Installing Microsoft Windows on an HP ProBook or EliteBook Notebook PC and creating an image

2012 Business Notebook Models

Technical white paper

Table of contents

Executive summary

This white paper provides instructions for installing the Microsoft® Windows® 7 Professional and Microsoft Windows XP Professional operating systems (OSs) along with applicable HP drivers and applications on select HP EliteBook and HP ProBook Notebook PC models. Instructions are also provided for creating a common image for 2012 HP Business Notebook PCs.

Target audience: This white paper is intended for IT staff.

System requirements and prerequisites

Information regarding minimum hardware requirements for the installation of Windows is available at http://www.microsoft.com.

Supported models

- HP EliteBook 2170p Notebook PC
- HP EliteBook 2570p Notebook PC
- HP EliteBook 8470p Notebook PC
- HP EliteBook 8470w Notebook PC
- HP EliteBook 8570p Notebook PC
- HP ProBook 6470b Notebook PC
- HP ProBook 6570b Notebook PC

WARNING
Before proceeding with the installation of Windows, you should back up all personal data, such as files, photos and videos. If it is not backed up, your personal data will be lost.

The following items are needed to install Windows:

- A supported HP business notebook PC model
- Windows OS recovery media provided by HP
  - Media from an alternate source may require a product ID (PID)[1]
- Access to Drivers/OS enhancements provided by HP
  - HP SoftPaq Download Manager (www.hp.com/go/sdm)
  - High speed Internet access (www.hp.com)
  - HP Driver Recovery DVD (DRDVD)

---

[1] Typically provided on the product's Certificate of Authenticity

Installing the OS, drivers, and enhancements

This section provides guidelines for users performing a clean installation of Windows on a supported HP business notebook PC.

For more information on installing Windows, refer to the Microsoft website at http://windows.microsoft.com/help.

1. Depending on the particular Internet connection(s) being used, download the driver(s) for the network interface card and/or wireless LAN adapter driver. Save to a USB storage device or optical media.
   – Contact your network administrator to properly set up the networking components of Windows.

2. Change the boot order in F10 Setup so the optical drive is the first boot device.
3. Boot with the Windows OS recovery disk provided by HP; follow the on-screen instructions for installation.
   – OS recovery media from HP does not require a product ID or key for installation on a supported HP business notebook PC.
   – HP recommends that you retain the HP_TOOLS partition to provide support for HP QuickLook, the F10 Setup graphical user interface, and HP diagnostics. For more information, refer to the white paper, "HP Business Notebook Computer EFI Guidelines."
   – Older Windows XP OS media does not include serial ATA (SATA) drivers. For more information on loading SATA drivers, refer to the white paper, "Modifying a Windows XP installation to support SATA Native Mode on HP Business Notebooks."
   – If using Advanced format hard drives (4K sector drives), please refer to the HP white paper "Preparing Advanced Format hard drives for Microsoft Windows installations on HP Business Notebook PCs and desktop PCs."

4. Install the appropriate communications driver from either the Driver Recovery DVD or USB storage device (Step 1 above) and configure your Internet connection.
   – For Windows XP, install the Microsoft Universal Audio Architecture (UAA) Bus Driver and Essential System Updates, then reboot prior to installing the audio and modem drivers. The audio driver may require manual installation. (NOTE: The Universal Audio Architecture (UAA) Bus driver is integrated into Service Pack (SP) 3 and does not need to be installed separately).

5. Install the desired patches from www.microsoft.com/windowsupdate or contact your network administrator for additional updates. Reboot the system after these patches have been installed.
    – For Windows XP, you must install Microsoft DirectX 9 and possibly Microsoft .NET Framework. For more information on .NET dependencies, refer to Table 1 below.
6. Install the drivers and enhancements listed in Table 1 using HP SoftPaq Download Manager (available from www.hp.com/go/sdm); alternatively, you can download individual SoftPaqs from the HP website.

    For more information, refer to Appendix A: Using HP SoftPaq Download Manager.

IMPORTANT
To prevent possible data loss, HP recommends you adjust your power management settings prior to using the notebook.

Drivers and enhancements

Table 1 lists minimum recommended drivers and enhancements for Windows 7 Professional and Windows XP Professional. The table also includes dependencies on .NET Framework (if applicable).

