

1. Document Information

Project Name:	Expand SSD HPE DL380 Gen9	Document Version No:	1.0
Customer:	PT. Mako Anugerah Kreasindo	Document Version Date:	April 2024
End User:	-	Preparation Date:	-
Opportunity Roadmap Phase:	-	Review Date:	-
Quality Review Method:	Team Review		
Prepared By:	Dandy Bagus Prasetyo		
Reviewed By:	Team Review		

Distribution List

From	Date	Phone/Fax
Dandy Bagus Prasetyo		62896 2586 1210
Ramdhan Kukuh P		-

To	Action*	Due Date	Phone/Fax
Tech Team	Share & Review		
Customer Team	Share & Review		

* Action Types: Approve, Review, Inform, File, Action Required, Attend Meeting, Other (please specify)

Version History

Ver. No.	Ver. Date	Revised By	Description	Filename
1.0		Dandy Bagus Prasetyo	Report Preparation and Procedure	

2. Table of Content

1. Document Information	1
2. Table of Content	2
3. Preparation	3
3.1 System Summary	3
3.2 Purpose	3
4. Plan and Procedures	4
4.1 Requirement	4
4.2 Procedure	4
4.3 Before Installation Activity	7
4.3.1 ILO Capture Before	7
4.3.2 Smart Storage Administration Existing Before	9
4.3.3 Physical Capture Before	10
4.4 After Installation Activity	11
4.4.1 ILO Capture After	11
4.4.2 Smart Storage Administration After Expand	13
4.4.3 Physical Capture After	14
5. Assessment Summary	15
5.1 Analys Result	15
5.2 References	15
6. Approval	16
7. Acceptance	16

3. Preparation

3.1 System Summary

No	Brand	Model	Serial Number	Location	Notes
1	HPE	ProLiant DL380 Gen9	SGH511YTYX	Ruko Intercon Plaza Blok A. No. 10, 11, 12, 12a dan blok F no. 25	

3.2 Purpose

1. Expand SSD and RAID Configuration.
2. Mounting Logical Volume on Windows 2012 OS.

No	Server	Existing	Target
1	ProLiant DL380 Gen9	4 x 300 GB HDD	Expand SSD 12 x 1.9 TB

4. Plan and Procedures

This activity requires around 3 to 4 hours of downtime.

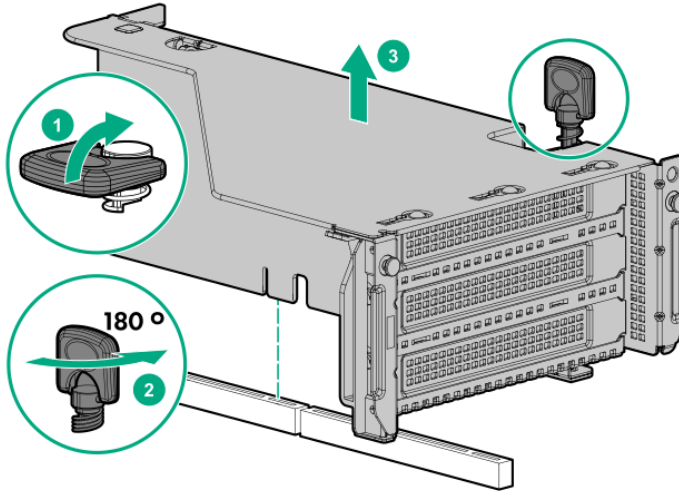
4.1 Requirement

No	Item	Part Number	Description	Qty	Price
1	HP 12G DL380 G9 SAS Expander Card	727253-001 / 761879-001		1	
2	HP MINI SAS CABLE EXPANDER PORT 1	776409-001 / 839759-001		1	
3	HP MINI SAS CABLE EXPANDER PORT 2	776408-001 / 839760-001		1	
4	Mini-SAS cable kit for PCI-e MID DRIVE BACKPLANE TO EXPANDER	784629-001 / 747576-001		1	
5	HP DL380 G9 HDD BACKPLANE POWER CABLE	784624-001		1	
6	8-bay SATA/SAS backplane with Metal Cage small form factor (SFF) hard drive	779086-001 / 777279-001		1	
7	HP G8-G10 1.92-TB 2.5 SAS 12G RI SSD	872392-B21 / P36999-B21		12	
8	SPS-PCA dl380 gen9 3-S x8 PCI-E Riser	777283-001		1	
9	Services		2 man/days	2	

4.2 Procedure

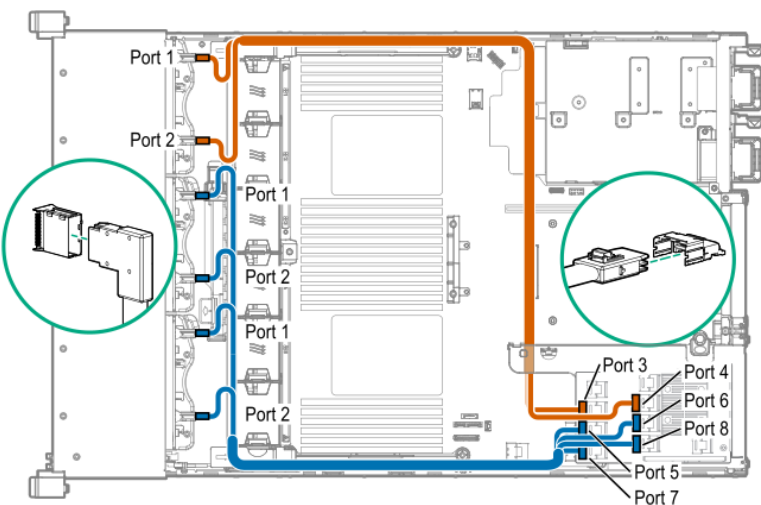
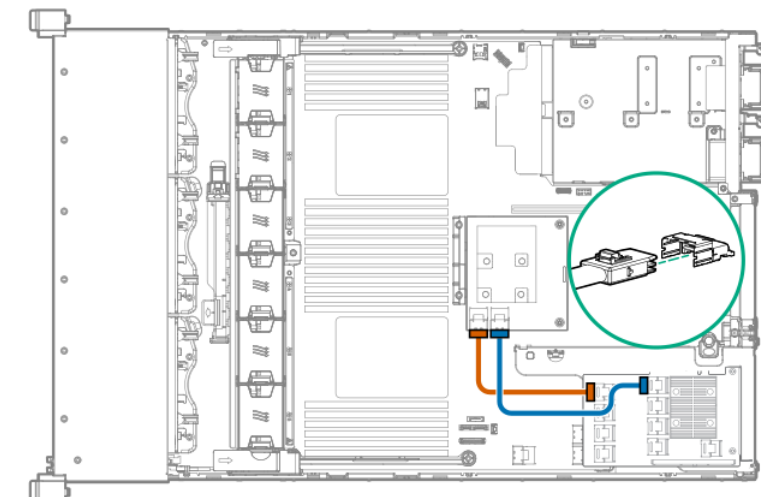
1. Test Restart server and all service application.
2. Re-check existing RAID configuration from Intelligent Provisioning > Smart Storage Administration.
3. Re-test Restart server and all service application.
4. Shutdown the server.
5. Unplugged all cable connection.

