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Altos R360 F3 Installation Configuration Guide

INTRODUCTION

The driver required for installing the OS manually is included in Resource Kit v1.0, this document provides you a OS installation guide on Altos R360 F3, including,

- Windows Server 2012 R2
- Windows Server 2012
- Red Hat Enterprise Linux 6 Update 5
- SuSE Linux Enterprise Server 11 SP3
- VMware ESXi 5.5 Update 2
- XenServer 6.5

WINDOWS SERVER 2012 R2

Intel Onboard SATA RSTe RAID

Below information describes how to manually install Windows Server 2012 R2 on Altos R360 F3 with Intel Onboard SATA RSTe RAID.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) can support Windows Server 2012 R2.

Drivers Required

Device	Version	Driver Source
Intel Onboard SATA RSTe RAID	4.1.0.1046	Resource Kit v1.0
Chipset	10.0.20.0	Resource Kit v1.0
Onboard VGA	4.1.1.5	Resource Kit v1.0
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0
Management Engine Interface	1.2.3.2005	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel Onboard SATA RSTe RAID Utility	4.1.0.1046	Resource Kit v1.0
PROSet	Package 19.3	Resource Kit v1.0

Configuring Intel Onboard SATA RSTe RAID

Please refer to Appendix A. for Intel Onboard SATA RSTe RAID configuration.

Installation Tips

NOTE. Please refer to Altos R360 F3 FAQ (Frequently Asked Questions) to select OS installation in EFI mode or Legacy mode if the OS media supports EFI.

NOTE. Windows Server 2012 R2 cannot detect Intel Onboard SATA RSTe RAID. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Onboard SATA RSTe RAID driver from Resource Kit DVD to a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Windows Server 2012 R2 DVD. Follow the instructions to do the installation.
2. When "**Where do you want to install Windows**" message displayed, please Insert the USB flash drive which includes the RAID driver and click **Load Driver**.
3. Browse to the folder that includes the Intel Onboard SATA RSTe RAIDD driver and click **OK**.
4. It will show the available driver. Please select "**iaStorA.inf**" as target driver.

   NOTE. There would be two iaStorA.inf listed for SATA and sSATA controllers respectively. Please select the one that is with HDD connected.
5. After the RAID driver is loaded, please click **Drive options** to partition the drive or click **Next** to use default disk partition.
6. Follow the normal procedure to finish the installation.

Chipset Driver Package Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Chipset Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Chipset**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

Gigabit Ethernet Driver Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Gigabit Ethernet Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Network**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Windows_x64_Install.bat**.
6. Follow the instructions, accept the license agreement and use the default setting to complete the driver installation.

7. The driver and PROSet utility will be installed together automatically.

VGA Driver Installation

NOTE. Windows will treat onboard VGA as Standard VGA device. Please install onboard VGA driver from Resource Kit DVD.

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Drivers**.
3. Find the VGA Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard VGA**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Install.bat**.
6. Accept the license agreement to install the VGA driver.
7. After the installation is completed, reboot the system.
8. After installing the driver, you would see **Matrox G200e (Emulex)** listed in Display adapters.

Management Engine Interface Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the MEI Driver by expanding the directory in the following order, **Altos R360 F3 -> MEI**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

RAID Utility Installation

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on Utilities.
3. Find the RAID Utility by expanding the directory in the following order, **Altos R360 F3 -> Onboard RSTe RAID**.
4. Select **WS2012/WS2012 R2**.
5. Double-click on **Setup.exe**.
6. Accept the license and follow the instruction to install the RAID Utility. Reboot the system after the installation completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Intel Onboard SATA ESRTII RAID

Below information describes how to manually install Windows Server 2012 R2 on Altos R360 F3 with Intel Onboard SATA ESRTII RAID.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) can support Windows Server 2012 R2.

Drivers Required

Device	Version	Driver Source
Intel Onboard SATA ESRTII RAID	16.3.2014.1127	Resource Kit v1.0
Chipset	10.0.20.0	Resource Kit v1.0
Onboard VGA	4.1.1.5	Resource Kit v1.0
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0
Management Engine Interface	1.2.3.2005	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0
PROSet	Package 19.3	Resource Kit v1.0

Configuring Intel Onboard SATA ESRTII RAID

Please refer to Appendix B. for Intel Onboard SATA ESRTII RAID configuration.

Installation Tips

NOTE. Please refer to Altos R360 F3 FAQ (Frequently Asked Questions) to select OS installation in EFI mode or Legacy mode if the OS media supports EFI.

NOTE. Windows Server 2012 R2 cannot detect Intel Onboard

SATA ESRTII RAID. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Onboard SATA ESRTII RAID driver from Resource Kit DVD to a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Windows Server 2012 R2 DVD. Follow the instructions to do the installation.
2. When "**Where do you want to install Windows**" message displayed, please Insert the USB flash which includes the RAID driver and click on "**Load Driver**".
3. Browse to the folder that includes the Intel Onboard SATA ESRTII RAIDD driver and click **OK**.
4. It will show the available driver. Please select "**MegaSR1.inf**" as target driver.
5. After the RAID driver is loaded, please click **Drive options** to partition the drive or click **Next** to use default disk partition.
6. Follow the normal procedure to finish the installation n.

Chipset Driver Package Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Chipset Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Chipset**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

Gigabit Ethernet Driver Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Gigabit Ethernet Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Network**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Windows_x64_Install.bat**.

6. Follow the instructions, accept the license agreement and use the default setting to complete the driver installation.
7. The driver and PROSet utility will be installed together automatically.

VGA Driver Installation

NOTE. Windows will treat onboard VGA as Standard VGA device. Please install onboard VGA driver from Resource Kit DVD.

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Drivers**.
3. Find the VGA Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard VGA**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Install.bat**.
6. Accept the license agreement to install the VGA driver.
7. After the installation is completed, reboot the system.
8. After installing the driver, you would see **Matrox G200e (Emulex)** listed in Display adapters.

Management Engine Interface Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the MEI Driver by expanding the directory in the following order, **Altos R360 F3 -> MEI**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

RAID Utility Installation

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Utilities**.
3. Find the RAID Utility by expanding the directory in the following order, **Altos R360 F3 -> Onboard ESRTII RAID**.
4. Select **WS2012/WS2012 R2.**
5. Double-click on **Setup.exe**.
6. Accept the license and follow the instruction to install the RAID Utility. Reboot

the system after the installation completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Intel Integrated RAID Module

Below information describes how to manually install Windows Server 2012 R2 on Altos R360 F3 with Intel Integrated RAID Module.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) can support Windows Server 2012 R2.

Drivers Required

Device	Version	Driver Source
Intel Integrated RAID Module	6.705.5.0	Resource Kit v1.0
Chipset	10.0.20.0	Resource Kit v1.0
Onboard VGA	4.1.1.5	Resource Kit v1.0
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0
Management Engine Interface	1.2.3.2005	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0
PROSet	Package 19.3	Resource Kit v1.0

Configuring Intel Integrated RAID Module

Please refer to Appendix C. for Intel Integrated RAID Module.

Installation Tips

NOTE. Please refer to Altos R360 F3 FAQ (Frequently Asked Questions) to select OS installation in EFI mode or Legacy mode if the OS media supports EFI.

NOTE. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Integrated RAID Module driver from Resource Kit DVD to a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Windows Server 2012 R2 DVD. Follow the instructions to do the installation.
2. When "**Where do you want to install Windows**" message displayed, please Insert the USB flash which includes the RAID driver and click on "**Load Driver**".
3. Browse to the folder that includes the Integrated Hardware RAID driver and click **OK**.
4. It will show the available driver. Please select "**megasas2.inf**" as target driver.
5. After the RAID driver is loaded, please click **Drive options** to partition the drive or click **Next** to use default disk partition.
6. Follow the normal procedure to finish the installation n.

