MC-7400 Series Computer
Windows User's Manual

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MC-7400 Series Computer Windows User's Manual

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Introduction

Thank you for buying Moxa's MC-7400 Series computer. The MC-7400 computer comes with the Windows 10 LTSB software platform, providing a simple and familiar development environment for various industrial applications.

The following topics are covered in this chapter:

- **Software Components**

Software Components

Refer to the following content for the software components of the Windows 10 LTSB preinstalled on the MC-7400 Series computer.

Windows 10 LTSB

Core OS:

- 64-bit support
- Remote client
- Remote procedure call

Applications and Services Development:

- .Net Framework 3.5
- .Net Framework 4.6
- Remote Desktop
- COM+ application support
- MSMQ

Internet Services:

- Internet Explorer 11
- IIS 10.0

File Systems and Data Storage:

- Windows data access components
- Windows backup and restore

Diagnostics:

- Common diagnostic tools
- Problem reports and solutions
- Windows Memory Diagnostic tool

Graphics and Multimedia:

- DirectX and Windows Device Experience
- Photo Viewer
- Remote media streaming
- Windows Media Player

Management:

- Local Group Policy Editor
- Group Policy Management
- Windows Management Instrument (WMI)
- Windows Update

Networking:

- Extensible Authentication Protocol (EAP)
- Internet Authentication Service
- Telnet Server
- Domain Services
- Network and Sharing Center
- Quality of Service
- Remote Access Service (RAS)
- Telephony API Client
- Windows Firewall
- iSCSI Initiator

Security:

- Credential Roaming Service
- Credentials and certificate management
- Windows Authorization Manager (AZMAN)
- Windows Security Center
- Active Directory Rights Management
- Security Base
- Encrypted File System (EFS)
- Data Recovery Agent (DRA)
- Local security policy

Embedded Features:

- Message box default reply
- Registry filter
- WSDAPI for .NET.

Embedded Self-Health Diagnostic Software:

- SNMP-based remote scripting layer for monitoring, reporting, and control

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Software Initialization

This chapter describes how to initialize the system settings on the MC-7400 Series computer when you boot up the computer for the first time.

The following topics are covered in this chapter:

- **Overview**
- **Initializing User Settings**

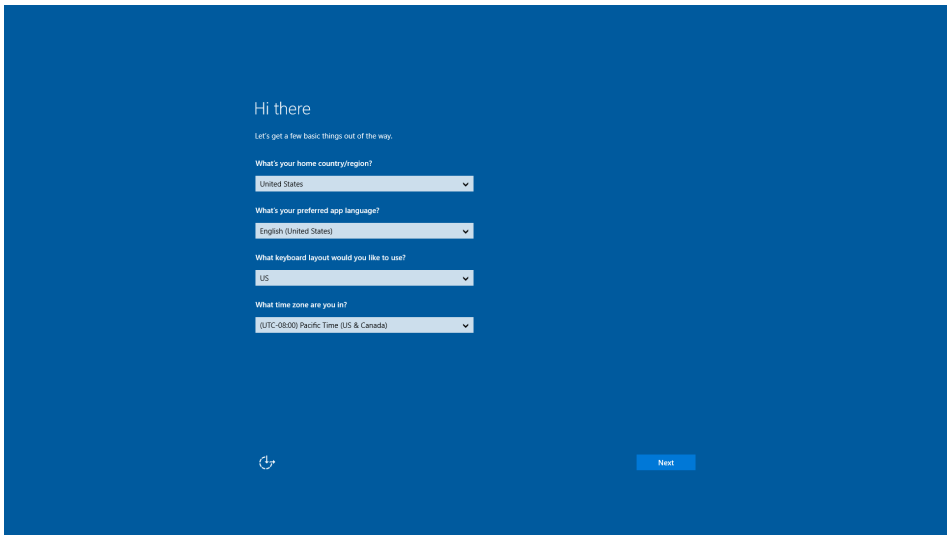
Overview

Like most laptop computers, you will need to first create a user account and initialize the user settings for the MC-7400 embedded computer to work.

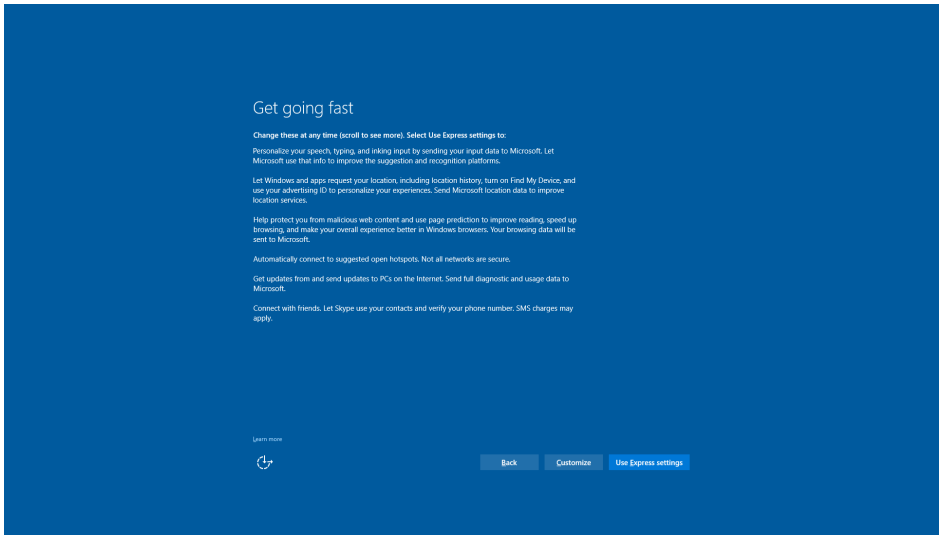
Initializing User Settings

Follow these instructions to create a new user account.

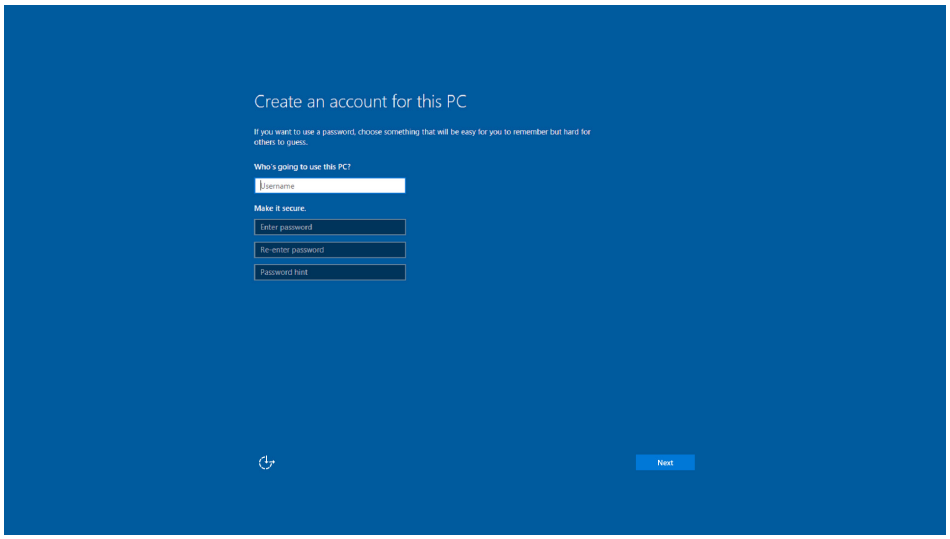
1. When you boot up the embedded computer for the first time, select your home region, preferred language, keyboard layout, and time zone.



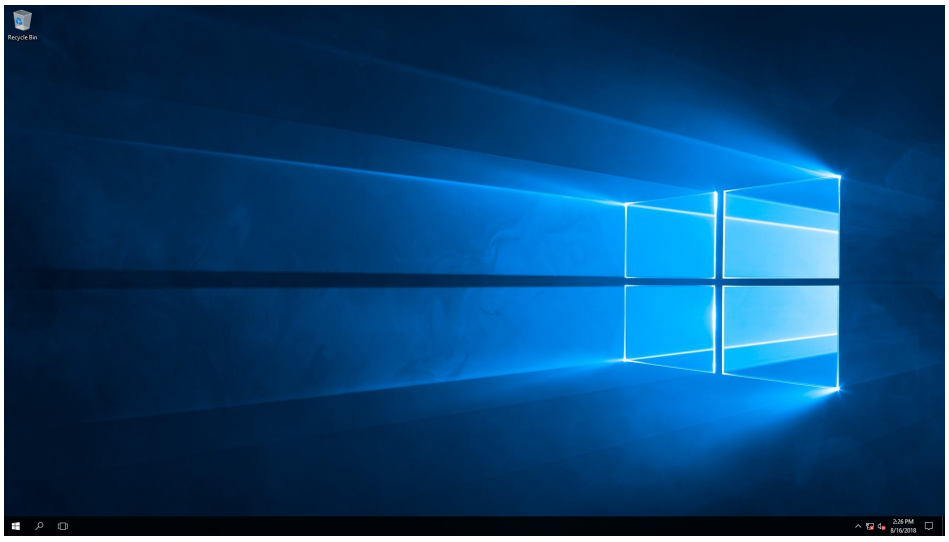
2. Click **Next.**
3. Select **Use Express settings**.



