SUR40 Technical Guide

Recovery OS (Ver1.00)

OS, Driver

Windows 7 operating system recovery

Windows 7 operating system (OS) can be recovered using the following methods:

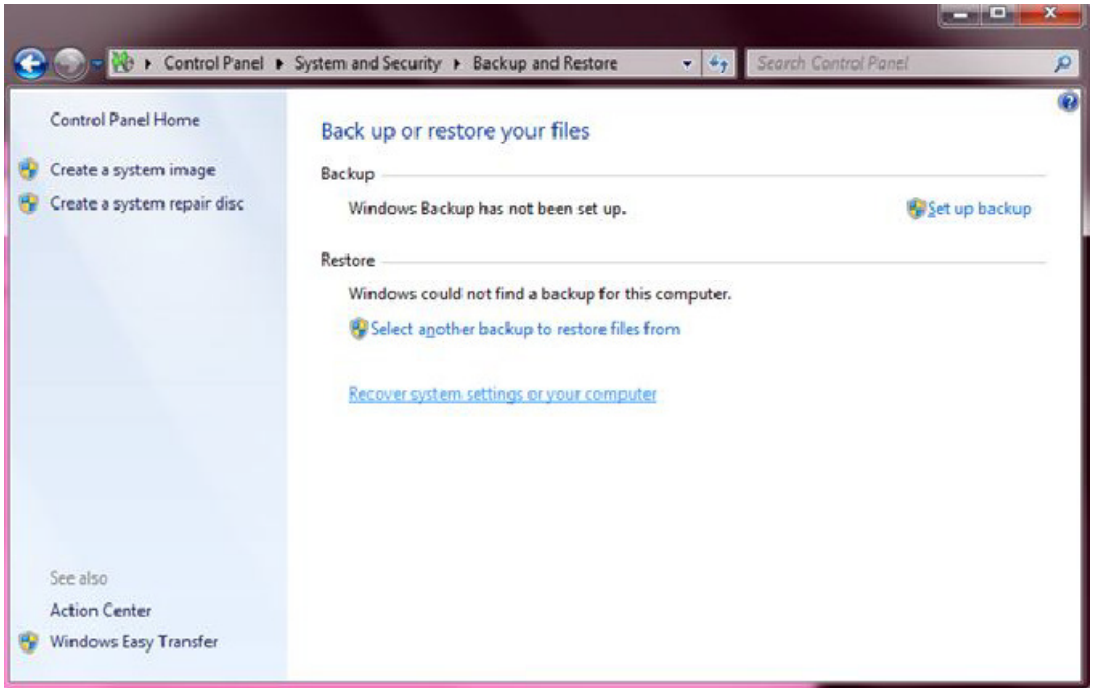
1) Re-installation of Windows 7 OS
2) Restore Windows 7 OS factory default

1. Re-installing Windows 7

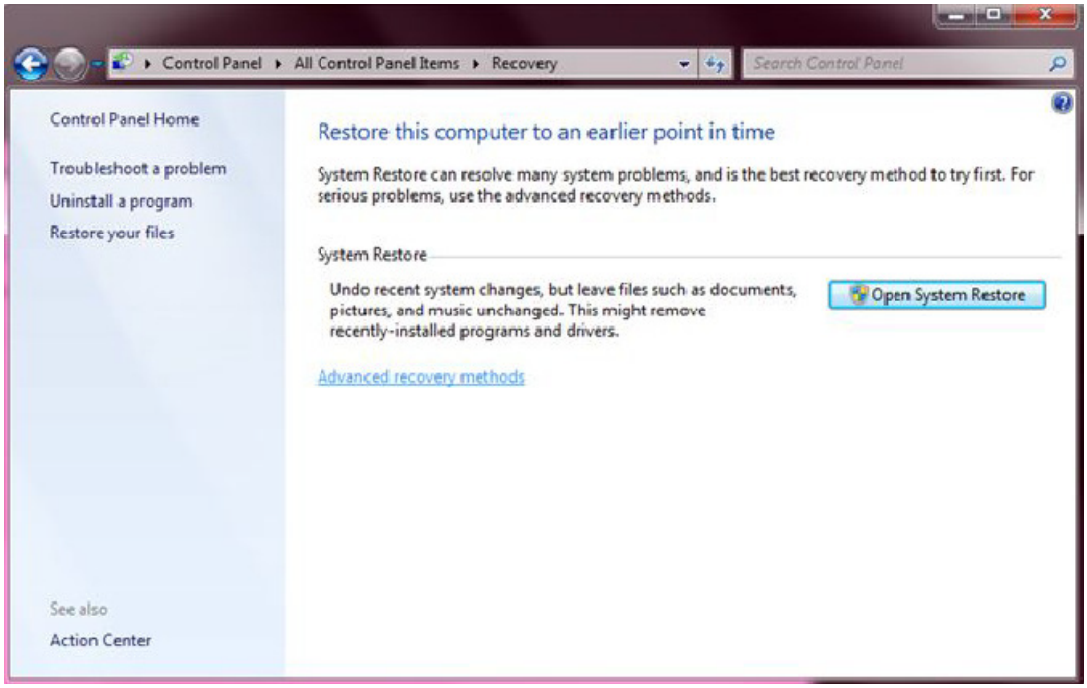
In order to re-install Windows 7 access the system recovery mode and follow the instructions as shown below.

1.1 Option 1: Access recovery mode via Control Panel

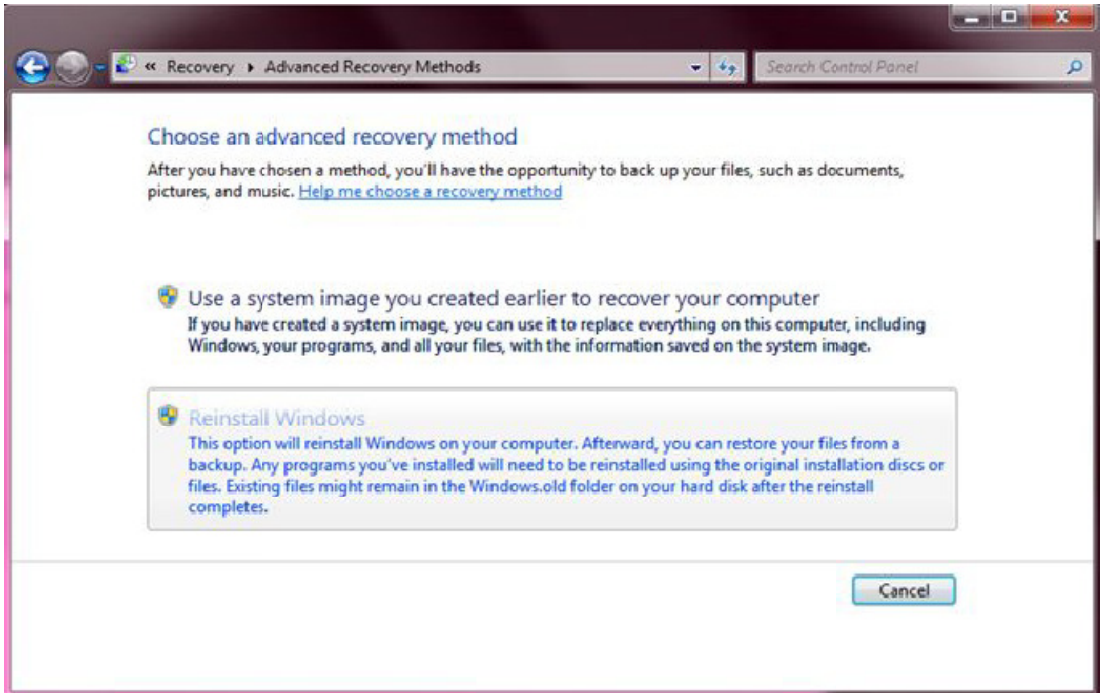
1) Go to Start > **Control Panel** > System and Security, select *Backup and Restore* and click on Recover system settings on your computer.