Chipset Driver Package Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Chipset Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Chipset**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

Gigabit Ethernet Driver Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Gigabit Ethernet Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Network**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Windows_x64_Install.bat**.
6. Follow the instructions, accept the license agreement and use the default setting to complete the driver installation.

7. The driver and PROSet utility will be installed together automatically.

VGA Driver Installation

NOTE. Windows will treat onboard VGA as Standard VGA device. Please install onboard VGA driver from Resource Kit DVD.

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Drivers**.
3. Find the VGA Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard VGA**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Install.bat**.
6. Accept the license agreement to install the VGA driver.
7. After the installation is completed, reboot the system.
8. After installing the driver, you would see **Matrox G200e (Emulex)** listed in Display adapters.

Management Engine Interface Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the MEI Driver by expanding the directory in the following order, **Altos R360 F3 -> MEI**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

RAID Utility Installation

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Utilities**.
3. Find the RAID Utility by expanding the directory in the following order, **Altos R360 F3 -> Integrated RAID Module**.
4. Select **WS2012/WS2012 R2.**
5. Double-click on **Setup.exe**.
6. Accept the license and follow the instruction to install the RAID Utility. Reboot the system after the installation completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

WINDOWS SERVER 2012

Intel Onboard SATA RSTe RAID

Below information describes how to manually install Windows Server 2012 on Altos R360 F3 with Intel Onboard SATA RSTe RAID.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) can support Windows Server 2012.

Drivers Required

Device	Version	Driver Source
Intel Onboard SATA RSTe RAID	4.1.0.1046	Resource Kit v1.0
Chipset	10.0.20.0	Resource Kit v1.0
Onboard VGA	4.1.1.5	Resource Kit v1.0
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0
Management Engine Interface	1.2.3.2005	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel Onboard SATA RSTe RAID Utility	4.1.0.1046	Resource Kit v1.0
PROSet	Package 19.3	Resource Kit v1.0

Configuring Intel Onboard SATA RSTe RAID

Please refer to Appendix A. for Intel Onboard SATA RSTe RAID configuration.

Installation Tips

NOTE. Please refer to Altos R360 F3 FAQ (Frequently Asked Questions) to select OS installation in EFI mode or Legacy mode if the OS media supports EFI.

NOTE. Windows Server 2012 cannot detect Intel Onboard SATA RSTe RAID. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Onboard SATA RSTe RAID driver from Resource Kit DVD to a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Windows Server 2012 DVD. Follow the instructions to do the installation.
2. When "**Where do you want to install Windows**" message displayed, please Insert the USB flash drive which includes the RAID driver and click **Load Driver**.
3. Browse to the folder that includes the Intel Onboard SATA RSTe RAIDD driver and click **OK**.
4. It will show the available driver. Please select "**iaStorA.inf**" as target driver.

   NOTE. There would be two iaStorA.inf listed for SATA and sSATA controllers respectively. Please select the one that is with HDD connected.
5. After the RAID driver is loaded, please click **Drive options** to partition the drive or click **Next** to use default disk partition.
6. Follow the normal procedure to finish the installation.

Chipset Driver Package Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Chipset Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Chipset**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.
6. After the installation is completed, reboot the system.

Gigabit Ethernet Driver Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Gigabit Ethernet Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Network**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Windows_x64_Install.bat**.
6. Follow the instructions, accept the license agreement and use the default setting

to complete the driver installation.

7. The driver and PROSet utility will be installed together automatically.

VGA Driver Installation

NOTE. Windows will treat onboard VGA as Standard VGA device. Please install onboard VGA driver from Resource Kit DVD.

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Drivers**.
3. Find the VGA Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard VGA**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Install.bat**.
6. Accept the license agreement to install the VGA driver.
7. After the installation is completed, reboot the system.
8. After installing the driver, you would see **Matrox G200e (Emulex)** listed in Display adapters.

Management Engine Interface Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the MEI Driver by expanding the directory in the following order, **Altos R360 F3 -> MEI**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

RAID Utility Installation

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on Utilities.
3. Find the RAID Utility by expanding the directory in the following order, **Altos R360 F3 -> Onboard RSTe RAID**.
4. Select **WS2012/WS2012 R2**.
5. Double-click on **Setup.exe**.
6. Accept the license and follow the instruction to install the RAID Utility. Reboot the system after the installation completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Intel Onboard SATA ESRTII RAID

Below information describes how to manually install Windows Server 2012 on Altos R360 F3 with Intel Onboard SATA ESRTII RAID.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) can support Windows Server 2012.

Drivers Required

Device	Version	Driver Source
Intel Onboard SATA ESRTII RAID	16.3.2014.1127	Resource Kit v1.0
Chipset	10.0.20.0	Resource Kit v1.0
Onboard VGA	4.1.1.5	Resource Kit v1.0
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0
Management Engine Interface	1.2.3.2005	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0
PROSet	Package 19.3	Resource Kit v1.0

Configuring Intel Onboard SATA ESRTII RAID

Please refer to Appendix B. for Intel Onboard SATA ESRTII RAID configuration.

Installation Tips

NOTE. Please refer to Altos R360 F3 FAQ (Frequently Asked Questions) to select OS installation in EFI mode or Legacy mode if the OS media supports EFI.

NOTE. Windows Server 2012 cannot detect Intel Onboard SATA

ESRTII RAID. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Onboard SATA ESRTII RAID driver from Resource Kit DVD to a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Windows Server 2012 DVD. Follow the instructions to do the installation.
2. When "**Where do you want to install Windows**" message displayed, please Insert the USB flash which includes the RAID driver and click on "**Load Driver**".
3. Browse to the folder that includes the Intel Onboard SATA ESRTII RAIDD driver and click **OK**.
4. It will show the available driver. Please select "**MegaSR1.inf**" as target driver.
5. After the RAID driver is loaded, please click **Drive options** to partition the drive or click **Next** to use default disk partition.
6. Follow the normal procedure to finish the installation n.

Chipset Driver Package Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Chipset Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Chipset**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.
6. After the installation is completed, reboot the system.

Gigabit Ethernet Driver Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Gigabit Ethernet Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Network**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.

5. Double-click on **Windows_x64_Install.bat**.
6. Follow the instructions, accept the license agreement and use the default setting to complete the driver installation.
7. The driver and PROSet utility will be installed together automatically.

VGA Driver Installation

NOTE. Windows will treat onboard VGA as Standard VGA device. Please install onboard VGA driver from Resource Kit DVD.

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Drivers**.
3. Find the VGA Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard VGA**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Install.bat**.
6. Accept the license agreement to install the VGA driver.
7. After the installation is completed, reboot the system.
8. After installing the driver, you would see **Matrox G200e (Emulex)** listed in Display adapters.

Management Engine Interface Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the MEI Driver by expanding the directory in the following order, **Altos R360 F3 -> MEI**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

RAID Utility Installation

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Utilities**.
3. Find the RAID Utility by expanding the directory in the following order, **Altos R360 F3 -> Onboard ESRTII RAID**.
4. Select **WS2012/WS2012 R2.**
5. Double-click on **Setup.exe**.

6. Accept the license and follow the instruction to install the RAID Utility. Reboot the system after the installation completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

Intel Integrated RAID Module

Below information describes how to manually install Windows Server 2012 on Altos R360 F3 with Intel Integrated RAID Module.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) can support Windows Server 2012.

