# Installing Operating Systems (VMware, Windows) with M.2 SSD's on UCS B200 M5

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#### Introduction

This document describes the installation of Operating Systems (VMware, Windows) with M.2 SSD's on UCS B200 M5

The Cisco UCS B200 M5 blade server has a mini-storage module option that plugs into a motherboard socket to provide additional internal storage. The mini-storage module can be one of the following types:

- An SD card module that supports up to two SD cards. (Uses UCS-MSTOR-SD catridge)
- An M.2 SSD module that supports up to two SATA M.2 SSDs. (Uses UCS-MSTOR-M2 catridge)

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Prerequisites

#### Requirements

• Understanding of UCS, policies and profiles

#### **Components Used**

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

UCSM 3.2.2b or higher

UCS B200 M5 (Server firwmare 3.2.2b or higher)

Capability Catalog 3.2.3i or higher

# **Background Information**

The M.2 cartridge consists of the UCS-MSTOR-M2 carrier holding the UCS-M2-XXXGB SATA drives

You can use one or two M.2 SSDs in the carrier.

M.2 socket 1 is on the top side of the carrier; M.2 socket 2 is on the underside of the carrier (the same side as the carrier's connector to the server board socket)

This is depicted in the pictures (both slots have been populated with M.2 SSD drives)





Underside

(slot 2)

M.2 UCS-MSTOR-M2 inventory in UCSM

#### Equipment / Chassis / Chassis 1 / Servers / Server 7

General	Inventory	Virtual	Machines	Installed F	irmware	CIMC Sessi	ons	SEL Logs	VIF Paths	Health
Motherboard	CIMC	CPUs	GPUs	Memory	Adapters	HBAs	NICs	iSCSI vN	ICs Secur	rity S
				lini Storag	е					
			mini-	storage-M2-	-1					
			ID	: 1						
			Mod	lel : U	CS-MSTOR	-M2				
			Тур	e : N	12					
			Ven	dor : <b>C</b>	isco System	ns Inc				
			Revi	sion : 0						
			Seri	al :						
			VID	: <b>V</b>	01					
			Part	Number: 7	3-17926-05					
			Proc	luct Name :	Cisco UCS I	Mini-Storage	e Carrier	for M.2		
			Cap	tion :	Cisco UCS I	Mini-Storage	e Carrier	for M.2 (hold	ls up to 2)	
			Des	cription :	Dual M.2 Mi	ni-Storage C	Carrier (h	olds up to 2	M.2 modules)	)
			Con	troller ID :	1					
			Con	troller Type :	PCH					

Any addition or removal of the disks will be updated to UCSM inventory only after a reacknowledgement of the server as there is no CIMC sensor for the PCH controller and the M.2 Sata drives.

The UCSM will warn you about any hardware changes to the mini storage and will also request that you re-acknowledge the server.

Properties					
Affected object	:	sys/chassis-1/blade-7/board/mini-stora	ge-M2-1/inv-status		
Description	:	Mini storage inventory mismatch			
ID	;	13155391	Туре	:	equipment
Cause	:	hardware-mismatch	Created at	:	2018-09-26T17:13:58Z
Code	:	F1901	Number of Occurrences	:	1
Original severity	:	Critical			
Previous severity	:	Critical	Highest severity	:	Critical

_	Properties	_			_	
	Affected object	:	sys/chassis-1/blade-7			
	Description	:	Server 1/7 hardware inventory mismatch	. Acknowledge the serve	er	to clear the fault
	ID	:	13155390	Туре	:	equipment
	Cause	:	hardware-inventory-mismatch	Created at	:	2018-09-26T17:13:58Z
	Code	:	F1913	Number of Occurrences	:	1
	Original severity	:	Critical			
	Previous severity	:	Critical	Highest severity	:	Critical

After the server has been re-acknowledged the storage inventory should update (In this case, a M.2 ssd was added in slot 2).