4. Enter a username for this computer. Type the password, retype the password. In addition, you may also type a password hint that can be used when you forget your password.
   If you do not want to set the password, leave the field blank and click **Next**.



5. Click **Next**.
6. Wait for the computer to process the new user account information and then restart the computer.



3

Utilities

This chapter describes the utilities supported on the MC-7400 Series computer.

The following topics are covered in this chapter:

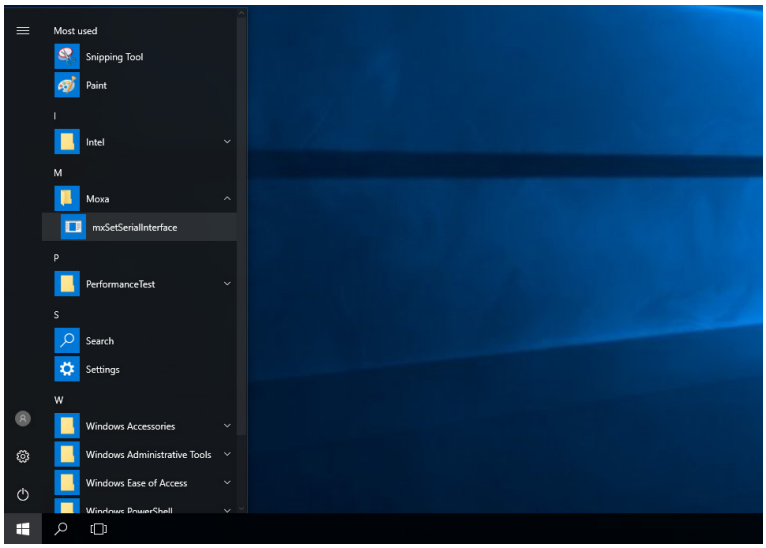
- **Serial Interface Utility**

Serial Interface Utility

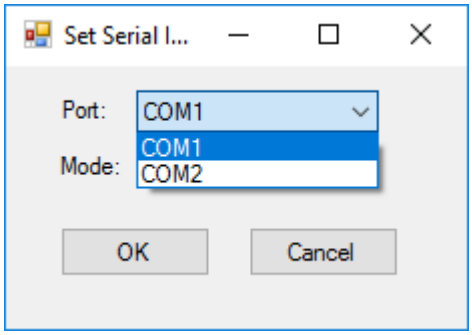
The Serial Interface utility can be used to configure different serial modes on the MC-7400 computer. The MC-7400 supports the serial modes **RS232, RS485-2-wire,** and **RS422/RS485-4-wire**. COM1 and COM2 are RS-232/422/485 and COM3 and COM4 are RS-232 ports.

Follow these steps to change the serial interface mode settings.

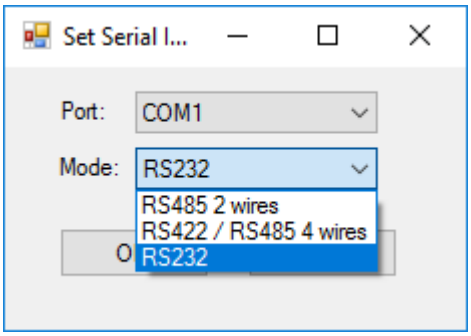
1. From the Start menu, Click **All apps >Moxa >mxSetSerialInterface**.



2. In the **Port** setting, select the type of port (COM1/COM2) that you want to set.



3. Select the serial mode that you want to use in the **Mode** setting.



4. Click **OK**.

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Examples

The following topics are covered in this chapter:

- **Watchdog Function**
- **Serial Interface Mode**
- **DIO**

Watchdog Function

You can use the watchdog program included in the MC-7400 software DVD to implement the watchdog function.

Enabling the Watchdog Function

To enable the watchdog function on your MC-7400, do the following:

1. Create an **example\Watchdog** folder on your system and copy the following files from the product software DVD:

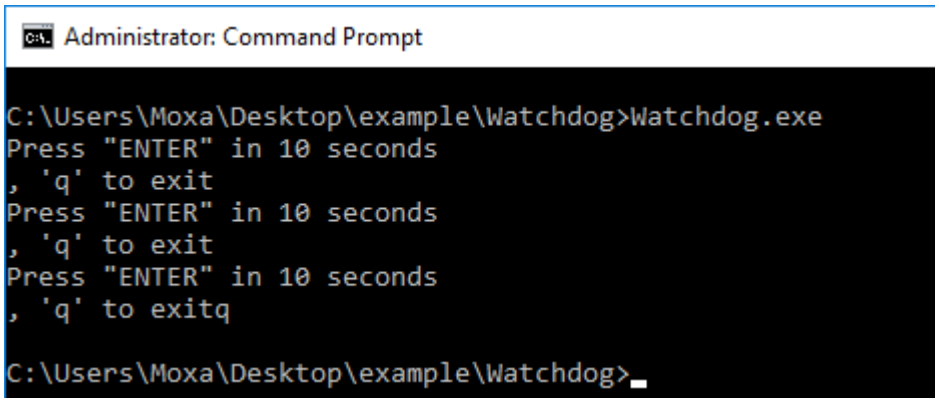
   mxdwg.dll: <Software DVD>\Example\[Library]\Release\x64\mxdwg\

   Watchdog.exe: <Software DVD>\Example\Release\x64\Watchdog\

2. Run the **Watchdog.exe** program.

   You need to press **Enter** every 10 seconds to prevent the system from rebooting.

3. To stop the watchdog function and exit the program, press **q**.



Serial Interface Mode

The **UartMode.exe** script reports on and controls the serial interface mode.

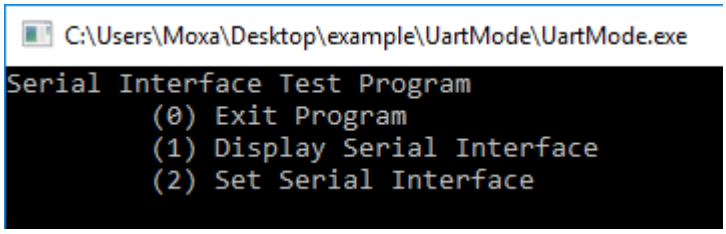
To enable the serial interface mode on your MC-7400, do the following:

1. Create an **example\UartMode** folder on the desktop and copy the following files from the product software DVD.

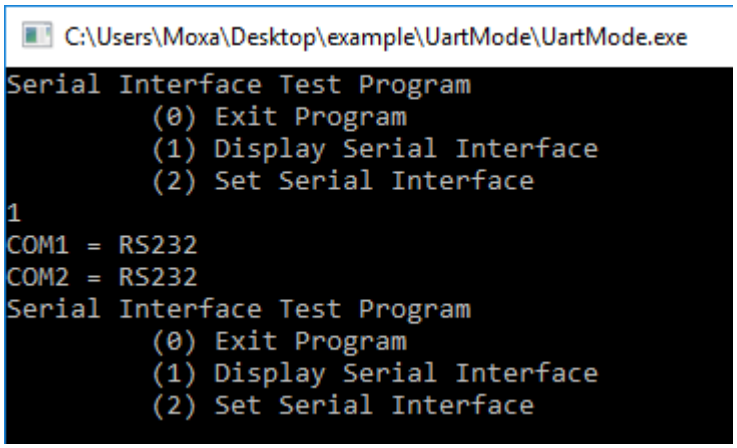
   mxsp.dll: <Software DVD>\Example\[Library]\Release\x64\mxsp\