Table 1. Minimum recommended software versions

Name	Version	XP	Win 7	Priority	.NET Required
Driver – Audio					
IDT HD Audio Driver	1.00 D	X	X	Required	3.0
Driver – Chipset					
Intel® Chipset Installation Utility	9.3.0.1020	X	X	Required	N/A
Intel Management Engine Components Driver	8.0.10.1464 B	X	X	Required	3.5 SP1 or greater
Intel USB 3.0 Driver	1.0.4.225 A	X	X	Required	N/A
Driver – Graphics					
AMD Video Driver and Control Panel	8.951.6 A	X	X	Required	3.5 SP1
Intel HD Graphics with Turbo Boost Technology	8.15.10.2712		X	Required	3.0
Intel Video Driver and Control Panel for Windows XP	6.14.10.5407	X		Required	3.0
Driver – Keyboard/Mouse/Input					
HP Hotkey Support	4.5.9.1 A	X	X	Recommended	3.5 SP1 or greater
HP Universal Camera Driver	4.00 A	X	X	Required	N/A
Synaptics Touchpad Driver	16.0.3 T	X	X	Required	N/A
Validity Fingerprint Driver	4.4.213.0 A	X	X	Required	N/A
Driver – Modem					
LSI HDA Modem Driver for Windows	1.00 D	X	X	Required	N/A
Driver – Network					
Atheros AR3012 and AR9462 Bluetooth +HS 4.0	1.00 A	X	X	Required	N/A
Atheros AR9462 Wireless LAN Driver	1.00 A		X	Required	N/A

Name	Version	XP	Win 7	Priority	.NET Required
Atheros AR9485 Wireless LAN Driver	1.00 B	X	X	Required	N/A
Broadcom 2070 Bluetooth for Windows 7	6.5 K	X	X	Required	3.0 or greater
Broadcom 2070 Bluetooth for Windows XP	5.6 F	X		Required	3.0 or greater
Broadcom WLAN Driver and Utility Package	5.100.82.130	X	X	Required	N/A
Ericsson Mobile Broadband Drivers	7.2.0.10 A	X	X	Required	N/A
Intel 82579LM and 82579V Gigabit Ethernet Driver for Microsoft Windows	1.00 D	X	X	Required	N/A
Intel My WiFi and Wireless Drivers	15.1 A		X	Required	N/A
Sierra Wireless Driver Package for HP un2430 Mobile Broadband Module	1.0.35.0 B	X	X	Required	N/A
Driver – Storage					
Alcor Micro Smart Card Reader Driver	1.7.28.0 A	X	X	Required	N/A
Intel Rapid Storage Technology Driver	11.1.0.1006	X	X	Required	3.5 SP1 or greater
JMicron Media Card Reader Driver	1.0.68.0 A	X	X	Required	N/A
Software - OS Enhancements/QFE's					
Essential System Updates for Microsoft Windows 7	2.0.6		X	Required	N/A
Essential System Updates for Microsoft Windows XP	4.1 E	X		Required	N/A
Software – Security					
Embedded Security for HP ProtectTools	7.0.000.2882 A	X	X	Recommended	N/A
Privacy Manager for HP ProtectTools	7.0.0.865 A	X	X	Recommended	3.5 SP1

Software – Solutions					
HP 3D DriveGuard	5.0.8.0 A	X	X	Required	N/A
HP Software Framework	4.5.10.1 A	X	X	Required	3.5 SP1 or greater
Software – System Management					
System Default Settings for Windows 7	2.4		X	Recommended	N/A

Priority Key	
Required	Mandatory for optimal hardware support
Recommended	HP recommends installing for optimal system performance
Optional	Value-add software for desired solution

NOTE

Some deliverables may have direct dependencies on other deliverables that may require .NET.

Building a common image

Instructions are provided for building Windows XP Professional and Windows 7 Professional images.

Windows XP Professional

1. Install Windows XP Professional on a supported platform.
2. Install the following and then reboot the system:
   - Essential System Updates for Windows XP
   - System Default Settings
   - Microsoft Universal Audio Architecture (UAA) High Definition Audio class driver (not required for XP SP3)
   - Microsoft .NET (refer to Table 1 for .NET version requirements)
3. Copy the **i386** folder from the Windows XP installation DVD to the root of **%SystemDrive%**.
4. Extract **deploy.cab** from the **SUPPORT\TOOLS** folder of the install DVD to the **%SystemDrive%\sysprep** folder.
5. Copy all device drivers to a common folder location (i.e. **%SystemDrive%\DRV)**.
6. Run **setupmgr.exe** from the **%SystemDrive%\sysprep** folder to create a **sysprep.inf** file.
7. As shown in Figure 1, make the following changes to the **sysprep.inf** file.
   - In the [Unattended] section –
     Change **InstallFilesPath** to **%SystemDrive%\i386**.
     The **OemPnPDriversPath** should include paths for all **.inf** installed drivers.
   - In the [SetupMgr] section –
     Change **DistFolder** to **%SystemDrive%\i386**

NOTE

Figure 1 does not show the complete sysprep.inf file.