quipment / Chassis / Chassis 1 / Se	rvers / Server 7						
General Inventory Virtual Mac	hines Installed Firm	ware CIMC Sessions	SEL Logs VIF Pat	hs Health Diagnostics	Faults Events F	SM Statistics	Temperatures Power
Motherboard CIMC CPUs	GPUs Memory	Adapters HBAs N	IICs ISCSI vNICs	Security Storage			
Controller LUNs Disks							
+ - 🏷 Advanced Filter 💠 Export	t 🖷 Print						
Name	Size (MB)	<ul> <li>Serial</li> </ul>	Operability	Drive State	Presence	Technology	Bootable
Disk 1	227927	17191708379C	Operable	Online	Equipped	SSD	Unknown
Disk 2	227927	173819147CCD	Operable	Online	Equipped	SSD	Unknown
Storage Controller SAS 1							

# Configure

The onboard Lewisburg sSATA controller is used to manage both types of M.2 cartridges but does not manage any front panel drives.

The PCH controller operates in AHCI mode or SWRAID mode.

**AHCI Mode:** Disks are presented as JBOD disks.

SWRAID Mode: Disks can either be in RAID0 or RAID1 based on user configuration in policy.

Desired Raid	BIOS P-SATA Setting	Storage Profile Controller Definition Setting	Notes
RAID0, RAID1	SWRAID	RAID0 OR RAID 1	Only UEFI boot supported. OS requir megasr driver.
JBOD	Disabled	NORAID	Legacy or UEFI boot

VMware ESX/ESXi operating system is not supported with the embedded SATA MegaRAID controller in SW RAID mode, as VMWare does not have a software raid driver. You can use VMWare in AHCI mode.

Microsoft Windows Server 2016 Hyper-V hypervisor is supported for use with the embedded MegaRAID controller in SW RAID mode, but all other hyperviors are not supported.

All Hypervisors are supported in AHCI mode.

#### AHCI Mode

This is an example of installing VMware ESXi with the PCH controller in AHCI Mode.

Create a Strorage Profile with RAID Level set to No RAID.

✓ root	Fault Summary		Properties
Create Storage Profile			? ×
Name : NO_RAID			
Description :			
Local LUNs Controller Definitions	s Security Policy		
Create Controller De	finition	? ×	\$
Name : NO_RAID Controller Mode Configuration			
Protect Configuration : 🗹 RAID Level : No RAID	<b>V</b>		
		OK Cancel	
		ОК	Cancel

Create a BIOS Policy with P-SATA mode set to AHCI

## **BIOS Policy**

Main Advanced Boot Options	Server Management Events	
Ty Advanced Filter 🔶 Export 📑 Print		\$
BIOS Setting	Value	
Cool Down Time (sec)	Platform Default	Ψ.
Number of Retries	Platform Default	Ψ.
Boot option retry	Platform Default	₹.
SAS RAID module	Platform Default	Ψ.
SAS RAID	Platform Default	Ψ.
Onboard SCU Storage Support	Platform Default	Ψ.
P-SATA mode	AHCI	Ψ.
Power On Password	Platform Default	Ψ.
IPV6 PXE Support	Platform Default	<b>V</b>

Create a Boot Policy

Set the Boot Mode to UEFI

Select "Add CD/DVD"

Select "Add Embedded Local Disk"

#### Create Boot Policy

Name :	AHCI_B	oot										
Description :	:											
Reboot on Boot Order Change :												
Enforce vNIC/vHBA/iSCSI Name :												
Boot Mode :	: O Legac	y 🖲 Uefi										
Boot Security :												
The type (primary/secondary) does The effective order of boot devices If Enforce vNIC/vHBA/iSCSI Name If it is not selected, the vNICs/vHB/ O Local Devices	s within the s e is selected	same device class d and the vNIC/vHB	(LAN/Storage/i A/iSCSI does r	not exist, a	config erro	or will be n	eported.		d.			
Add Local Disk		+ - 🏹 Adva	anced Filter 4	Export	🖶 Print							\$
Add Local Disk		+ - Ty Adva	anced Filter 4	Export	Print vNIC/	Туре	LUN	WWN	Slot N	Boot	Boot	Cescri
Add Local LUN			anced Filter 4		-	Туре	LUN	WWN	Slot N	Boot	Boot	
		Name		Or 🔺	-	Туре	LUN	WWN	Slot N	Boot	Boot	
Add Local LUN Add Local JBOD		Name CD/DVD		Or ▲	-	Type Primary		WWN	Slot N	Boot	Boot	
Add Local LUN Add Local JBOD Add SD Card		Name CD/DVD	isk	Or ▲	-			WWN	Slot N	Boot	Boot	
Add Local LUN Add Local JBOD Add SD Card Add Internal USB		Name CD/DVD	isk	Or ▲	-			WWN	Slot N	Boot	Boot	
Add Local LUN Add Local JBOD Add SD Card Add Internal USB Add External USB		Name CD/DVD	isk	Or ▲	-			WWN	Slot N	Boot	Boot	
Add Local LUN Add Local JBOD Add SD Card Add Internal USB Add External USB Add Embedded Local LUN		Name CD/DVD	isk	Or • 1 2	-	Primary			Slot N 1	Boot	Boot	
Add Local LUN Add Local JBOD Add SD Card Add Internal USB Add External USB Add Embedded Local LUN Add Embedded Local Disk		Name CD/DVD	isk d Disk Image	Or • 1 2	vNIC/	Primary			Slot N 1	Boot	Boot	