6. Unmounting server from rack and uninstall required component.

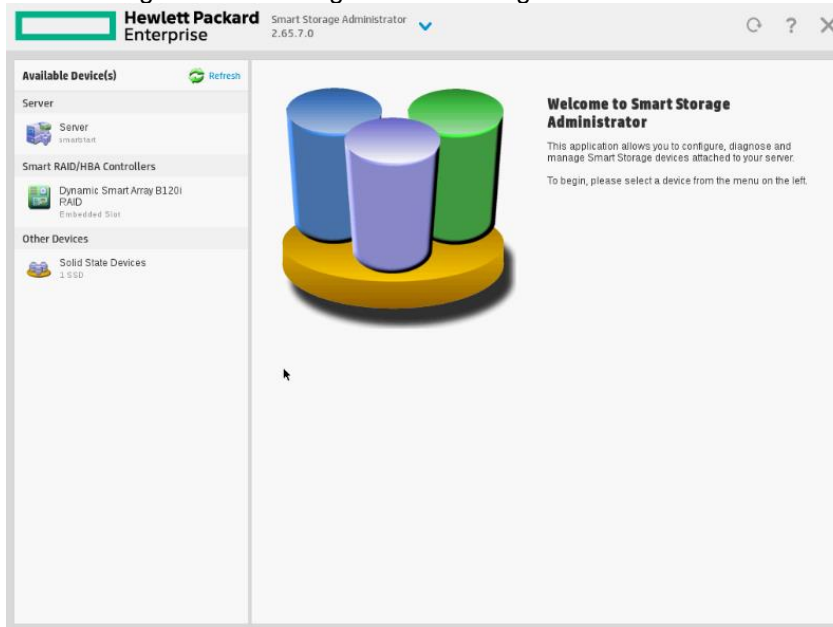


7. Install PCI-Riser and Drive Backplane with Metal cage.

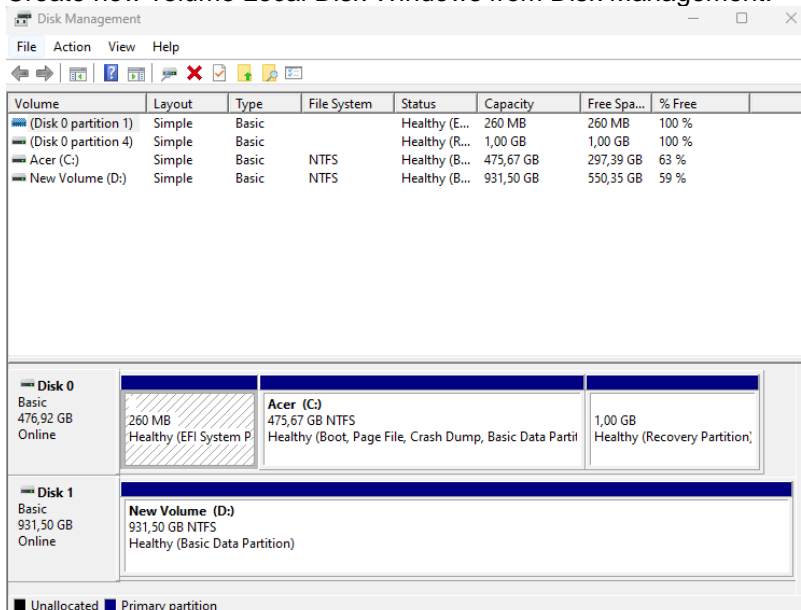
8. Install Expander card and Cabling SAS.



9. Mounting to rack and plugged-in all cable connection.
10. Power ON the server.
11. Enter Intelligent Provisioning > Smart Storage Administration.



12. Insert all SSD to server.
13. Refresh Intelligent Provisioning > Smart Storage Administration.
14. Create new Logical RAID.
15. Restart server and boot to Windows 2012 OS.
16. Create new volume Local Disk Windows from Disk Management.

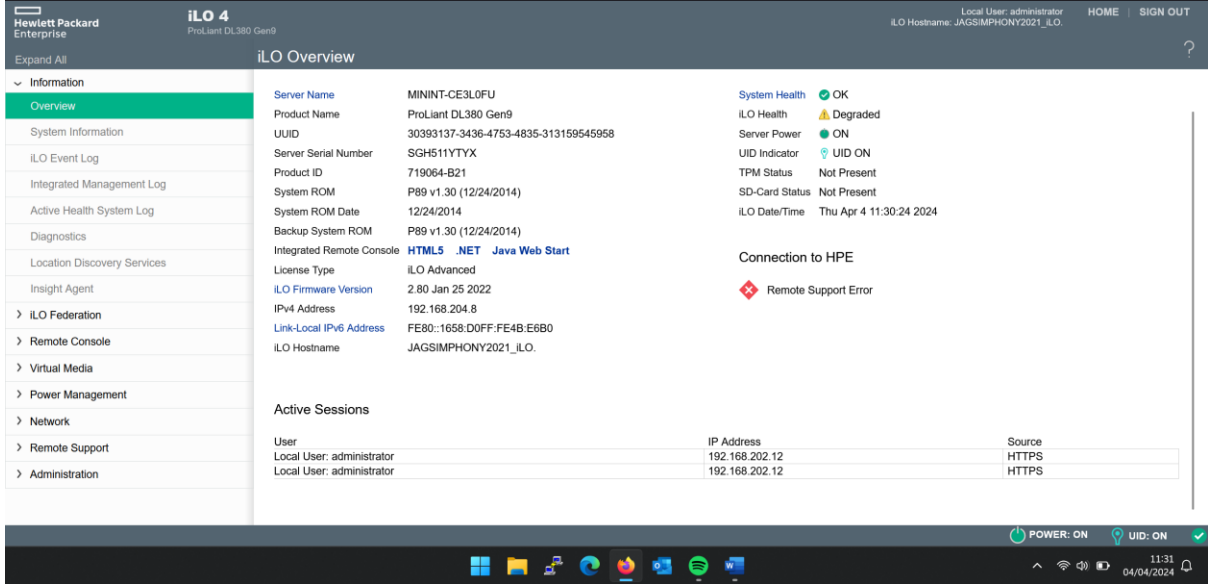


17. User check OS and service application.
18. Done.

4.3 Before Installation Activity

This section content is capture before we do the installation to expand SSD drive activity.