Drivers Required

Device	Version	Driver Source
Intel Integrated RAID Module	6.705.5.0	Resource Kit v1.0
Chipset	10.0.20.0	Resource Kit v1.0
Onboard VGA	4.1.1.5	Resource Kit v1.0
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0
Management Engine Interface	1.2.3.2005	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0
PROSet	Package 19.3	Resource Kit v1.0

Configuring Intel Integrated RAID Module

Please refer to Appendix C. for Intel Integrated RAID Module.

Installation Tips

NOTE. Please refer to Altos R360 F3 FAQ (Frequently Asked Questions) to select OS installation in EFI mode or Legacy

mode if the OS media supports EFI.

NOTE. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Integrated RAID Module driver from Resource Kit DVD to a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Windows Server 2012 DVD. Follow the instructions to do the installation.
2. When "**Where do you want to install Windows**" message displayed, please Insert the USB flash which includes the RAID driver and click on "**Load Driver**".
3. Browse to the folder that includes the Integrated Hardware RAID driver and click **OK**.
4. It will show the available driver. Please select "**megasas2.inf**" as target driver.
5. After the RAID driver is loaded, please click **Drive options** to partition the drive or click **Next** to use default disk partition.
6. Follow the normal procedure to finish the installation n.

Chipset Driver Package Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Chipset Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Chipset**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.
6. After the installation is completed, reboot the system.

Gigabit Ethernet Driver Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the Gigabit Ethernet Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard Network**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Windows_x64_Install.bat**.

6. Follow the instructions, accept the license agreement and use the default setting to complete the driver installation.
7. The driver and PROSet utility will be installed together automatically.

VGA Driver Installation

NOTE. Windows will treat onboard VGA as Standard VGA device. Please install onboard VGA driver from Resource Kit DVD.

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Drivers**.
3. Find the VGA Driver by expanding the directory in the following order, **Altos R360 F3 -> Onboard VGA**.
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Install.bat**.
6. Accept the license agreement to install the VGA driver.
7. After the installation is completed, reboot the system.
8. After installing the driver, you would see **Matrox G200e (Emulex)** listed in Display adapters.

Management Engine Interface Installation

1. Please insert the Resource Kit DVD into the optical drive
2. Select model and click on **Drivers**.
3. Find the MEI Driver by expanding the directory in the following order, **Altos R360 F3 -> MEI**
4. Select **WS2012/WS2012 R2** then click on **Browse**.
5. Double-click on **Setup.exe** and follow the instructions to complete the driver installation.

RAID Utility Installation

1. Please insert the Resource Kit DVD into the optical drive.
2. Select model and click on **Utilities**.
3. Find the RAID Utility by expanding the directory in the following order, **Altos R360 F3 -> Integrated RAID Module**.
4. Select **WS2012/WS2012 R2.**
5. Double-click on **Setup.exe**.
6. Accept the license and follow the instruction to install the RAID Utility. Reboot

the system after the installation completed.

Network Utility Installation

The PROSet utility for the onboard Gigabit Ethernet controller will be installed automatically when you installing the onboard Gigabit Ethernet driver.

RED HAT ENTERPRISE LINUX 6 UPDATE 5

Intel Onboard SATA ESRTII RAID

Below information describes how to manually install Red Hat Enterprise Linux 6 Update 5 on Altos R360 F3 with Intel Onboard SATA ESRTII RAID.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) is required to support Red Hat Enterprise Linux 6 Update 5.

Drivers Required (64 bit)

Device	Version	Driver Source
Intel Onboard SATA ESRTII RAID	16.03.2014.1127	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0

Drivers Required (32 bit)

Device	Version	Driver Source
Intel Onboard SATA ESRTII RAID	16.03.2014.1127	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0

Configuring Intel Onboard SATA ESRTII RAID

Please refer to Appendix B. for Intel Onboard SATA ESRTII RAID configuration

Installation Tips

NOTE. Red Hat Enterprise Linux 6 Update 5 cannot detect Intel Onboard SATA ESRTII RAID. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Onboard SATA ESRTII RAID driver (megasr-16.03.2014.1127-1-rhel65-ga-x86_64.img for 64-bit and megasr-16.03.2014.1127-1-rhel65-ga-x86.img for 32-bit) from Resource Kit DVD onto a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Red Hat Enterprise Linux 6 Update 5.
2. At Welcome Menu, please press **ESC**.
3. Type below command and press **Enter**.

   linux dd blacklist=ahci nodmraid

4. Follow the instruction to select the Driver Disk Source to load the driver for Intel Onboard SATA ESRTII RAID.
5. Follow the instruction and select **Intel MegaSR** as the install target device for the installation.
6. Please Select **Software Development Workstation.**
7. Please follow the general procedure to complete the installation.

Gigabit Ethernet Driver Installation

NOTE. The onboard Gigabit Ethernet driver is included in Resource Kit DVD. Please check path of the RAID utility in Windows OS environment first and copy the driver from the Resource Kit DVD to HDD (e.g. /tmp directory)

1. Stop network service

   ```
   # service network stop
   ```

2. Remove the OS built-in NIC driver

   ```
   # rmmod ixgbe
   ```

3. Change the directory to the driver source and install the driver

   ```
   # cd /tmp
   # tar zxvf ixgbe-<version>.tar.gz
   # cd ixgbe-<version>/src/
   # make install
   # modprobe ixgbe
   ```

4. Start the network service to bring up both of the network interfaces.

   ```
   # service network start
   ```

5. Use the network configuration utility like system-config-network in command line or select System -> Preferences-> Network Connections in GUI to configure the network interfaces.

VGA Driver Installation

Red Hat Enterprise Linux 6 Update 5 has the built-in driver for onboard VGA. You don't need to install the VGA driver manually.

RAID Utility Installation

NOTE. The RAID utility is included in Resource Kit DVD. Please check path of the RAID utility in Windows OS environment first and copy the RAID utility from the Resource Kit DVD to HDD (e.g. /tmp directory)

NOTE. For 64-bit Red Hat Enterprise Linux 6 Update 5, please install below packages first from the Red Hat Enterprise Linux 6 Update 5 OS DVD.

libstdc++-<version>.el6.i686.rpm
compat-libstdc++-33-<version>.i686.rpm
libXau-<version>.el6.i686.rpm
libxcb-<version>.el6.i686.rpm
libX11-<version>.el6.i686.rpm
libXext-<version>.el6.i686.rpm
libXi-<version>.el6.i686.rpm
libXtst-<version>.el6.i686.rpm

1. Install RAID Utility

```
# cd /tmp/

# ./install.csh
```

2. Input **Y** to accept the license agreement.
3. Please select **3** for Stand Alone installation.
4. To start the RAID Utility, please select Applications -> System Tools -> RAID Web Console 2 StartupUI.

Intel Integrated RAID Module

Below information describes how to manually install Red Hat Enterprise Linux 6 Update 5 on Altos R360 F3 with Intel Integrated RAID Module.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) is required to

support Red Hat Enterprise Linux 6 Update 5.

Drivers Required (64 bit)

Device	Version	Driver Source
Intel Integrated RAID Module	6.806.08.00	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0

Drivers Required (32 bit)

Device	Version	Driver Source
Intel Integrated RAID Module	6.806.08.00	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0

Configuring Intel Integrated RAID Module

Please refer to Appendix C. for Intel Integrated RAID Module configuration

Installation Tips

NOTE. Red Hat Enterprise Linux 6 Update 5 cannot detect Intel Integrated RAID Module. Please load the RAID driver during OS installation.

NOTE. You need an external USB floppy drive or USB Flash drive to load RAID driver during the OS installation.