Figure 1. Updating the sysprep.inf file

```
[Unattended]

OemSkipEula=No

OemPnPDriversPath =
"Drv\Video;Drv\Nic;Drv\Audio;Drv\Modem;Drv\Misc1;Drv\Misc2;Drv\Misc3;Drv\Misc4;Drv\Misc5;Drv
\Chipset;Drv\KBD;Drv\MSD;Drv\USB;Drv\Network"

InstallFilesPath = "C:\i386"

[SetupMGR]
DistFolder = c:\i386
```

8. Run the following command:

    sysprep –mini –shutdown –reseal

9. After shutting down the system, use hard-drive duplication software to deploy the common image.

Windows 7 Professional

1. Install Windows 7 Professional on a supported platform.
2. Install the following and then reboot the system:
    – Essential System Updates for Windows 7 SP2
    – Windows 7 Default Settings
3. Copy all device drivers to the **%SystemDrive%\DRV** folder.
4. Run Windows System Image Manager to create the **sysprep.xml** file.
5. As shown in Figure 2, make the following changes to the **sysprep.xml** file:
    – In the Microsoft-Windows-PnpCustomizationsNonWinPE component –
      Set the PnP driver search path.
    – In the Microsoft-Windows-Deployment component –
      Following the **pass="auditUser"** phase, set **Reseal** in **OOBE** mode.

NOTE
Figure 2 does not show the complete sysprep.xml file.

Figure 2. Example of sysprep.xml file

```xml
<?xml version="1.0" encoding="utf-8"?>
<unattend xmlns="urn:schemas-microsoft-com:unattend">
    <settings pass="auditSystem">
        <component name="Microsoft-Windows-PnpCustomizations-NonWinPE" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
            <DriverPaths>
                <PathAndCredentials wcm:keyValue="dfbbff91" wcm:action="add">
                    <Path>C:\Drv</Path>
                </PathAndCredentials>
            </DriverPaths>
        </component>
    </settings>
    <settings pass="auditUser">
        <component name="Microsoft-Windows-Deployment" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
            <Reseal>
                <ForceShutdownNow>false</ForceShutdownNow>
                <Mode>OOBE</Mode>
            </Reseal>
        </component>
    </settings>
```

6. Copy **sysprep.xml** to **%SystemDrive%\Windows\System32\Sysprep**.
7. Run the following command:

   sysprep /generalize /audit /shutdown /unattend:sysprep.xml

8. After shutting down the system, use hard-drive duplication software to deploy the common image.

# Appendix A: Using HP SoftPaq Download Manager

Using HP SoftPaq Download Manager to update the current platform

1. Boot the Windows OS.
2. Open Microsoft Internet Explorer.
3. Download and install HP SoftPaq Download Manager from www.hp.com/go/sdm.
4. Launch SoftPaq Download Manager.
5. When prompted, select **Show software for this model only** (Figure A-1).

NOTE
Use the Check software updates for this model option to automatically install the updates on the current system or to download SoftPaqs to install on systems similar to the current platform.

Figure A-1. SoftPaq Download Manager menu
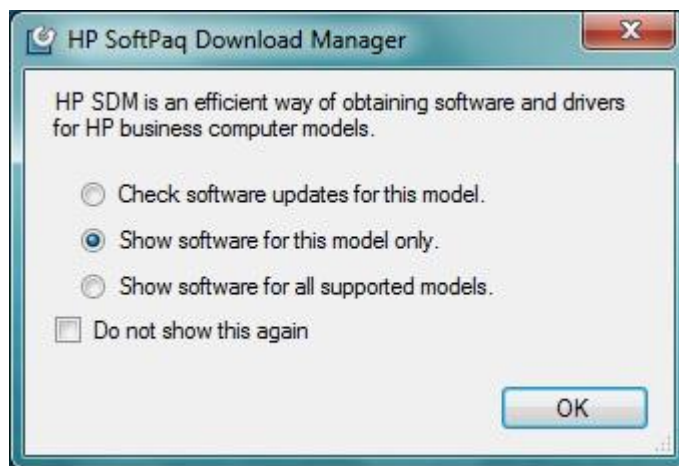
6. The current platform will automatically be displayed and selected in the Product Catalog window.
7. Select the desired SoftPaqs from the Available SoftPaqs list (Figure A-2).

Figure A-2. Available SoftPaqs list

8. After selecting the desired SoftPaqs, the following options are available in the Downloaded SoftPaqs window: **Download Only, Download and Unpack or Download and Install** (Figure A-3).