Select the appropriate options from the "Add Embedded Local Disk" section

If "Any" is chosen, then the default order is Disk1, Disk2

# Add Embedded Local Disk

Туре	:	● Primary ◯ Secondary ◯ Any
Disk Slot Number	:	1



?

Set Uefi Boot Pa	rameters		? ×
Uefi Boot Parameters			
Boot Loader Name :	BOOTx64.EFI		
Boot Loader Path :	\EFI\BOOT		
Boot Loader Description :	VMware ESXi		
		ОК	Cancel

#### Assign the BIOS Policy you created earlier to the Service Profile

Servers / Service Profiles / root / Service Profile M.2	_AHCI	
General Storage Network iSCSI vNICs	vMedia Policy Boot Order Virtual Machines F	FC Zones Policies Server Details CIMC Sessions FSM V
Actions	Policies	
Change Serial over LAN Policy		
Change Power Sync Policy	BIOS Policy: AHCI V	Create BIOS Policy
	BIOS Policy Instance : org-root/bios-prof-AHCI	

Assign the Storage Profile you created earlier to the Service Profile

General Storage Network iSCSI vNICs	vMedia Policy	Boot Order	Virtual Machines
Storage Profiles Local Disk Configuration Policy	vHBAs vHB/	A Initiator Groups	\$
Actions	Storage Profil	le Policy	
Modify Storage Profile	Name	: AH	CI_SP
	Description	:	
	Storage Profil	e Instance : org	-root/profile-AHCI_
Local LUNs Controller Definitions Security Polic	cy Faults		
🔨 Advanced Filter 🔺 Export 📑 Print			
Name			

#### UCSM view of embedded PCH controller in AHCI mode

General Inventory	Virtual Machines	Installed Firmware	CIMC Sessions	SEL Logs	VIF Paths Heal	h Diagnostics	Faults	Events	FSM Statistics	Temperatures
Motherboard CIMC	CPUs GPUs	Memory Adap	ters HBAs	NICs iSCSI	vNICs Security	Storage				
Controller LUNs D	lisks									
+ - Ty Advanced Filter	🕈 Export 🖷 Prin	nt								
Name		ID			Туре				Subtype	
Storage Controller PCH	1	1			PCH				NA	

General FSM Faults Events Statistic Actions	ID	:1	Name	: Lewisburg SSATA Controller [AHCI mode
Import Foreign Configuration	Description	: Lewisburg SSATA Controller [AHCI mode]	Nome	
	Model	: Lewisburg SSATA Controller [AHCI mode]	PID	: N/A
	Revision	: N/A	Serial	: LSIROMB-0
Cancel Storage Operations	Subtype	: NA		
	RAID Support	: RAID0, RAID1	Vendor	: Intel Corp.
Unlock Disk	OOB Interface Supporte	d: No		
Unlock For Remote	PCIe Address	: 00:17.5	PCI Slot	
Modify Remote Key	Number of Local Disks	: 2	Rebuild Rate	: N/A
			Neound Note	. 00
	Pinned Cache Status :	Unknown		