4.3.1 ILO Capture Before



iLO 4 Overview

Local User: administrator
iLO Hostname: JAGSIMPHONY2021_ILO

Expand All

- Information
 - Overview**
 - System Information
 - iLO Event Log
 - Integrated Management Log
 - Active Health System Log
 - Diagnostics
 - Location Discovery Services
 - Insight Agent
 - iLO Federation
 - Remote Console
 - Virtual Media
 - Power Management
 - Network
 - Remote Support
 - Administration

Server Name MININT-CE3LOFU

Product Name ProLiant DL380 Gen9

UUID 30393137-3436-4753-4835-313159545958

Server Serial Number SGH511YTYX

Product ID 719064-B21

System ROM P89 v1.30 (12/24/2014)

System ROM Date 12/24/2014

Backup System ROM P89 v1.30 (12/24/2014)

Integrated Remote Console [HTML5](#) [.NET](#) [Java Web Start](#)

License Type iLO Advanced

iLO Firmware Version 2.80 Jan 25 2022

IPV4 Address 192.168.204.8

Link-Local IPv6 Address FE80::1658:D0FF:FE4B:E6B0

iLO Hostname JAGSIMPHONY2021_ILO.

System Health OK

iLO Health Degraded

Server Power ON

UID Indicator UID ON

TPM Status Not Present

SD-Card Status Not Present

iLO Date/Time Thu Apr 4 11:30:24 2024

Connection to HPE

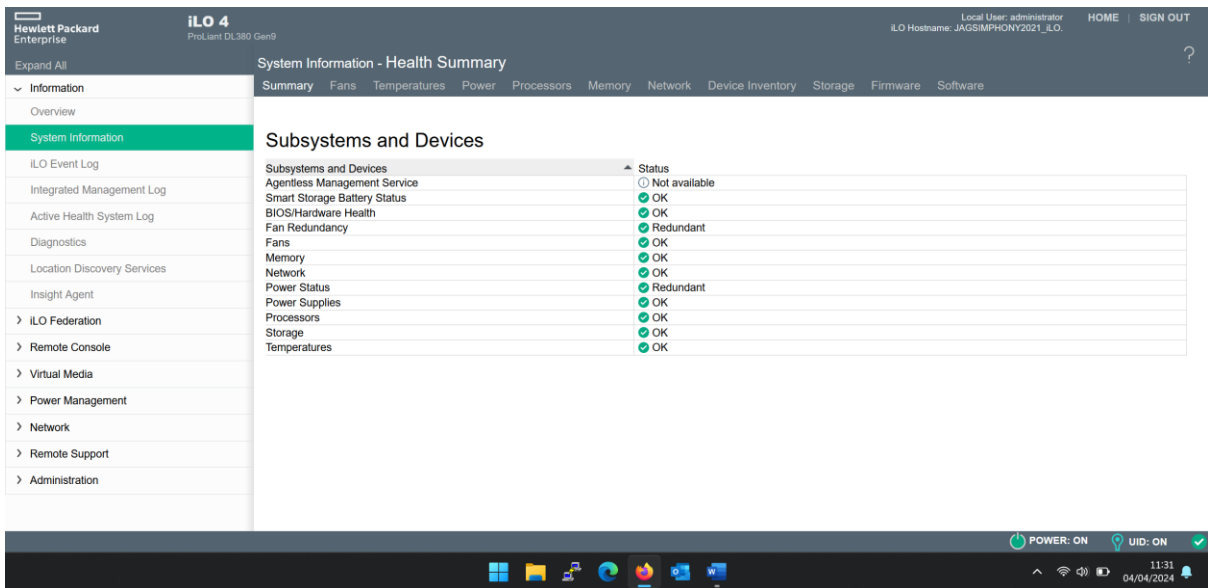
✖ Remote Support Error

Active Sessions

User	IP Address	Source
Local User: administrator	192.168.202.12	HTTPS
Local User: administrator	192.168.202.12	HTTPS

POWER: ON UID: ON

11:31 04/04/2024



iLO 4 System Information - Health Summary

Local User: administrator
iLO Hostname: JAGSIMPHONY2021_ILO

Expand All

- Information
 - Overview
 - System Information**
 - iLO Event Log
 - Integrated Management Log
 - Active Health System Log
 - Diagnostics
 - Location Discovery Services
 - Insight Agent
 - iLO Federation
 - Remote Console
 - Virtual Media
 - Power Management
 - Network
 - Remote Support
 - Administration

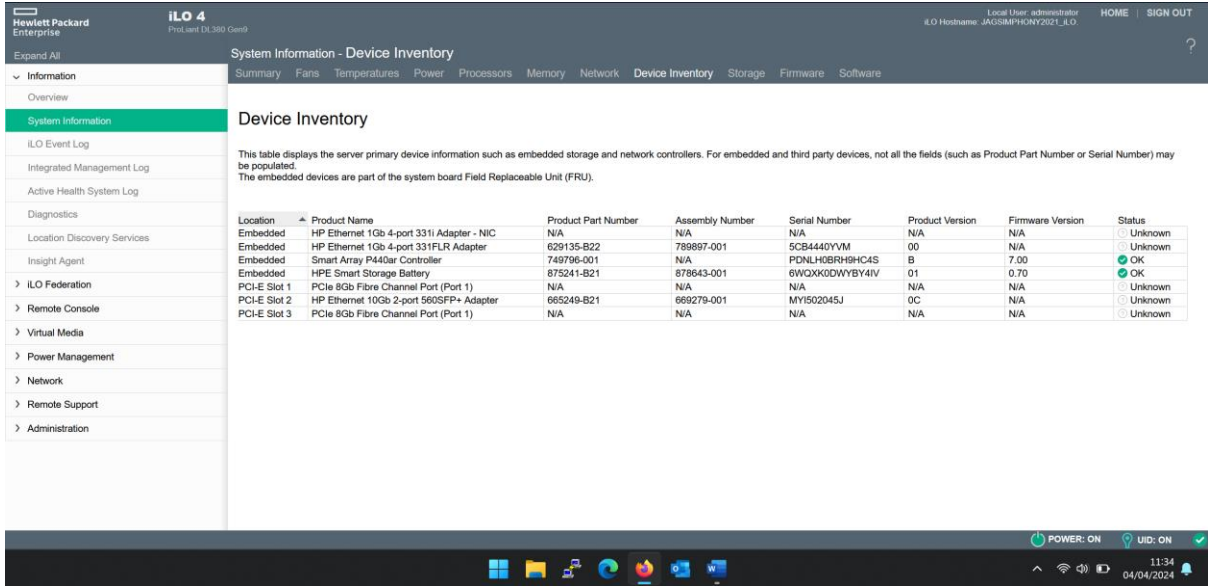
Summary Fans Temperatures Power Processors Memory Network Device Inventory Storage Firmware Software

Subsystems and Devices

Subsystems and Devices	Status
Agentless Management Service	Not available
Smart Storage Battery Status	OK
BIOS/Hardware Health	OK
Fan Redundancy	Redundant
Fans	OK
Memory	OK
Network	OK
Power Status	Redundant
Power Supplies	OK
Processors	OK
Storage	OK
Temperatures	OK