NOTE. Please copy Intel Integrated RAID Module driver (megaraid_sas-06.806.08.00_el6.6-1.x86_64.iso for 64-bit and megaraid_sas-06.806.08.00_el6.6-1.i686.iso for 32-bit) from Resource Kit DVD onto a USB floppy drive or USB flash drive.

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the Red Hat Enterprise Linux 6 Update 5.
2. At Welcome Menu, please press **ESC**.
3. Type below command and press **Enter**.

   linux dd

4. Follow the instruction to select the Driver Disk Source to load the driver for Intel Integrated RAID Module.
5. Follow the instruction and select Intel Integrated RAID Module as the install target device for the installation.
6. Please Select **Software Development Workstation.**
7. Please follow the general procedure to complete the installation.

Gigabit Ethernet Driver Installation

NOTE. The onboard Gigabit Ethernet driver is included in Resource Kit DVD. Please check path of the RAID utility in Windows OS environment first and copy the driver from the Resource Kit DVD to HDD (e.g. /tmp directory)

1. Stop network service

   ```
   # service network stop
   ```

2. Remove the OS built-in NIC driver

   ```
   # rmmod ixgbe
   ```

3. Change the directory to the driver source and install the driver

   ```
   # cd /tmp
   # tar zxvf ixgbe-<version>.tar.gz
   # cd ixgbe-<version>/src/
   # make install
   # modprobe ixgbe
   ```

4. Start the network service to bring up both of the network interfaces.

   ```
   # service network start
   ```

5. Use the network configuration utility like system-config-network in command line or select System -> Preferences-> Network Connections in GUI to configure the network interfaces.

VGA Driver Installation

Red Hat Enterprise Linux 6 Update 5 has the built-in driver for onboard VGA. You don’t need to install the VGA

driver manually.

RAID Utility Installation

NOTE. The RAID utility is included in Resource Kit DVD. Please check path of the RAID utility in Windows OS environment first and copy the RAID utility from the Resource Kit DVD to HDD (e.g. /tmp directory)

NOTE. For 64-bit Red Hat Enterprise Linux 6 Update 5, please install below packages first from the Red Hat Enterprise Linux 6 Update 5 OS DVD.

libstdc++-<version>.el6.i686.rpm
compat-libstdc++-33-<version>.i686.rpm
libXau-<version>.el6.i686.rpm
libxcb-<version>.el6.i686.rpm
libX11-<version>.el6.i686.rpm
libXext-<version>.el6.i686.rpm
libXi-<version>.el6.i686.rpm
libXtst-<version>.el6.i686.rpm

1. Install RAID Utility

   ```
   # cd /tmp/

   # ./install.csh
   ```

2. Input **Y** to accept the license agreement.
3. Please select **3** for Stand Alone installation.
4. To start the RAID Utility, please select Applications -> System Tools -> RAID Web Console 2 StartupUI.

SUSE LINUX ENTERPRISE SERVER 11 SP3

Intel Onboard SATA ESRTII RAID

Below information describes how to manually install SUSE Linux Enterprise Server 11 SP3 on Altos R360 F3 with Intel Onboard SATA ESRTII RAID.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) is required to support SUSE Linux Enterprise Server 11 SP3.

Drivers Required (64 bit)

Device	Version	Driver Source
Intel Onboard SATA ESRTII RAID	16.03.2014.1127	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 17.4	Resource Kit v1.0

Drivers Required (32 bit)

Device	Version	Driver Source
Intel Onboard SATA ESRTII RAID	16.03.2014.1127	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 17.4	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0

Configuring Intel Onboard SATA ESRTII RAID

Please refer to Appendix B for Intel Onboard SATA ESRTII RAID configuration

Installation Tips

NOTE. SUSE Linux Enterprise Server 11 SP3 cannot detect Intel Onboard SATA ESRTII RAID. Please load the RAID driver during OS installation.

NOTE. You need an USB Flash drive to load RAID driver during the OS installation.

NOTE. Please extract files from Intel Onboard SATA ESRTII RAID driver image file (.img file, megasr-16.03.2014.1127-1-sles11-sp3-x86_64.img for 64-bit and megasr-16.03.2014.1127-1-sles11-sp3-x86.img for 32-bit) into USB flash drive. The steps of write the .img file driver into USB flash drive as below.

a. Copy the image file (.img) to any linux system.
b. Create a directory, for example, image.

```
# mkdir image
```

c. Mount the image file to image directory using the below command.

```
# mount –o loop megasr-16.03.2014.1127-1-sles11-sp3-x86_64.img image
```

d. Change directory to image

```
# cd image
```

e. Copy the contents of the image directory into USB drive. (Contents of the image starts with 01 directory, copy the 01 directory to USB Drive)

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the SuSE Linux Enterprise Server 11 SP3 DVD.
2. When you see the boot menu on the screen, please select **Installation** and type in the Boot Options:

   brokenmodules=ahci

3. Press **F6** to select **Yes**. Please plug in USB flash drive in which the driver is inside. Then press **Enter** to continue.
4. Follow the instruction to load the driver for Intel Onboard SATA ESRTII RAID. “Intel MegaSR” device appears when Intel Onboard SATA ESRTII RAID is recognized.
5. Press **back** to boot the system.
6. Follow the instruction to install the OS.
7. At the Installation Settings, click on the Software.
8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.
9. Click on **Accept** and continue the installation.
10. Follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

NOTE. The onboard Gigabit Ethernet driver is included in Resource Kit DVD. Please check path of the Gigabit Ethernet driver in Windows OS environment first and copy the driver from the Resource Kit DVD to HDD (e.g. /tmp directory)

1. Stop network service

```
# service network stop
```

2. Remove the OS built-in NIC driver

```
# rmmod ixgbe
```

3. Change the directory to the driver source and install the driver

```
# cd /tmp

# tar zxvf ixgbe-<version>.tar.gz

# cd ixgbe-<version>/src/

# make install

# modprobe ixgbe
```

4. Start the network service to bring up both of the network interfaces.

```
# service network start
```

5. Network configuration

```
# YaST2
```

6. Select Network Devices -> Network Settings to configure the network setting.

VGA Driver Installation

SUSE Linux Enterprise Server 11 SP3 has the built-in driver for onboard VGA. You don't need to install the VGA driver manually.

RAID Utility Installation

NOTE. The RAID utility is included in Resource Kit DVD. Please check path of the RAID utility in Windows OS environment first and copy the RAID utility from the Resource Kit v1.0 to HDD (e.g. /tmp directory).

1. Install RAID Utility

```
# cd /tmp/

# ./install.csh
```

2. Input **Y** to accept the license agreement.
3. Please select 3 for Stand Alone installation.
4. To start the RAID Utility, click on Computer -> More Applications -> System -> RAID Web Console 2 StartupUI.

Intel Integrated RAID Module

Below information describes how to manually install SUSE Linux Enterprise Server 11 SP3 on Altos R360 F3 with Intel Integrated RAID Module.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) is required to support SUSE Linux Enterprise Server 11 SP3.

Drivers Required (64 bit)

Device	Version	Driver Source
Intel Integrated RAID Module	6.806.08.00	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0

Drivers Required (32 bit)

Device	Version	Driver Source
Intel Integrated RAID Module	6.806.08.00	Resource Kit v1.0
Onboard VGA	N/A	OS Built-in
Onboard Gigabit Ethernet	Package 19.3	Resource Kit v1.0

Software Required

Software	Version	Software Source
Intel RAID Web Console 2	14.11.01.00	Resource Kit v1.0

Configuring Intel Integrated RAID Module

Please refer to Appendix C for Intel Integrated RAID Module configuration

Installation Tips

NOTE. SUSE Linux Enterprise Server 11 SP3 cannot detect Intel Integrated RAID Module. Please load the RAID driver during OS installation.

NOTE. You need an USB Flash drive to load RAID driver during the OS installation.

NOTE. Please extract files from Intel Onboard SATA ESRTII RAID driver image file (.iso file) into USB flash drive. (megaraid_sas-06.806.08.00-1-sles11-sp3.x86_64.iso for 64-bit and megaraid_sas-06.806.08.00-1-sles11-sp3.i586.iso for 32-bit) from Resource Kit DVD and then write the driver onto an USB flash drive. The steps of write the .iso file driver into USB flash drive as below.

a. Copy the image file (.iso) to any linux system.
b. Create a directory, for example, image.

```
# mkdir image
```

c. Mount the image file to image directory using the below command.

```
# mount -o loop megaraid_sas-06.806.08.00-1-sles11-sp3.x86_64.iso image
```

d. Change directory to image

```
# cd image
```

e. Copy the contents of the image directory into USB drive. (Contents of the image starts with linux directory, copy the linux directory to USB Drive)

NOTE. For OS installation, a USB optical drive is required as well.

1. Please boot the system from the SuSE Linux Enterprise Server 11 SP3 DVD.
2. When you see the boot menu on the screen, please select **Installation.**
3. Press **F6** to select **Yes**. Please plug in USB flash drive in which the driver is inside. Then press **Enter** to continue.
4. Follow the instruction to load the driver for Intel Integrated RAID Module.
5. Press **back** to boot the system.
6. Follow the instruction to install the OS.
7. At the Installation Settings, click on the Software.
8. Check **C/C++ Compiler and Tools** under **Development** to add C/C++ compiler tools.

9. Click on **Accept** and continue the installation.

10. Follow the instruction to complete the installation.

Gigabit Ethernet Driver Installation

NOTE. The onboard Gigabit Ethernet driver is included in Resource Kit DVD. Please check path of the Gigabit Ethernet driver in Windows OS environment first and copy the driver from the Resource Kit DVD to HDD (e.g. /tmp directory)

1. Stop network service

   ```
   # service network stop
   ```

2. Remove the OS built-in NIC driver

   ```
   # rmmod ixgbe
   ```

3. Change the directory to the driver source and install the driver

   ```
   # cd /tmp
   # tar zxvf ixgbe-<version>.tar.gz
   # cd igb-<version>/src/
   # make install
   # modprobe ixgbe
   ```

4. Start the network service to bring up both of the network interfaces.

   ```
   # service network start
   ```

5. Network configuration

   ```
   # YaST2
   ```

6. Select Network Devices -> Network Settings to configure the network setting.

VGA Driver Installation

SUSE Linux Enterprise Server 11 SP3 has the built-in driver for onboard VGA. You don’t need to install the VGA driver manually.

RAID Utility Installation

NOTE. The RAID utility is included in Resource Kit DVD. Please check path of the RAID utility in Windows OS environment first and copy the RAID utility from the Resource Kit v1.0 to HDD (e.g. /tmp directory)

1. Install RAID Utility

```
# cd /tmp/
# ./install.csh
```

2. Input **Y** to accept the license agreement.
3. Please select 3 for Stand Alone installation.
4. To start the RAID Utility, click on Computer -> More Applications -> System -> RAID Web Console 2 StartupUI.

VMWARE ESXI 5.5 UPDATE 2

Intel Integrated RAID Module

Below information describes how to manually install VMware ESXI 5.5 Update 2 on Altos R360 F3 with Intel Integrated RAID Module.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) is required to support VMware ESXI 5.5 Update 2.

Drivers Required

Device	Version	Driver Source
Intel Integrated RAID Module	6.605.10.00	Resource Kit v1.0
Onboard VGA	N/A	OS built-in
Onboard Gigabit Ethernet	N/A	OS built-in

Configuring Intel Integrated RAID Module

Please refer to Appendix C to configure Intel Integrated RAID Module.

Installation Tips

NOTE. When you install OS with Intel Integrated RAID Module, please configure onboard AHCI Capable SATA Controller to AHCI.

AHCI Capable SATA Controller [AHCI]

NOTE. Please enable Intel Virtualization Technology in BIOS Setup before installation. The option can be found on Advanced > Processor Configuration of BIOS Setup.

Intel(R) Virtualization Technology [Enabled]

NOTE. Please enable Intel VT for Directed I/O in BIOS Setup before installation. The option can be found on Advanced > Integrated IO Configuration of BIOS Setup.

Intel(R) VT for Directed I/O [Enabled]

NOTE. Please disable Memory Mapped I/O above 4 GB in BIOS Setup before installation. The option can be found on Advanced > PCI Configuration of BIOS Setup.

Memory Mapped I/O above 4 GB [Disabled]

NOTE. Please use the driver provided by Resource Kit DVD.

Since there is no way to load the driver during ESXi installation, please create a customized ESXi ISO image with the driver by yourself. Please refer to Appendix D to create the customized ESXi ISO image.

1. Boot the system with VMware ESXI 5.5 Update 2 customized installation CD
2. Select **<you defined- Installer>** from the boot menu.
3. At the Welcome screen, press **Enter** to continue with the installation.
4. Accept VMware license by pressing **F11**.
5. At the Select a Disk screen, select the disk drive on which to install ESXi 5.5 Update 2 and press **Enter**.
6. Follow the instructions to select the keyboard layout, root password.
7. At Confirm Install screen, press **F11** to start the installation.
8. When the installation is completed, press **Enter** to reboot the host. Please remove the installation CD before the host rebooted.

Configure the VMware ESXI 5.5 Update 2 host

1. When the installation is completed, reboot the host into VMware ESXI 5.5 Update 2.
2. Press **F2** to configure the host.
3. Select **Configure Management Network** to set IP address.
4. Select the network adapter which you want to configure in Network Adapters and set the IP address in IP configuration.
5. Press **ESC** when complete the configuration.
6. Press **Y** to save the change.

Downloading vSphere Client to a PC

The vSphere Client is a Windows program that you can use to configure the host and to manage virtual machines.

1. On a Windows-based PC, please launch the web browser.
2. Please use the browser to connect to IP address of VMware ESXi host.
3. At the welcome page, please click **Download vSphere Client** under Getting Started.

vSphere Client Installation on a PC

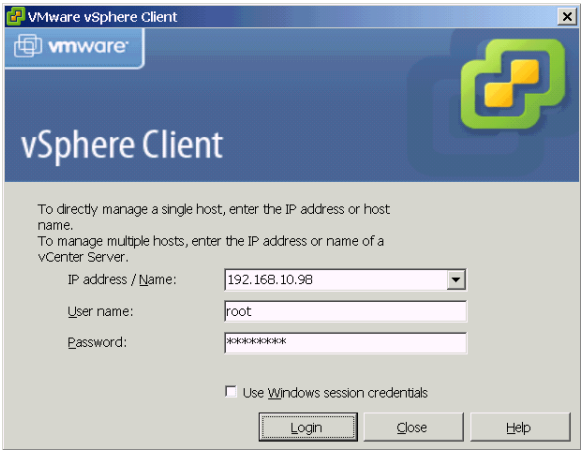
NOTE. The vSphere Client requires the Microsoft .NET Framwork 3.5 SP1. If it is not installed, the vSphere Client installer will install it.

NOTE. The installation of vSphere Client might require Internet connectivity.