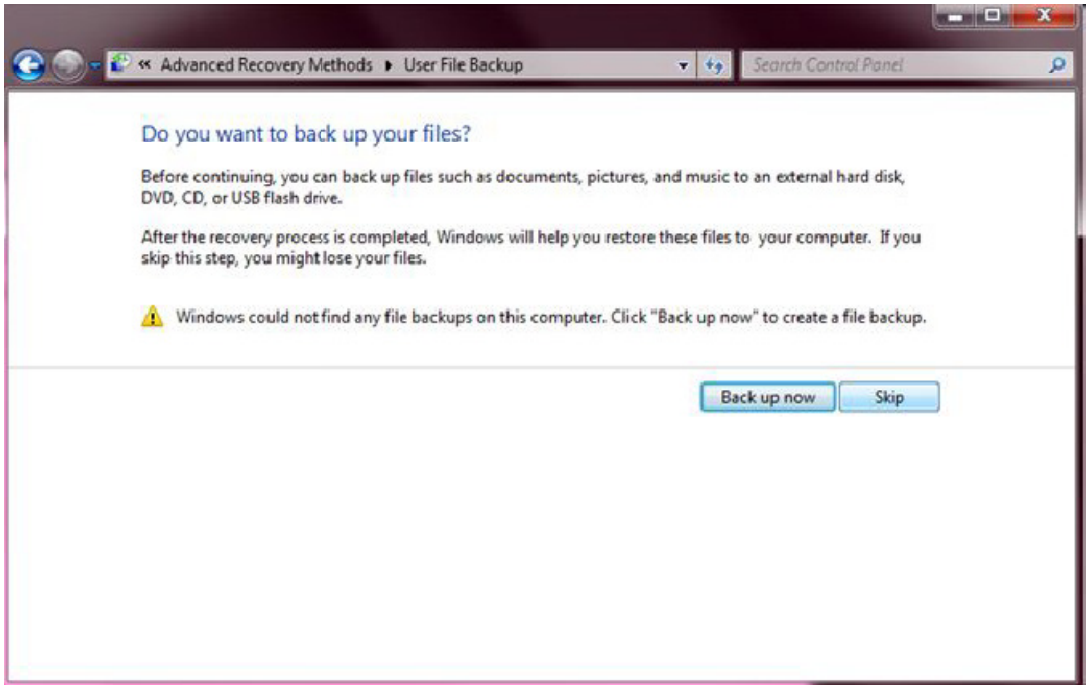
2) Select Advanced recovery methods.



3) Click Reinstall Windows



4) You will be prompted to confirm that you want to back up files as shown below. After you completed the data back-up, restart your computer to commence the re-installation of Windows 7.

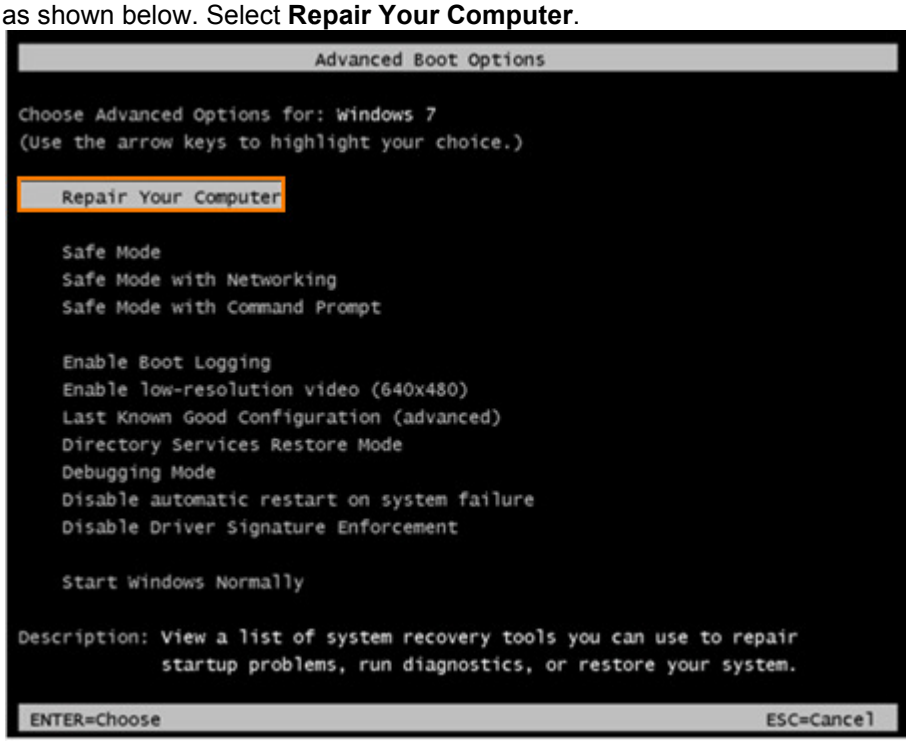


1.2 Option 2: Access recovery mode when the computer boots

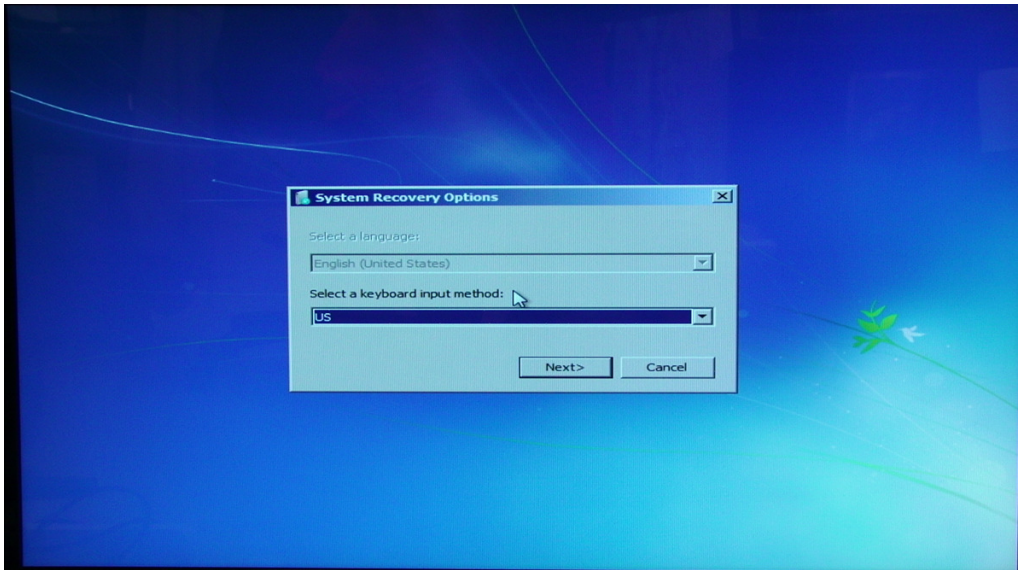
1.2.1 Press F1 or F8 immediately after the computer boots up.

Note that the system will boot in standard mode if you do not press F1 or F8 immediately after the computer boots up.

1.2.2 If you have accessed recovery mode by pressing F8, the **Advanced Boot Options** screen will appear as shown below. Select **Repair Your Computer**.