POWER: ON UID: ON

11:31 04/04/2024



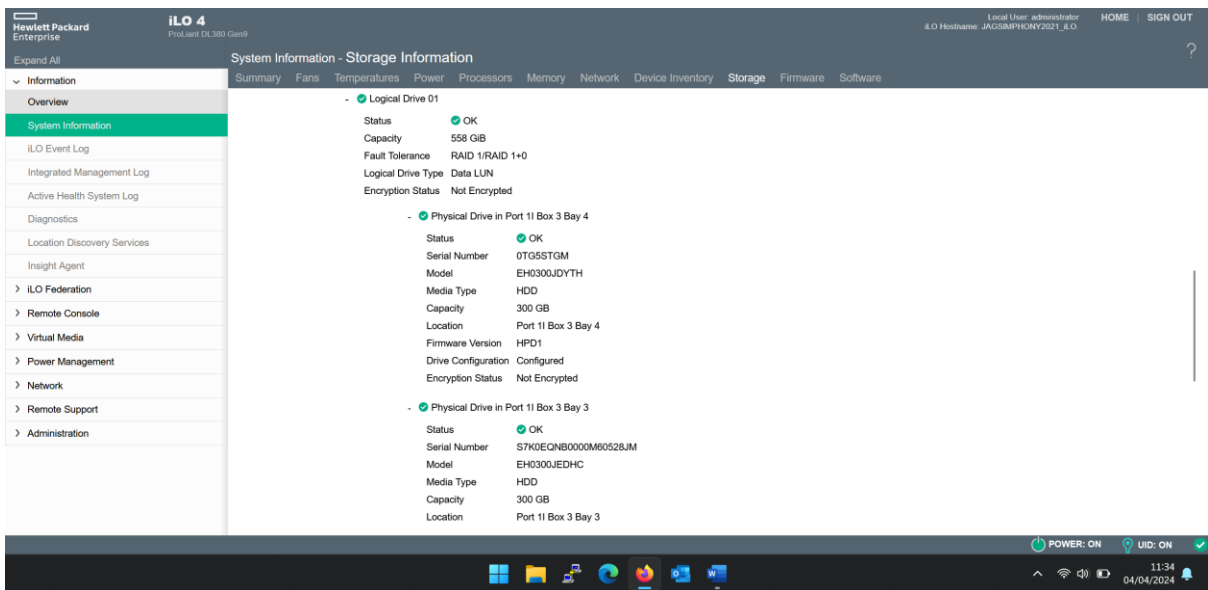
System Information - Device Inventory

Summary Fans Temperatures Power Processors Memory Network **Device Inventory** Storage Firmware Software

Device Inventory

This table displays the server primary device information such as embedded storage and network controllers. For embedded and third party devices, not all the fields (such as Product Part Number or Serial Number) may be populated.
The embedded devices are part of the system board Field Replaceable Unit (FRU).

Location	Product Name	Product Part Number	Assembly Number	Serial Number	Product Version	Firmware Version	Status
Embedded	HP Ethernet 1Gb 4-port 331i Adapter - NIC	N/A	N/A	N/A	N/A	N/A	Unknown
Embedded	HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B22	799897-001	5CB444DYVM	00	N/A	Unknown
Embedded	Smart Array P440ar Controller	749796-001	N/A	PDNLH0BRH9HC4S	B	7.00	OK
Embedded	HPE Smart Storage Battery	875241-B21	878643-001	6WQXK0DWYBY4IV	01	0.70	OK
PCI-E Slot 1	PCIe 8Gb Fibre Channel Port (Port 1)	N/A	N/A	N/A	N/A	N/A	Unknown
PCI-E Slot 2	HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21	669279-001	MY1502045J	0C	N/A	Unknown
PCI-E Slot 3	PCIe 8Gb Fibre Channel Port (Port 1)	N/A	N/A	N/A	N/A	N/A	Unknown



System Information - Storage Information

Summary Fans Temperatures Power Processors Memory Network Device Inventory **Storage** Firmware Software

Logical Drive 01

- Status: OK
- Capacity: 558 GiB
- Fault Tolerance: RAID 1/RAID 1+0
- Logical Drive Type: Data LUN
- Encryption Status: Not Encrypted

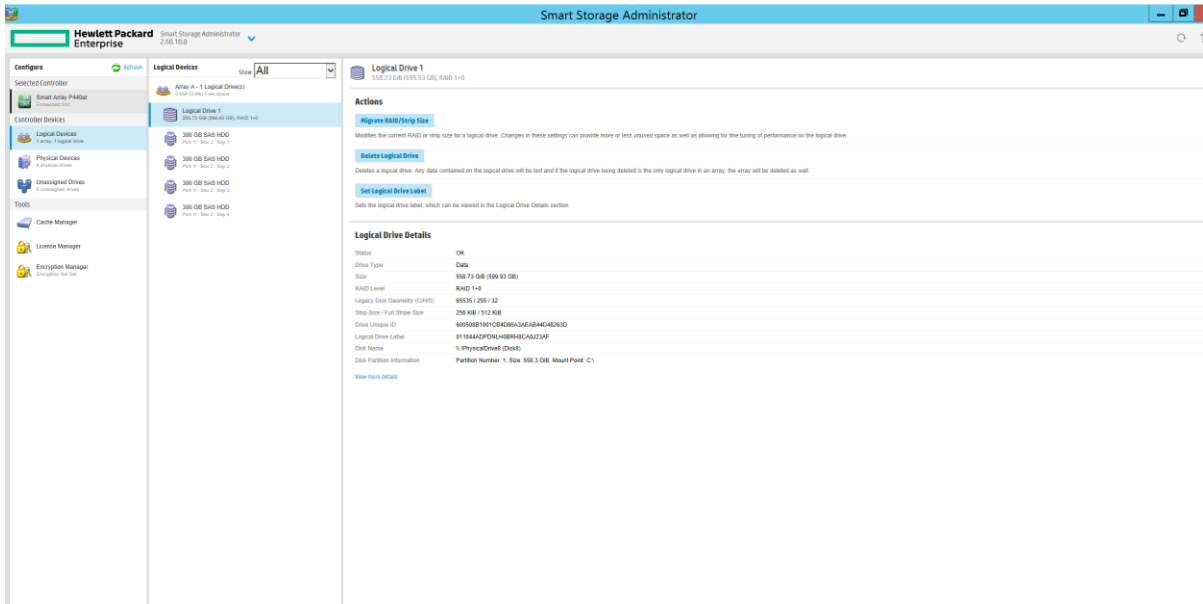
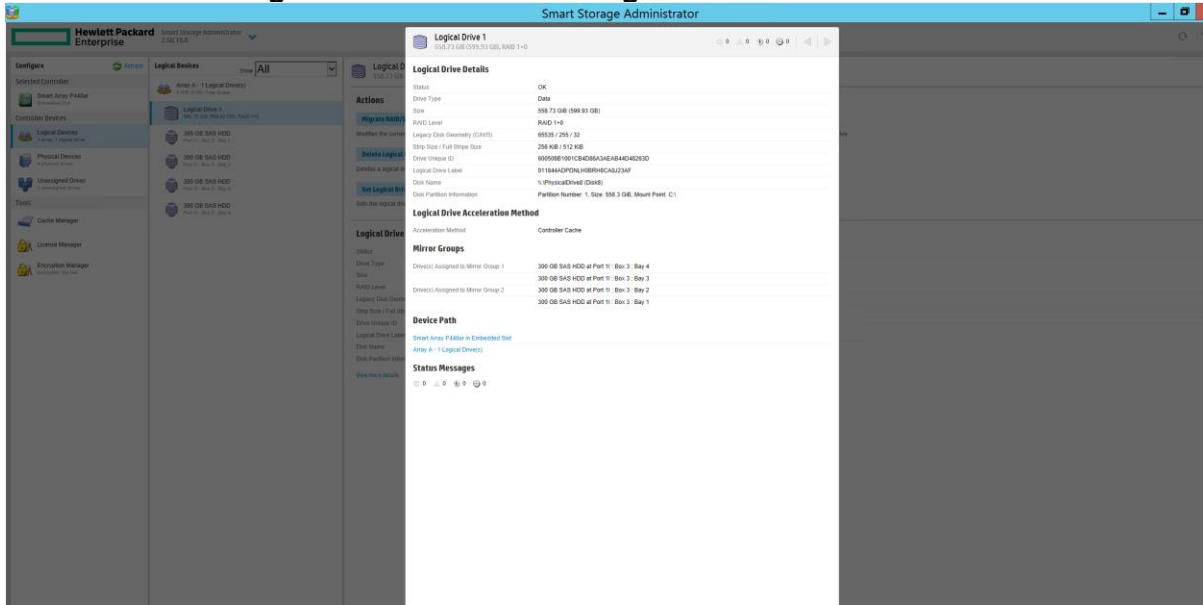
Physical Drive in Port 11 Box 3 Bay 4