   UartMode.exe: <Software DVD>\Example\Release\x64\UartMode\

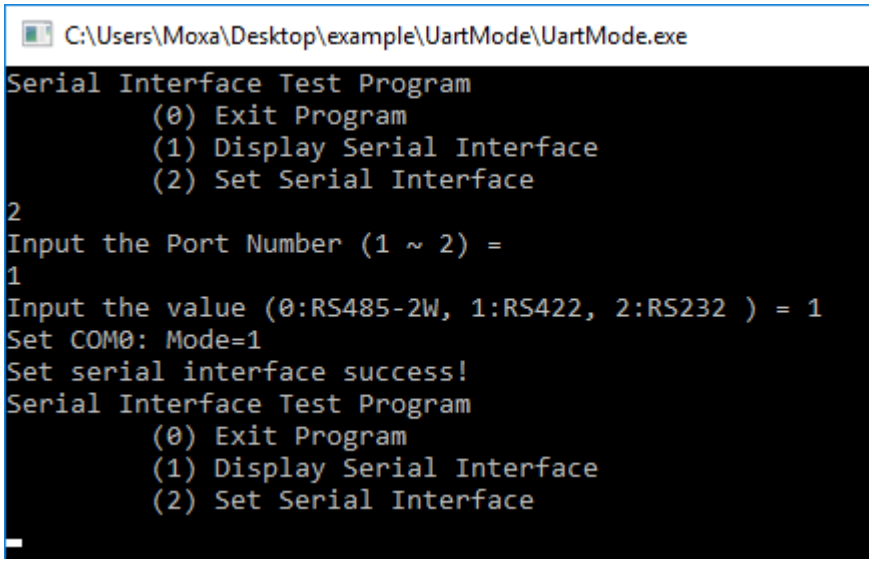
2. Run the UartMode.exe program.



3. Type **1** to display the current serial interface settings.



4. Type **2** to set the serial interface. Follow the on-screen instructions.



DIO

This script reports on and controls the state of the DIs and DOs, switching them between high and low.

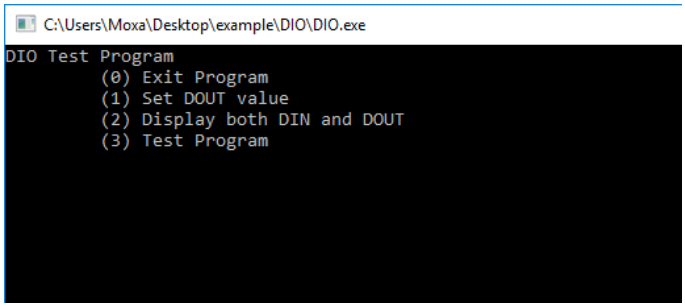
To enable the DIO script, do the following:

1. Create an **example\DIO** folder on the desktop and copy the following files from the product software DVD.

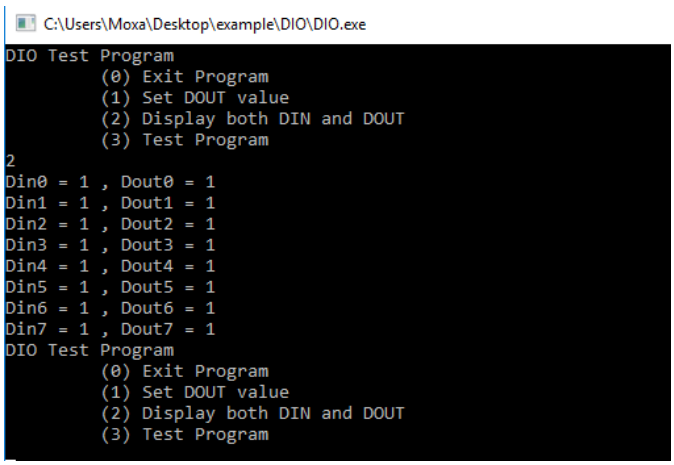
   mxgpio.dll: <Software DVD>\Example\[Library]\Release\x64\mxgpio

   DIO.exe: <Software DVD>\Example\Release\x64\DIO

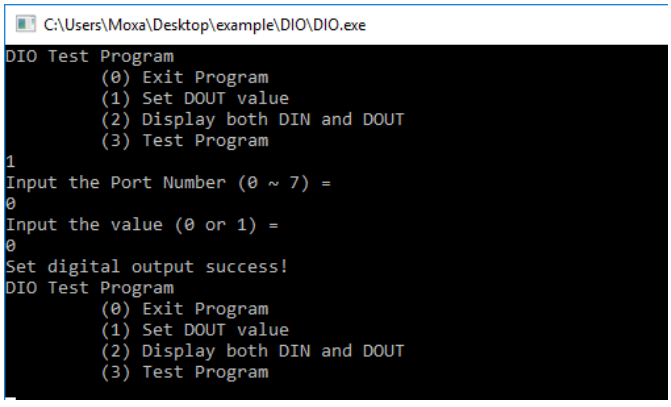
2. Run the **DIO.exe** program.



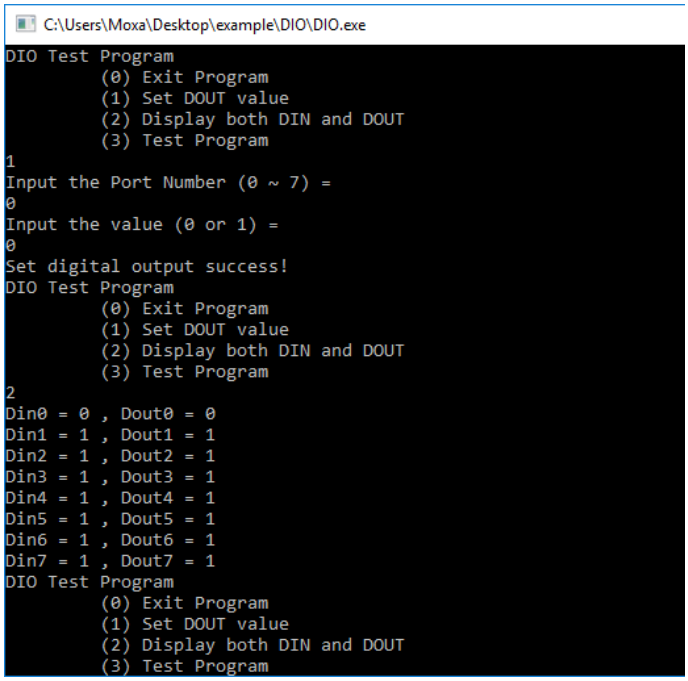
3. Type **2** to display the current DIO status. Follow the on-screen instructions.



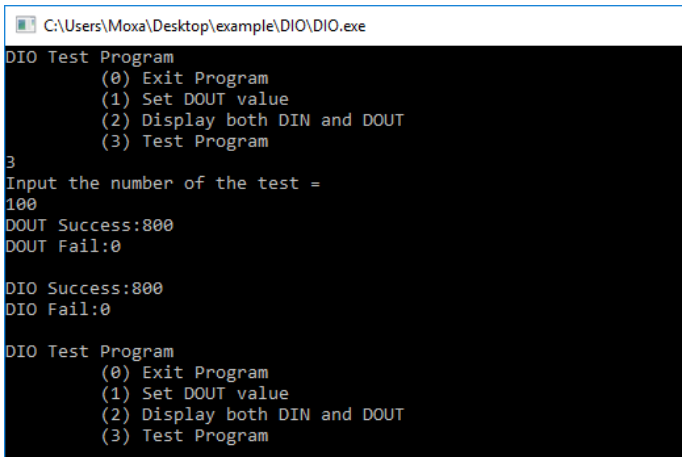
4. Type **1** to set DOUT value. Follow the on-screen instructions and enter the target port and value.



5. Type **2** to check the DIO status.



6. Type **3** to run the DIO test program and specify the number of tests.
After the test program runs a test report is shown on the screen (100 times * 8 ports).



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System Recovery

This chapter describes the recovery process in the event of system instability.

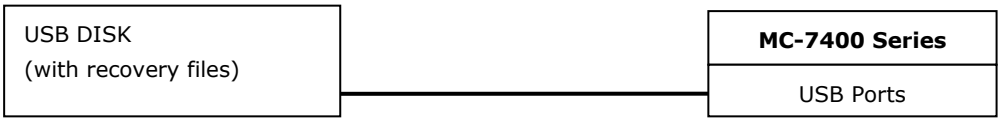
The following topics are covered in this chapter:

- **Recovery Environment**
- **Recovery Procedure**
- **Saving the System Image to a USB Device**

Recovery Environment

The recovery environment includes a PC, a MC-7400 computer, and a bootable USB disk with the recovery programs and the system image file.