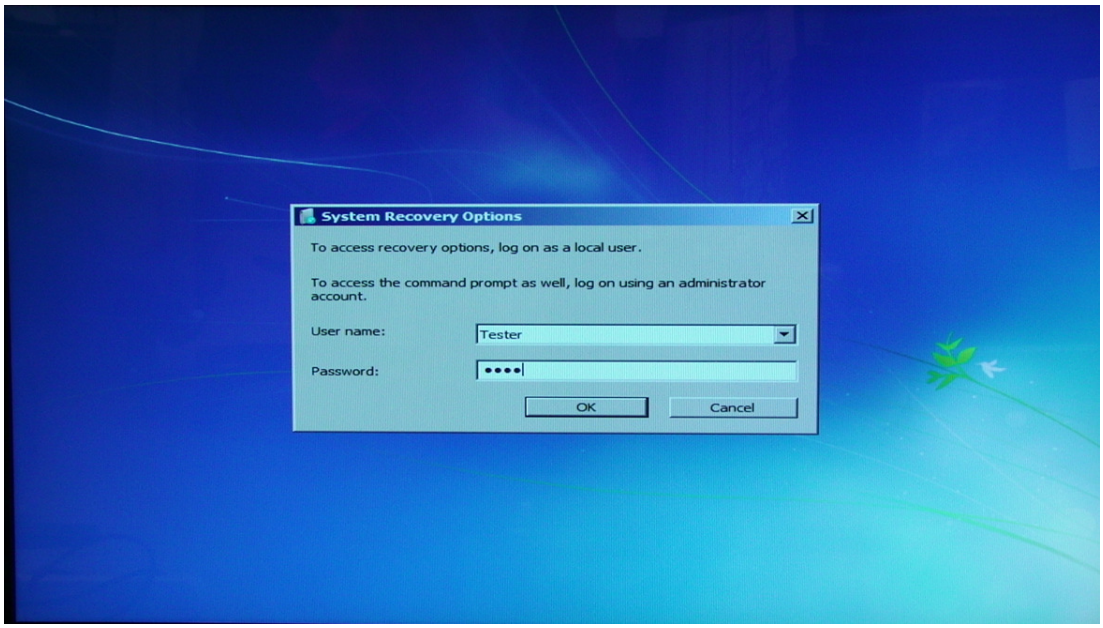


1.2.3 System Recovery Environment

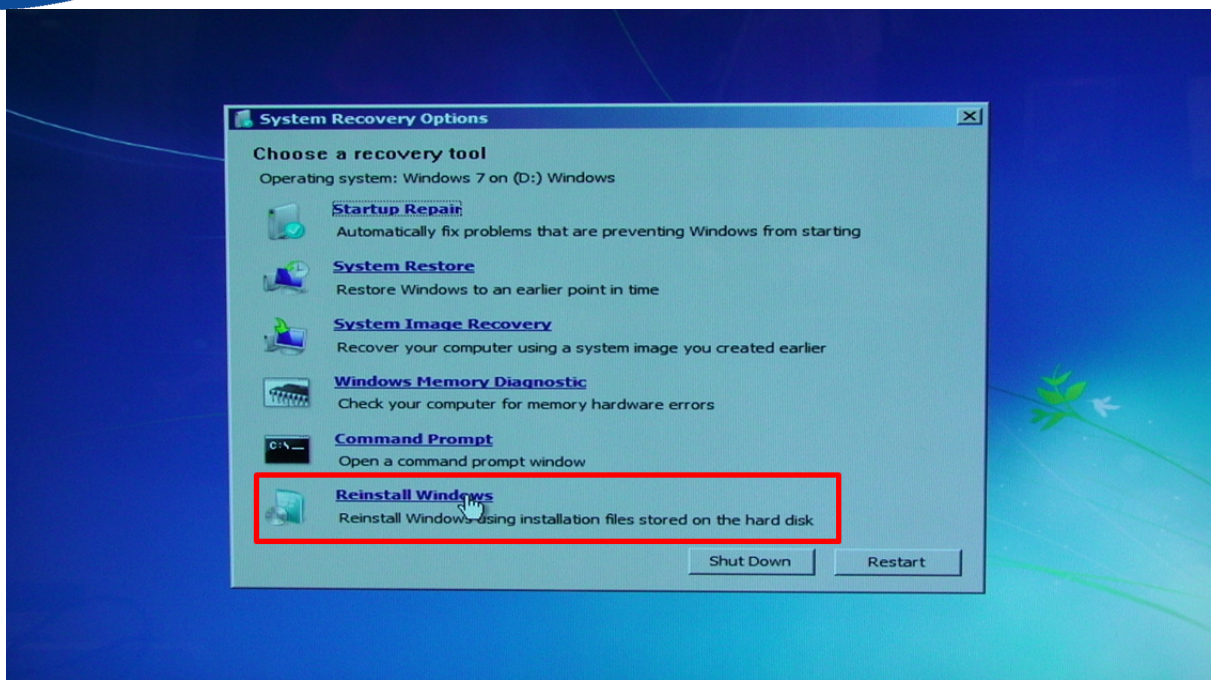


When booted into recovery mode, the above screen appears.

[Next]