- Status: OK
- Serial Number: 0TG5SSTM
- Model: EH0300JDYTH
- Media Type: HDD
- Capacity: 300 GB
- Location: Port 11 Box 3 Bay 4
- Firmware Version: HPD1
- Drive Configuration: Configured
- Encryption Status: Not Encrypted

Physical Drive in Port 11 Box 3 Bay 3

- Status: OK
- Serial Number: S7K0EQNB0000M60528JM
- Model: EH0300JEDHC
- Media Type: HDD
- Capacity: 300 GB
- Location: Port 11 Box 3 Bay 3

4.3.2 Smart Storage Administration Existing Before



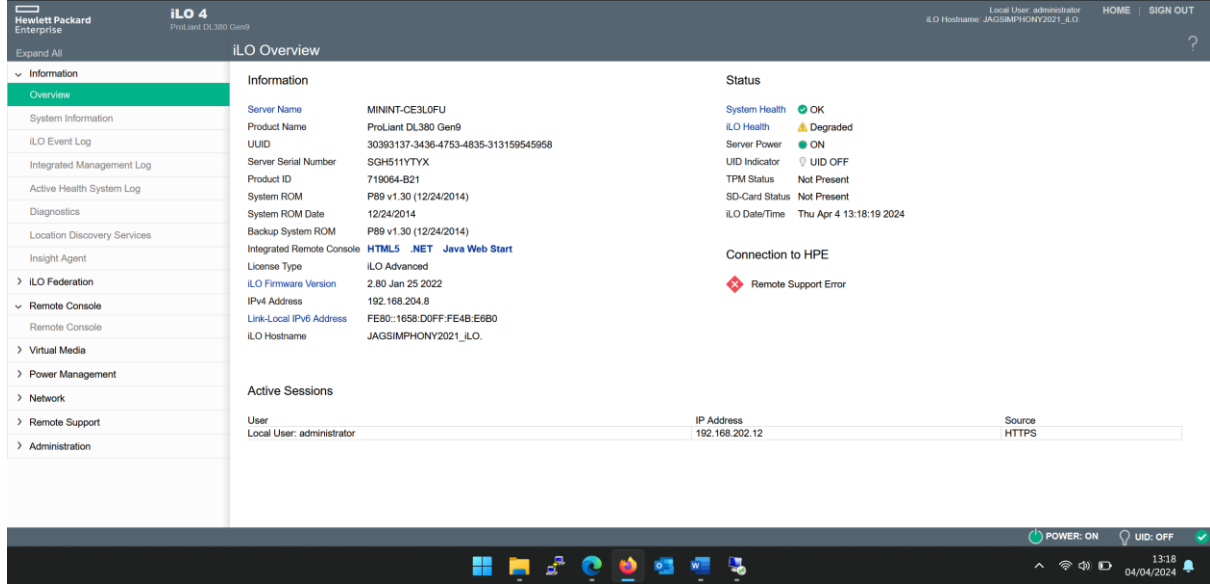
4.3.3 Physical Capture Before



4.4 After Installation Activity

This section content is capture after we do the installation to expand SSD drive activity.

4.4.1 ILO Capture After



iLO Overview

Local User: administrator
iLO Hostname: JAGSIMPHONY2021_ILO

Expand All

Information

Overview

System Information

iLO Event Log

Integrated Management Log

Active Health System Log

Diagnostics

Location Discovery Services

Insight Agent

iLO Federation

Remote Console

Virtual Media

Power Management

Network

Remote Support

Administration

Information

Server Name: MININT-CE3LDFU
Product Name: ProLiant DL380 Gen9
UUID: 30393137-3436-4753-4835-313159545958
Server Serial Number: SGH511TYX
Product ID: 719064-B21
System ROM: P89 v1.30 (12/24/2014)
System ROM Date: 12/24/2014
Backup System ROM: P89 v1.30 (12/24/2014)
Integrated Remote Console: [HTML5](#) [.NET](#) [Java Web Start](#)
License Type: iLO Advanced
iLO Firmware Version: 2.80 Jan 25 2022
IPMI Address: 192.168.204.8
Link-Local IPv6 Address: FE80::1658:D0FF:FE4B:E680
iLO Hostname: JAGSIMPHONY2021_ILO

Status

System Health: OK
iLO Health: Degraded
Server Power: ON
UID Indicator: UID OFF
TPM Status: Not Present
SD-Card Status: Not Present
iLO Date/Time: Thu Apr 4 13:18:19 2024