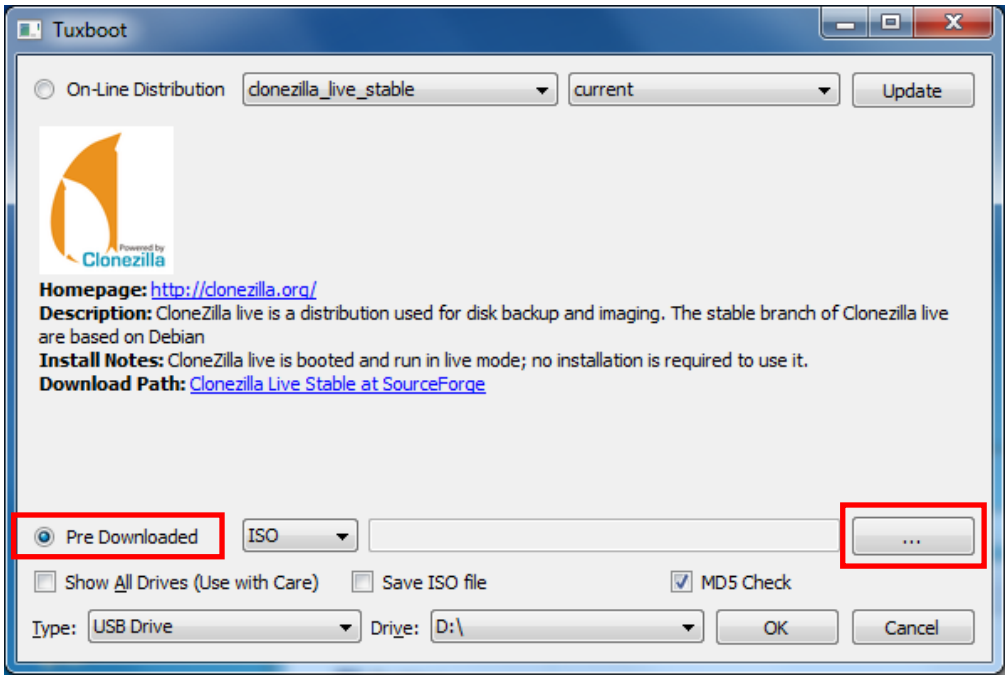
NOTE **The USB disk should have at least 8 GB free space.**



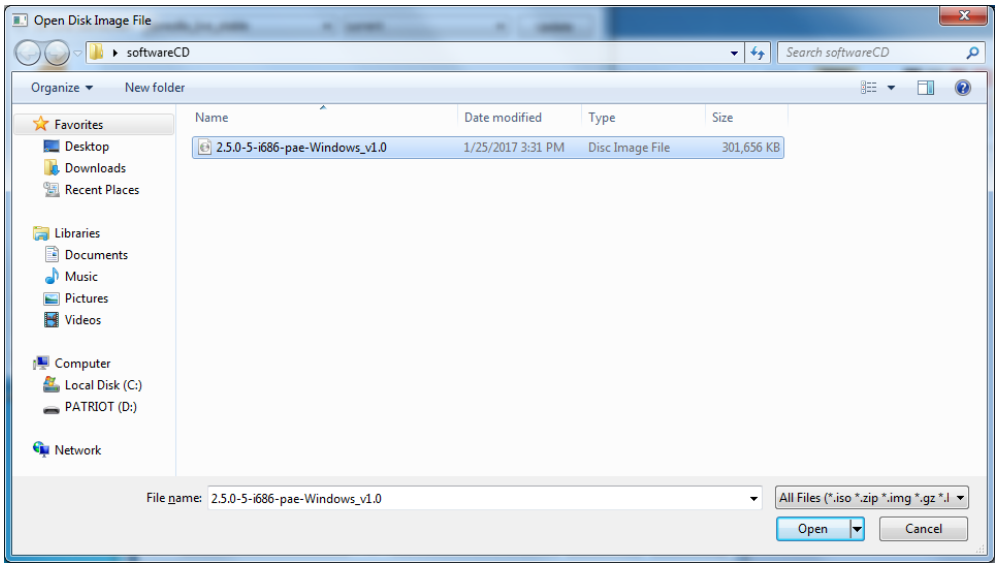
Recovery Procedure

Step 1: Prepare your USB device

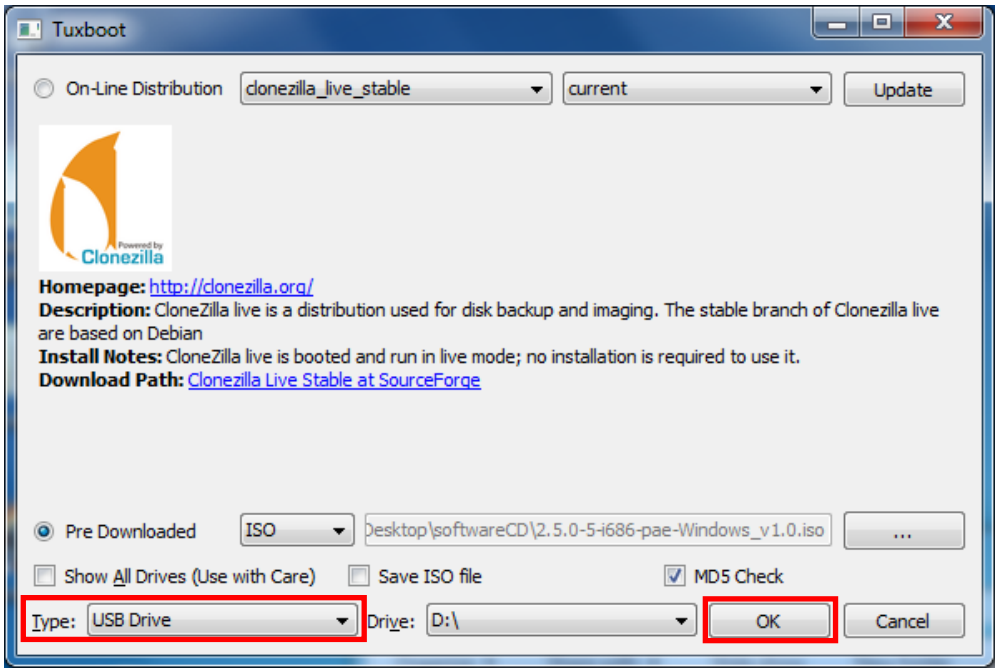
1. Format the USB disk to the **FAT32** file system.
2. Run the **tuxboot-windows-23.exe** program from the <Software DVD>**\recovery** folder, then select **Pre Download**, and then click "**...**".



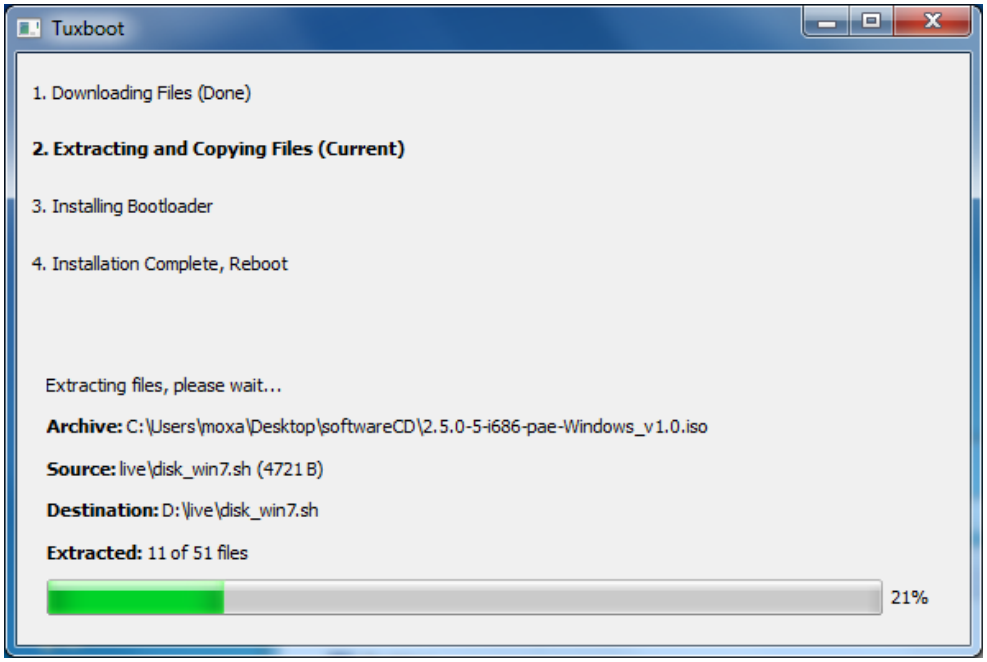
3. Select the ISO file from the <Software DVD>**\recovery** folder.



