootManage are registered trademarks of bootix Technology GmbH. All other company and product names are trademarks of the company or manufacturer, respectively.

Revision history:

November 2008, first version

Introduction

Overview

This is a “bootix Best Practices” document that shows how to create and manage so-called “answer files” for automated Windows installations, and integrate them in the BootManage Administrator (BMA) environment.

The purpose of an answer file is to provide the configuration information that is required during the installation process of a Windows operating system. The Windows operating system installer can silently fetch this information from the answer file instead of having to interactively ask for it. This is especially useful in large network environments.

The following Windows operating systems support answer file driven automated installation¹:

- Windows Server 2003 (32-Bit x86 and 64-Bit x64)
- Windows XP Professional (32-Bit x86 and 64-Bit x64)
- Windows 2000 Professional and Server
- Windows NT 4.0 Workstation and Server
- Windows NT 3.5x Workstation and Server

There are three main types of answer files that have similar structure and syntax, but support different automated installation methods:

- Unattended Setup (*unattend.txt*) answer files
- Sysprep Setup (*sysprep.inf*) answer files
- Remote Installation Services (*ristndrd.sif*) answer files

This document only covers the unattended setup (*unattend.txt*) answer files, because they are widely used in BMA controlled, automated Windows installations. Sysprep setup (*sysprep.inf*) answer files can also be used with the BMA, and will also be subject of the next version of this document. Remote installation services (*ristndrd.sif*) answer files are not used with the BMA.

Prerequisites

An installed BMA environment is needed that is already configured to deploy one or more of the previously listed supported Windows operating systems. The Windows machine that hosts the BMA console is called the “technician computer”.

¹ Windows Server 2008 and Windows Vista also support answer file driven installation, but these answer files have a completely different structure and syntax, and must also be created using a different application. It is intended to cover Windows Server 2008 and Windows Vista style answer files in the next version of this document.

Windows Setup Manager (WSM)

Introducing WSM

Windows Setup Manager (WSM) is a graphical, easy-to-use answer file generation and management tool that comes with the Windows operating system CD-ROM. WSM is used to create *unattend.txt*, *sysprep.inf* and *ristndrd.sif* answer files.

Installing WSM

In the `\SUPPORT\TOOLS\` folder of your Windows operating system CD, locate the cabinet file *deploy.cab*, and extract its contents to a folder on your technician computer.

WSM is located in the executable program file *setupmgr.exe*. It is a ready-to-run application that does not need to be installed. Documentation is available in the files *deploy.chm* and *ref.chm*.

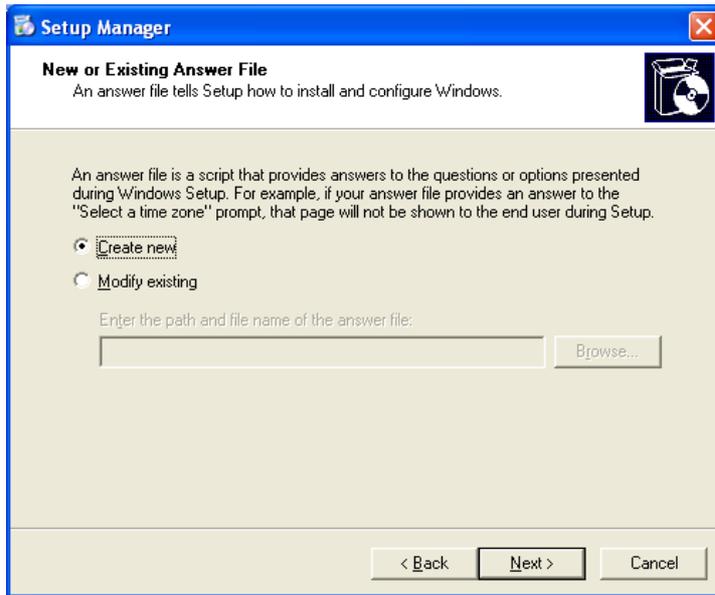
Creating Your First unattend.txt File

Start WSM by executing *setupmgr.exe*. At program startup, WSM guides you through several dialogs, starting with the following welcome dialog:



Click the “Next” button.