Figure A-3. Downloaded SoftPaqs window
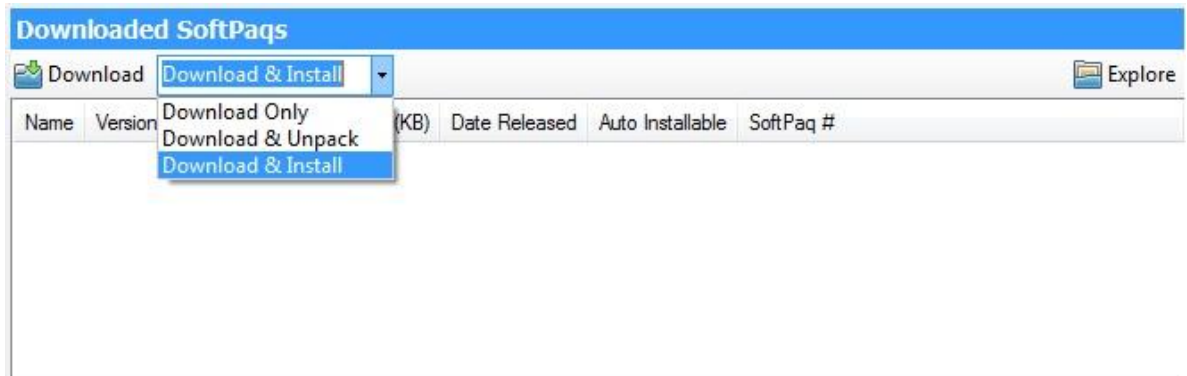
- **Download Only** – this option will download all selected SoftPaqs to "C:\ProgramData\HP\HP SoftPaq Download Manger\SWDownload".
- **Download and Unpack** – this option will download all selected SoftPaqs to "C:\ProgramData\HP\HP SoftPaq Download Manger\SWDownload" and unpack each individual SoftPaq in a unique folder based on SP#: (i.e. \SPxxxxx).
- **Download and Install** – this option will download all selected SoftPaqs to "C:\ProgramData\HP\HP SoftPaq Download Manger\SWDownload" and then install each individual SoftPaq on the current system.

# Using HP SoftPaq Download Manager to download SoftPaqs for multiple platforms

1. Download and install HP SoftPaq Download Manager from www.hp.com/go/sdm on any Windows based system.
2. Launch HP Softpack Download Manager
3. When prompted, select **Show software for all supported models** (Figure A-4).

**Figure A-4.** SoftPaq Download Manager menu

4. Select the respective platforms in the Product Catalog window.
5. Select the appropriate **Driver** and **Operating System Enhancement** SoftPaqs from the Available SoftPaqs list (Figure A-5).

Figure A-5. Available SoftPaqs list
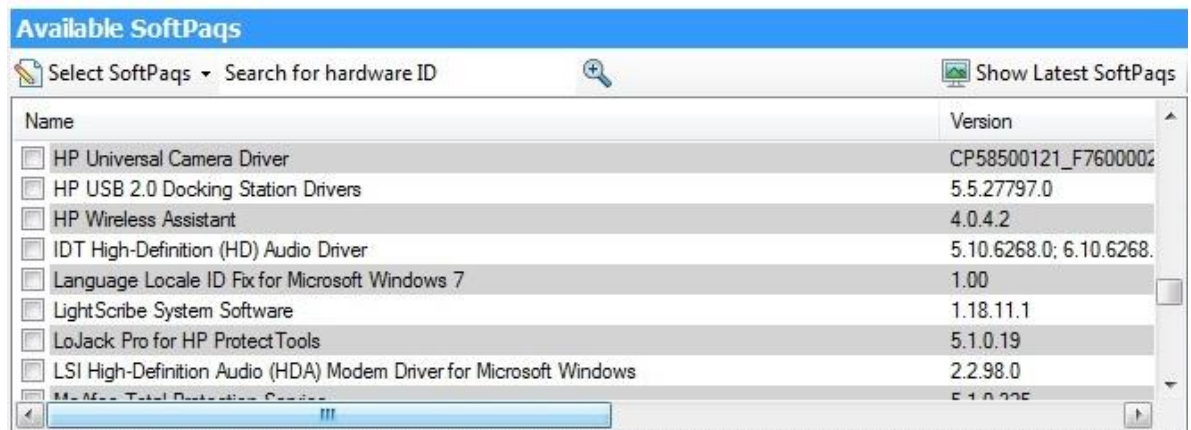
6. Prior to downloading the sofpaqs, set your download preferences in the **Configuration Options** window (Figure A-6) accessed from the Tools menu (Tools -> Configuration Options).