Connection to HPE

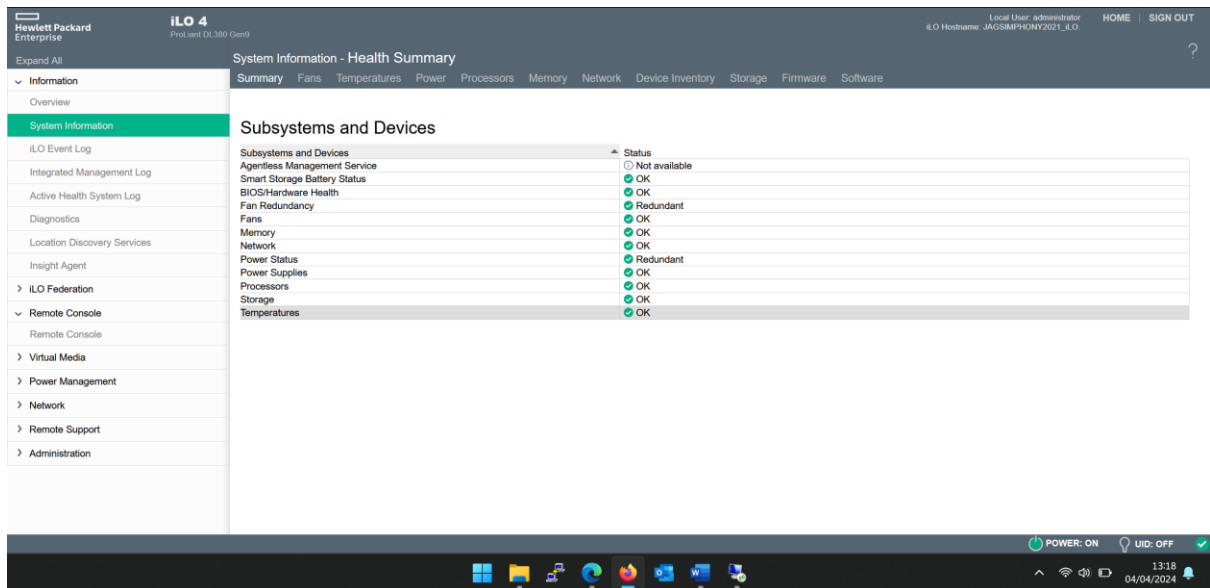
Remote Support Error

Active Sessions

User	IP Address	Source
Local User: administrator	192.168.202.12	HTTPS

POWER: ON UID: OFF

13:18 04/04/2024



System Information - Health Summary

Local User: administrator
iLO Hostname: JAGSIMPHONY2021_ILO

Expand All

Information

System Information

iLO Event Log

Integrated Management Log

Active Health System Log

Diagnostics

Location Discovery Services

Insight Agent

iLO Federation

Remote Console

Virtual Media

Power Management

Network

Remote Support

Administration

Summary Fans Temperatures Power Processors Memory Network Device Inventory Storage Firmware Software

Subsystems and Devices

Subsystems and Devices	Status
Agentless Management Service	Not available
Smart Storage Battery Status	OK
BIOS/Hardware Health	OK
Fan Redundancy	Redundant
Fans	OK
Memory	OK
Network	OK
Power Status	Redundant
Power Supplies	OK
Processors	OK
Storage	OK
Temperatures	OK

POWER: ON UID: OFF

13:18 04/04/2024

iLO 4
ProLiant DL380 Gen9

Local User: administrator
iLO Hostname: JAGSIMPHONY2021_ILO

HOME | SIGN OUT

System Information - Device Inventory

Summary Fans Temperatures Power Processors Memory Network Device Inventory Storage Firmware Software

Device Inventory

This table displays the server primary device information such as embedded storage and network controllers. For embedded and third party devices, not all the fields (such as Product Part Number or Serial Number) may be populated.
The embedded devices are part of the system board Field Replaceable Unit (FRU).

Location	Product Name	Product Part Number	Assembly Number	Serial Number	Product Version	Firmware Version	Status
Embedded	HP Ethernet 1Gb 4-port 331i Adapter - NIC	N/A	N/A	N/A	N/A	N/A	Unknown
Embedded	HP Ethernet 1Gb 4-port 331FLR Adapter	629135-B22	789897-001	SC84440YVM	00	N/A	Unknown
Embedded	Smart Array P440ar Controller	749796-001	N/A	PDNLH0BRH9HC4S	B	7.00	OK
Embedded	HPE Smart Storage Battery	875241-B21	878843-001	6WQXK0DWBY4IV	01	0.70	OK
PCI-E Slot 1	HP 12G SAS Expander Card	727250-B21	781879-001	PDNRB0DRC360KS	G9	N/A	Unknown
PCI-E Slot 2	HP Ethernet 10Gb 2-port 560SFP+ Adapter	665249-B21	669279-001	MY1502045J	0C	N/A	Unknown
PCI-E Slot 3	PCIe 8Gb Fibre Channel Port (Port 1)	N/A	N/A	N/A	N/A	N/A	Unknown
PCI-E Slot 4	Empty slot 4	N/A	N/A	N/A	N/A	N/A	Not installed
PCI-E Slot 5	PCIe 8Gb Fibre Channel Port (Port 1)	N/A	N/A	N/A	N/A	N/A	Unknown
PCI-E Slot 6	Empty slot 6	N/A	N/A	N/A	N/A	N/A	Not installed

POWER: ON UID: OFF

13:20 04/04/2024

iLO 4
ProLiant DL380 Gen9

Local User: administrator
iLO Hostname: JAGSIMPHONY2021_ILO

HOME | SIGN OUT

System Information - Storage Information

Summary Fans Temperatures Power Processors Memory Network Device Inventory Storage Firmware Software