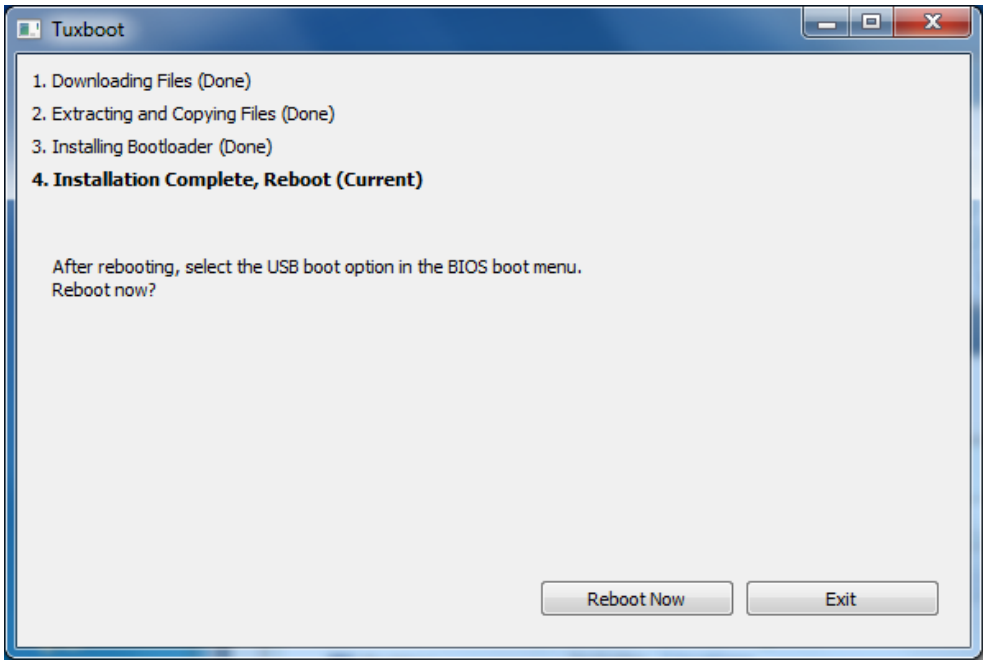
4. Select **USB Drive** type, select a **Drive**, and then click **OK** to continue.



The boot files will be copied to your USB device.



5. When finished, click **Exit** to stop the program.

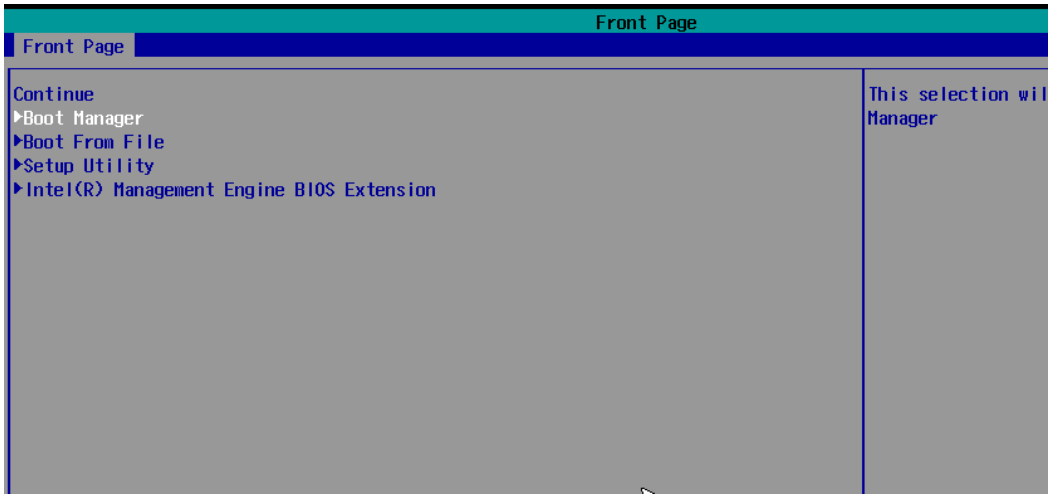


6. Copy the **os_image** directory from the <Software DVD>**\recovery** folder to the **\home\partimag** folder on the USB device.
   The USB disk is now ready for use in the recovery process.

Step 2: Boot from the USB disk

You will need to select the specific USB disk to boot from.

1. Turn on the computer and press **F2** when you hear the beep sound to enter the BIOS setup menu.
2. Select **Boot Manager** and press **Enter** to continue.

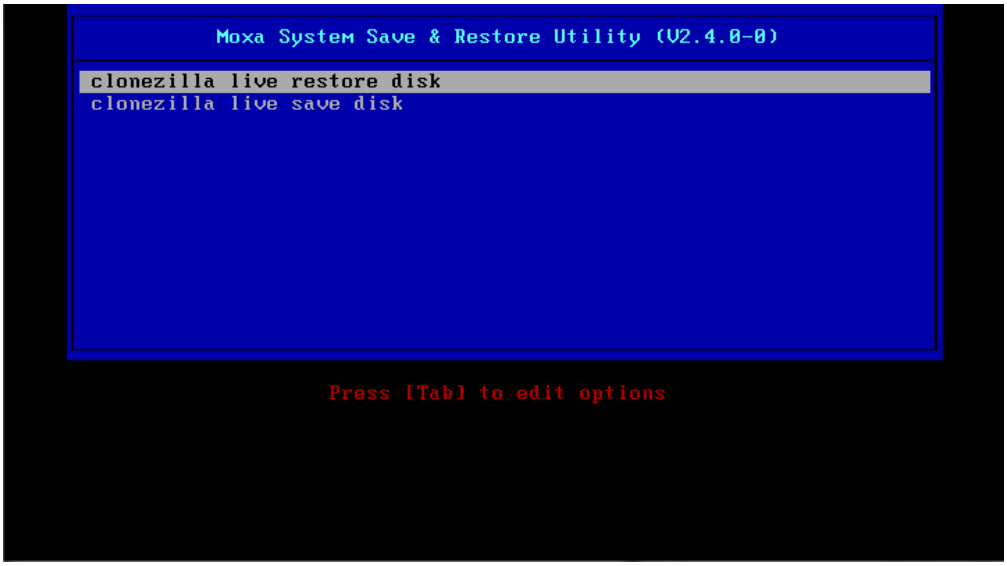


3. Select a **USB device** on the computer and press **Enter** to continue to boot from USD device.

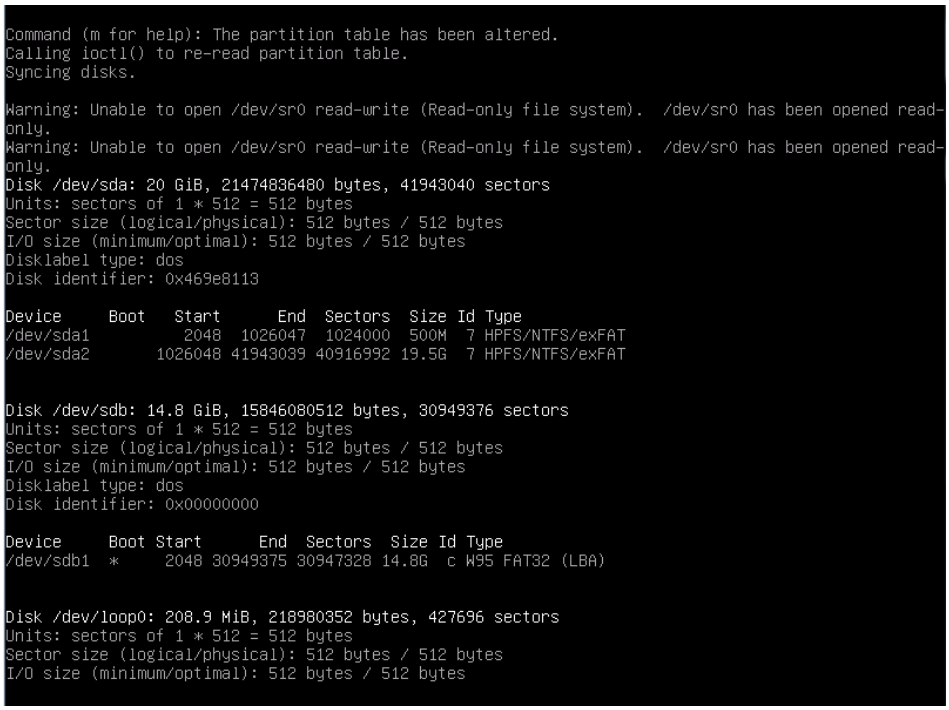
Step 3: Restore the system from USB device

After select the USB device, the system will boot from the USB disk. The pre-installation Environment and the recovery utility will displayed.