**Figure A-6.** Download tab in Configuration Options window
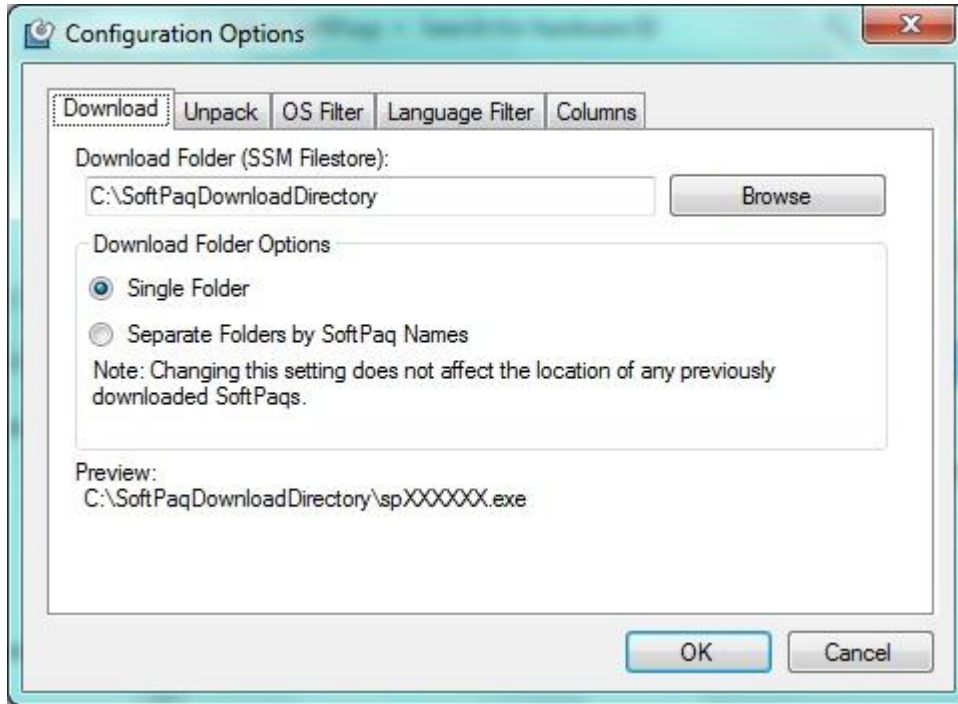
7. Additional customizations are available through the **Unpack** tab (Figure A-7).

**Figure A-7.** Unpack tab in Configuration Options window
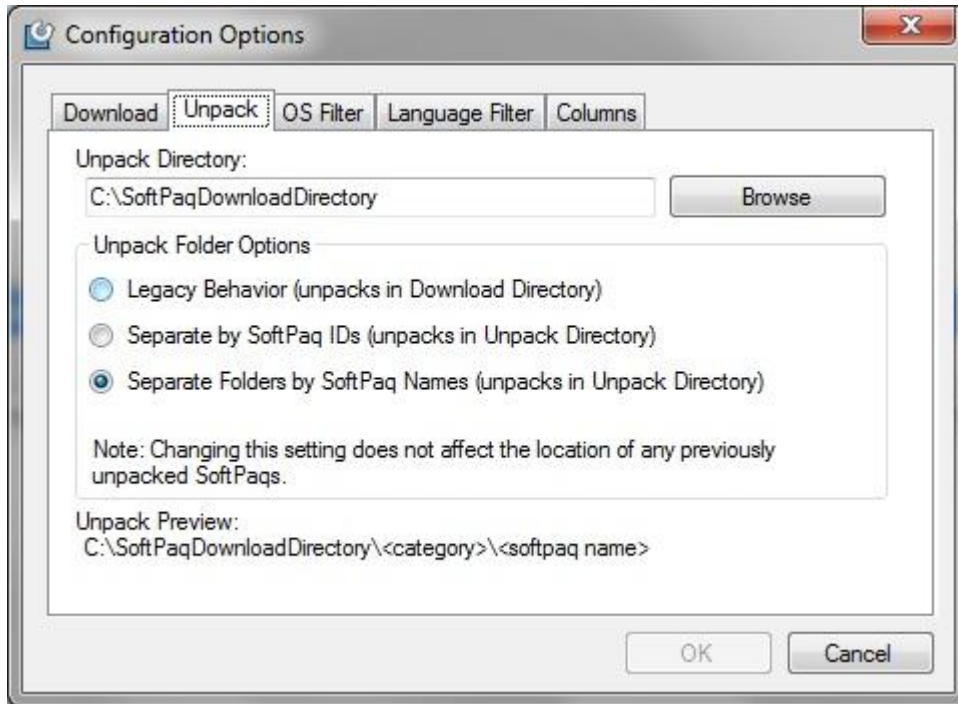
- **Unpack Directory** – this field allows the user to change the location where the SoftPaqs will be unpacked once they are downloaded.
- **Unpack Folder Options**
  - **Legacy Behavior** – this option will unpack all selected SoftPaqs in the Download Directory established on the **Download** tab (above). Unpack directory field will be locked.
  - **Separate by SoftPaq IDs** – this option will unpack all selected SoftPaqs in the folder designated in the Unpack directory. Individual SoftPaqs will be unpacked in a unique folder based on SP# (i.e. \SPxxxxx) according to SoftPaq category (Driver – Video, Driver – Audio, etc.). Figure A-8 shows an example of this folder structure.