#### This is the view from F2 BIOS menu

Notice the pSATA is set to AHCI

LOM and PCIe Slots Conf	iguration			
Current Boot Mode SecureBoot Support	UEFI Disabled			
SWRAID Configuration pSATA SATA OpROM M.2 SATA OpROM	[AHCI] [AHCI]			
LOM and PCIe Slots Configuration				
<ul> <li>PCIe Slots Inventory Details</li> <li>PCIE Link Speed Configuration</li> <li>PCI OpROM Configuration</li> </ul>				

Notice the UEFI policy is named VMware ESXi (specified in our boot policy earlier)

Main Advanced Server Mgmt	Boot Options Save & Exit		
Boot Configuration Setup Prompt Timeout Bootup NumLock State	<mark>3</mark> [0n]		
SecureBoot Support	Disabled		
Boot Mode	[UEFI Mode]		
CDN Control	[Disabled]		
Boot Option Priorities	[VMware ESXi]		
Boot Option #1	[UEFI: Built–in EFI		
Boot Option #2	Shell]		
Boot Option #3	[Disabled]		

#### SWRAID Mode

This is an example of installing Microsoft Windows Server 2016 with the PCH controller in SWRAID Mode

Create a Strorage Profile with RAID Level set to RAID1 for redundancy.

格	<ul> <li>root ●</li> </ul>	Fault Summary		Properties
Ŧ	Create Storage Profile			? ×
▣	Name : RAID1 Description :			
∎	LUNs			
		r Definition	? ×	⇔
20	Name : RAID1 Controller Mode Configura	tion		
	RAID Protect Configuration :  RAID Level : RA	ID 1 Mirrored	OK Cancel	
			ОК	Cancel

Create a BIOS Policy with P-SATA mode set to SWRAID

BIOS Policy		×
Main Advanced Boot Options Server Management	Events	
🏹 Advanced Filter 🔺 Export 📑 Print		۵
BIOS Setting	Value	
Cool Down Time (sec)	Platform Default	
Number of Retries	Platform Default	
Boot option retry	Platform Default	
SAS RAID module	Platform Default	
SAS RAID	Platform Default	
Onboard SCU Storage Support	Platform Default	
P-SATA mode	LSI SW RAID	
Power On Password	Platform Default	
IPV6 PXE Support	Platform Default	
🕀 Add 📋 De	elete 🕕 Info	
Croate a Past Policy	OK Apply Cancel	Help

Create a Boot Policy

Set the Boot Mode to UEFI

Select "Add CD/DVD"

Select "Add Embedded Local LUN"

#### Create Boot Policy

Name	:	embeddedlun
Description	:	
Reboot on Boot Order Change	:	
Enforce vNIC/vHBA/iSCSI Name	:	
Boot Mode	:	C Legacy    Uefi
Boot Security		

#### WARNINGS:

The type (primary/secondary) does not indicate a boot order presence. The effective order of boot devices within the same device class (LAN/Storage/iSCSI) is determined by PCIe bus scan order. If Enforce vNIC/vHBA/iSCSI Name is selected and the vNIC/vHBA/iSCSI does not exist, a config error will be reported. If it is not selected, the vNICs/vHBAs are selected if they exist, otherwise the vNIC/vHBA with the lowest PCIe bus scan order is used.

<ul> <li>Local Devices</li> </ul>	Boot Order	
Add Local Disk	+ - Ty Advanced Filter 🛧 Export 🖶 Print	¢
Add Local LUN	Name Order A vNIC/vH Type LUN Na WWN Slot Nu Boot Na Boot Path	Descript
Add Local JBOD	<b>CD/</b> 1	
Add SD Card	Emb 2	
Add Internal USB		
Add External USB		
Add Embedded Local LUN		
Add Embedded Local Disk		
Add CD/DVD	🕇 Move Up 👎 Move Down 🔟 Delete	
Add Local CD/DVD	Set Uefi Boot Parameters	
Add Remote CD/DVD		