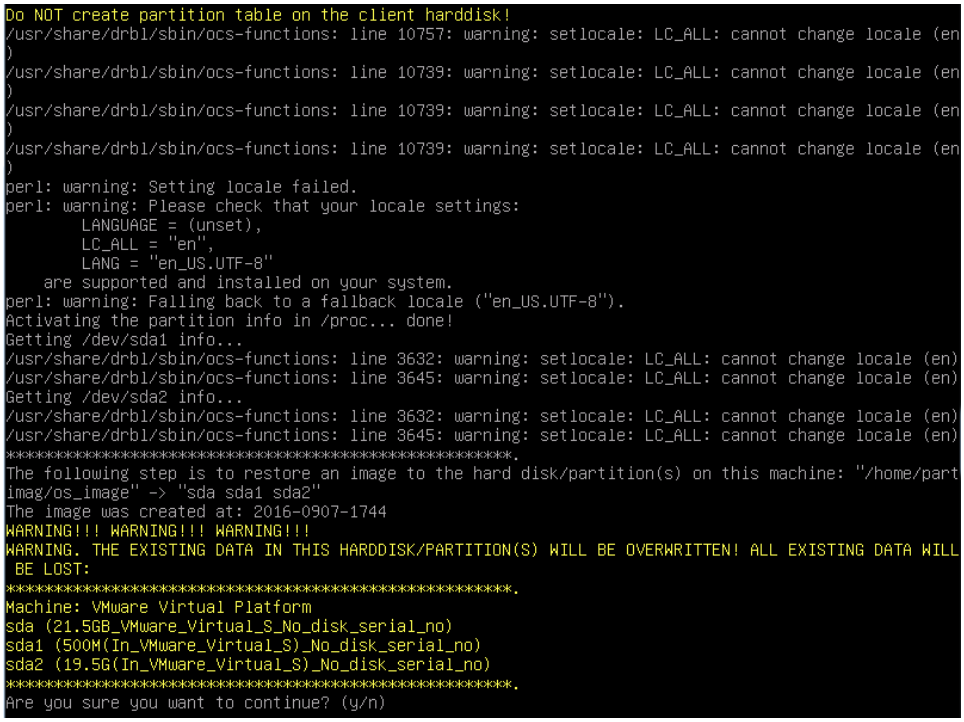
1. Select **clonezilla live restore disk**.



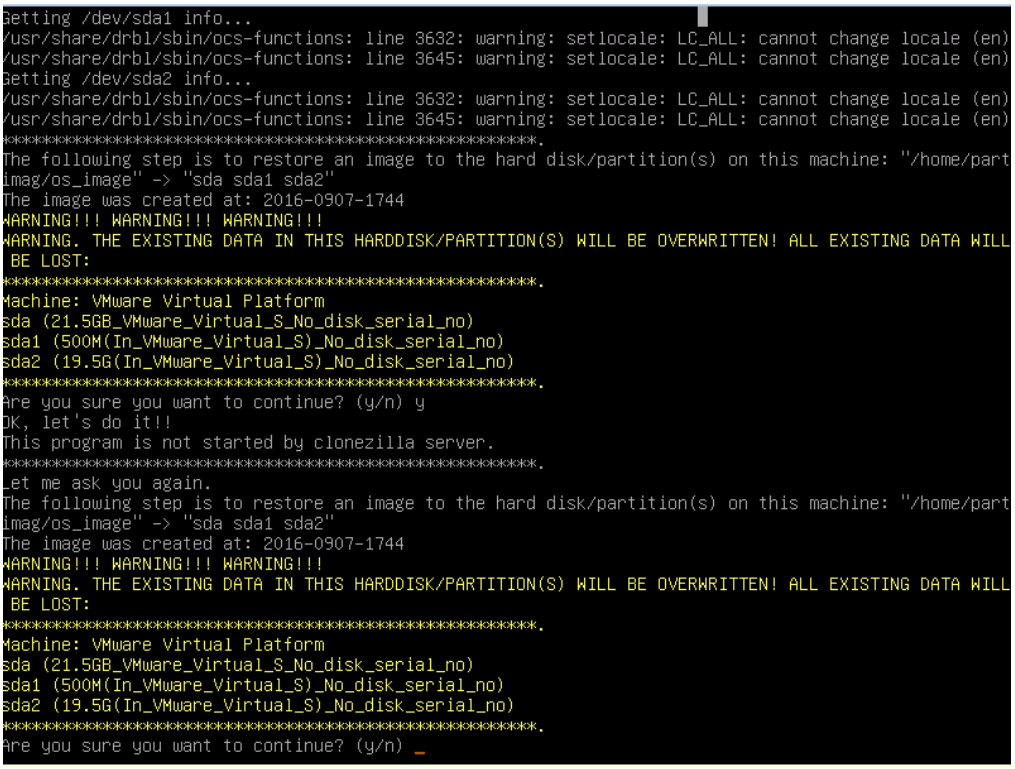
2. Wait for the USB boot process to finish.



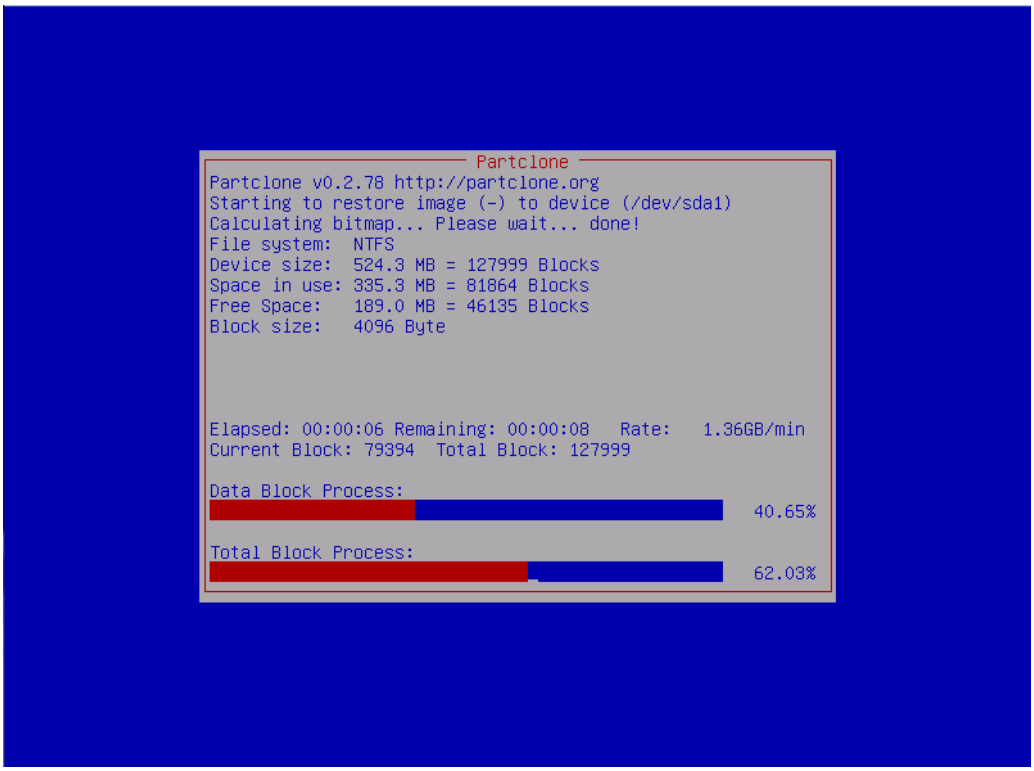
3. Enter **y** to continue the restore process.