**Figure A-8.** Example of folder structure separated by SoftPaq IDs
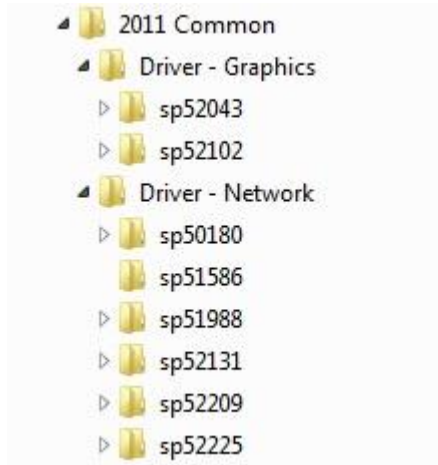
– **Separate by SoftPaq Names** – this option will unpack all selected SoftPaqs in the folder designated in the Unpack directory. Individual SoftPaqs will be unpacked in a unique folder based on SP Name (i.e. HP Universal Camera Driver) according to SoftPaq category (Driver – Video, Driver – Audio, etc.). Figure A-9 shows an example of this folder structure.

Figure A-9. Example of folder structure separated by SoftPaq Name
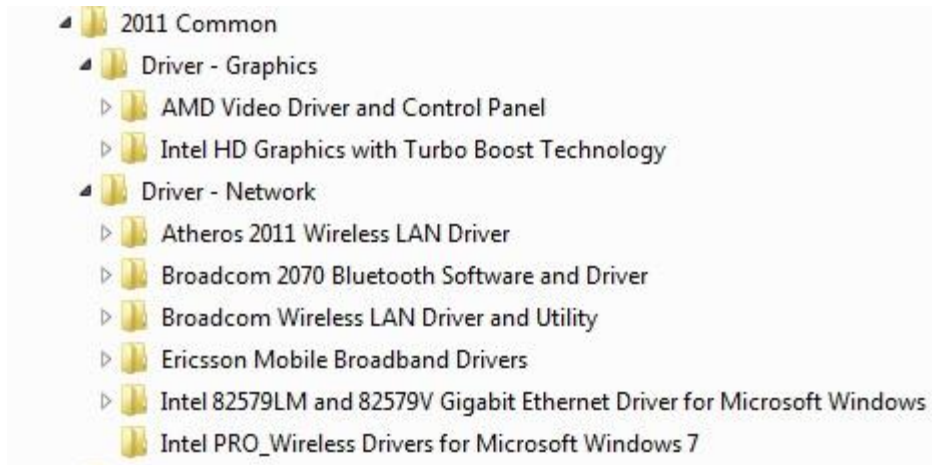
8. After selecting the desired SoftPaqs, the following options are available in the Downloaded SoftPaqs window: **Download Only** or **Download and Unpack** (Figure A-10).

Figure A-10. Downloaded SoftPaqs window
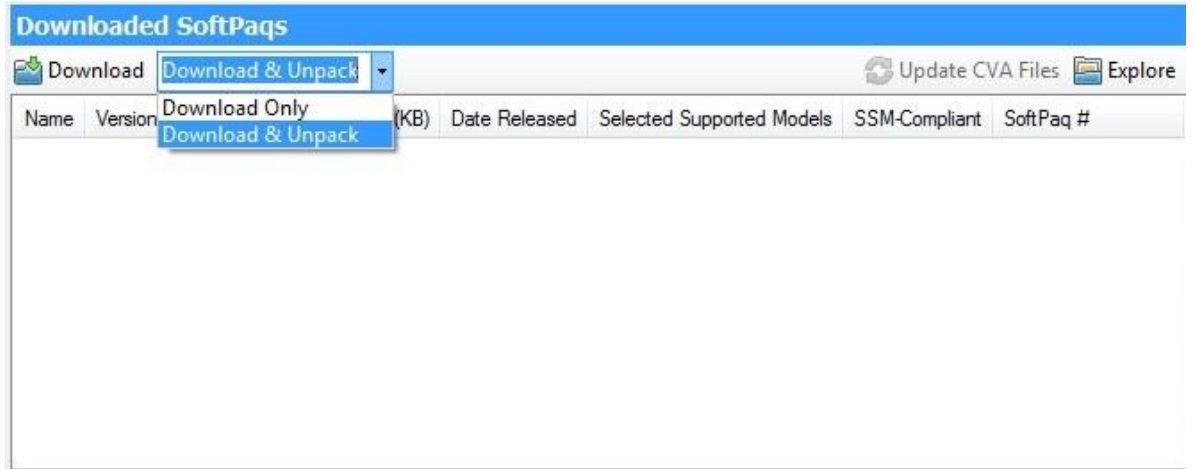
- **Download Only** – this option will download all selected SoftPaqs according to the settings established in the **Download tab** in the Configuration Options dialog. Default is Single Folder set to "C:\SoftPaqDownloadDirectory".
- **Download and Unpack** – this option will download all selected SoftPaqs according to the settings established in the **Unpack tab** in the Configuration Options dialog. Default is Legacy Behavior (unpack in Download directory) "C:\SoftPaqDownloadDirectory".

9. After download is complete, the SoftPaqs can either be installed directly or imported into your respective management solution.

For more technical information about using HP SoftPaq Download Manager, please refer to the User Guide at www.hp.com/go/sdm.