The “New or Existing Answer File” menu is displayed:



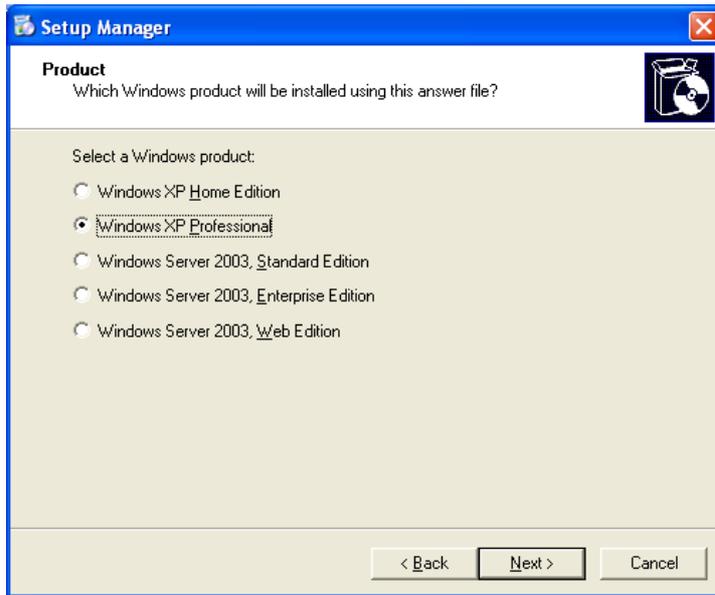
To create a new answer file, select “Create new” and click the “Next” button.

The “Type of Setup” dialog is now displayed:



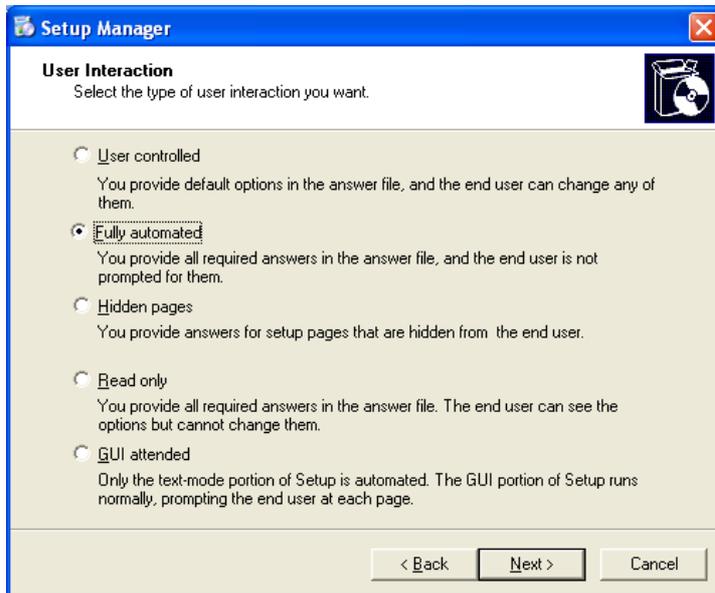
This document only covers an unattended setup, so select “Unattended setup” and click the “Next” button.

The “Product” dialog comes up:



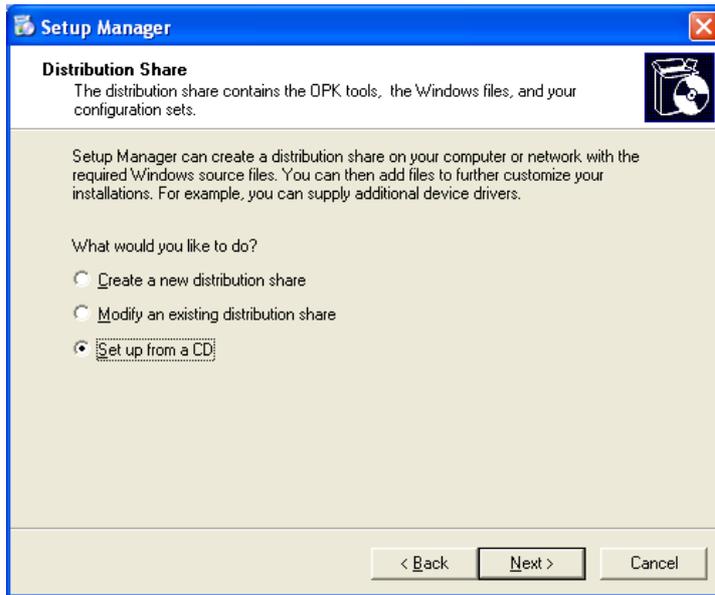
Select the Windows operating system for which an *unattend.txt* file shall be generated, e.g. “Windows XP Professional”, and click the “Next” button.