Controller on System Board

Logical View Physical View

Controller Status: OK

Serial Number: PDNLH0BRH9HC4S

Model: Smart Array P440ar Controller

Firmware Version: 7.00

Controller Type: HPE Smart Array

Cache Module Status: OK

Cache Module Serial Number: PDNLH0BRH9HC4S

Cache Module Memory: 2097152 KB

Encryption Status: Not Enabled

Encryption ASIC Status: OK

Encryption Critical Security Parameter NVRAM Status: OK

Drive Enclosure Port 11 Box 1

Status: OK

Drive Bays: 28

Serial Number: PDNRB0DRC360KS

Model Number: 12G

Firmware Version: 5.10

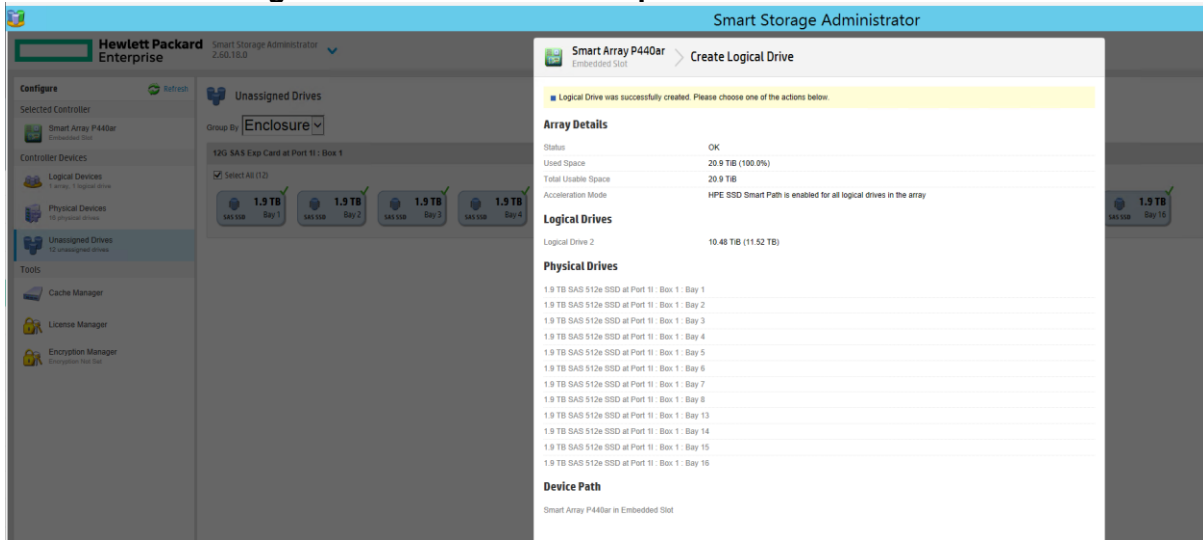
Physical Drive in Port 11 Box 1 Bay 1

Status: OK

POWER: ON UID: OFF

13:21 04/04/2024

4.4.2 Smart Storage Administration After Expand



Smart Storage Administrator

Smart Array P440ar Embedded Slot

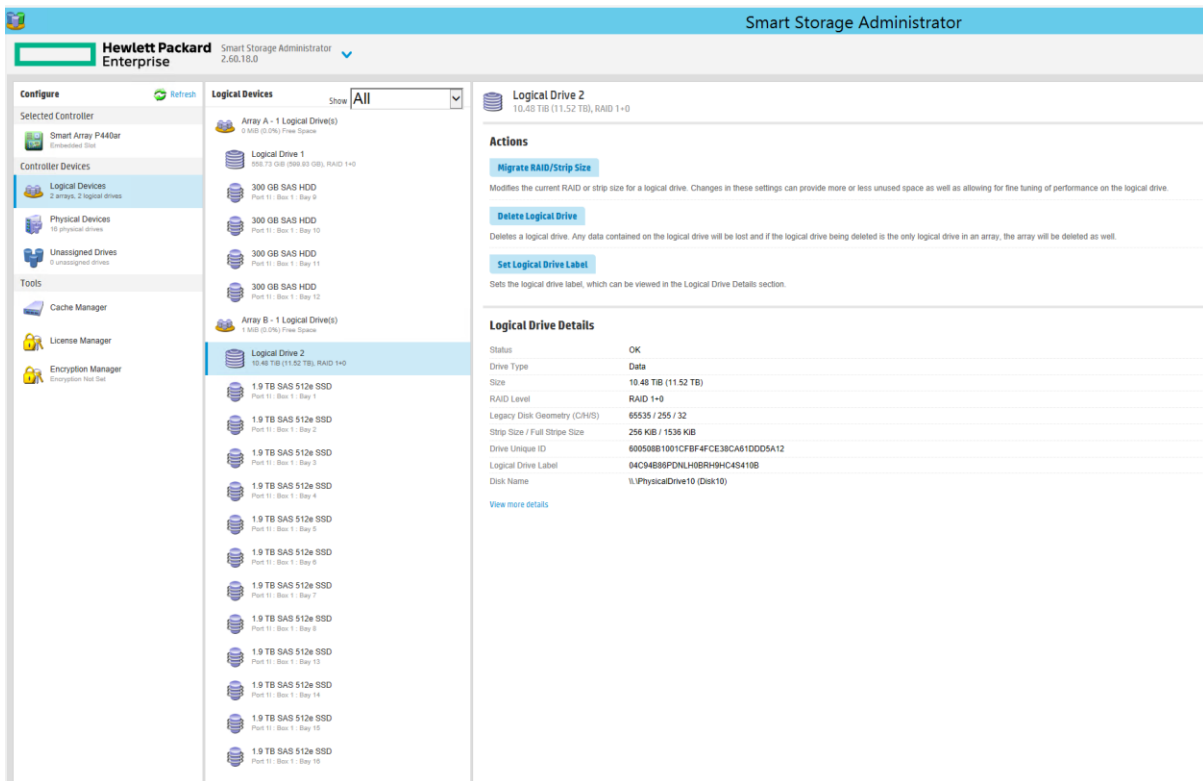
Logical Drive was successfully created. Please choose one of the actions below:

Array Details	
Status	OK
Used Space	20.9 TB (100.0%)
Total Usable Space	20.9 TB
Acceleration Mode	HPE SSD Smart Path is enabled for all logical drives in the array

Logical Drives	
Logical Drive 2	10.48 TB (11.52 TB)

Physical Drives	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 1	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 2	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 3	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 4	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 5	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 6	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 7	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 8	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 9	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 10	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 11	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 12	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 13	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 14	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 15	
1.9 TB SAS 512e SSD at Port 11: Box 1: Bay 16	