Appendix B: Sample Sysprep.inf files

Example of Windows XP SYSPREP.INF

```
[Unattended]
OemSkipEula=No
OemPnPDriversPath =
"Drv\Video;Drv\Nic;Drv\Audio;Drv\Modem;Drv\Misc1;Drv\Misc2;Drv\Misc3;Drv\Misc4;Drv\Misc5;Drv\
Chipset;Drv\KBD;Drv\MSD;Drv\USB;Drv\Network"

InstallFilesPath = "C:\i386"

[GuiRunOnce]
Command0=c:\Drv\install.bat

[GuiUnattended]
AdminPassword=*
EncryptedAdminPassword=NO
AutoLogon=Yes
AutoLogonAccountCreation=NO
AutoLogonCount=1
OEMSkipRegional=0
OemSkipWelcome=0
WaitForReboot=NO

[UserData]
ComputerName=*

[RegionalSettings]
LanguageGroup=1

[Identification]
JoinWorkgroup=WORKGROUP

[Networking]
InstallDefaultComponents=Yes

[OEM_Ads]
Background=BACKGRND.BMP

[Data]
UseBIOSToBoot=1

[SysprepMassStorage]
PCI\VEN_8086&DEV_2410       = %systemroot%\inf\machine.inf        ;INTEL PCI-ISA bridge
PCI\VEN_1106&DEV_0571 = %systemroot%\inf\mshdc.inf          ;VIA IDE controller
PCI\VEN_10DE&DEV_01BC = %systemroot%\inf\mshdc.inf          ;NVidia IDE controller
```

Example of Windows 7 SYSPREP.XML

```xml
<?xml version="1.0" encoding="utf-8"?>
<unattend xmlns="urn:schemas-microsoft-com:unattend">
    <settings pass="oobeSystem">
        <component name="Microsoft-Windows-International-Core" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
            <InputLocale>en-us</InputLocale>
            <SystemLocale>en-us</SystemLocale>
            <UILanguage>en-us</UILanguage>
            <UILanguageFallback>en-us</UILanguageFallback>
            <UserLocale>en-us</UserLocale>
        </component>
        <component name="Microsoft-Windows-Shell-Setup" processorArchitecture="x86" publicKeyToken="31bf3856ad364e35"
language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
            <OOBE>
                <HideEULAPage>true</HideEULAPage>
                <NetworkLocation>Work</NetworkLocation>
                <ProtectYourPC>1</ProtectYourPC>
                <SkipUserOOBE>true</SkipUserOOBE>
            </OOBE>
            <RegisteredOrganization>Bmankind</RegisteredOrganization>
            <RegisteredOwner>Bmankind</RegisteredOwner>
            <UserAccounts>
                <LocalAccounts>
                    <LocalAccount wcm:action="add">
                        <Password>
                            <Value>cABhAHMAcwB3AG8AcgBkAFAAYQBzAHMAdwBvAHIAZAA=</Value>
                            <PlainText>false</PlainText>
                        </Password>
                        <Name>UserA</Name>
                        <Group>administrators</Group>
                        <DisplayName>UserA</DisplayName>
                    </LocalAccount>
                </LocalAccounts>
                <AdministratorPassword>

<Value>cABhAHMAcwB3AG8AcgBkAEEAZABtAGkAbgBpAHMAdAByAGEAdABvAHIAUABhAHMAcwB3AG8AcgBkAA==</Value>
                    <PlainText>false</PlainText>
                </AdministratorPassword>
            </UserAccounts>
        </component>
    </settings>
    <settings pass="auditSystem">
        <component name="Microsoft-Windows-PnpCustomizationsNonWinPE" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
            <DriverPaths>
                <PathAndCredentials wcm:keyValue="dfbbff91" wcm:action="add">
                    <Path>C:\Drv</Path>
                </PathAndCredentials>
            </DriverPaths>
        </component>
        <component name="Microsoft-Windows-Deployment" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"
```

```
xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
        <Reseal>
           <Mode>Audit</Mode>
        </Reseal>
        <AuditComputerName>
           <MustReboot>false</MustReboot>
           <Name>*</Name>
        </AuditComputerName>
     </component>
     <component name="Microsoft-Windows-Shell-Setup" processorArchitecture="x86" publicKeyToken="31bf3856ad364e35"
language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
        <AutoLogon>
           <Username>Administrator</Username>
           <Enabled>true</Enabled>
           <LogonCount>3</LogonCount>
        </AutoLogon>
     </component>
  </settings>
  <settings pass="specialize">
     <component name="Microsoft-Windows-Shell-Setup" processorArchitecture="x86" publicKeyToken="31bf3856ad364e35"
language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
        <ProductKey>xxxxx-xxxxx-xxxxx-xxxxx-xxxxx</ProductKey>
        <ShowWindowsLive>false</ShowWindowsLive>
        <TimeZone>Eastern Standard Time</TimeZone>
        <Display>
           <ColorDepth>32</ColorDepth>
           <DPI>106</DPI>
           <HorizontalResolution>1280</HorizontalResolution>
           <RefreshRate>75</RefreshRate>
           <VerticalResolution>1024</VerticalResolution>
        </Display>
        <ComputerName>*</ComputerName>
        <CopyProfile>true</CopyProfile>
     </component>
     <component name="Microsoft-Windows-Security-Licensing-SLC-UX" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
        <SkipAutoActivation>true</SkipAutoActivation>
     </component>
     <component name="Microsoft-Windows-UnattendedJoin" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"

xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
        <Identification>
           <Credentials>
              <Domain>arbor01</Domain>
              <Password>nopass</Password>
              <Username>installman</Username>
           </Credentials>
           <JoinDomain>arbor01</JoinDomain>
        </Identification>
     </component>
     <component name="Microsoft-Windows-Deployment" processorArchitecture="x86"
publicKeyToken="31bf3856ad364e35" language="neutral" versionScope="nonSxS"
```

```
xmlns:wcm="http://schemas.microsoft.com/WMIConfig/2002/State" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance">
        <RunSynchronous>
          <RunSynchronousCommand wcm:action="add">
             <Order>1</Order>
             <Path>net user administrator /active:yes</Path>
          </RunSynchronousCommand>
        </RunSynchronous>
    </component>
  </settings>
  <cpi:offlineImage cpi:source="wim:d:/sources/install.wim#Windows 7 ULTIMATE" xmlns:cpi="urn:schemas-microsoft-
com:cpi" />
</unattend>
```