Now the “User Interaction” menu is displayed:



To create an answer file for a fully automated Windows installation, select “Fully automated” and click the “Next” button.

The next screen is titled “Distribution Share”:



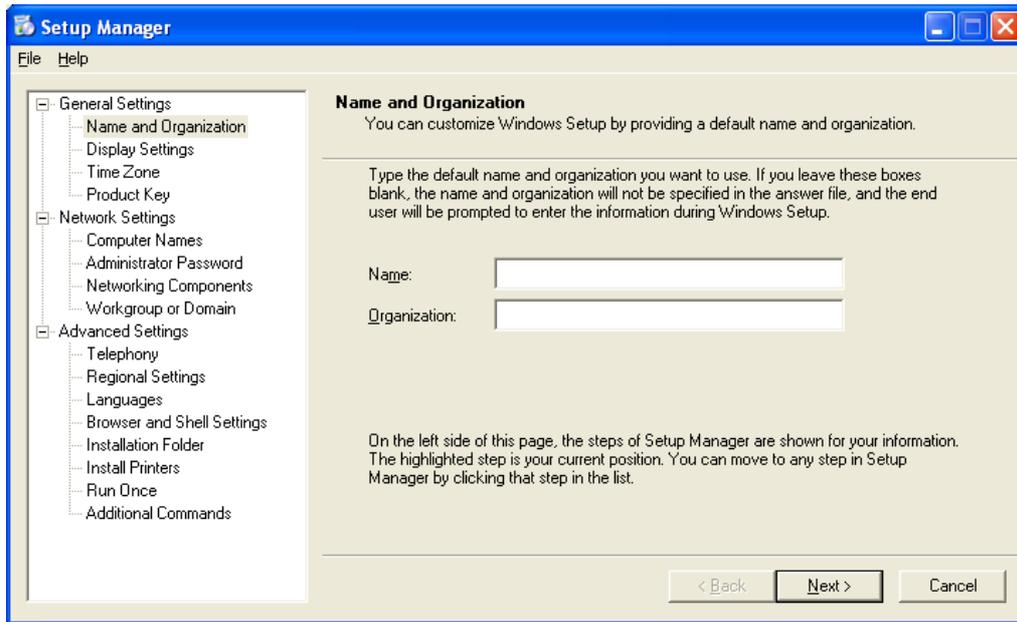
A distribution share has already been set up by the BMA, so there is no need to create or modify a distribution share from within WSM. Select “Set up from a CD” and click the “Next” button.

Now the “License Agreement” menu is displayed:



Click the “I accept the terms of the License Agreement” check box and then the “Next” button.

WSM displays its two-pane user interface:



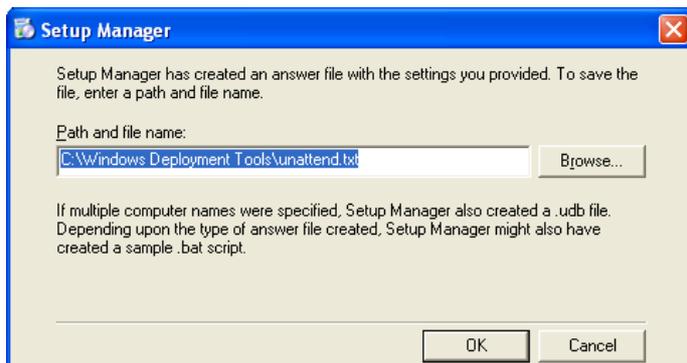
The left pane is a tree view of the answer file settings. When selecting a setting, the corresponding properties appear in the right pane and can be edited there. Depending on the type of setting and its valid values, there will be text fields, dropdown lists, radio buttons, checkboxes, etc.

Some information about the settings is given in the right pane. For more detailed information, please refer to the *deploy.cbm* and *ref.cbm* files.

To work through the settings in sequence, use the “Back” and “Next” buttons. Also, a direct selection of a specific setting in the tree view pane is possible.

Having reached the last setting, the “Next” button changes into “Finished”. When all relevant settings have been specified, click the “Finished” button.