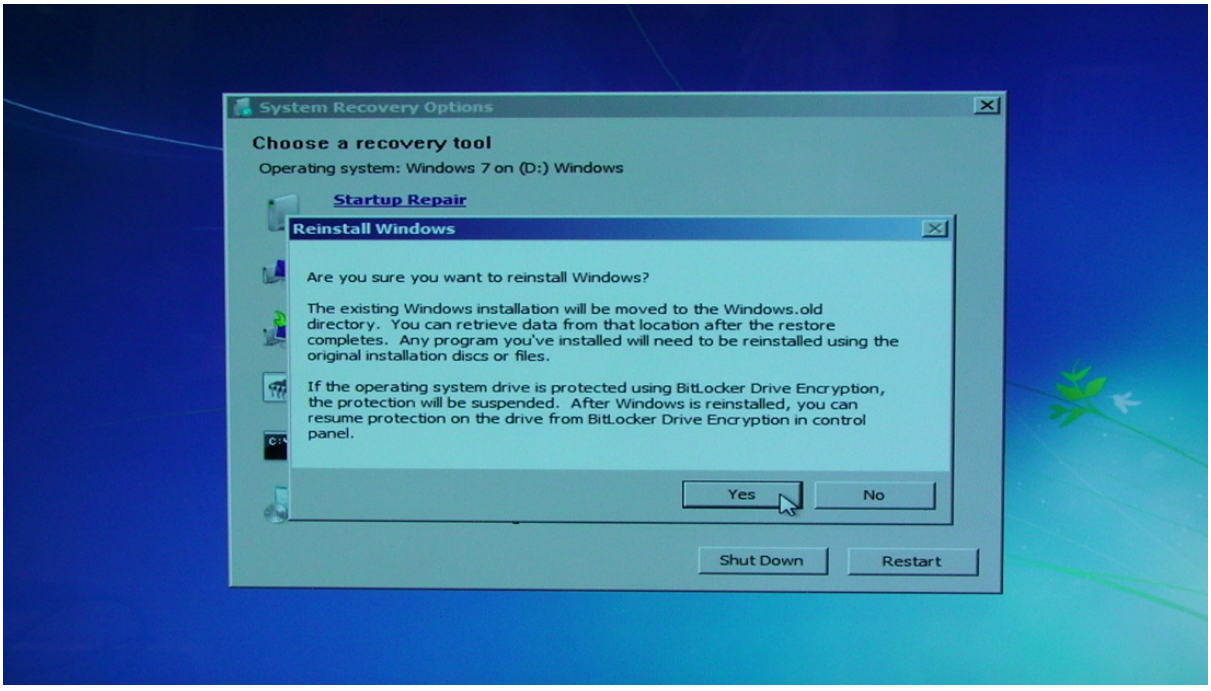


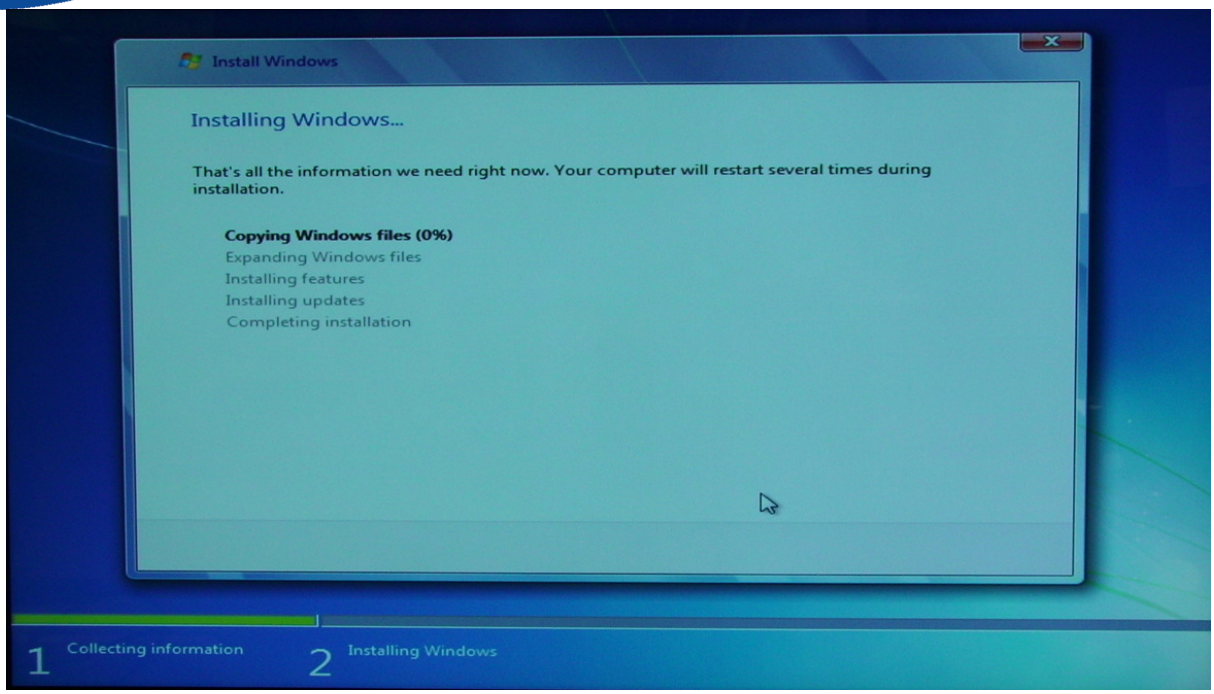
Enter your Windows user name and password

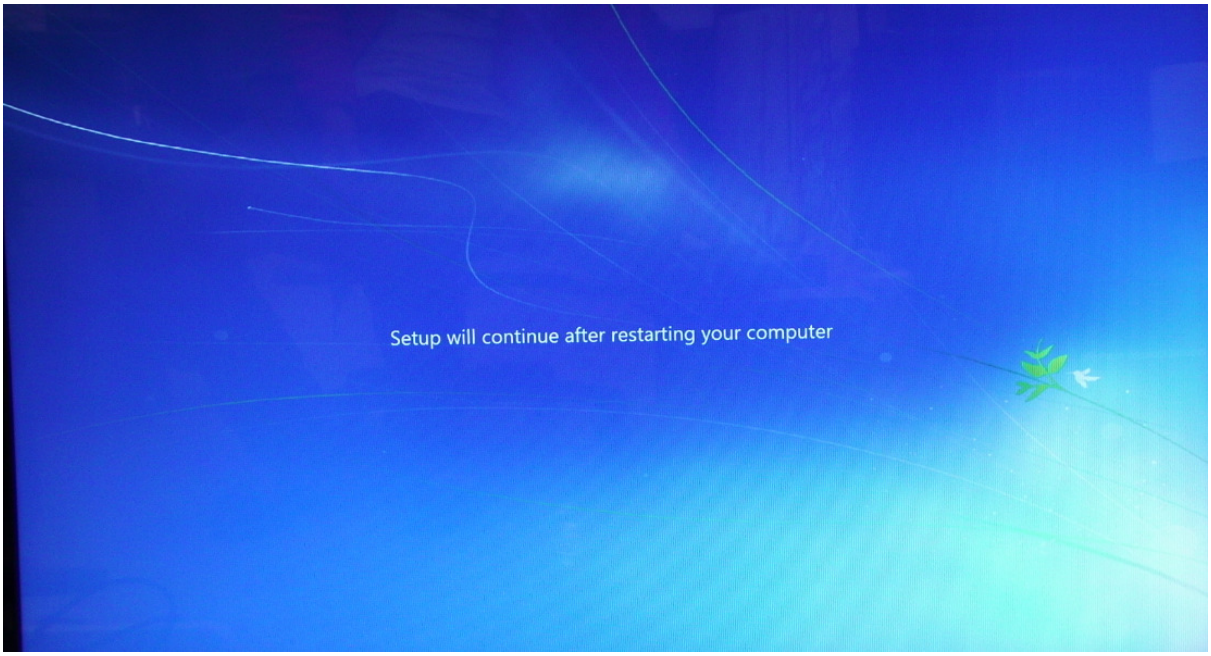


A list of [System Recovery Options] is displayed.

Select [Reinstall Windows] and confirm with “yes”.

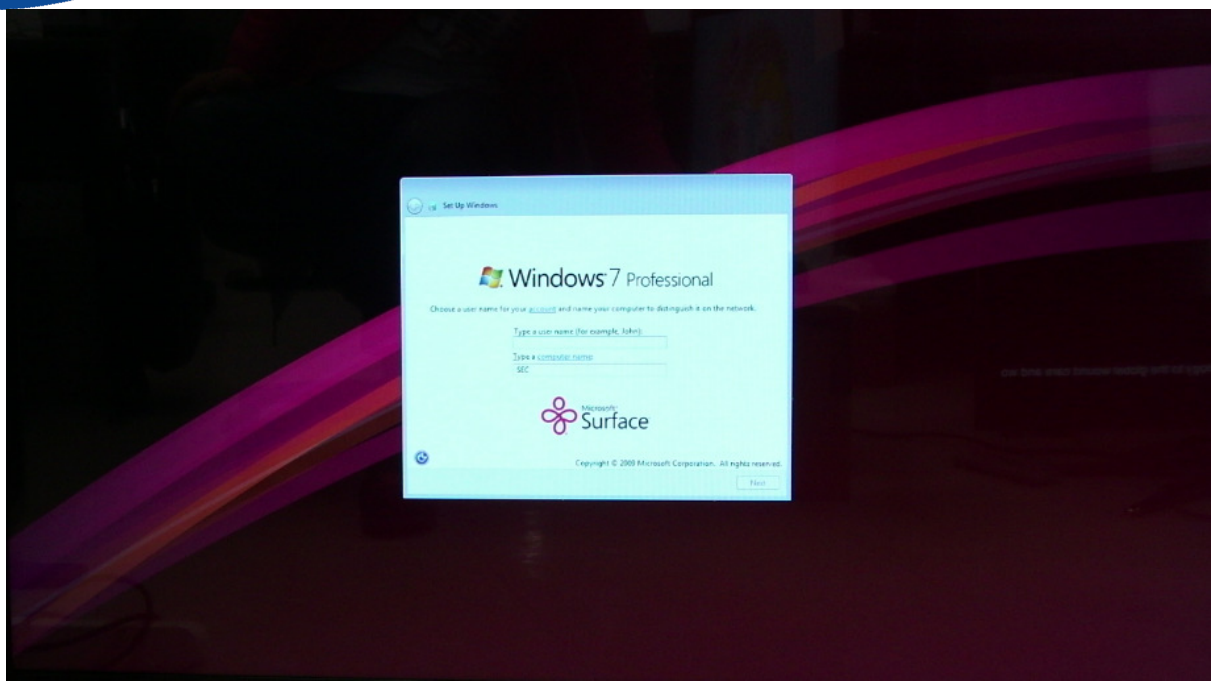






During reinstallation the system will restart several times.