#### Specify the UEFI Boot Paramaters

? X

Global Boot Policy						
Name	: embe	ddedlun				
Boot Policy Instance	: org-ro	Modify U	efi Boot Param	eters		? ×
Description	:	I would be		0.010		• ~
Reboot on Boot Ord		Uefi Boot Para	ameters			
Enforce vNIC/vHBA/						
Boot Mode	: Uefi	Boot Loader N	Name : BOOTx64.E	FI		
Boot Security WARNINGS:	: No	Boot Loader F	Path : \EFI\BOOT\			
The type (primary/sec The effective order of If <b>Enforce vNIC/vHB/</b> If it is not selected, th	boot devices within ViSCSI Name is sele	ti Boot Loader L	Description : Windows			
Boot Order						
+ - 🏹 Advance	ed Filter 🔶 Export					
Name	Orde	er			OK	
CD/DVD	1	1			ОК	Cancel
- Embedded LUN	2					
uefi-boot-par	am					
Create ISCSI vi	NIC Set ISCSI	Boot Parameters	Modify Uefi Boot Pa	arameters		
Assign the BIO	S Policy you c	reated earlier	r to the Service Pr	ofile		
iSCSI vNICs	vMedia Policy	Boot Order	Virtual Machines	FC Zones	Policies	Server Details
Policies						
	DS Policy					
	BIOS Po	licy: embedded	lun_Bios 🔻		Create Bl	OS Policy

Assign the Storage Profile you created earlier to the Service Profile

Service P	rofile em	bedde	edlun
Network	iSCSI vNICs	vMed	lia Policy
cal Disk Configur	ration Policy	vHBAs	vHBA Init
	Stor	age Profile	Policy
			:
	Des	cription	:
	Stor	rage Profile	Instance :
er Definitions	Security Poli	cy Fau	ılts
xport 📑 Print			
	Network	Network iSCSI vNICs cal Disk Configuration Policy Stor Nan Des Stor	cal Disk Configuration Policy vHBAs           Storage Profile           Name           Description           Storage Profile