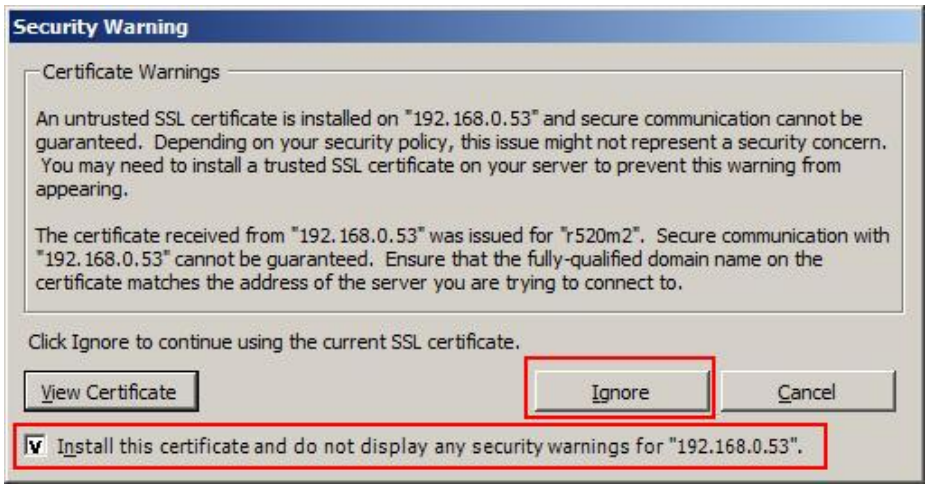
1. To install the vSphere Client on the PC by double-clicking the downloaded VMware-vicient.exe file.
2. Choose a language for the installer and click **OK**.
3. Follow the instructions and accept the license agreement to complete the installation.

Launch vSphere Client on a PC

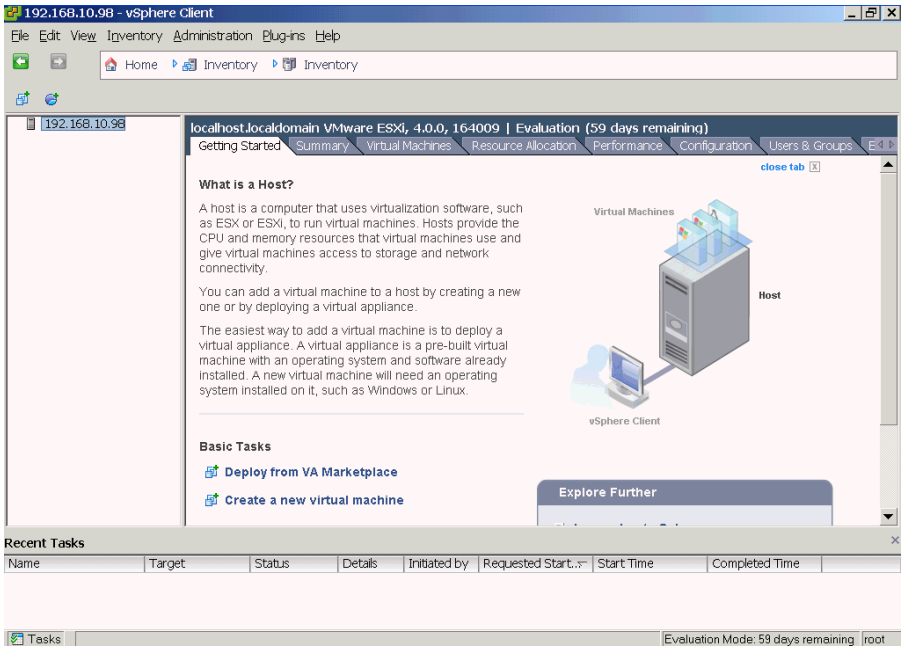
1. Open vSphere Client on a PC.
2. Type in the information to login VMware ESXi 5.5 Update 2 host.
   - IP address of VMware ESXi host
   - User name (“root” by default)
   - Password (set during the VMware ESXi installation)



3. When you see the Security Warning pop-up window, please check the checkbox for **Install this certificate and do not display any security warnings for “IP address/Name of your system”** and click on **Ignore**.



4. Now, you can manage the VMware ESXi hypervisor or create virtual machines with the vSphere Client.



Gigabit Ethernet Driver Installation

VMwaer ESXi 5.5 Update 2 has the built-in driver for onboard NIC. You don’t need to install the onboard NIC driver manually.

VGA Driver Installation

VMwaer ESXi 5.5 Update 2 has the built-in driver for onboard VGA. You don’t need to install the VGA driver manually.

XENSERVER 6.5

AHCI

Below information describes how to manually install XenServer 6.5 on Altos R360 F3 with Onboard AHCI.

BIOS Required

Altos R360 F3 BIOS 01.01.0008 (or later) is required to support XenServer 6.5.

Drivers Required

Device	Version	Driver Source
Intel Integrated RAID Module	N/A	OS built-in
Onboard VGA	N/A	OS built-in
Onboard Gigabit Ethernet	N/A	OS built-in

Configuring Intel Integrated RAID Module

Please configure onboard AHCI Capable SATA Controller to AHCI.

AHCI Capable SATA Controller [AHCI]

Installation Tips

NOTE. Please enable Intel Virtualization Technology in BIOS Setup before installation. The option can be found on Advanced > Processor Configuration of BIOS Setup.

Intel(R) Virtualization Technology [Enabled]

NOTE. Please enable Intel VT for Directed I/O in BIOS Setup before installation. The option can be found on Advanced > Integrated IO Configuration of BIOS Setup.

Intel(R) VT for Directed I/O [Enabled]

NOTE. Please use the OS built-in driver of XenServer 6.5 to install the OS.

1. Boot the system with XenServer 6.5 installation CD
2. Select Keymap.
3. Accept EULA.
4. Select the drive for virtual machine storage.
5. Select Installation Source.
6. Select No for Supplemental Packs option.

7. Set password for connecting to XenServer Host from XenCenter.
8. Select the time zone.
9. Start to install XenServer.
10. When the installation is completed, please remove the installation CD before the host rebooted.

Configure the XenServer 6.5 host

1. When the installation is completed, reboot the host into XenServer 6.5.
2. Select **Network and Management Interface** to set IP address.
3. Select the network adapter which you want to configure in Network Adapters and set the IP address in IP configuration.
4. Press **Enter** to save the change when complete the configuration.

Downloading XenCenter to a PC

The XenCenter is a Windows program that you can use to configure the host and to manage virtual machines.

1. On a Windows-based PC, please launch the web browser.
2. Please use the browser to connect to IP address of the XenServer host.
3. Click **XenCenter installer** to download XenCenter installation file.

XenCenter Installation on a PC

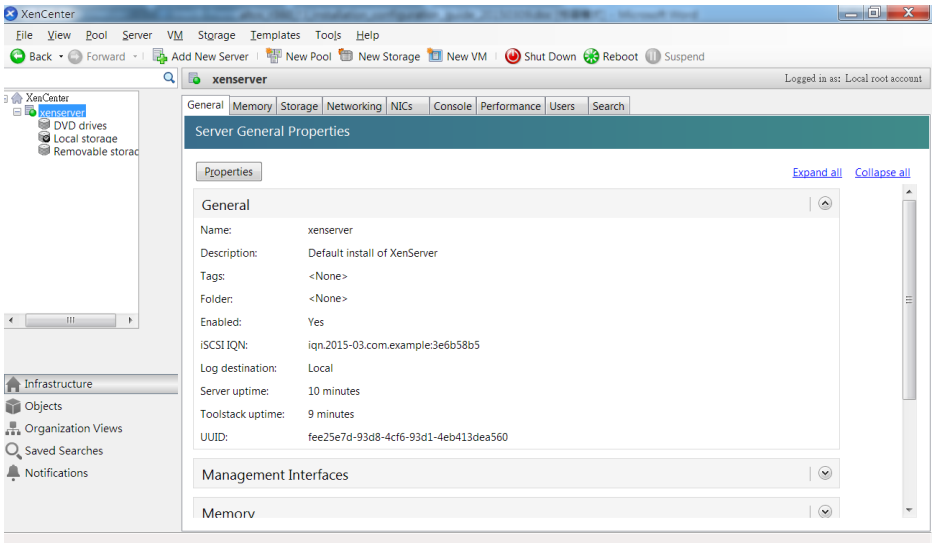
NOTE. The XenCenter requires the Microsoft .NET Framwork 3.5.1.