Appendix C: Installing Preboot applications and tools

The HP TOOLS partition and the preboot applications on the partition are not required for the basic operation of HP notebook computers. However, if the HP_TOOLS partition or applications are missing, the features described in this paper will not be available.

Applications accessible during startup
The HP_TOOLS partition includes the following applications and utilities:

- •   HP System Diagnostics - allows you to perform diagnostic tests on select system components
- •   BIOS Recovery – automatic BIOS corruption detection aand recovery

Creating or restoring an preboot partition on the hard drive

Use the following steps to create the HP preboot partition and install preboot SofPaqs onto the partition:

1. Use Partition Magic or a comparable utility to create a partition on a local hard drive that has a System partition with the following characteristics: Partition type: FAT32 Partition size: 5 GB Volume name: HP_TOOLS
2. In the new partition, create a folder called HEWLETT-PACKARD.
3. In the HEWLETT-PACKARD folder, create the following sub-folders:
-SYSTEMDIAGS
-BIOS
4. In the BIOS folder, create a Current subfolder
5. Download the SoftPaqs for System Diagnostics and BIOS to the operating system partition. SoftPaqs are available from http://www.hp.com/support.
6. Verify that the Softpaqs run and unbundle into the C:\swsetup directory.
7. Verify that the preboot application is installed in the correct location in the FAT32 partition
8. Verify that all preboot applications have signature (.sig) files.
9. Verify that each application works properly after installation.

HP_TOOLS partition errors

If the preboot application launch keys fail to operate, the partition may have become corrupt. Reinstall the application using the related SoftPaq from http://www.hp.com/support. If a reinstalled preboot application does not work after reinstallation, contact technical support.

The following errors may be displayed if a problem occurs when launching EFI and preboot applications:

- Preboot partition not found: can't find FAT32 partition starting with HP_TOOLS.
- Application not found: can't find preboot application in directory.
- Invalid signature: BIOS fails to verify the signature of the preboot application.

If there is a backup version of the application in BIOS flash (for example, HP System Diagnostics). BIOS will launch the backup. Otherwise, BIOS displays an error message.

WARNING

Do not encrypt HP_TOOLS partition using software encryption programs such as Windows BitLocker or Full Volume Encryption for HP ProtectTools. When the partition is encrypted, the HP preboot applications cannot function.

References

HP Client Catalog for SCCM
- http://h20331.www2.hp.com/Hpsub/cache/561194-0-0-225-121.html

HP Client Management Interface
- www.hp.com/go/hpcmi

Microsoft .NET Framework
- http://www.microsoft.com/net/

Description of the Windows XP Corporate Deployment tools and documentation
- http://support.microsoft.com/kb/321880

System Preparation Tool and Answer File Usage
- http://support.microsoft.com/kb/314460

Windows Automated Installation Kit (AIK) Download
- http://www.microsoft.com/downloads/details.aspx?FamilyID=C7D4BC6D-15F3-4284-9123-679830D629F2&displaylang=en

Windows Automated Installation Kit Information
- http://technet.microsoft.com/en-us/library/cc748933(WS.10).aspx

For more information

To learn more about HP business notebooks, contact your local HP sales representative or visit www.hp.com/go/notebooks.

Get connected
www.hp.com/go/getconnected
Current HP driver, support, and security alerts delivered directly to your desktop

718504-001 rev. 1, April 2012