UCSM view of embedded PCH controller in SWRAID mode

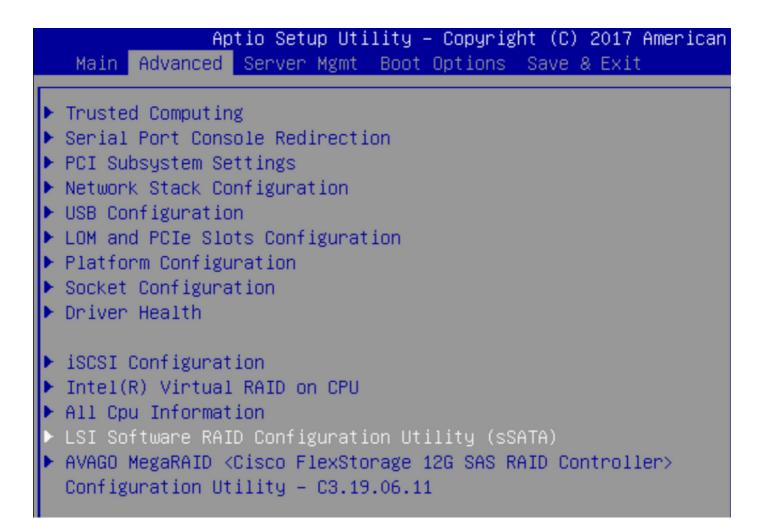
General Inventory Virtual Machines I	Installed Firmware CIMC See	ssions SELLogs VIF Paths Health I	Diagnostics Faults	Events FSM S	Statistics Temperatures I	Powe
Motherboard CIMC CPUs GPUs	Memory Adapters HB/	As NICs ISCSI vNICs Security Stor	age			
Controller LUNs Disks						
+ - Ty Advanced Filter 🛧 Export 🖶 Print						
Name	ID	Туре		Subtyp	98	
Storage Controller PCH 1	1	PCH		NA		
Storage Controller SAS 1	1	SAS		NA		
General FSM Faults Events St	tatistics					
General FSM Faults Events St Actions	itatistics	: 1	Name	: Lewisburg SSA	TA Controller [SWRAID mode]	
Actions				: Lewisburg SSA	TA Controller [SWRAID mode]	
	ID	: 1		: Lewisburg SSA	TA Controller [SWRAID mode]	
Actions Import Foreign Configuration	ID Description	: 1 : Lewisburg SSATA Controller [SWRAID mode] : Lewisburg SSATA Controller [SWRAID mode]		: N/A	TA Controller [SWRAID mode]	
Actions Import Foreign Configuration Clear Foreign Configuration	ID Description Model	: 1 : Lewisburg SSATA Controller [SWRAID mode]	PID		TA Controller [SWRAID mode]	
Actions Import Foreign Configuration Clear Foreign Configuration Clear Boot Configuration	LD Description Model Revision	: 1 : Lewisburg SSATA Controller [SWRAID mode] : Lewisburg SSATA Controller [SWRAID mode] : NA	PID	: N/A	TA Controller [SWRAID mode]	
Actions Import Foreign Configuration Clear Foreign Configuration Clear Boot Configuration Cancel Storage Operations	LD Description Model Revision Subtype	: 1 : Lewisburg SSATA Controller [SWRAID mode] : Lewisburg SSATA Controller [SWRAID mode] : NA : NA : RAID0, RAID1	PID Serial	: N/A : LSIROMB-0	TA Controller [SWRAID mode]	
Actions Import Foreign Configuration Clear Foreign Configuration Clear Boot Configuration Cancel Storage Operations Unpin Cache	LD Description Model Revision Subtype RAID Support	: 1 : Lewisburg SSATA Controller [SWRAID mode] : Lewisburg SSATA Controller [SWRAID mode] : NA : NA : RAID0, RAID1	PID Serial	: N/A : LSIROMB-0	TA Controller [SWRAID mode]	
Actions Import Foreign Configuration Clear Foreign Configuration Clear Boot Configuration Cancel Storage Operations Unpin Cache Unlock Disk	ID     Description     Model     Revision     Subtype     RAID Support     OOB Interface Support     PCIe Address	: 1 : Lewisburg SSATA Controller [SWRAID mode] : Lewisburg SSATA Controller [SWRAID mode] : NA : NA : RAID0, RAID1 tted : No : 00:17.5	PID Serial Vendor PCI Slot	: N/A : LSIROMB-0 : Intel Corp.	TA Controller [SWRAID mode]	
Actions Import Foreign Configuration Clear Foreign Configuration Clear Boot Configuration Cancel Storage Operations Unpin Cache Unlock Disk Unlock For Remote	ID     Description     Model     Revision     Subtype     RAID Support     OOB Interface Support	: 1 : Lewisburg SSATA Controller [SWRAID mode] : Lewisburg SSATA Controller [SWRAID mode] : NA : NA : RAID0, RAID1 tted : No : 00:17.5	PID Serial Vendor	: N/A : LSIROMB-0	TA Controller [SWRAID mode]	

This is the view from F2 BIOS menu

## Notice the pSATA is set to AHCI

LOM and PCIe Slots Configu	nation
Current Boot Mode SecureBoot Support	UEFI Disabled
SWRAID Configuration pSATA SATA OpROM M.2 SATA OpROM	[LSI SW RAID] [LSI SW RAID]
LOM and PCIe Slots Configuration	
<ul> <li>PCIe Slots Inventory Details</li> <li>PCIE Link Speed Configuration</li> <li>PCI OpROM Configuration</li> </ul>	

Notice the LSI Software RAID Configuration Utility (sSATA) show up



We can confirm that the Virtual Drive is set to RAID1 in BIOS

Aptio Setup Utility Virtual Drive Management >	<mark>– Copyright (C) 2017</mark> Manage Virtual Drive	
▶ Apply Changes		s
Select Virtual Drive	<pre>[Virtual Drive 0: MegaSRVD0, RAID1, 222.58GB, Optimal]</pre>	t
Virtual Drive Properties:		
Virtual Drive Name	MegaSRVD0	
Target ID	0	
RAID Level	[RAID1]	
Virtual Drive Status	[Optimal]	
Virtual Drive Capacity (MB)	227928	
Segment Size	[64 KB]	

After you map the Windows Operating System, when you reach the section to install the driver, browse the contents of the drivers folders to the location of the embedded MegaRAID drivers: Storage/Intel/C600-M5/<OS>/