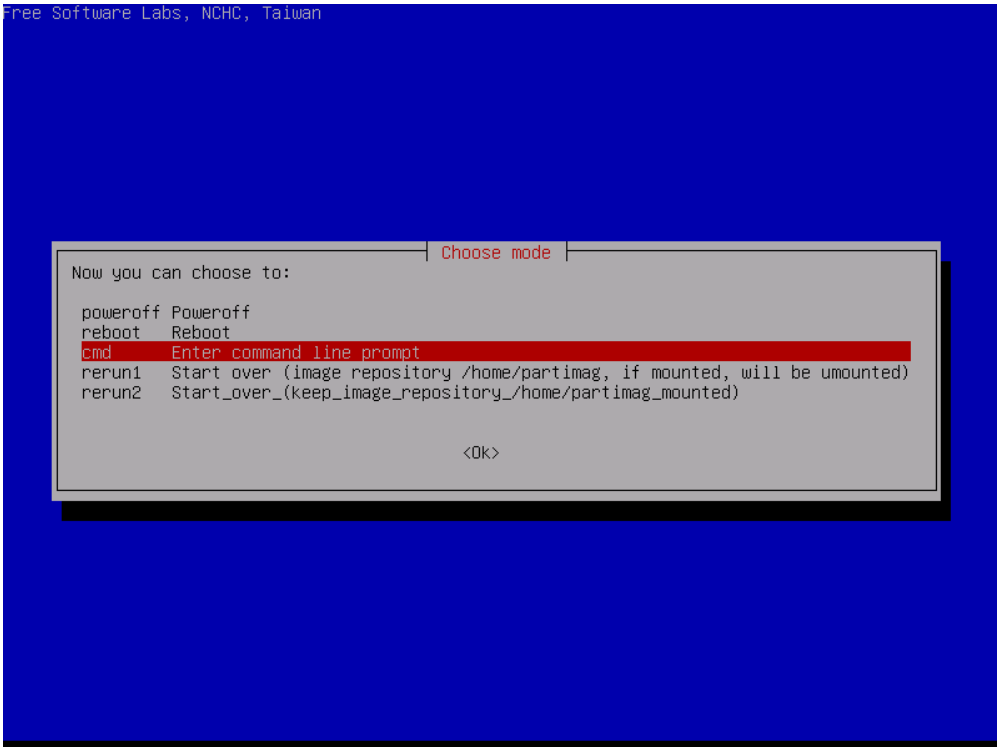
4. Enter **y** to confirm.



5. Wait for the process to finish.



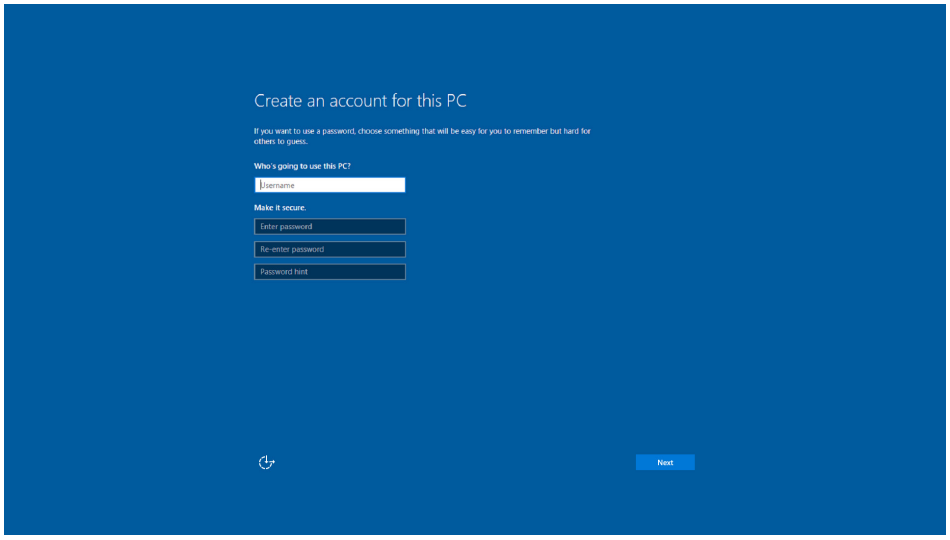
6. Select **(0) Poweroff** to power off the computer.



7. Remove the USB device after the computer has been powered off.

Step 4: Reboot the Computer

When you restart the computer, you will need to wait for about 5 minutes for the computer to go through two cycles of the reboot process. The system configuration files will be initiated during the first boot-up process. **Do not turn off the computer or shut down the computer** while the system is restarting. When the operating system has successfully launched, follow the "System Initialization" process.

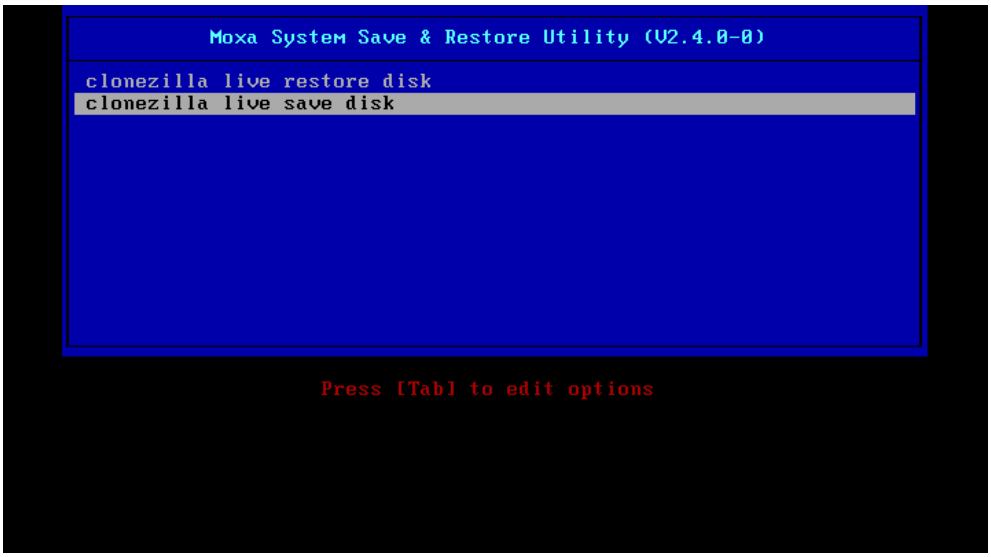


Saving the System Image to a USB Device

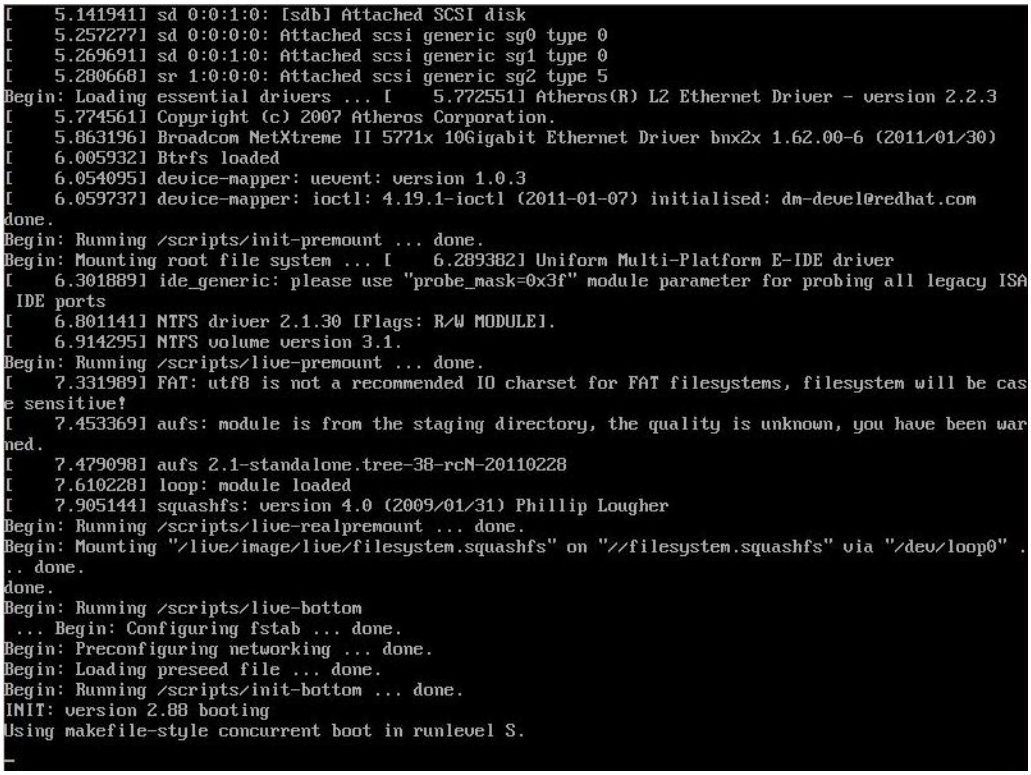
You can save the current system to the USB device for system recovery in case the system crashes. Before saving the system image to the USB device, we suggest you remove all files under **\home\partimag** on the USB device.