NOTE. The installation of XenCenter might require Internet connectivity.

1. To install the XenCenter on the PC by double-clicking the downloaded xencenter file.
2. Follow the instructions to complete the installation.

Launch XenCenter on a PC

1. Open XenCenter on a PC.
2. Right-click XenCenter item to add the XenServer host. The following information is required.
   - IP address of XenServer host
   - User name (“root” by default)
   - Password (set during the XenServer installation)
3. Now, you can manage the XenServer hypervisor or create virtual machines with the XenCenter.



Gigabit Ethernet Driver Installation

XenServer 6.5 has the built-in driver for onboard NIC. You don't need to install the onboard NIC driver manually.

VGA Driver Installation

XenServer 6.5 has the built-in driver for onboard VGA. You don't need to install the VGA driver manually.

APPENDIX A: INTEL ONBOARD SATA RSTE RAID CONFIGURATION

Enabling Intel Onboard SATA RSTe RAID

1. Please press **F2** to enter BIOS Setup during POST.
2. Please press **F9** to load default BIOS settings.
3. In Main Page, change Quiet Boot from Enabled to **Disabled**.

   Quiet Boot [Disabled]
4. In Advanced Page, select **Mass Storage Controller Configuration**
5. Please select the SATA port that is connecting to the HDD desired.

   SATA Port 0-5

   sSATA Port 0-3
6. You might see below information:

   AHCI Capable SATA Controller [AHCI]
7. Please change the setting of AHCI Capable SATA Controller from AHCI to **RAID Mode**.

   AHCI Capable SATA Controller [RAID Mode]
8. Change the setting of AHCI Capable RAID Options from INTEL(R) ESRT2 (LSI*) to **INTEL (R) RSTe**

   AHCI Capable RAID Options [INTEL (R) RSTe]
9. Save the setting and exit from BIOS Setup

Set Intel onboard SATA RSTe RAID in EFI Mode or Legacy Mode

1. Please press **F2** to enter BIOS Setup during POST.
2. In Boot Maintenance Manger Page, select **Advanced Boot Options**
3. You would see below information.

   Boot Mode [Legacy]
4. To enable EFI mode, please change the setting from Legacy to **UEFI**.

   Boot Mode [UEFI]
5. To enable legacy mode, please change the setting to **Legacy**.

   Boot Mode [Legacy]
6. Save the setting and exit from BIOS Setup.

Entering Intel onboard SATA RSTe RAID BIOS Utility (Legacy Mode)

Please press **CTRL-I** when you see the RAID BIOS during POST.

Entering Intel onboard SATA RSTe RAID BIOS Utility (EFI Mode)

Please press **F2** to enter BIOS Setup during POST. In BIOS Setup, select **Advanced** > **PCI Configuration** > **UEFI Option ROM Control** > **Intel RSTe SATA Controller** to configure Intel onboard SATA RSTe RAID in EFI mode.

Loading Factory Default Setting

NOTE. The Intel onboard SATA RSTe RAID BIOS utility does not provide the function to load factory default setting.

Creating a RAID Volume

1. Select **Create RAID Volume**.
2. The **CREATE VOLUME MENU** displayed.
3. Type in the name of RAID volume.
4. Select RAID level.
5. Select desired HDD to create the RAID.
6. Select Strip Size.
7. Select Capacity.
8. Select **Create Volume**.
9. Press **Y** when “Are you sure you want to create the volume? (Y/N):” displayed.
10. Now the RAID volume is created, you can press **ESC** and select **Exit** to exit.

Initializing a RAID Volume

The RAID volume will be automatically initialized once it has been created.

Assigning a Hot Spare Drive

The Intel onboard SAS/SATA RSTe RAID BIOS utility does not provide the function to create hot spare drive.

NOTE. Please create the hot spare drive with the Intel onboard SATA RSTe RAID utility in operating system.

APPENDIX B: INTEL ONBOARD SATA ESRTII RAID CONFIGURATION

Enabling Intel Onboard SATA ESRTII RAID

1. Please press **F2** to enter BIOS Setup during POST.
2. Please press **F9** to load default BIOS settings.
3. In Main Page, change Quiet Boot from Enabled to Disabled.

   Quiet Boot [Disabled]
4. In Advanced Page, select **Mass Storage Controller Configuration**
5. Please select the SATA port that is connecting to the HDD desired.

   SATA Port 0-5

   sSATA Port 0-3
6. You might see below information:

   AHCI Capable SATA Controller [AHCI]
7. Please change the setting of AHCI Capable SATA Controller from AHCI to **RAID Mode .**

   AHCI Capable SATA Controller [RAID Mode]
8. Keep the setting of AHCI Capable RAID Options as **INTEL(R) ESRT2 (LSI*) .**

   AHCI Capable RAID Options [INTEL(R) ESRT2 (LSI*)]
9. Save the setting and exit from BIOS Setup

Entering Intel onboard SATA ESRTII RAID BIOS Utility

Please press **CTRL-E** when you see the RAID BIOS during POST.

Loading Factory Default Setting

1. Select **Objects** from Management menu.
2. Select **Adapter**. The selectable adapter will be listed.
3. Press Enter to select the adapter and the adapter setting will be shown on the screen.
4. Select **Factory Default.**
5. Select **Yes** to load the default settings.
6. Press **ESC** Exit the RAID BIOS Utility
7. Press **Ctrl + Alt + Del** to reboot the server.

Creating a RAID Volume

1. Select **Configure** from Management Menu.

2. Select **New Configuration**
3. Select **Yes** to continue. An array selection window displays the devices connected to the current controller.
4. Press the arrow keys to choose specific physical drives and press **SPACE** key to associate the selected drive with the current array. The indicator for selected drive change from **READY** to **ONLINE**
5. After adding 2 drives to current array, press **Enter** to finish creating current array.
6. Press **Enter** again to select array to configure.
7. Press **SPACE** key to select the array and press **F10** to configure the logical drive.
8. The default RAID level for 2 disk drives is RAID1. Just select **Accept** to use the default setting.
9. Press **Enter** to return to the ARRAY SELECTION MENU.
10. Press **Enter** to end the array configuration.
11. Select **Yes** to Save Configuration and press any key to return to the Configure menu.

Initializing a RAID Volume

1. Press **Esc** to return to the Management Menu.
2. Select **Initialize** from Management menu. All logical drives should be listed under Logical Drives.
3. Press **SPACE** key to select drives for initialization. The selected drive will be shown in yellow.
4. Press **F10.**
5. Select **YES** to start the initialization process.
6. When initialization is complete, press any **Esc** to continue.
7. Press **Esc** again to return to the Management Menu.

Assigning a Hot Spare Drive

1. Select **Objects** from Management menu.
2. Select **Physical Drive** from Objects. All of the drives will be listed.
3. Select a drive marked as READY and press **Enter**.
4. Select **Make Hot Spare** and press **Enter**.
5. Select **Yes** then you will see the HDD is changed from READY to HOTSP.
6. Press **Esc** to return to the Management Menu.