$\bigcirc$	Windows Setup	×
	Select the driver to install	
	LSI Embedded MegaRAID (D:\Storage\Intel\C600-M5\W2K16\x64\MegaSR1.inf)	
	RAID Virtual Device (D:\Storage\Intel\C600-M5\W2K16\x64\nodev.inf)	
		4

#### We should be able to detect the Virtual Drive we created

#### Click "New"

🕼 Windows Setup Where do you v	vant to install Wind	dows?	
Name		Total size	Free space Type
🛹 Drive 2 Una	llocated Space	222.6 GB	222.6 GB
★ <u>R</u> efresh ▲ Load driver	<u>D</u> elete	Eormat	<mark>₩</mark> N <u>e</u> w

The disk should partition like so and allow you to install windows on the Primary partition.

Image: Drive 2 Partition 1: Recovery450.0 MEImage: Drive 2 Partition 2100.0 ME	IB 433.0 MB Recovery
Drive 2 Partition 2 100.0 ME	
	IB 95.0 MB System
Drive 2 Partition 3 16.0 ME	IB 16.0 MB MSR (Reserv
Drive 2 Partition 4 222.0 GE	iB 222.0 GB Primary

Once the OS has installed, you can verify the mapping in the Actual Boot order

General	Inventory	Virtual Machines	Installed Firmware	CIMC Sessions		VIF Paths	Health	Diagnostics	Faults
				Adapters		1			
				NICs	:	1			HBA
				Original UUID	:	2622df36-0b	af-42ba-a1	07-b04a8fd026	58
				+ Part De	tails				
					Connection	Details			
				(+) Power	Budget				
				🕞 Boot Or	rder Details	3			
				Configured	Boot Order	Actual Boot	Order		
				There may be	e a delay of a	few minutes be	fore the acti	ual boot order is u	updated.
				+ - + E	xport  🖶 Pri	nt			
				Name					
				▼ OnboardH	DDAny				
				(1) Win	dows Boot Ma	anager			
				▼ OnboardH	DDAny				
				(2) Win	dows				

Notice the parameters in Actual Boot Order are identical to parameters in Boot Options in the BIOS

Main Advanced Server Mgmt Boot Options Save & Exit

Boot Configuration Setup Prompt Timeout Bootup NumLock State

SecureBoot Support Boot Mode CDN Support for VIC

Boot Option Priorities Boot Option #1 Boot Option #2 Boot Option #3 [On] Disabled

3

[UEFI Mode] [Disabled]

[Windows Boot Manager] [Windows] [UEFI: Built-in EFI Shell]

#### Clean up

If you want to install a different OS or want to shift the controller to AHCI mode, then you would need to scrub the disks.

In order to do so, apply a scrub policy to your Service Profile with Disk Scrub set to yes, then disassociate the Service Profile for srub to take effect.

Actions	Properties	
Delete	Name	diskscrub
Show Policy Usage	Description	
Use Global	Owner	Local
	Disk Scrub	No • Yes
	BIOS Settings Scrub	● No ◯ Yes
	FlexFlash Scrub	● No ○ Yes

After the Service Profile has been disassociated, the drive state should move to Unconfigured Good.

General	Inventory	Virtual	Machines	Installe	ed Firmware	CIMC Sessions	SEL Lo	gs VIF	Paths	Health	Diagnos	tics	Fau
Motherboard	CIMC	CPUs	GPUs	Memory	y Adapters	HBAs NI	Cs iSC	SI vNICs	Security	Stora	age		
Controller L	UNs Di	isks											
+ - 🍢 Adv	vanced Filter	♠ Expo	ort 🖷 Print										Ķ
	vanced Filter Size (MB		ort 🖶 Print Serial		Operability	Drive State		Presence	Т	[echnology	y Bo	ootable	¢
	Size (MB		-		Operability	Drive State		Presence	Т	[echnology	y Bo	ootable	\$
Name	Size (MB		-	C	Dperability Dperable	Drive State	ood	Presence		Fechnology SSD		ootable	¢

The M.2 SSD's can only be scrubbed in SWRAID mode and not in AHCI.

# Verify

There is currently no verification procedure available for this configuration.

# Troubleshoot

There is currently no specific troubleshooting information available for this configuration