Boot from USB disk, when the system has been launched, and take the following steps.

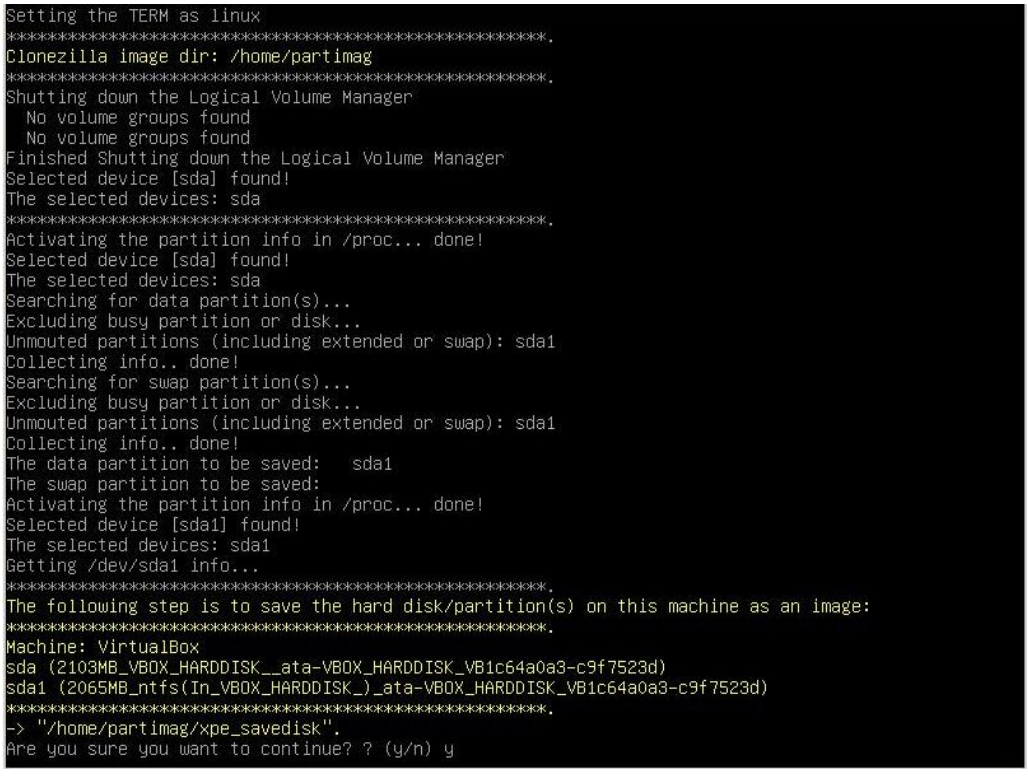
1. Select **clonezilla live save disk.**



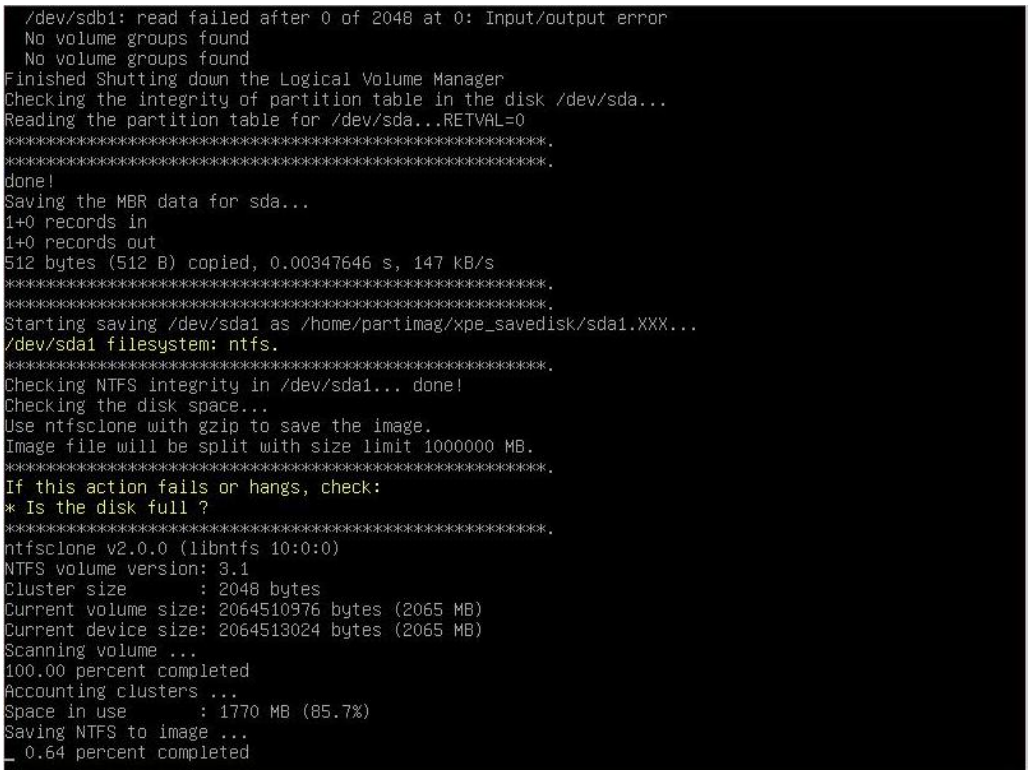
2. Wait for the USB device boot process to finish.



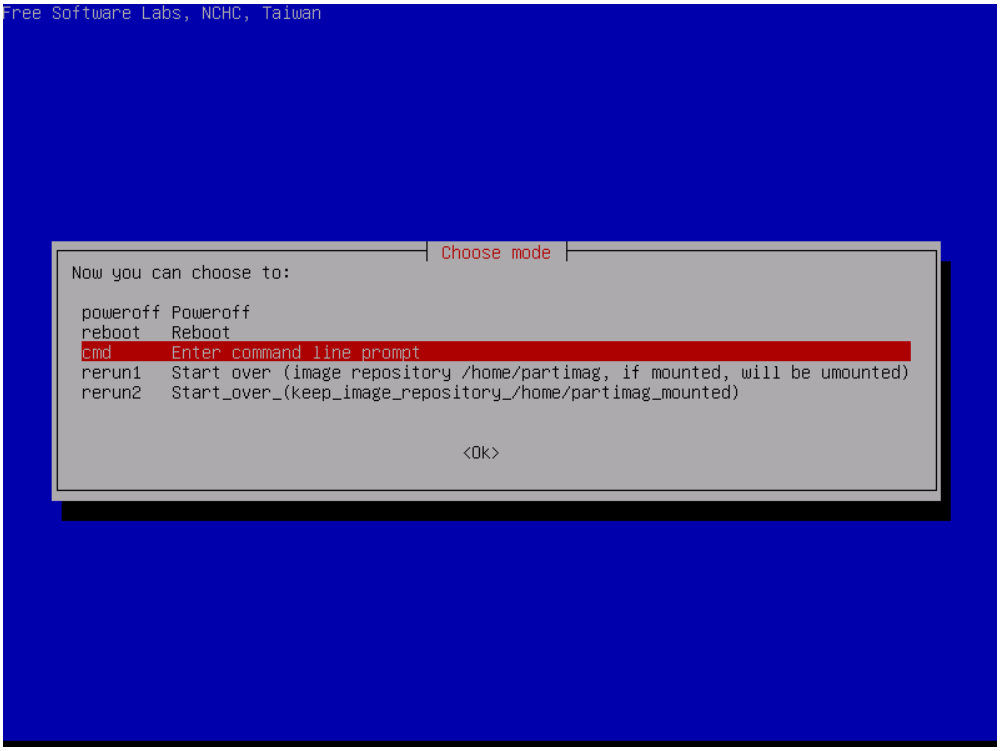
3. Enter **y** to continue.



4. Wait for the process to finish.



5. Select **(0) Poweroff** so that the computer will power off when the process is finished.



The system image is stored in the **\home\partimag\os_image** folder on the USB disk. Keep the USB disk safe for system recovery in the future.