Saving and Exiting Intel Onboard SATA ESRTII RAID Configuration Utility

1. When RAID configuration, initialization and assigning hot spare are completed, press **Esc** in the Management Menu and select **Yes** to exit the Software RAID Configuration Utility.
2. Press **Ctrl + Alt + Del** to reboot the server.
3. Now you can start to install OS.

APPENDIX C: INTEL INTEGRATED RAID MODULE

Set RAID Controller in EFI Mode or Legacy Mode

1. Please press **F2** to enter BIOS Setup during POST.
2. Please press **F9** to load default BIOS settings.
3. In Main Page, change Quiet Boot from Enabled to **Disabled**.

   Quiet Boot [Disabled]
4. In Boot Maintenance Manger Page, select **Advanced Boot Options**
5. You would see below information.

   Boot Mode [Legacy]
6. To enable EFI mode, please change the setting from Legacy to **UEFI**.

   Boot Mode [UEFI]
7. To enable legacy mode, please change the setting to **Legacy**.

   Boot Mode [Legacy]
8. Save the setting and exit from BIOS Setup.

Legacy Mode

Entering RAID BIOS Utility (Legacy Mode)

Please press **CTRL-R** when you see the RAID BIOS during POST. After POST finished, the Intel Integrated RAID Module BIOS Configuration Utility will show on the screen.

Loading Factory Default Setting (Legacy Mode)

1. In the top menu, please press **Ctrl-N** to switch to Ctrl Mgmt page.
2. Press **Tab** to move the cursor to **Set Factory Defaults** and then press **Enter**.
3. Select **OK** to load factory defaults.
4. Press **Ctrl-S** to save the change.
5. Press **Esc** and then select **OK** to exit.
6. Press **Ctrl + Alt + Del** to reboot the server.

Creating a RAID Volume (Legacy Mode)

1. On the VD Mgmt page of top menu, please move cursor to the root of Intel Integrated RAID.
2. Press **F2** and select **Create Virtual Drive**.
3. Select the **RAID Level** desired by **Enter**.
4. Select **Drives** for the virtual drive.

5. Specify the size.
6. Select **OK.**
7. Select **OK** to create the virtual drive.

Initializing a RAID Volume (Legacy Mode)

1. Locate the cursor on Virtual Drive 0 you just created and then press **F2**.
2. Select **Initialization > Fast Init**.
3. Select **Yes.**
4. Press **OK** when initialization is complete.

Assigning a Hot Spare Drive (Legacy Mode)

1. In the top menu, please press **Ctrl-N** to switch to PD Mgmt page.
2. Select the drive desired for the hot spare drive.
3. Press **F2** and then select **Make Global HS**.
4. Press **OK**.
5. Press **Esc**.
6. Select **OK** to exit.
7. Press **Ctrl + Alt + Del** to reboot the system.
8. Now you can start to install the operating system.

EFI Mode

Entering RAID EFI Utility (EFI Mode)

Please press **F2** to enter BIOS Setup during POST. In BIOS Setup, select **Advanced** > **PCI Configuration** > **UEFI Option ROM Control** > **Intel RAID Controller** to configure Intel Integrated RAID in EFI mode.

Loading Factory Default Setting (EFI Mode)

1. Select **Controller Management** > **Advanced Controller Management**.
2. Select **Set Factory Defaults**.
3. Check **Confirm** and then select **Yes**.
4. Select **OK** and then press **F10** to save the change.

Creating a RAID Volume (EFI Mode)

1. Select **Configuration Management** > **Create Virtual Drive**.
2. Select the **RAID Level** desired by **Enter**.

3. Select **Drives** for the virtual drive and apply the changes
4. Specify the virtual drive size.
5. Select **Save Configuration**.
6. Check **Confirm** and then select **Yes**.
7. Select **OK.**
8. Press **Esc** to return to top menu.

Initializing a RAID Volume (EFI Mode)

1. Select **Virtual Drive Management** > **Virtual Drive** that you just created.
2. Select **Operation** by **Enter**.
3. Select **Fast Initialization**.
4. Select **Go**.
5. Check **Confirm** and then select **Yes**.
6. Select **OK.**
7. Press **Esc** to return to top menu.

Assigning a Hot Spare Drive (EFI Mode)

1. Select **Drive Management** > **Drive** that you want to assign.
2. Select **Operation** by **Enter**
3. Select **Assign Global Hot Spare Drive**.
4. Select **Go**.
5. Check **Confirm** and then select **Yes**.
6. Select **OK.**
7. Press **Esc** to return to top menu
8. Press **F10** to save the change and exit BIOS Setup.
9. Now you can start to install the operating system.

APPENDIX D: CUSTOMIZED VMWARE ESXI INSTALLATION CD

In order to load required driver for a new installation, it is necessary to create a customized ESXi ISO image.

Prerequisites

1. A Windows system with .Net Framework 2.0 (or later), Windows PowerShell and VMWare PowerCLI installed
2. Intel Integrated RAID Module driver for VMware ESXi 5.5 Update 2

   You can find the file "VMW-ESX-5.5.0-lsi_mr3-6.605.10.00-2160906.zip" with Resource Kit. Please extract "VMW-ESX-5.5.0-lsi_mr3-6.605.10.00-offline_bundle-2160906.zip" from the driver file.
3. ESXi 5.5 Update 2 Offline Bundle

   It is the file "update-from-esxi5.5-5.5_update02-2068190.zip" that can be downloaded from VMware Download Center.

NOTE. VMware Power CLI and ESXi 5.5 Update 2 Offline Bundle can be downloaded from VMware Download Center (www.wmware.com/downloads)

Create Customized ISO

Please place VMW-ESX-5.5.0-lsi_mr3-6.605.10.00-offline_bundle-2160906.zip and ESXi 5.5 Update 2 Offline Bundle file on the same folder (e.g. C:\temp) of a Windows system with Windows PowerShell and VMware PowerCLI installed.

1. Run VMware PowerCLI as administrator.
2. Import software depots with **Add-EsxSoftwareDepot** command.

   ```
   PowerCLI C:\temp> Add-EsxSoftwareDepot .\update-from-esxi5.5-5.5_update02-2068190.zip

   PowerCLI C:\temp> Add-EsxSoftwareDepot .\VMW-ESX-5.5.0-lsi_mr3-6.605.10.00-offline_bundle-2160906.zip
   ```
3. Get image profile with **Get-EsxImageProfile** command.

   ```
   PowerCLI C:\temp> Get-EsxImageProfile | Select Name
   ```
4. Create an image profile with **New-EsxImageProfile** command.

   ```
   PowerCLI C:\temp> New-EsxImageProfile -CloneProfile ESXi-5.5.0-20140902001-standard -Name ESXi55U2CustomProfile -AcceptanceLevel PartnerSupported -vendor LSI
   ```

5. List VIB (vSphere Installation Bundle) of Intel Integrated RAID Module driver with **Get-EsxSoftwarePackage** command.

```
PowerCLI C:\temp> Get-EsxSoftwarePackage | where
{$_.Vendor -eq "lsi"}
```

6. Add VIB with **Add-EsxSoftwarePackage** command.

```
PowerCLI C:\temp> Add-EsxSoftwarePackage -ImageProfile
ESXi55U2CustomProfile –SoftwarePackage lsi-mr3
```

7. Create ISO image with **Export-EsxImageProfile** command.

```
PowerCLI C:\temp> Export-EsxImageProfile -ImageProfile
ESXi55U2CustomProfile –ExportToISO -FilePath
C:\temp\esxi5.5u2-customizedImage.iso
```

8. Now, the customized ISO image (Intel Integrated RAID Module driver included) is ready.