After restart, the OOBE screen appears.


Set Up Windows
Windows 7 Professional
Type a user name (for example, John):
Type a computer name:
SEC
Microsoft
Surface
Copyright © 2009 Microsoft Corporation. All rights reserved.
Next

2 Return to the FACTORY OS Image

If the re-installation of Windows 7 fails, you may restore the default factory settings of the operating system. Recover the system as explained below:

2.1 Create a WinPE bootable USB

2.1.1 Why we need a WinPE environment

The applications ImageX.exe and diskpart allow us to manage Win7-based OS images.
ImageX and diskpart do not run on DOS systems and require WinPE or Windows7 environments.
To create a WinPE bootable USB, you can use any WinPE or Win7 environment which you may already have in place.

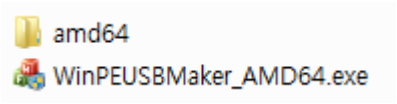
2.1.2 Using WinPEUSBMaker tool

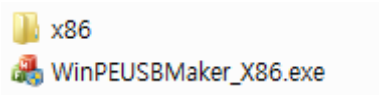
The WinPEUSBMaker tool is available for: (A) AMD64 and (B) X86 architecture.
Select the correct tool according to your OS image's architecture.
(A) AMD64 platform : SUR40 (Surface, Windows 7 Professional 64bit)
(B) X86 platform : SBBA, SIM (Windows Embedded Standard 7 32bit)

2.1.2.1 Requirements

Copy a mandatory set of files for each OS architecture into a WinPE data folder.
These files ought to be located on one USB drive only
The USB will be formatted.
WinPE files require 200MB, but we recommend over 8GB available space
The OS image will be saved on the USB
WinPEUSBMaker_[%Processor_Architecture%].exe

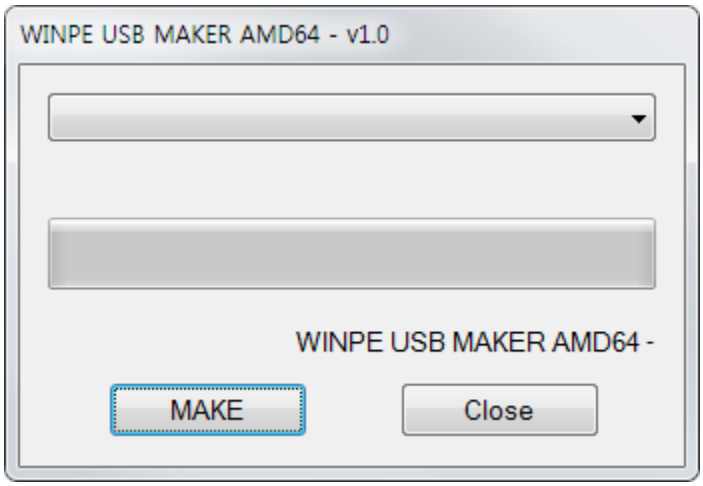
- [%Processor_Architecture%]₩ISO₩



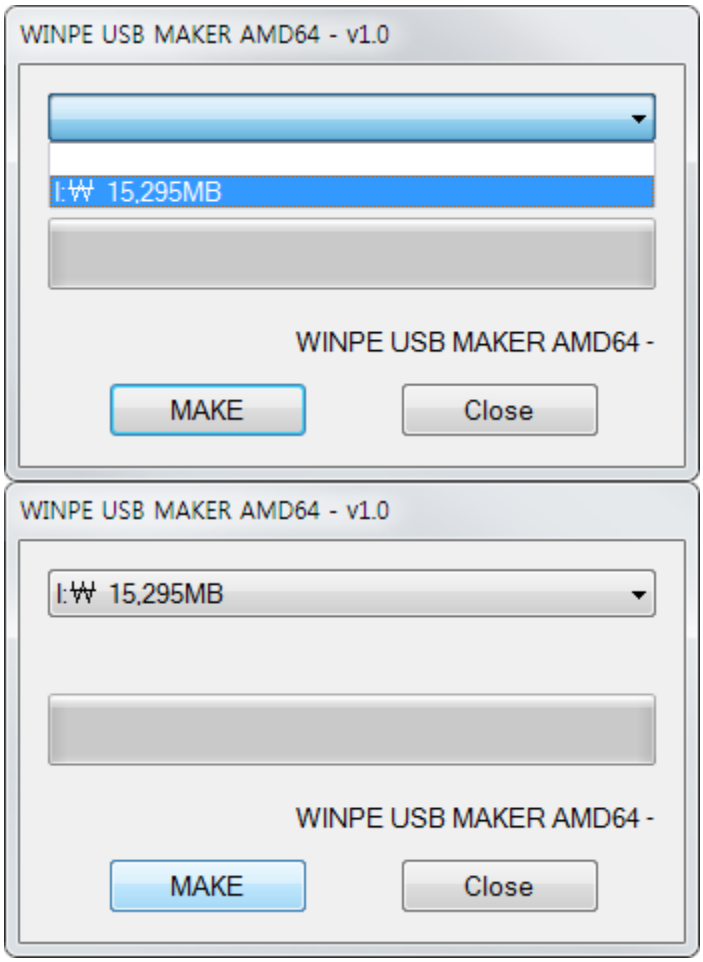


2.1.2.2 Run WinPEUSBMaker

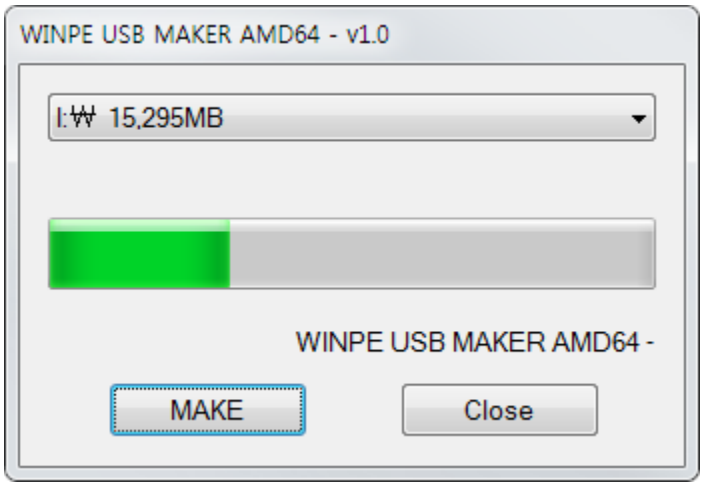
- Connect USB drive and run WInPEUSBMaker_AMD64.exe



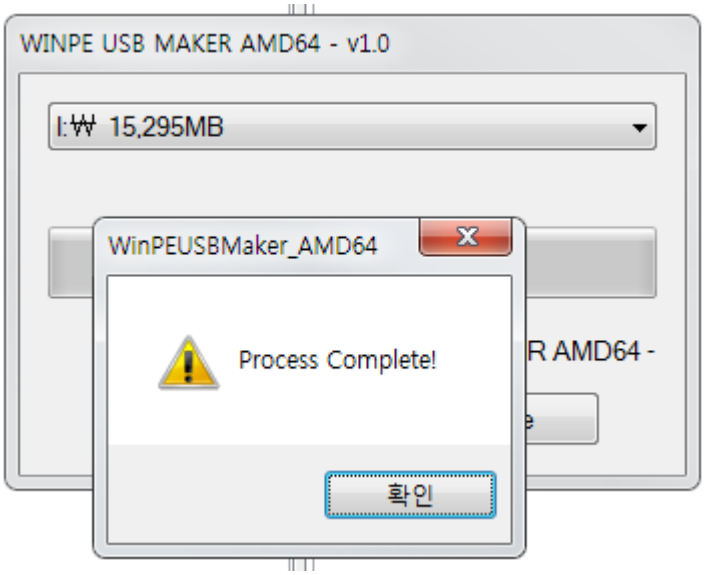
Locate your USB drive in the drop down list



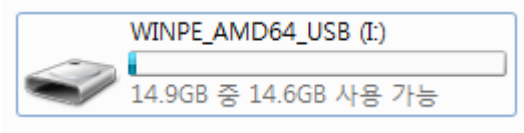
Select USB drive and click [MAKE] button.



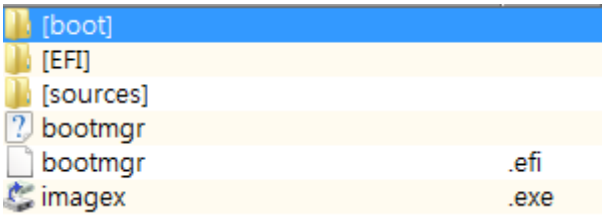
Progress bar is displayed during process.



"Process Complete!" message appears.



USB's label is set to "WINPE_AMD64_USB"



You can see USB's contents.

Now you can boot to WinPE from the USB drive.

2.1.3 Microsofts' guide (without WinPEUSBMaker)

You can also manually create a bootable WinPE USB without the WinPEUSBMaker. Either method will produce the same WinPE bootable USB.

2.1.3.1 Instructions

Create a Bootable Windows PE RAM Disk on UFD.

http://technet.microsoft.com/en-us/library/cc766092(WS.10).aspx

2.1.3.2 Summary

1. Manual inputs

```
-----------------------------------------
diskpart
select disk 1
clean
create partition primary
select partition 1
active
format fs=ntfs quick
assign
exit
-----------------------------------------
(The example above assumes Disk 1 is the UFD.)


-----------------------------------------
xcopy c:₩winpe_amd64₩iso₩*.* /s /e /f f:₩
-----------------------------------------
```

2. Below is actual command sample. User's input is indicated in **bold blue**.

```
e:\85.WinPE_USB_Making\WinPE ISO\amd>dir
 Volume in drive E is ? ??
 Volume Serial Number is 4C64-333B

 Directory of e:\85.WinPE_USB_Making\WinPE ISO\amd

2012-02-02  ?? 01:17    <DIR>          .
2012-02-02  ?? 01:17    <DIR>          ..
2011-12-01  ?? 10:54    <DIR>          amd64
2012-01-30  ?? 10:28         1,764,864 WinPEUSBMaker_AMD64.exe
               1 File(s)      1,764,864 bytes
               3 Dir(s)  12,744,904,704 bytes free

e:\85.WinPE_USB_Making\WinPE ISO\amd>diskpart

Microsoft DiskPart version 6.1.7600
Copyright (C) 1999-2008 Microsoft Corporation.
On computer: DO-JJKK-KIM02
```

```
DISKPART> list disk

  Disk ###  Status         Size     Free     Dyn  Gpt
  --------  -------------  -------  -------  ---  ---
  Disk 0    Online         119 GB      0 B
  Disk 1    Online         465 GB      0 B
  Disk 2    Online         465 GB  1024 KB
  Disk 3    Online          14 GB      0 B

DISKPART> select disk 3

Disk 3 is now the selected disk.

DISKPART> clean

DiskPart succeeded in cleaning the disk.

DISKPART> create partition primary

DiskPart succeeded in creating the specified partition.

DISKPART> select partition 1

Partition 1 is now the selected partition.

DISKPART> active

DiskPart marked the current partition as active.

DISKPART> format fs=ntfs quick

  100 percent completed

DiskPart successfully formatted the volume.

DISKPART> assign

DiskPart successfully assigned the drive letter or mount point.

DISKPART> list volume

  Volume ###  Ltr  Label        Fs     Type        Size     Status     Info
  ----------  ---  -----------  -----  ----------  -------  ---------  --------
  Volume 0     M                       DVD-ROM         0 B  No Media
  Volume 1     H                       DVD-ROM         0 B  No Media
  Volume 2     C   SSD_128      NTFS   Partition    119 GB  Healthy    System
  Volume 3     G   500GB        NTFS   Partition    465 GB  Healthy
  Volume 4     F   ? ??         NTFS   Partition    234 GB  Healthy
  Volume 5     E   ? ??         NTFS   Partition    231 GB  Healthy
* Volume 6     D                NTFS   Removable     14 GB  Healthy

DISKPART> exit

Leaving DiskPart...

e:\85.WinPE_USB_Making\WinPE ISO\amd>xcopy amd64₩ISO₩*.* /s /e /f d:₩
```

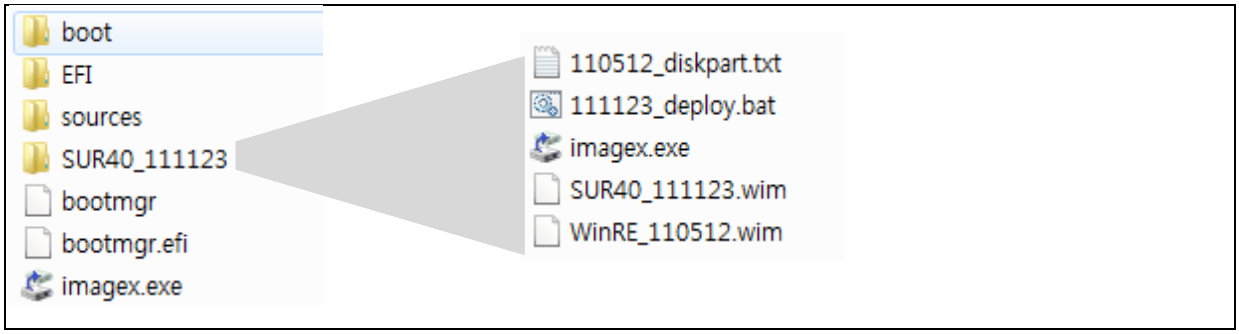
```
E:\85.WinPE_USB_Making\WinPE ISO\amd\amd64\ISO\bootmgr -> D:\bootmgr
E:\85.WinPE_USB_Making\WinPE ISO\amd\amd64\ISO\bootmgr.efi -> D:\bootmgr.efi
E:\85.WinPE_USB_Making\WinPE ISO\amd\amd64\ISO\imagex.exe -> D:\imagex.exe
E:\85.WinPE_USB_Making\WinPE ISO\amd\amd64\ISO\boot\bcd -> D:\boot\bcd
E:\85.WinPE_USB_Making\WinPE          ISO\amd\amd64\ISO\boot\boot.sdi          ->
D:\boot\boot.sdi
.
.
.
 ISO\amd\amd64\ISO\EFI\microsoft\boot\fonts\wgl4_boo
t.ttf -> D:\EFI\microsoft\boot\fonts\wgl4_boot.ttf
E:\85.WinPE_USB_Making\WinPE        ISO\amd\amd64\ISO\sources\boot.wim        ->
D:\sources\boot.wim
22 File(s) copied

e:\85.WinPE_USB_Making\WinPE ISO\amd>
```

2.2 Copy OS image to USB

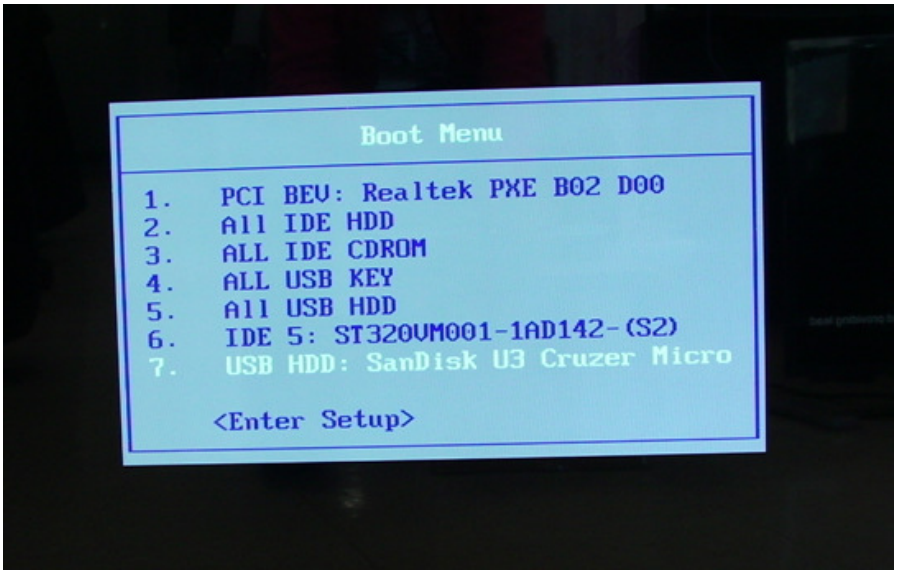
2.2.1 Copy OS image and related files to USB.

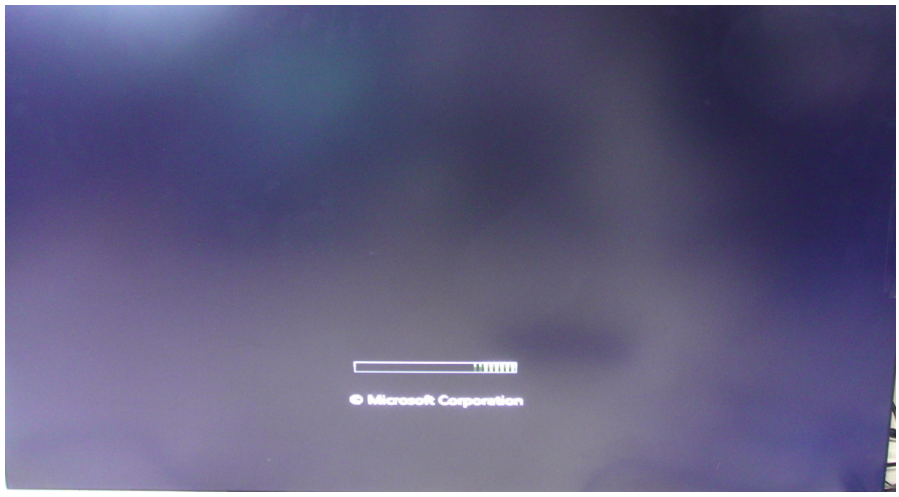
(xxx.txt, xxx.bat, xxx.wim, WinRe.wim)



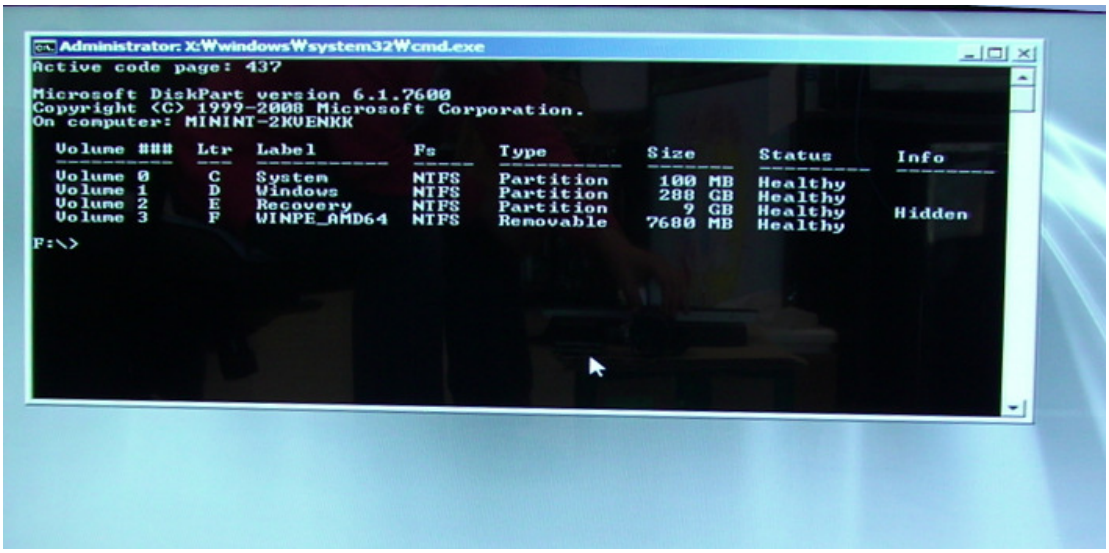
2.2.2 Connect the USB and restart the local machine to boot into USB (using F2 / F10)

You may have to amend the boot sequence in the BIOS system as shown below:

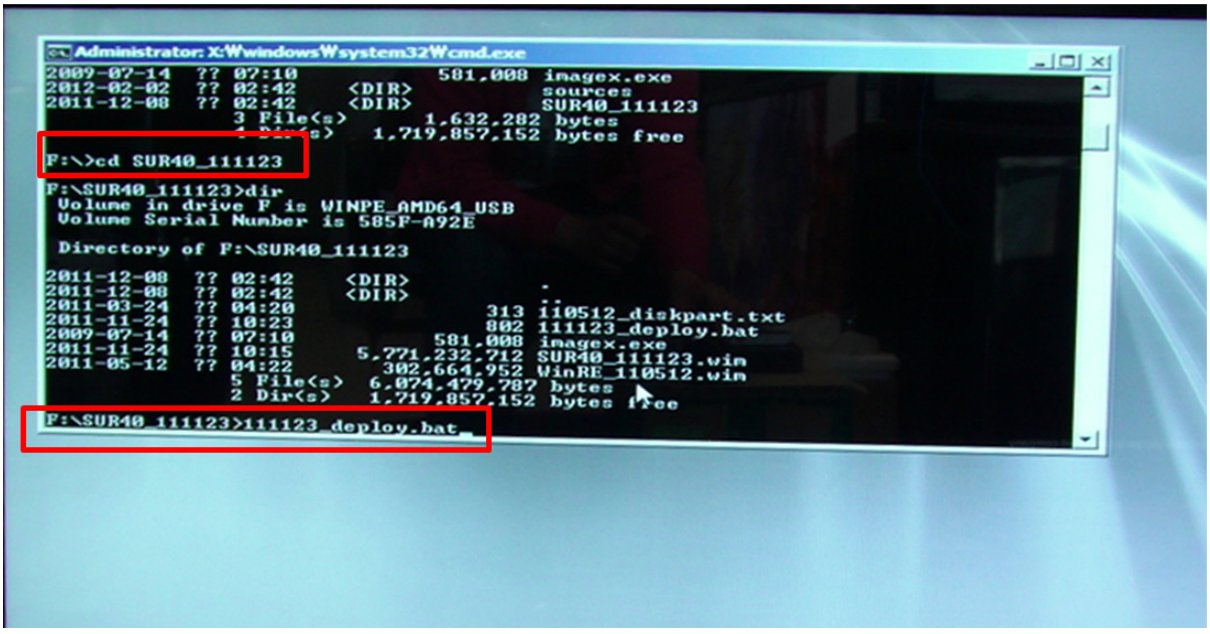




2.2.3 When booting is completed, the following menu appears:

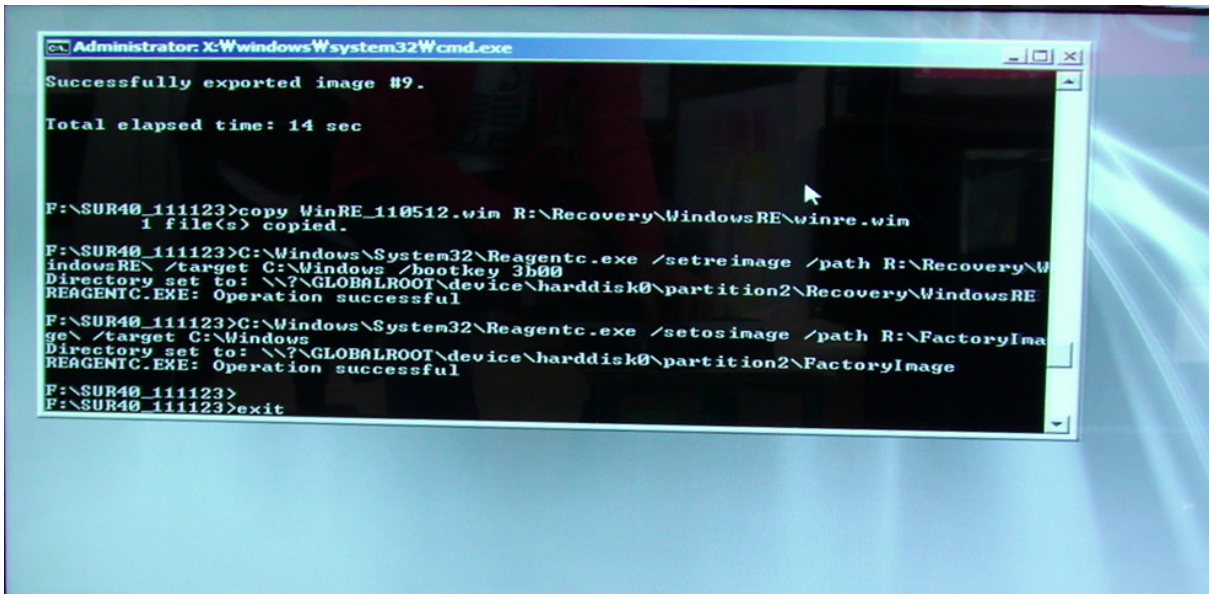


2.2.4 Move to OS image folder and execute xxxxxx_deploy.bat script file.

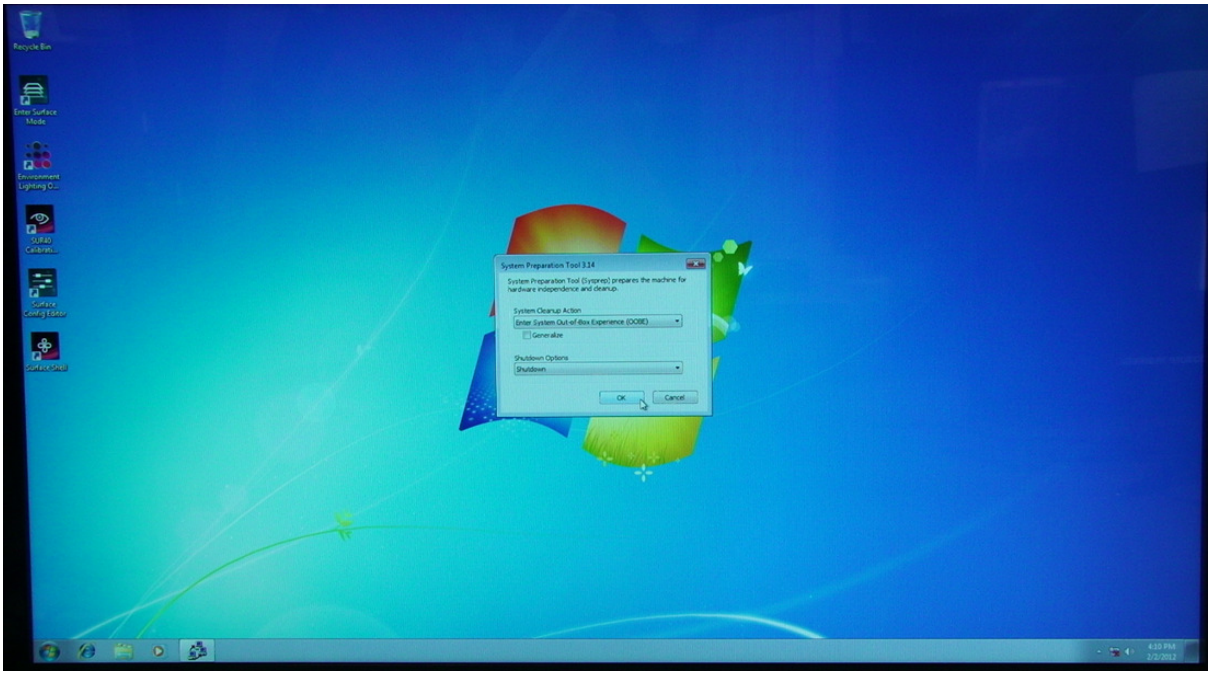


2.2.5 Deployment is automatically proceeding.

Reboot target.

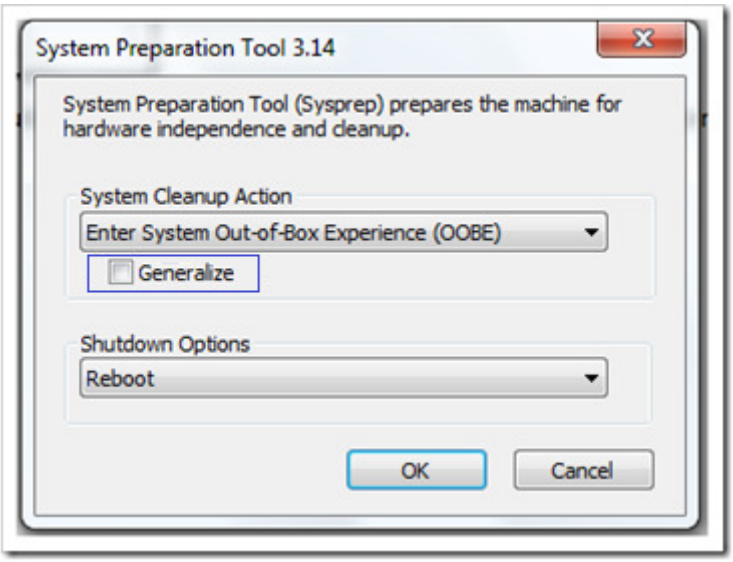


2.2.6 After the SUR40 OS image is deployed, boot into audit mode and the SysPrep window will appear



2.3 First booting and Sysprep

- After the SUR40 OS image has been deployed, first boot into audit mode and the SysPrep window will appear.



- Click OK to confirm.
  We recommend to leave the option "Generalize" unchecked
- After reboot, the OOBE screen will be displayed
  This is the initial environment for the end user
- SysPrep info
  http://technet.microsoft.com/en-us/library/cc721940(WS.10).aspx