The next dialog asks for a file and path name where to save the newly created answer file:



When the OK button is clicked, WSM stores the answer file in the specified location.

Examining the Answer File

Open the just-created *unattend.txt* file in a text editor (e.g. NotePad). It is structured like an INI file, and contains sections as well as “setting=value” statements.

Each section starts with a section name enclosed in square brackets, and holds “setting=value” statements as in the following simple example:

```
;SetupMgrTag
[Data]
    AutoPartition=1
    MsDosInitiated="0"
    UnattendedInstall="Yes"

[Unattended]
    UnattendMode=FullUnattended
    OemSkipEula=Yes
    OemPreinstall=No
    TargetPath=\WINDOWS

[GuiUnattended]
    AdminPassword=95cb9ca0a91a7ef731ebf481c107a3baf7738feba7bf05db63e07a18bef7bed5
    EncryptedAdminPassword=Yes
    OEMSkipRegional=1
    TimeZone=35
    OemSkipWelcome=1

[UserData]
    ProductKey=11111-22222-33333-44444-55555
    FullName="Marvin Acme"
    OrgName="ACME Corporation"
    ComputerName=ROADRUNNER

[Identification]
    JoinDomain=ACMECORP

[Networking]
    InstallDefaultComponents=Yes
```

Explaining the various sections and settings is beyond the scope of this manual. Please refer to the *ref.cbm* help file that comes with WSM, and also to the online resources of the Microsoft TechNet web site.

BootManage Administrator (BMA)

Before the WSM-generated answer file can be used by the BootManage Administrator (BMA), it must be splitted and populated with BMA variables. Both techniques are described here.

Splitting the Answer File

When an operating system is registered in the BMA, a corresponding project directory (e.g. *xp_pro*) is created on the BMA installation server. If the newly registered OS is a “Windows unattended installation”, the following files can be found in its installation directory:

- *common.txt*
- *net_dom.txt*
- *net_wks.txt*

The *common.txt* file contains the generic portion of the unattend.txt file, whereas the *net_*.txt* files contain the domain or workgroup specific portion.

In a domain environment, the *common.txt* and *net_dom.txt* files are merged at runtime to build the *unattend.txt* file for this unattended Windows installation.

In a workgroup environment, the *common.txt* and *net_wks.txt* files are merged at runtime to build the *unattend.txt* file for this unattended Windows installation.

Within the *net_*.txt* files, the [Identification] section is the most important one.

The *net_dom.txt* file should contain the following settings:

```
[Identification]
JoinDomain=
CreateComputerAccountInDomain=
DomainAdmin=
DomainAdminPassword=
MachineObjectOU=
```

The *net_wks.txt* file should contain the following settings:

```
[Identification]
JoinWorkgroup=
```

In order to integrate your *unattend.txt* file (that was created with WSM) into the BMA, split it into the above two portions. To determine which part of the *unattend.txt* file goes into which file, the existing *common.txt* and *net_*.txt* files can be used as a reference.

Integrating BMA Variables

During answer file creation, WSM has asked for individual information that is only valid for a single machine. With the BMA, this individual information can be replaced by variables. This method allows using the same answer file for the unattended installation of multiple machines.

There are a number of system-provided variables, but additional custom variables can also be used. Please check the *common.txt* and *net_*.txt* files for existing BMA variables, and make sure that the system variables therein are retained.

For example, consider the [UserData] section in the *unattend.txt* file:

```
[UserData]
ProductKey=11111-22222-33333-44444-55555
FullName="Marvin Acme"
OrgName="ACME Corporation"
ComputerName=ROADRUNNER
```

In the BMA environment, this section goes into the generic *common.txt* file, and the individual values are replaced by BMA system variables:

```
[UserData]
ProductKey="#@t157*#####"
FullName="#@t151*#####"
OrgName="#@t152*#####"
ComputerName="#@t150*#####"
```

The same mechanism is used for the *net_dom.txt* and *net_wks.txt* files. For example, consider the [Identification] section in the *unattend.txt* file:

```
[Identification]
JoinDomain=ACMECORP
```

In the BMA environment, this section goes into the *net_dom.txt* file, and the individual values are replaced by BMA system variables:

```
[Identification]
JoinDomain="#@t154*#####"
```

To understand which system variable corresponds to what setting, use the existing *common.txt* and *net_*.txt* files as a reference.