Device Path
Smart Array P440ar in Embedded Slot



Smart Storage Administrator

Logical Drive 2
10.48 TB (11.52 TB), RAID 1+0

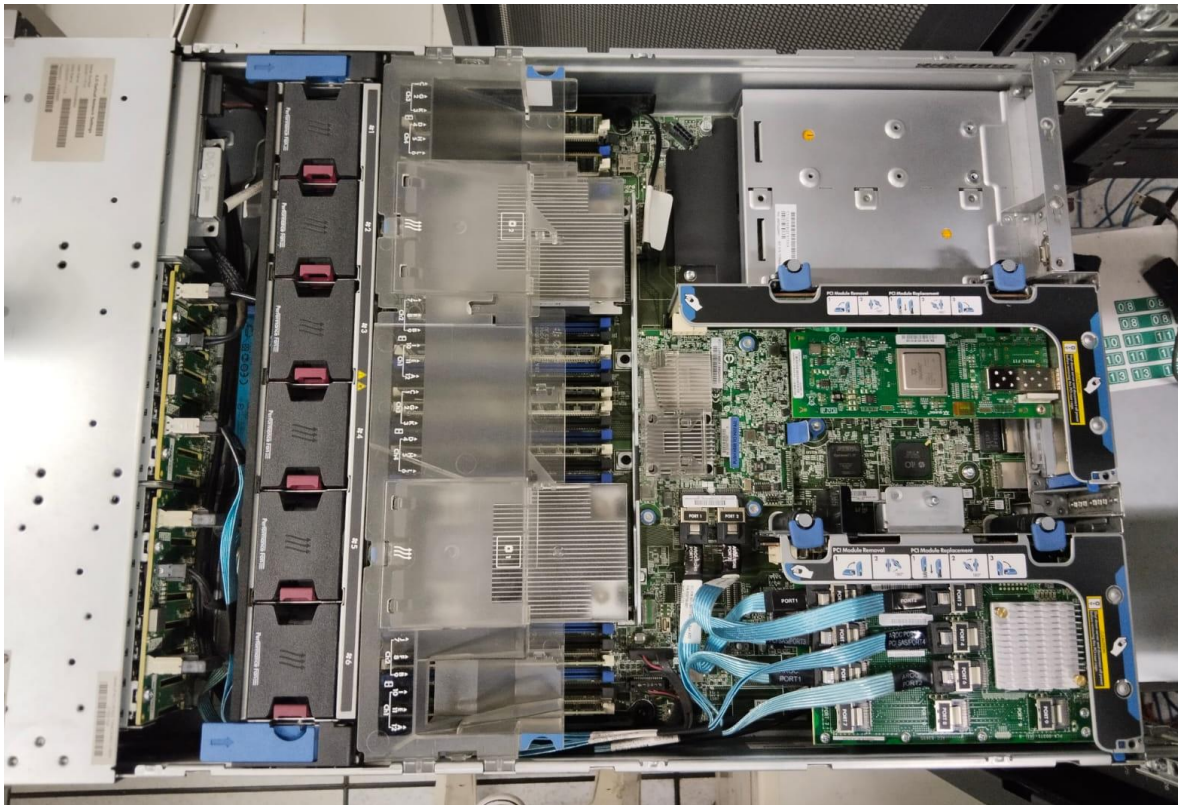
Actions

- [Migrate RAID/Strip Size](#)
Modifies the current RAID or strip size for a logical drive. Changes in these settings can provide more or less unused space as well as allowing for fine tuning of performance on the logical drive.
- [Delete Logical Drive](#)
Deletes a logical drive. Any data contained on the logical drive will be lost and if the logical drive being deleted is the only logical drive in an array, the array will be deleted as well.
- [Set Logical Drive Label](#)
Sets the logical drive label, which can be viewed in the Logical Drive Details section.

Logical Drive Details	
Status	OK
Drive Type	Data
Size	10.48 TB (11.52 TB)
RAID Level	RAID 1+0
Legacy Disk Geometry (CHS)	65535 / 255 / 32
Strip Size / Full Stripe Size	256 KB / 1536 KB
Drive Unique ID	605568B1001C78F4FCE38CA81DD05A12
Logical Drive Label	04C94885FDNLH06RHWHC4S410B
Disk Name	\\.\PhysicalDrive10 (Disk10)

[View more details](#)

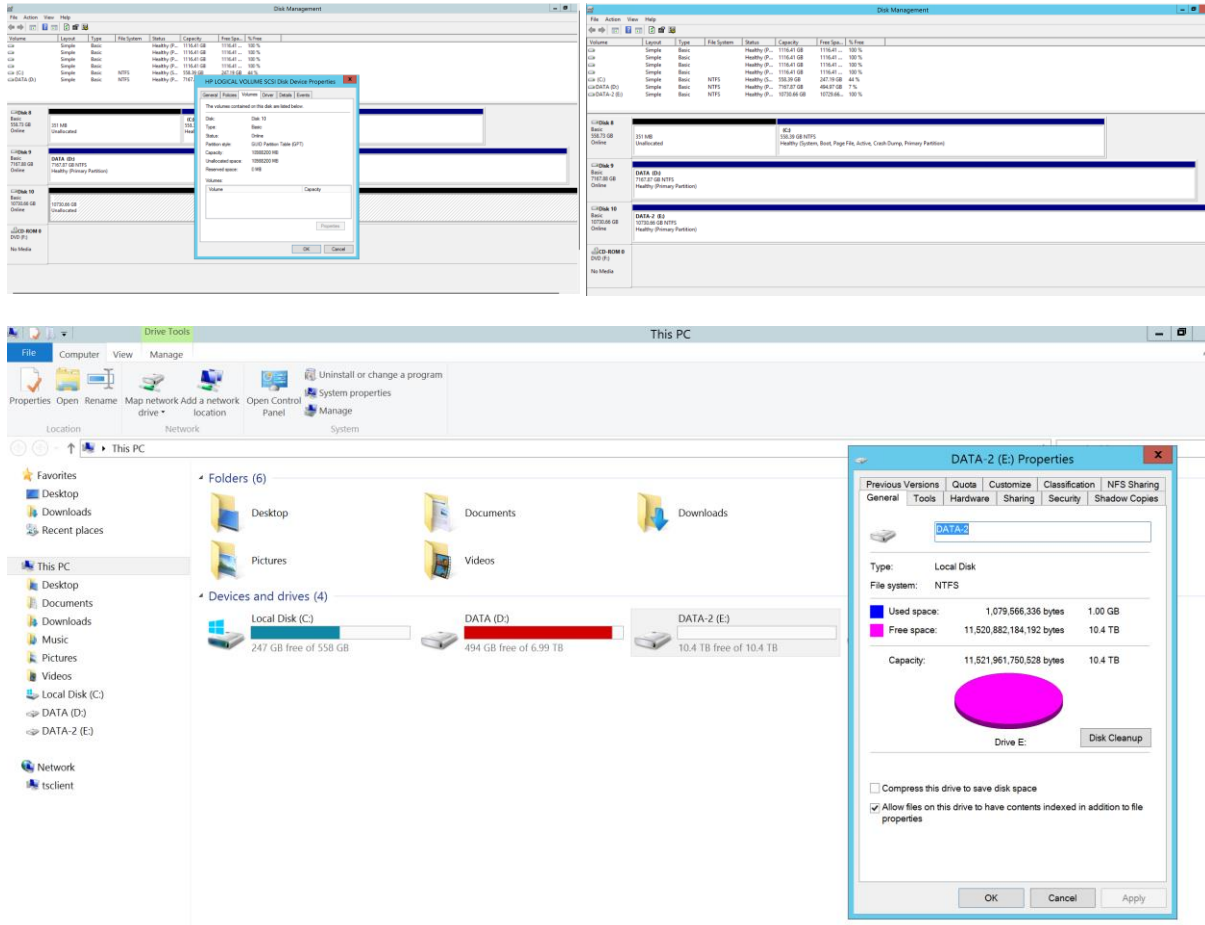
4.4.3 Physical Capture After



5. Assessment Summary

5.1 Analys Result

From the results of this report, it is stated that the activities to expand the SSD have been successfully carried out without any problems from the OS and application side, this has been confirmed by the IT team and users who have signed the Service Report and Delivery Order.



5.2 References

https://techlibrary.hpe.com/docs/iss/DL380_Gen10/setup_install/GUID-41BE8B1D-FCBB-4F35-BFFA-BAC8A6B3B5F1.html

https://techlibrary.hpe.com/docs/iss/DL380_Gen10/setup_install/GUID-C42E3178-9C64-49C8-9ABD-83A80164A6FF.html

6. Approval

The section is for the formal approval of Technical Team.

Name: Dandy Bagus Prasetyo
Title: Technical Engineer
Date:
Signature:

Name: Bernard Indiarko
Title: Technical Specialist
Date:
Signature:

Name: Ramadhan Kukuh P
Title: Technical Engineer
Date:
Signature:

Name: Erwin Pratama
Title: Service Delivery Manager
Date:
Signature:

7. Acceptance

The section is for the formal approval of User or Customer.

Name:
Title:
Date:
Signature:

Name:
Title:
Date:
Signature:

Name:
Title:
Date:
Signature:

Name:
Title:
Date:
Signature: