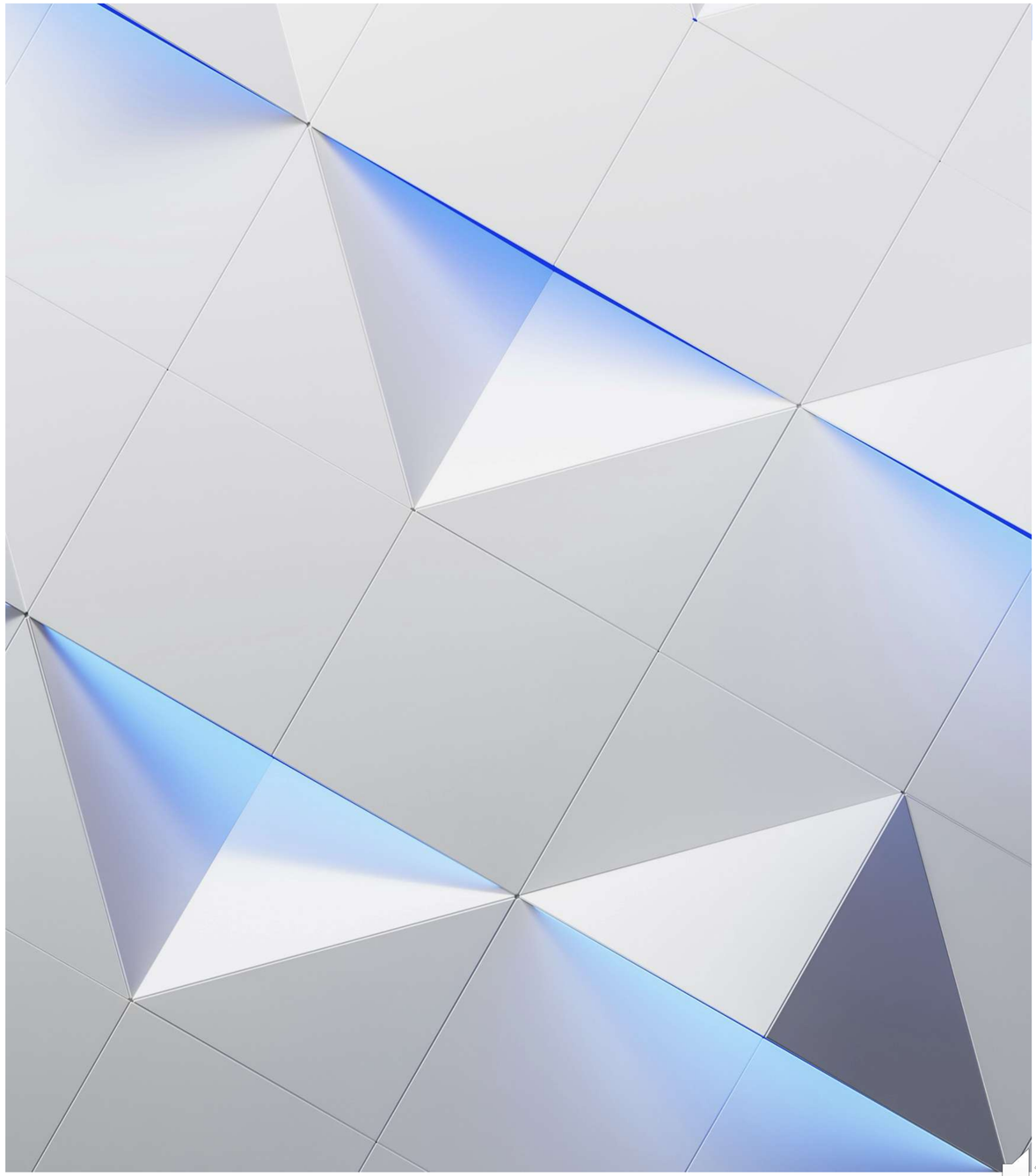
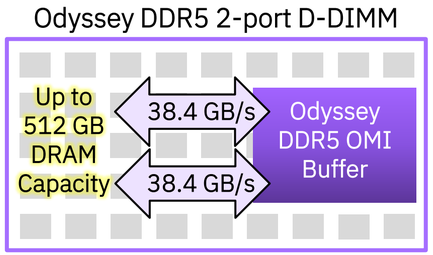
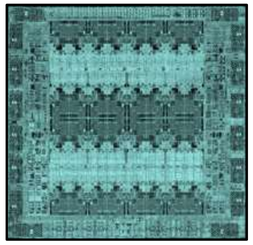
Power 11 HW Announcements



Fabian Michel
Senior Power & Storage Technical Specialist

Ludovic Gasc
Open Source and AI Solutions Architect

IBM Power11: Full stack innovation and optimization

AI Acceleration		MMA IBM Spyre Accelerator Optimized for Inference
Platform Capabilities		Uptime, Energy Management, Quantum-safe security
Memory Architecture Energy / Thermal Infrastructure		Agnostic, 3x Pipes, 2x Capacity Advanced Cooling Technology
Processor Architecture Socket-level Packaging Semiconductor Technology		Improved Thread, Core, Capacity 2.5D Stacking: Energy Optimization Samsung Foundries Enhanced 7nm

Power11 Portfolio and Innovation

An Edge to Cloud platform with core innovation by design

New Energy Efficient operating mode that optimizes power consumption without compromising SLAs

New 2.5D Integrated Stacked Capacitor and innovative thermal technologies to optimize power consumption

Improved performance through workload isolation with Resource Groups

Next-generation memory with 3X DDR bandwidth delivers performance to larger, memory-intensive applications

New off-chip AI acceleration based on IBM Spyre planned for 4Q25

Edge	Core				Cloud
					
P11 1-socket coming soon	S1122 & L1122	S1124 & L1124	E1150	E1180	PowerVS

Power11 availability on Day-1[1]

[1] Day 1 availability is planned for the United States and Spain only.

Power11 Value Drivers

High Level Capability	Feature	Power10 Capability	Power11 Capability	Notes
Zero Planned Downtime	Non-disruptive Update	X	X	
	Automated Update w/ Evacuation		X	
	Automated Update w/o Evacuation		X	
	Preserve Resource Groups during Evacuation		X	
Security	Power Cyber Vault	X	X	
	Inventory Scanning for Quantum Safe	X	X	PowerSC required
	Security at the Core (MFA)	X	X	MFA for BMC
	Quantum Safe Boot		X	
	Quantum Safe LPM		X	
Autonomous Error Resolution	Automated Case File Creation		X	
	Automated Data Collection and Transfer		X	
IT Efficiency - Energy	Monitoring and Reporting (Energy, etc)	X	X	
	Partition-level Monitoring	X	X	
	Energy Efficient Mode		X	
	Mode Scheduling		X	
IT Efficiency – Performance	Performance Utilization Guarantee	X	X	+5pts for Power11 DCM-based systems
	Resource Groups		X	
AI	MMA (on-chip acceleration)	X	X	
	Spyre Drawer Attachment		X	

Power11 Portfolio Highlights

–Architectural technology Improvements
  –Increased Core Counts
  –Increased Processor Frequencies
  –Increased Memory Frequencies

– Simplified Scale-out Portfolio

– High-End System upgrades available to Power E1180 from Power E1080
  –Now extended to Mid-range E1150 platform from Power E1050
  –Memory DIMM and I/O can migrate over to preserve investment

–Power11 systems support Power Enterprise Pools with Mobile or Shared Utility Capacity
  – Power11 & Power10 systems can interoperate and share resources in a single pool
  – Streamlined activation structure and pricing (single price for all activations)
  – Hybrid billing of Pools 2.0 Metered Capacity & PowerVS consumption

–Improved resiliency
  – Spare cores and stack availability for improved unplanned and planned downtime
  – Cyber Resiliency

IBM Power E1180

The industry’s most scalable server for consolidating database and mission critical workloads

Single Node

IBM Power E1150

Built for large data & memory intensive workloads.

IBM Power Entry

Enterprise-class reliability, security

Power11 Portfolio Specs Overview

Model(s)	Footprint Capacity	Notes
High-End (4S+): IBM Power E1180	•4 nodes (5U CEC) with 4 processors each •Up to 16 cores per socket/module •64 TB – DDR5 based memory	•In-place upgrades with serial number preservation.
Mid-Range (4S4U): IBM Power E1150	•2-4 processors in a 4U form factor •Up to 30 cores per socket/module •Up to 16 TB – DDR5 based memory	•In-place upgrades with serial number preservation.
Scale-Out 2S4U: IBM Power S1124 IBM Power L1124	•Up to 2 processors in a 4U form factor •Up to 30 cores per socket/module •Up to 8 TB – DDR5 based memory	
Scale-Out 2S2U: IBM Power S1122 IBM Power L1122	•2 processors in a 2U form factor •Up to 30 cores per socket/module •Up to 4 TB – DDR5 based memory	•Integrating the eSCM models into the S1122 family

IBM Power E1180

The industry's most scalable server for consolidating database and mission critical workloads

Single Node

IBM Power E1150

Built for large data & memory intensive workloads.

IBM Power Entry & Edge

Enterprise-class reliability, security

6

Power9 to Power10 to Power 11 Upgrade Options

S914
9009-41G

- 1-socket, 4U Rack & Tower
- 4,6,8 cores/socket
- Max 8 cores
- 16 IS RDIMM slots
- 1TB memory

S922 / H922
9009-22G /9223-22H

- 1,2-socket, 2U
- 1, 4, 8, 10, 11, cores/socket
- Max 22 cores
- 32 IS RDIMM slots
- 4TB memory

L922
9223-22H

- 1,2-socket, 2U
- 4, 8, 10, 11 cores/socket
- Max 22 cores
- 32 IS RDIMM slots
- 4TB memory

S924 / H924
9009-41G/9223-42H

- 1-socket, 4U Rack
- 8,10,11,12 cores/socket
- Max 24 cores
- 16 IS RDIMM slots
- 4TB memory

E950
9040-MR9

- 2, 3, 4-socket, 4U Rack
- 8,10,11,12 cores/socket
- Max 48 cores
- 32 IS RDIMM slots
- 16TB memory, 4TB/socket

E980
9080-M9S

- 1 to 4 CEC 5U + 2U SCU
- Max 192 cores
- 8,10,11,12 cores/socket
- 64TB memory, 16TB /drawer

S1012
9028-21B

- 1-socket, 2U rack and tower
- 1.4, 8 cores / SMT8 socket
- Max 8 cores
- 4 DDIMM slots
- 256 GB of memory (64 GB 1 and 4 Core)

S1014
9105-41B

- 1-socket, 4U rack and tower
- 4, 8 cores / SMT8 socket
- Max 8 cores
- 8 DDIMM slots
- 1 TB of memory (64 GB 4 Core)

S1022S
9105-22B

- 1,2-socket, 2U rack
- Up to 16 cores per system
- 4, 8 cores / SMT8 socket
- Max 16 cores
- 16 DDIMM slots
- 2 TB of memory

S1022 & L1022
9105-22A / 9786-22H

- 1,2-socket, 2U rack
- 12, 16, 20 cores SMT8 / socket
- Max 40 cores
- 32 DDIMM slots
- 4 TB of memory

S1024 & L1024
9105-42A / 9786-42H

- 1,2-socket, 4U rack
- 12, 16, 24 cores SMT8 / socket
- Max 48 cores
- 32 DDIMM slots
- 8 TB of memory

E1050
9043-MRX

- 2, 3, 4-socket, 4U
- 12, 18, 24 cores SMT8 / socket
- Max 96 cores
- 64 DDIMM slots
- 16 TB of memory

E1080
9080-HEX

- 1 to 4 CEC 5U + 2U SCU
- Max 240 cores
- 10,12,15 cores SMT8 / socket
- 64TB memory, 16TB /drawer

Future Power System

S1122 & L1122
9824-22A / 9856-22H

- 2-socket, 2U rack
- 4, 10, 16, 24, 30 cores SMT8 / socket
- Max 60 cores
- 32 DDIMM slots
- 4 TB of memory

S1124 & L1124
9824-42A / 9856-42H

- 1,2-socket, 4U rack
- 16, 24, 30 cores SMT8 / socket
- Max 60 cores
- 32 DDIMM slots
- 8 TB of memory

E1150
9043-MRU

- 2, 3, 4-socket, 4U
- 16, 24, 30 cores SMT8 / socket
- Max 120 cores
- 64 DDIMM slots
- 16 TB of memory

E1180
9080-HEU

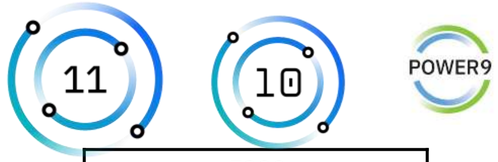
- 1 to 4 CEC 5U + 2U SCU
- Max 256 cores
- 10,12,16 cores SMT8 / socket
- 64TB memory, 16TB /drawer

AIX IBM i Linux Red Hat OpenShift

PowerVM

P05 P10 P20 P30 IBM i group processor

Power9 to Power10 to Power 11 Upgrade Options – IBM i SW Tiers



S914
9009-41G

- 1-socket, 4U Rack & Tower
- 4,6,8 cores/socket
- Max 8 cores
- 16 IS RDIMM slots
- 1TB memory

4C P05 | 6C P10 | 8C P10

S922 / H922
9009-22G /9223-22H

- 1,2-socket, 2U
- 1, 4, 8, 10, 11, cores/socket
- Max 22 cores
- 32 IS RDIMM slots
- 4TB memory

P10

L922
9223-22H

- 1,2-socket, 2U
- 4, 8, 10, 11 cores/socket
- Max 22 cores
- 32 IS RDIMM slots
- 4TB memory

P10

S924 / H924
9009-41G/9223-42H

- 1-socket, 4U Rack
- 8,10,11,12 cores/socket
- Max 24 cores
- 16 IS RDIMM slots
- 4TB memory

P20

E980
9080-M9S

- 1 to 4 CEC 5U + 2U SCU
- Max 192 cores
- 8,10,11,12 cores/socket
- 64TB memory, 16TB /drawer

P30

S1012
9028-21B

- 1-socket, 2U rack and tower
- 1.4, 8 cores / SMT8 socket
- Max 8 cores
- 4 DDIMM slots
- 256 GB of memory (64 GB 1 and 4 Core)

1C P05 | 4C P05 | 8C P10

S1014
9105-41B

- 1-socket, 4U rack and tower
- 4, 8 cores / SMT8 socket
- Max 8 cores
- 8 DDIMM slots
- 1 TB of memory (64 GB 4 Core)

4C P05 | 8C P10

S1022S
9105-22B

- 1,2-socket, 2U rack
- Up to 16 cores per system
- 4, 8 cores / SMT8 socket
- Max 16 cores
- 16 DDIMM slots
- 2 TB of memory

P10

S1022 & L1022
9105-22A / 9786-22H

- 1,2-socket, 2U rack
- 12, 16, 20 cores SMT8 / socket
- Max 40 cores
- 32 DDIMM slots
- 4 TB of memory

P10

S1024 & L1024
9105-42A / 9786-42H

- 1,2-socket, 4U rack
- 12, 16, 24 cores SMT8 / socket
- Max 48 cores
- 32 DDIMM slots
- 8 TB of memory

12C P20 | 2*12C P20 | 2*16C P30 | 2*24C P30

E1080
9080-HEX

- 1 to 4 CEC 5U + 2U SCU
- Max 240 cores
- 10,12,15 cores SMT8 / socket
- 64TB memory, 16TB /drawer

P30

Future Power System

S1122 & L1122
9824-22A / 9856-22H

- 2-socket, 2U rack
- 4, 10, 16, 24, 30 cores SMT8 / socket
- Max 60 cores
- 32 DDIMM slots
- 4 TB of memory

P10

S1124 & L1124
9824-42A / 9856-42H

- 1,2-socket, 4U rack
- 16, 24, 30 cores SMT8 / socket
- Max 60 cores
- 32 DDIMM slots
- 8 TB of memory

16C P20 | 2*16C P20 | 2*24C P30 | 2*30C P30

E1180
9080-HEU

- 1 to 4 CEC 5U + 2U SCU
- Max 256 cores
- 10,12,16 cores SMT8 / socket
- 64TB memory, 16TB /drawer

P30

AIX IBM i Linux Red Hat OpenShift

PowerVM

P05 P10 P20 P30 IBM i group processor

Introducing Power11: E1180

Hardware

- Power E1180 16-core SCM system with 64 – 256 Power11 processor cores (3.8-4.30 GHz)
- Power E1180 12-core SCM system with 48 – 192 Power11 processor cores (3.9-4.4 GHz)
- Power E1180 10-core SCM system with 40 – 160 Power11 processor cores (3.9-4.2 GHz)
- Up to 64TB DDR5 memory (DDR4 is supported if migrated from Power10)

Software Requirements

- AIX 7.2 & 7.3 or later
- IBM i 7.4, 7.5 & 7.6 or later
- RHEL 8.6, 9.4, 9.6, and 10
- SLES15 & 16 (4Q25)
- OCP 4.19 and later
- VIOS 3.1.4 (EOS is 4/2026), VIOS 4.1.0, VIOS 4.1.1 (GA 12/2024)

AIX

Power E1180 rPerf Projections (SMT8)					
Offerings	**Max. Cores**	**1-node**	**2-node**	**3-node**	**4-node**
E1180/16c	256-core	2285	4571	6856	9141
E1180/12c	192-core	1849	3698	5546	7395
E1180/10c	160-core	1500	3000	4500	5999

IBM i

Power E1180 CPW Projections (SMT8)					
Offerings	**Max. Cores**	**1-node**	**2-node**	**3-node**	**4-node**
E1180/16c	256-core	1,572,800	3,145,600	4,718,400	6,291,200
E1180/12c	192-core	1,290,000	2,580,100	3,870,200	5,160,300
E1180/10c	160-core	1,049,100	2,098,300	3,147,500	4,196,600

Based on published results as of 7/8/2025 available at
https://www.ibm.com/downloads/documents/us-en/10c31775c5d40fed

Introducing Power11: E1150

Hardware

- Power E1150 30-core DCM system with 60 – 120 Power11 processor cores (3.0-4.1 GHz)
- Power E1150 24-core DCM system with 48 – 96 Power11 processor cores (3.3-4.2 GHz)
- Power E1150 16-core DCM system with 32 – 64 Power11 processor cores (3.5-4.2 GHz)
- Up to 16TB DDR5 memory

Software Requirements

- AIX 7.2 & 7.3 or later
- RHEL 8.6, 9.4, 9.6, and 10
- SLES15 & 16 (4Q25)
- OCP 4.19 and later
- VIOS 3.1.4 (EOS is 4/2026),
  VIOS 4.1.0, VIOS 4.1.1 (GA 12/2024)

AIX

Power E1180 rPerf Projections (SMT8)				
Offerings	**Max. Cores**	**2-socket**	**3-socket**	**4-socket**
E1150/30c	120-core	1797	2650	3504
E1150/24c	96-core	1564	2307	3050
E1150/16c	64-core	1154	1703	2251

Based on published results as of 7/8/2025 available at
https://www.ibm.com/downloads/documents/us-en/10c31775c5d40fed

Introducing Power11: S1124

Hardware

- The S1124 will be offered with up to 2-sockets of DCM’s
- 30-core DCM system with 2 sockets and 60 Power11 processor cores (2.8-3.95 GHz)
- 24-core DCM system with 2 sockets and 48 Power11 processor cores (3.05-4.15 GHz)
- 16-core DCM system with 1-2 sockets and 16-32 Power11 processor cores (3.4-4.2 GHz)
- Up to 8TB DDR5 memory

Software Requirements

- AIX 7.2 & 7.3 or later
- IBM i 7.4, 7.5 & 7.6 or later
- RHEL 8.6, 9.4, 9.6, and 10
- SLES15 & 16 (4Q25)
- OCP 4.19 and later
- VIOS 3.1.4 (EOS is 4/2026), VIOS 4.1.0, VIOS 4.1.1 (GA 12/2024)

AIX

Power S1124 rPerf Projections (SMT8)		
Offerings	Max. Cores	2-socket / 1-socket
S1124/30c	60-core	1737 / NA
S1124/24c	48-core	1529 / NA
S1124/16c	32-core	1117 / 559

IBM i

Power S1124 CPW Projections (SMT8)		
Offerings	Max. Cores	2-socket / 1-socket
S1124/30c	60-core	1,345,900 / NA
S1124/24c	48-core	1,118,500 / NA
S1124/16c	32-core	823,000 / 433,200

Based on published results as of 7/8/2025 available at
https://www.ibm.com/downloads/documents/us-en/10c31775c5d40fed

Introducing Power11: S1122

Hardware

- S1122 will be offered with 2-sockets of DCM or eSCM modules and flexible consumption
- Power S1122 30-core DCM system with 60 Power11 processor cores (2.4-3.95 GHz)
- Power S1122 24-core DCM system with 48 Power11 processor cores (2.65-4.15 GHz)
- Power S1122 16-core DCM system with 32 Power11 processor cores (3.00-4.20 GHz)
- Power S1122 10-core eSCM system with 20 Power11 processor cores (3.05-4.00 GHz)
- Power S1122 4-core eSCM system with 8 Power11 processor cores (3.60-4.00 GHz)
- Up to 4TB DDR5 memory

Software Requirements

- AIX 7.2 & 7.3 or later
- IBM i 7.4, 7.5 & 7.6 or later
- RHEL 8.6, 9.4, 9.6, and 10
- SLES15 & 16 (4Q25)
- OCP 4.19 and later
- VIOS 3.1.4 (EOS is 4/2026), VIOS 4.1.0, VIOS 4.1.1 (GA 12/2024)

AIX

Power S1122 rPerf Projections (SMT8)		
Offerings	Max. Cores	2-socket
S1122/30c	60-core	1532
S1122/24c	48-core	1358
S1122/16c	32-core	1040
S1122/10c	20-core	627
S1122/4c	8-core	293

IBM i

Power S1122 CPW Projections (SMT8)		
Offerings	Max. Cores	2-socket (part. Size)
S1122/30c	60-core	117,100 (4c)
S1122/24c	48-core	123,800 (4c)
S1122/16c	32-core	123,800 (4c)
S1122/10c	20-core	123,400 (4c)
S1122/4c	8-core	236,400 (8c)

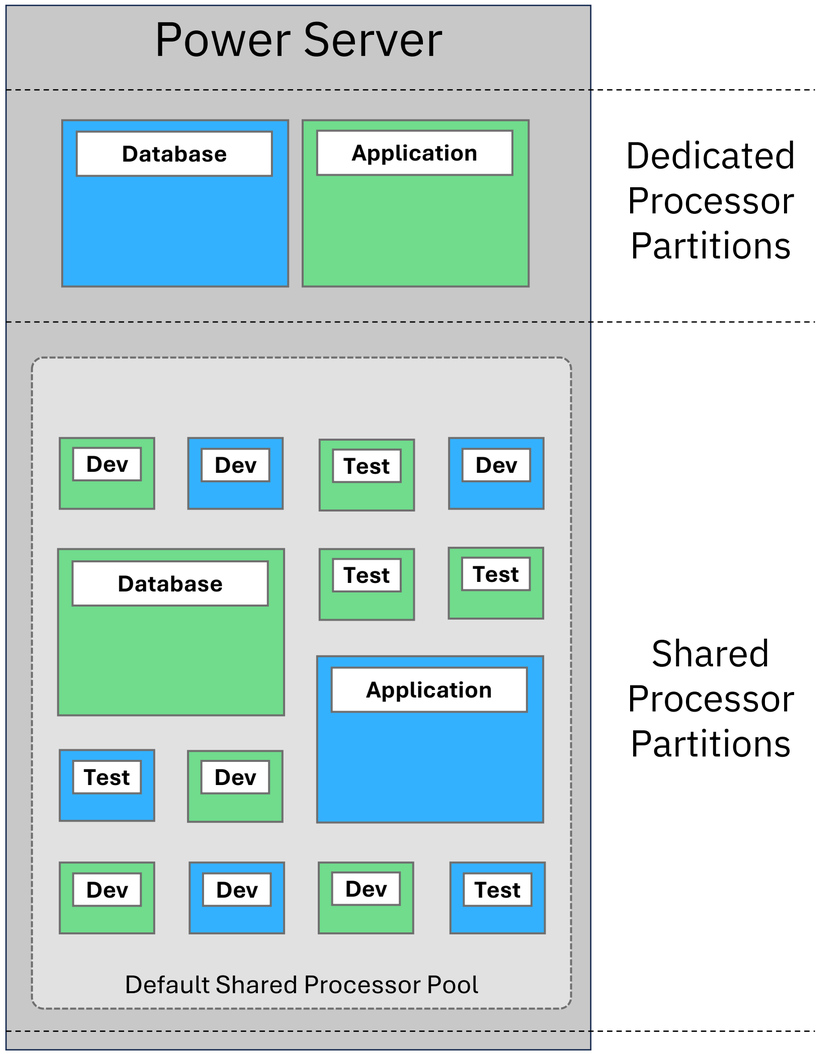
Based on published results as of 7/8/2025 available at
https://www.ibm.com/downloads/documents/us-en/10c31775c5d40fed

Resource groups

Business value for clients

- Predictable Performance
- Cost Optimization
- Simplified Management
- Operational Agility and Reliability

Power Virtualization Concept - *Dedicated vs Shared*



Simplified configuration illustration

Department A LPARs Department B LPARs

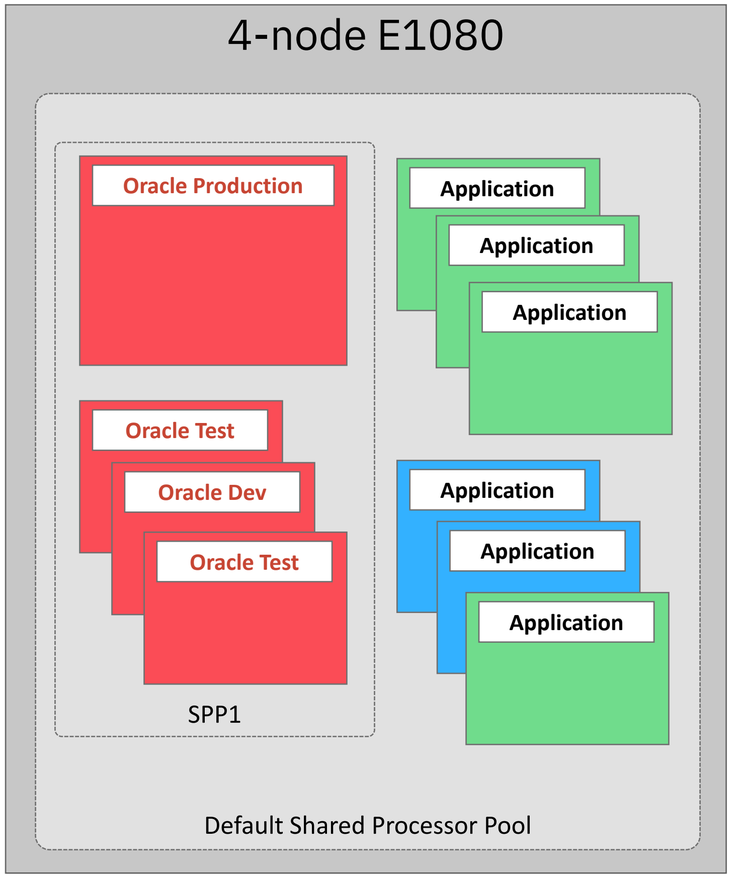
Dedicated Processor Partitions

- Whole physical cores are assigned to dedicated processor partitions
- One to one association between virtual processors and assigned cores
- Unused core cycles can be donated to shared processor partitions

Shared Processor Partitions

- Virtual Processors and Processing Units (Entitled Capacity) are assigned to shared processor partitions
  - Processing Units is guaranteed amount of processing capacity
  - Can have more Virtual Processors than Processing Units
- Configured as capped or uncapped
  - Capped are limited to their assigned processing units
  - Uncapped can utilize core cycles beyond the assigned processing units
- Compete for excess (uncapped) core cycles with other shared processor partitions
- Dispatched by the hypervisor on any shared physical core in the system

Power Virtualization Concept - *Shared Processor Pools*



Power10
Simplified configuration illustration

Shared Processor Pools (SPP)

- Pool of processor capacity shared between a group of shared processor partitions
- Configured with maximum processing units
- Allow a user to limit the total number of core cycles consumed by the set of shared processor partitions assigned to the pool
- Can have more Virtual Processors than maximum processing units assigned

Usage

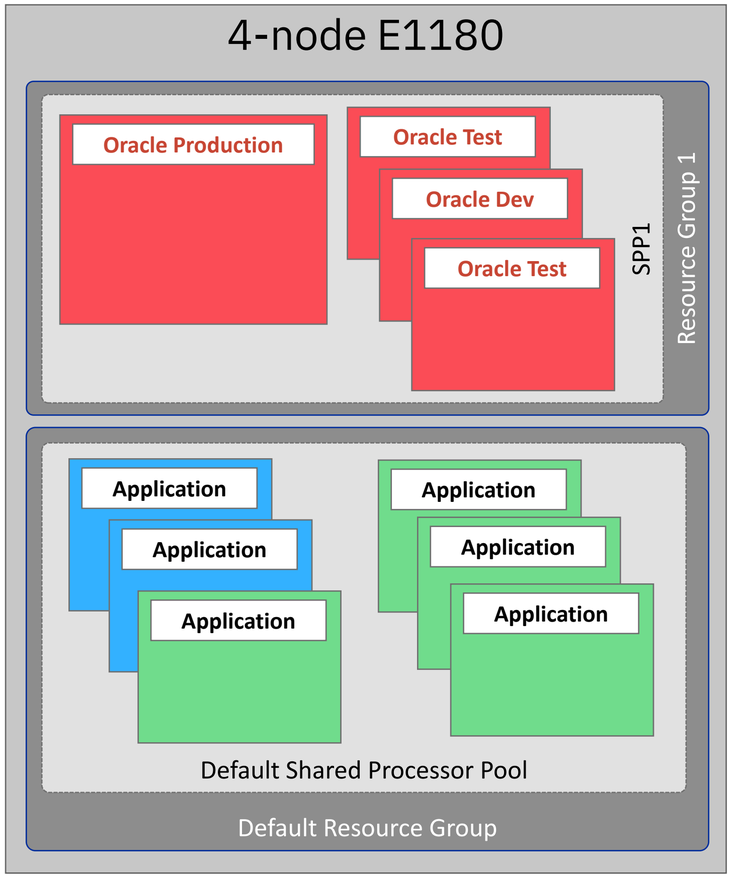
- Control software licensing cost by limiting the amount of processing units available to shared processor partitions

Limitation

- Dedicated processor partitions cannot be part of a SPP
- Using a SPP has no impact on partition placement
- SPP does not prevent noisy neighbor impact

Department A LPARs Department B LPARs Oracle partitions

Power Virtualization Concept - *Resource Groups*



Power11 Resource Groups
Simplified configuration illustration

Resource Groups (RG)

- Provides isolation for assigned cores
- Can contain dedicated and shared processor partitions
- Can be used in conjunction with Shared Processor Pools
- Can show significant performance and isolation improvements

Performance Improvements

- Reduce/eliminate noisy neighbor impact
- Improve efficiency through per Resource Group shared processor dispatching
- Can prevent off-node dispatches of virtual processors

Use cases

- Large number of use cases
  - Key use cases covered in the following slides

Resource Groups

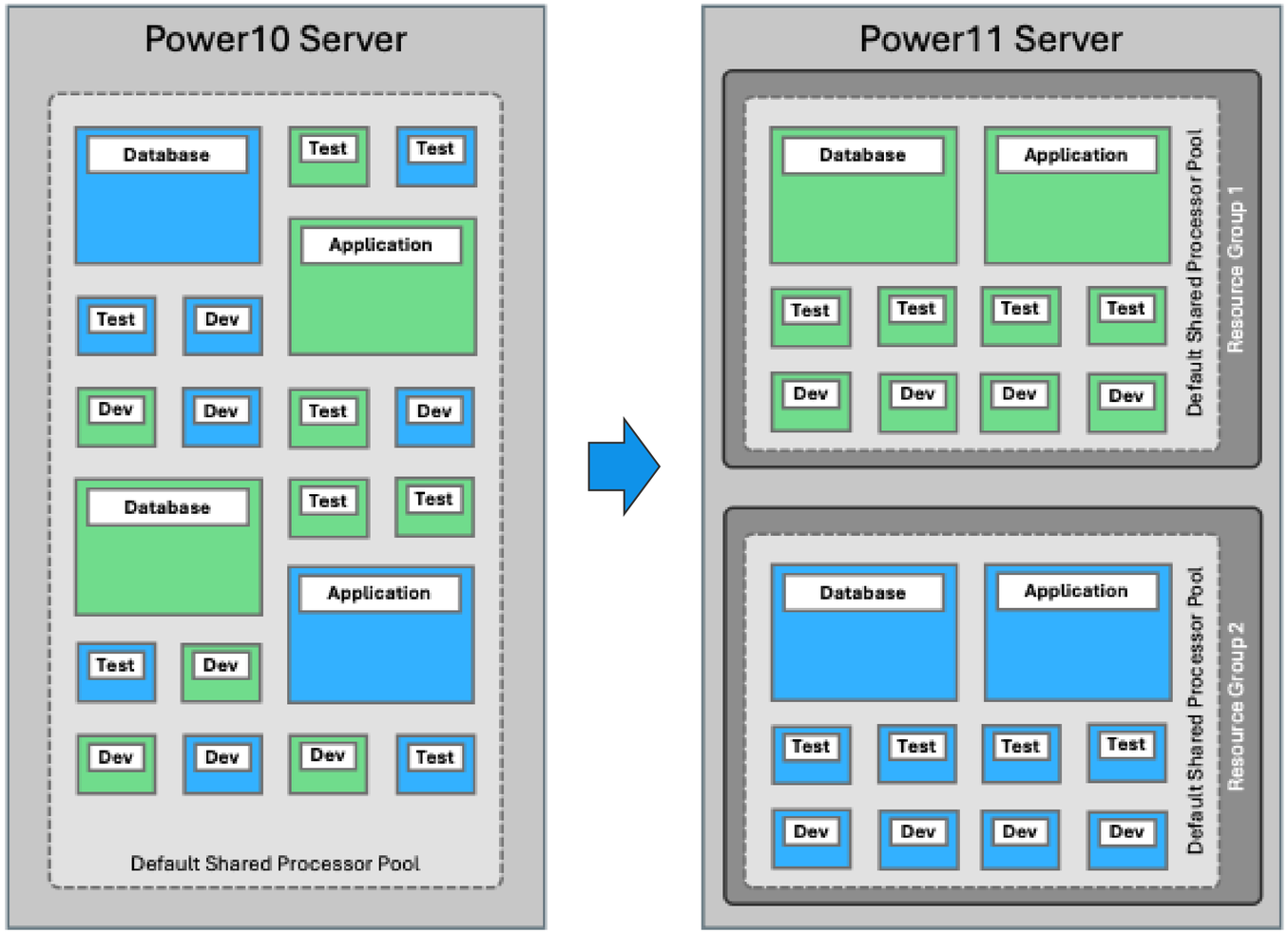
IBM Power11 with Resource Group capability delivers up to 25% improved performance

- Improved workload isolation
- Consolidation Scaling and Efficiency

Resource Group Use Cases:

- Consolidation across multiple lines of business
- Isolation of production workloads from test/dev workloads
- Improved application performance by grouping workload tiers into resource groups
- System-level isolation in multi-server consolidation scenarios
- Improved performance by mapping Shared Processor Pools into Resource Groups

Consolidation across multiple lines of business



Simplified configuration illustration

Department A LPARs Department B LPARs

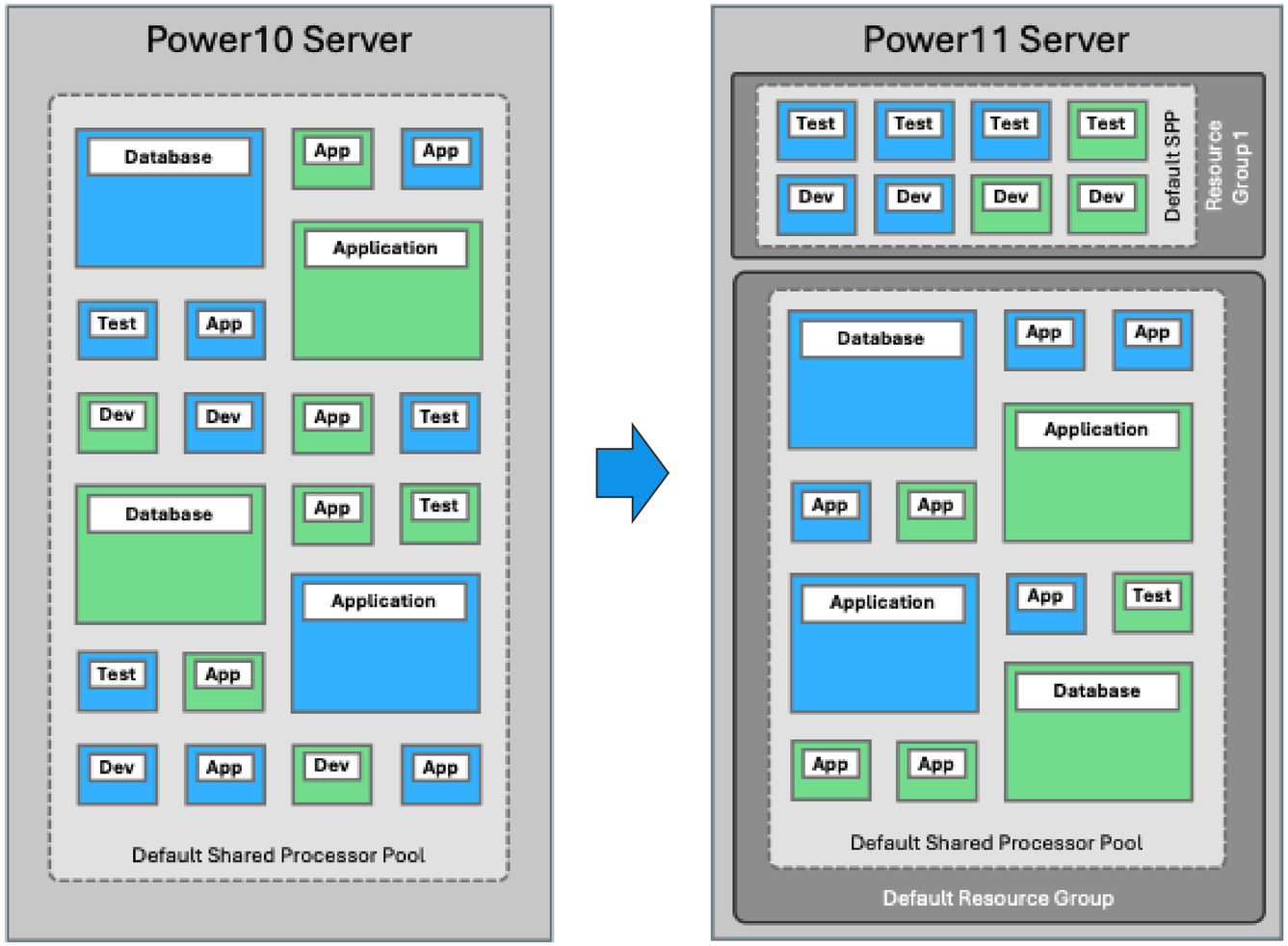
- Customer Private Cloud
- Department A (green) and B (blue)
- Power10
  - CPUs are shared across departments
- Power11 with Resource Groups
  - CPUs shared within a Resource Group
  - CPUs cannot be shared across Resource Groups

Actions

- Create Resource Group 1 and Resource Group 2
- Migrate partitions

Note: Enough space is required to create Resource Groups

Isolation of production workloads from test/dev workloads



Simplified configuration illustration

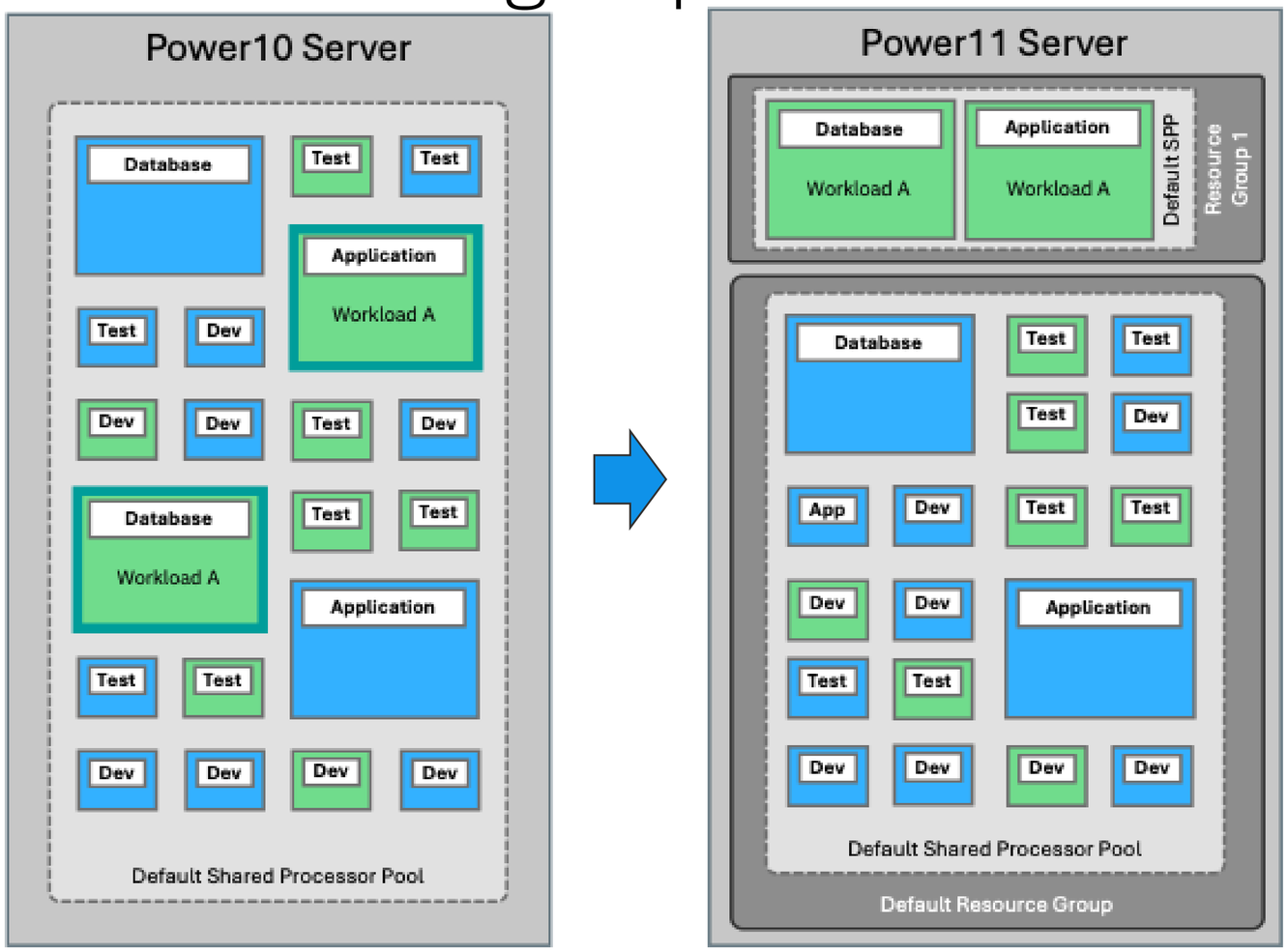
Department A LPARs Department B LPARs

- Department A (green) and B (blue)
- Power10
  - CPUs are shared across departments
- Power11 with Resource Groups
  - CPUs (test/dev) shared within a Resource Group
  - CPUs (test/dev) not shared across Resource Groups
- What happens in the Resource Group stays in the Resource Group

Actions

- Migrate performance critical partitions first
- Create Resource Group 1
- Migrate all other partitions

Improved application performance by grouping workload tiers into resource groups



Simplified configuration illustration

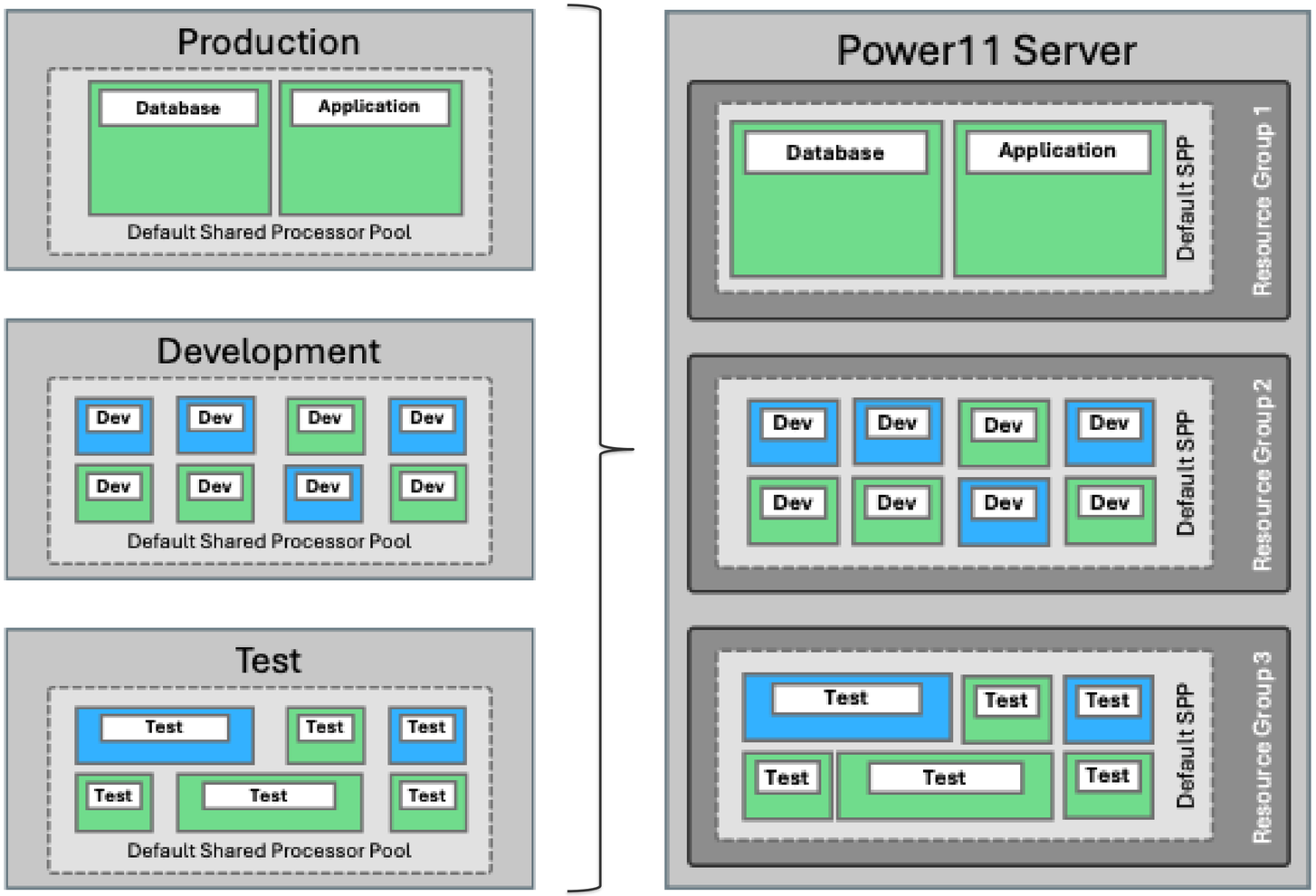
Department A LPARs Department B LPARs

- Department A (green) and B (blue)
- Workload A (green) consists of a database and application server
  - Data is shared through virtual Ethernet
- Improved performance through better affinity between database and application server

Actions

- Migrate performance critical partitions first
- Create Resource Group 1
- Migrate Workload A partitions

System-level isolation in multi-server consolidation scenarios



Simplified configuration illustration

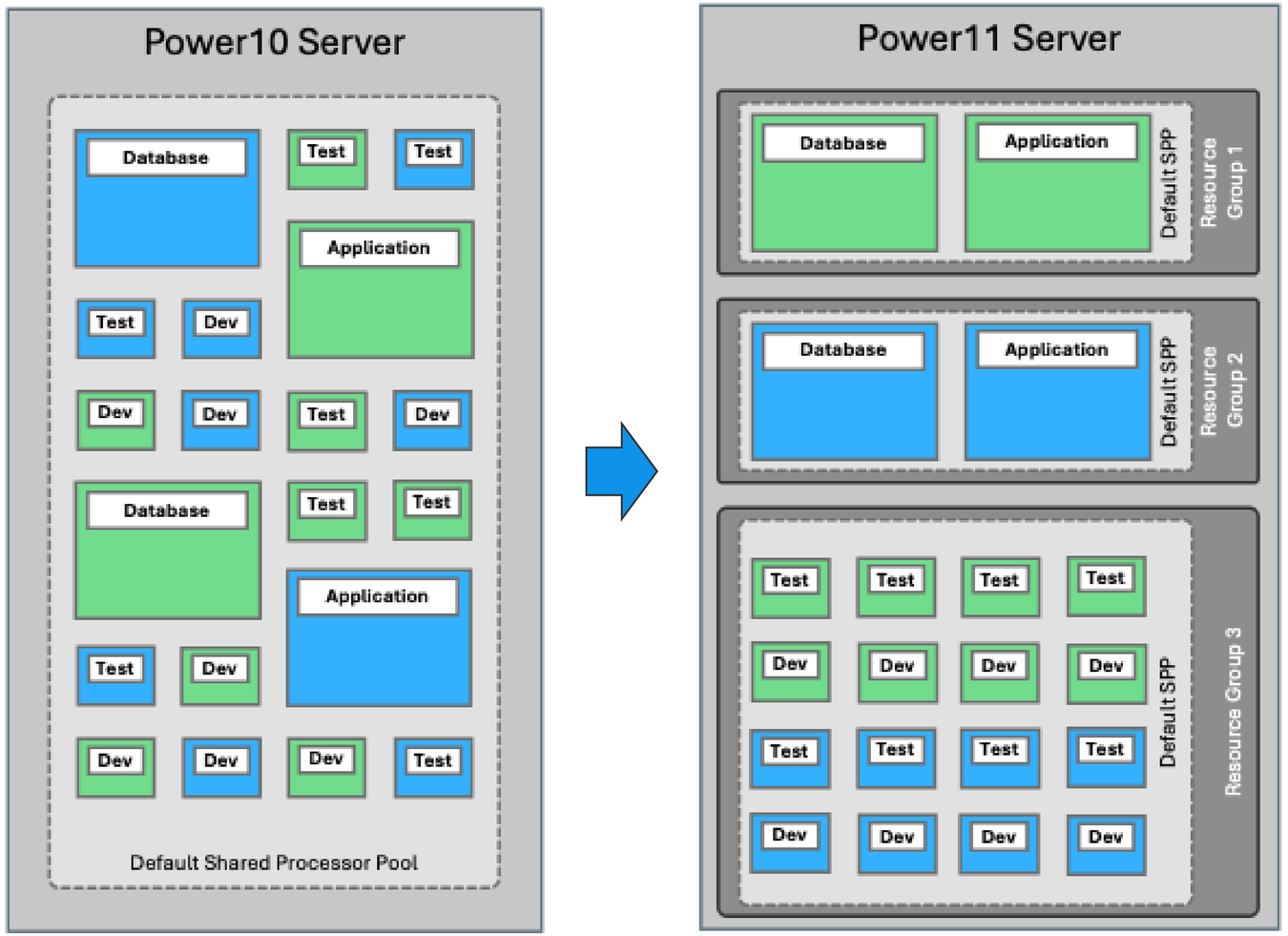
Department A LPARs Department B LPARs

- Department A (green) and B (blue)
  - Separate Systems for production, development, and test
- Consolidate multiple smaller servers into a larger Power11 system
- Using Resource Groups to isolated the “systems” in their new home

Actions

- Create Resource Group 1 first, then Resource Groups 2 and 3
- Migrate partitions - performance critical partitions first

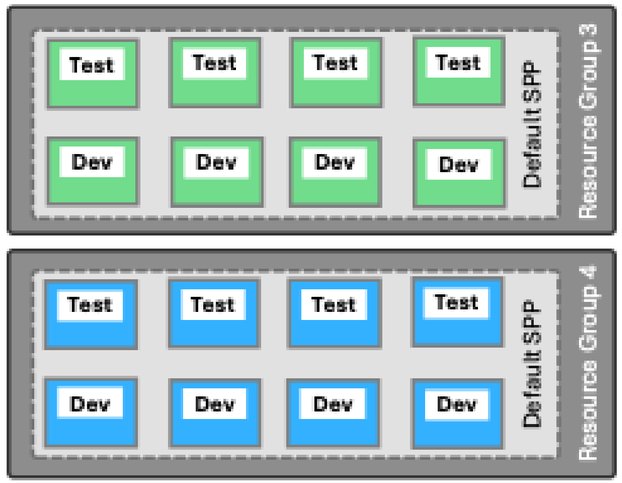
Combining use cases



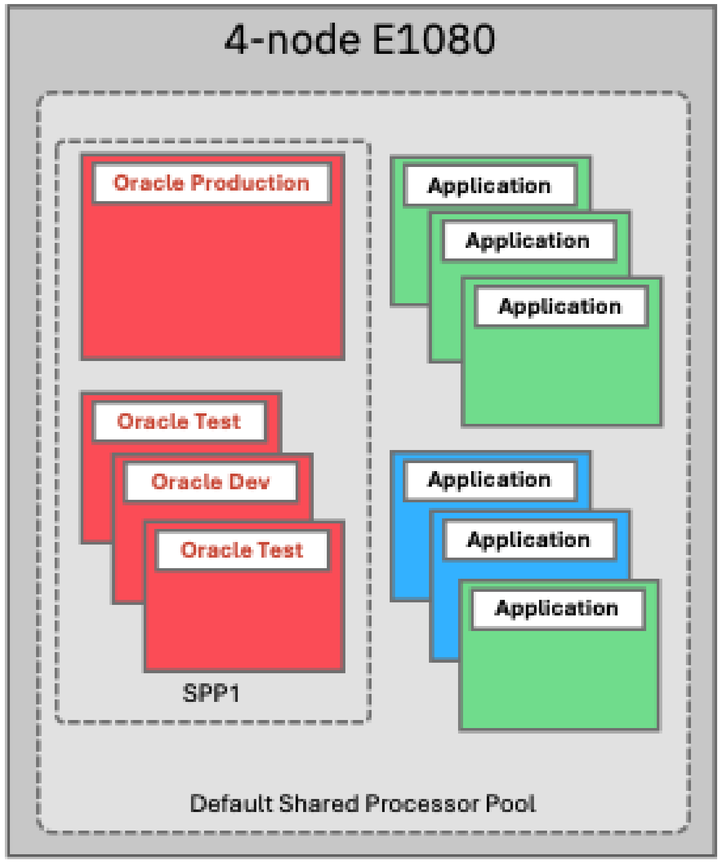
Simplified configuration illustration

Department A LPARs Department B LPARs

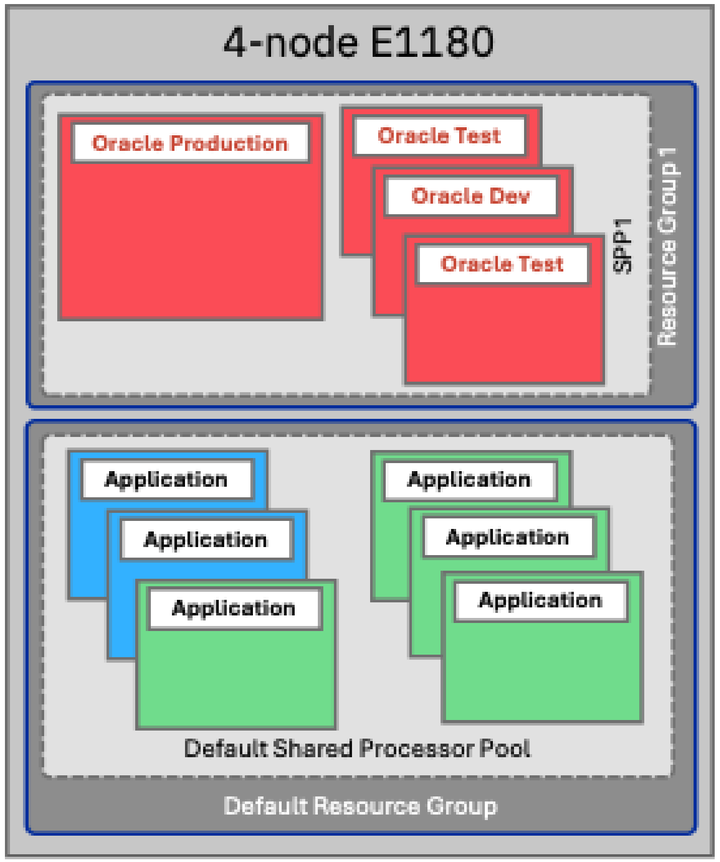
- Department A (green) and B (blue)
- Resource Group use cases are not limited to one or the other
- Example - combine
  - Consolidation across multiple lines of business
  - Isolation of production workloads from test/dev workloads
  - Add more isolation for dev/test



Improved performance by mapping Shared Processor Pools into Resource Groups



Power10
Simplified configuration illustration



Power11 Resource Groups
Simplified configuration illustration

Up to 25% improved performance

Workload Improvements
Resource Groups -> improved workload isolation & consolidation scaling efficiency

SW Improvements
Scaling, Affinity, Efficiency

HW Innovation
Frequency, Capacity, DDR5, PHYP

Department A LPARs Department B LPARs

Resource Groups - Client Values Summary

Workload Isolation

- Separate workloads from department A from department B (Private Cloud)
- Separate production from test and development workloads
- Grouping tiered workloads
- System Level Isolation when consolidating workloads
- Improve workload running in Shared Processor Pools
- Better control over CPU resource

Performance

- Improved Virtual Processor Dispatching
- Workload Affinization
- Consolidation without compromise

Power11 Performance – Resource Groups with Oracle Licensing

$750K lower 3-year TCO

Power E1180 vs E1080
(4-nodes, 16x12cores)

25% improvement in per core performance delivering lower TCO by leveraging Resource Groups for shared processor configurations

Better performance / $
- 20% fewer Oracle licenses for same capacity
- Activate fewer cores

Resource Group Advisor (RGA)

What is the Resource Group Advisor?

- A web-based tool to provide advice on resource group configuration

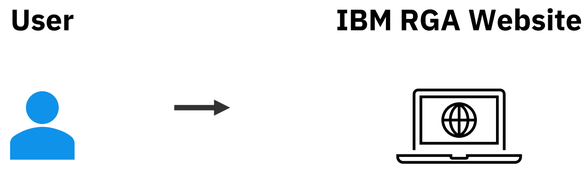
Initial Version

- Enables validation of resource group configuration
- Supports multiple input formats (csv, SPT, WLE)

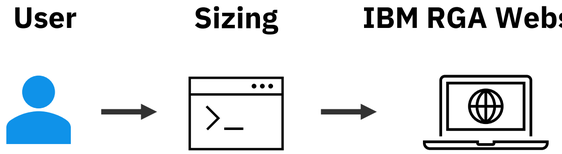
Potential Enhancements

- Considering Supports SPP and non-SPP configuration with automated configuration + CPU consumption data collection
- +

Use case



Migrating to Power11



Announcing IBM Power11

Autonomous IT built for the AI era

Automated Platform Maintenance - Eliminate Business Disruptions with Zero Planned Downtime

IBM Power11

Engineered to accelerate enterprises into the AI era

Hybrid Cloud Platform

Operating Systems & Firmware

Computing Hardware

Silicon Technology

0 planned downtime with end-to-end automation[1]

<1min guaranteed ransomware detection with automated response and recovery within minutes[2]

5X increase in business process rate with AI integration into existing enterprise workflows[3]

... Built on a foundation of performance, availability, and security

1. Based upon IBM internal testing of system upgrade scenarios; many (i.e. VIOS, hot plug adapters, I/O adapter FW, and concurrent system firmware updates) can be done in-place while some (i.e. non-concurrent system FW and HW maintenance) may require Live Partition Mobility (LPM) support.
2. This guarantee covers only the displaying of an alert in less then one minute. Remediation is in the form of drive replacement up to the cost of the Covered Product. Terms and conditions apply; full details can be found here. (Coming to IBMi in 4Q 2025, Roadmap for PowerVS)
3. Geis-group.eu , Uwe Remppel, head of ZSI department, Geis Group *: Measured in staging system.

Average annual cost of planned downtime

$5.6M *

- Typical maintenance window is several hours.
- Multiple maintenance windows each year

Average amount of time spent by IT team managing maintenance

25-40% **

- Understanding & testing required maintenance levels
- Planning for maintenance windows, including navigating business priorities.
- Executing upgrades, often during nights & weekends

*. Forrester: https://www.ibm.com/downloads/documents/us-en/10a99803f5afd8c1
**. Ponemon: https://adaptiva.com/hubfs/Reports/The-State-of-Patch-Management.pdf

Be a leader in core banking uptime with Zero Planned Downtime

Ensure banking services are always available

Increase customer satisfaction and trust with no planned service disruptions

---

Enhance compliance and regulatory posture

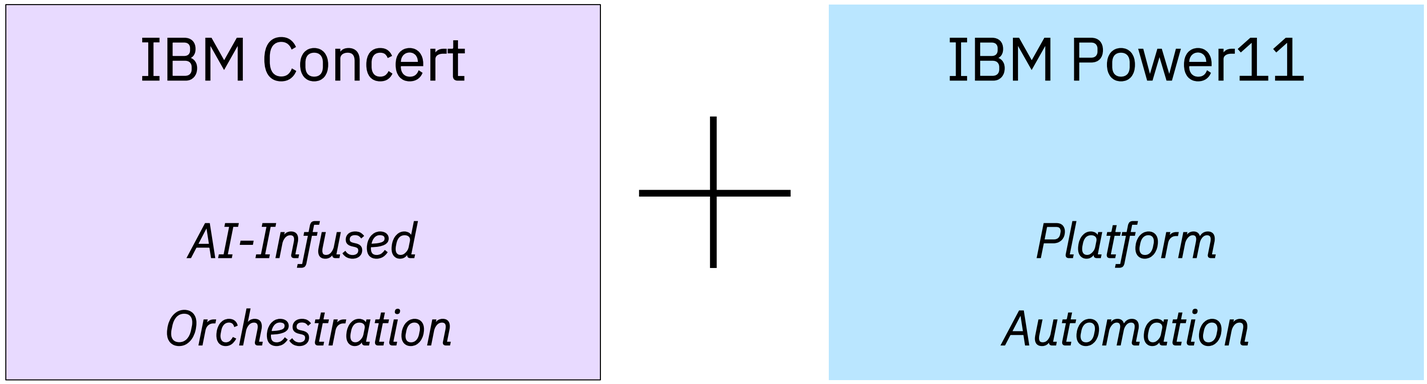
Install critical security fixes quickly and seamlessly with agile platform updates

Infosys® | Finacle

“We’re thrilled about the transformative value that IBM Power11 with Zero Planned Downtime delivers to our Finacle Core Banking customers. Harnessing Power11’s extreme automation, customers can perform platform maintenance without disrupting their core banking applications, ensuring near continuous application availability. This innovation enables our customers to match consumer demands for modern AI-first experiences while redefining the standard for system uptime.”

Girish G Kamath
AVP, Senior Product Line Manager, Infosys Finacle

Zero-planned downtime enabled with IBM Power11…
and enhanced with IBM Concert



And delivering essential business outcomes

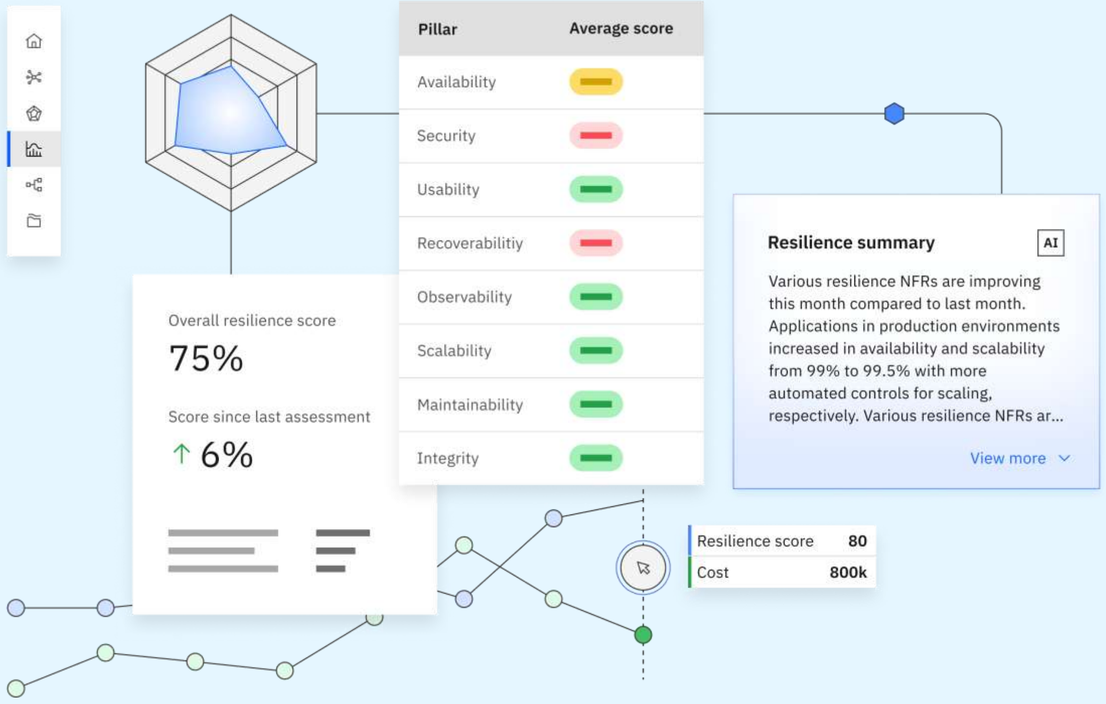
Reduced Risk

Increased Productivity

Improved Business Continuity

IBM Concert for IBM Power

IBM Concert is automated IT resilience.



Built on agentic AI, Concert automates best practices across key resilience pillars.

Concert scores and correlates data to identify issues and implement actionable recommendations to improve resilience.

Concert helps teams

→ Eliminate manual effort

→ Improve productivity

→ Reduce risk

→ Prevent outages

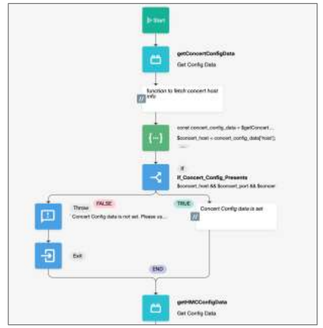
IBM Concert support for IBM Power

How Concert manages vulnerabilities for IBM Power systems:

- Keeps an inventory of IBM Power systems
- Reduces risk exposure by tracking CVEs and which Power system they relate to
- Provides watsonx.ai-generated remediation guidance steps
- Auto-remediates OS vulnerabilities against Power systems

Discover

- Power Inventory workflow discovers Power systems and component versions



Analyze

- Concert maps CVEs to systems, recommending precise remediation actions
- CVEs are prioritized based on CVSS scores

CVEs	CVSS	Severity	Component type
CVE-2022-35643	9.1	Critical	VIOS
CVE-2023-52881	5.9	Medium	Firmware

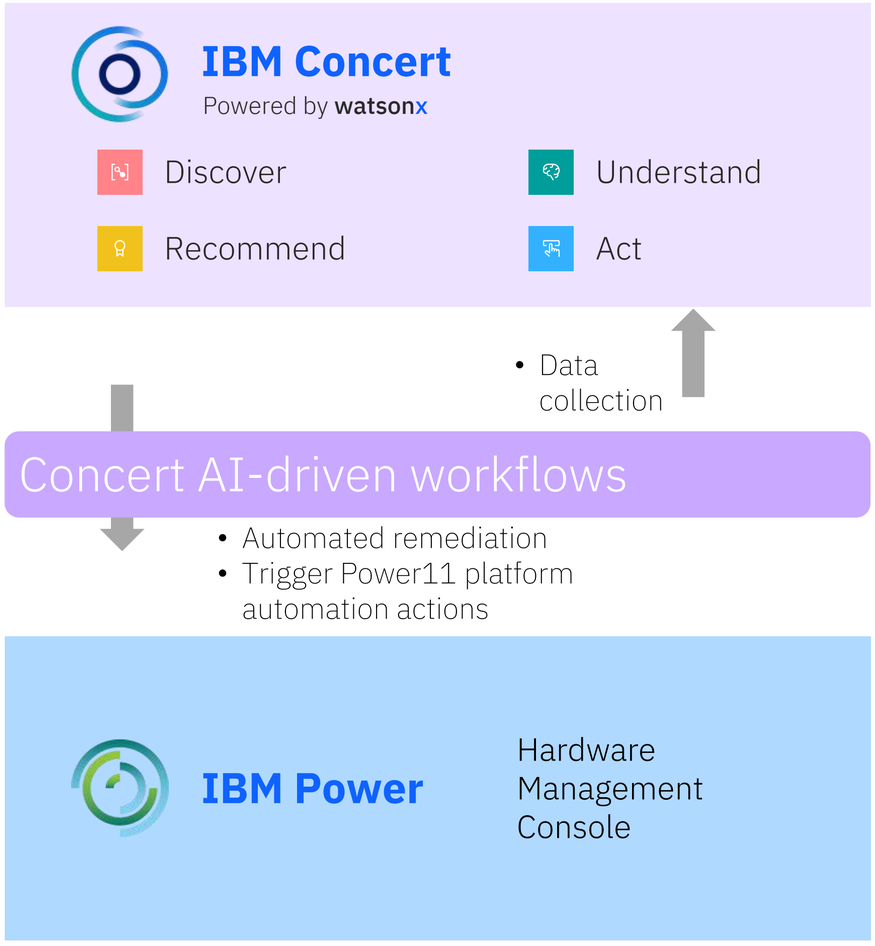
Act

- Review, approve and schedule updates (HMC, firmware, VIOS)
- Updates are applied via HMC APIs with built-in validations using a Power Patch scheduler workflow

Actions	Applied to
Patch	VIOS
Patch	VIOS
Patch	VIOS

IBM Concert for IBM Power - **Today**

Vulnerability management & remediation



Includes:

- ✓ Pre-built data ingestion workflows
- ✓ Pre-built vulnerability remediation workflows

Concert Deployment model:

- ✓ IBM Power ppc64le (OCP)
- ✓ Runs on x86
- ✓ Available as SaaS

Discover

Discover Inventory and current version of

- System (firmware)
- Virtual IO Server
- Hardware Management Console (HMC)

Discover critical vulnerabilities in these versions.

Understand

Using AI, understand the vulnerabilities (CVEs) within the context of the current Power version.

Brings all risk factors in a single view and prioritizes risks based on impact (risk score).

Recommend

Strategically provides which vulnerabilities to prioritize and possible mitigation steps, how to mitigate each risk factor/CVE.

Act

Allows user to take immediate and automated actions based on the insights though low code workflows.

For example, triggering P11 updates via **zero-planned downtime**.

Zero Planned Downtime can be executed by:

IBM Concert + IBM Power11

or

IT Admin at the Power11 HMC

What you are about to see:

1. Security Patch management & remediation with IBM Concert + IBM Power, including
   - Discovery of potential vulnerabilities
   - Understanding of risks
   - Recommendations for remediation
   - Ability to act by triggering Power11's automated maintenance workflow

2. Power 11's built-in automated maintenance that enables platform maintenance without application impact.

ever62bmc

Last updated on: Jun 20, 2025 5:12 PM

CVEs | Actions

Total unique CVEs

5

0 CVEs
Firmware

5 CVEs
VIOS

Most severe CVEs

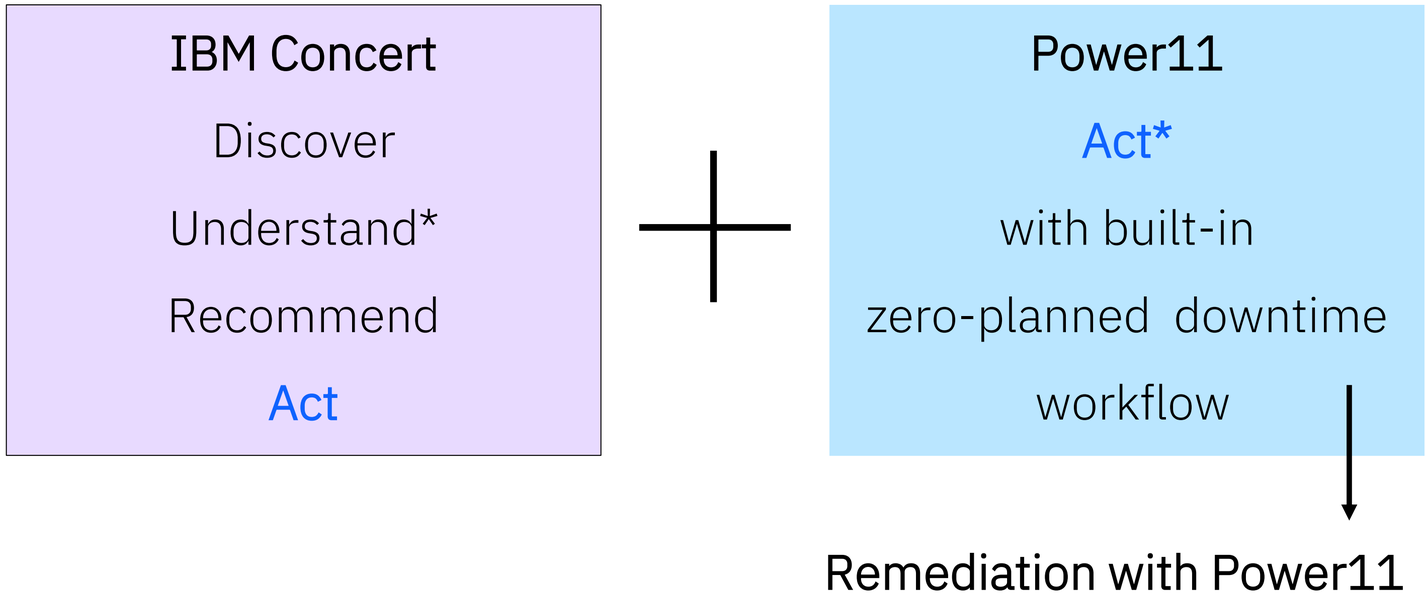
Find by CVE

CVEs	CVSS	Component type	Affected component name	Current version
CVE-2022-49043	5.5	VIOS	ever62bmc-vios1	4.1.0.21
CVE-2024-47102	5.5	VIOS	ever62bmc-vios1	4.1.0.21
CVE-2024-52906	5.5	VIOS	ever62bmc-vios1	4.1.0.21
CVE-2024-56171	5.5	VIOS	ever62bmc-vios1	4.1.0.21
CVE-2024-56346	5.5	VIOS	ever62bmc-vios1	4.1.0.21

Items per page: 50 | Items 1–5 | Page 1

What you just saw…AI-infused orchestration with IBM Concert + IBM Power11

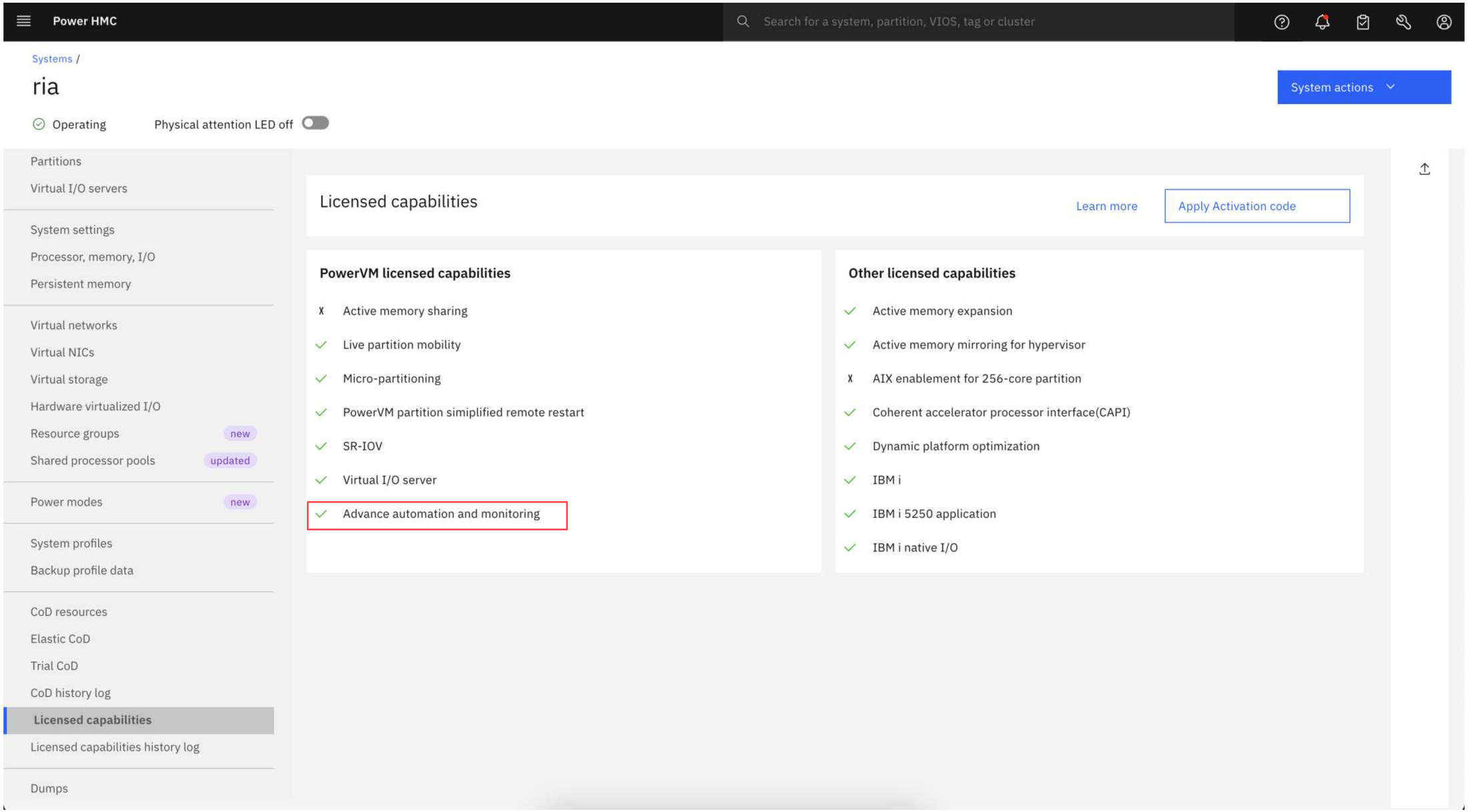
First use case: Vulnerability Management & Remediation



- Can be triggered directly from the HMC
- End-to-end automation for platform updates, including automated movement of workloads, with zero application downtime
- Available for firmware, VIOS, and I/O updates

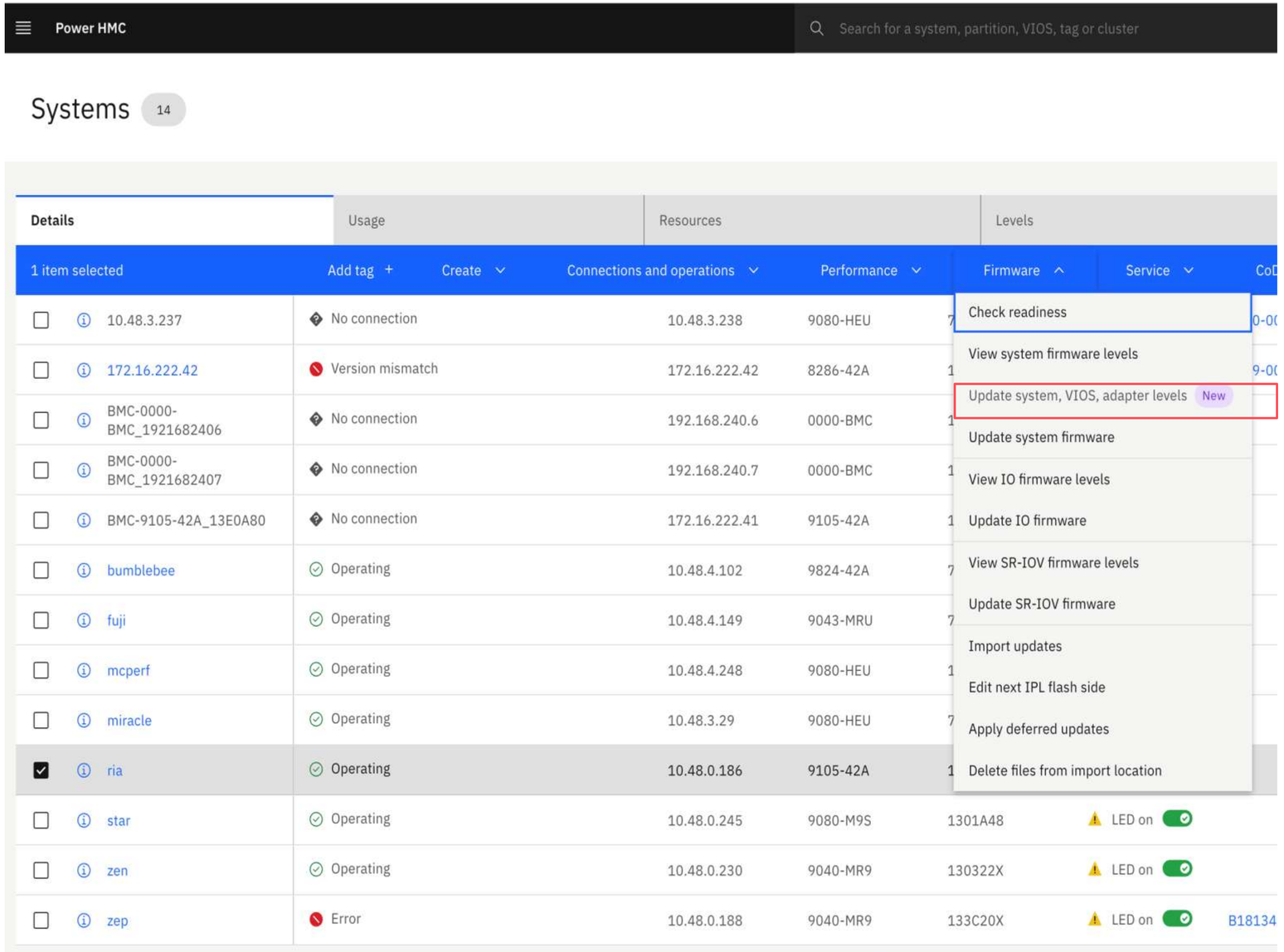
* --- Requires outbound connection from Concert and HMC to IBM Websites

System capability



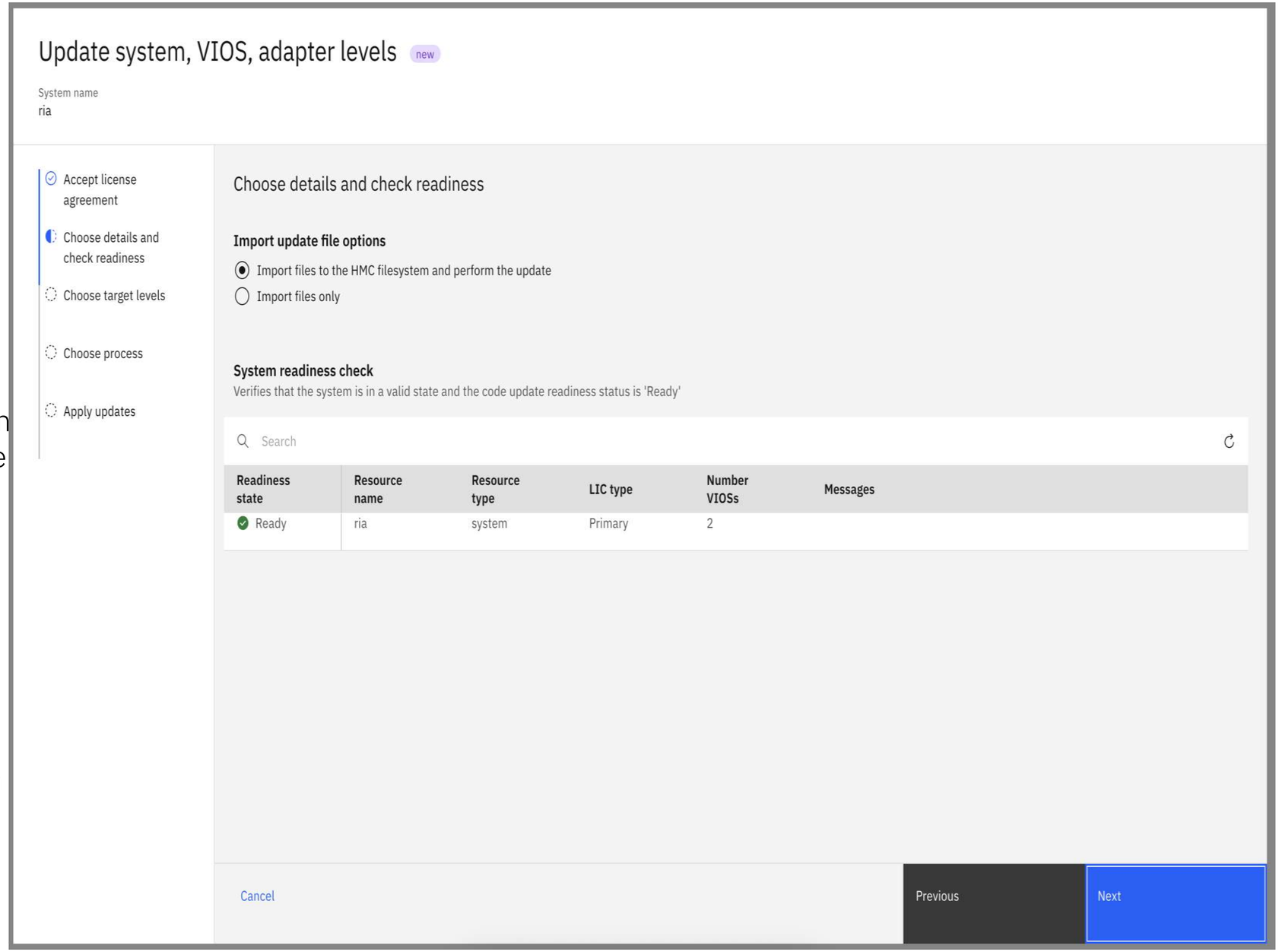
Launch point

- System should have latest 1110 firmware installed.
- **“Advance automation and monitoring”**, a new license capability introduced.
- “Update system, VIOS, adapter levels”, a new action menu introduced under Firmware.
- Above menu option can also be accessible upon clicking System name -> System actions.



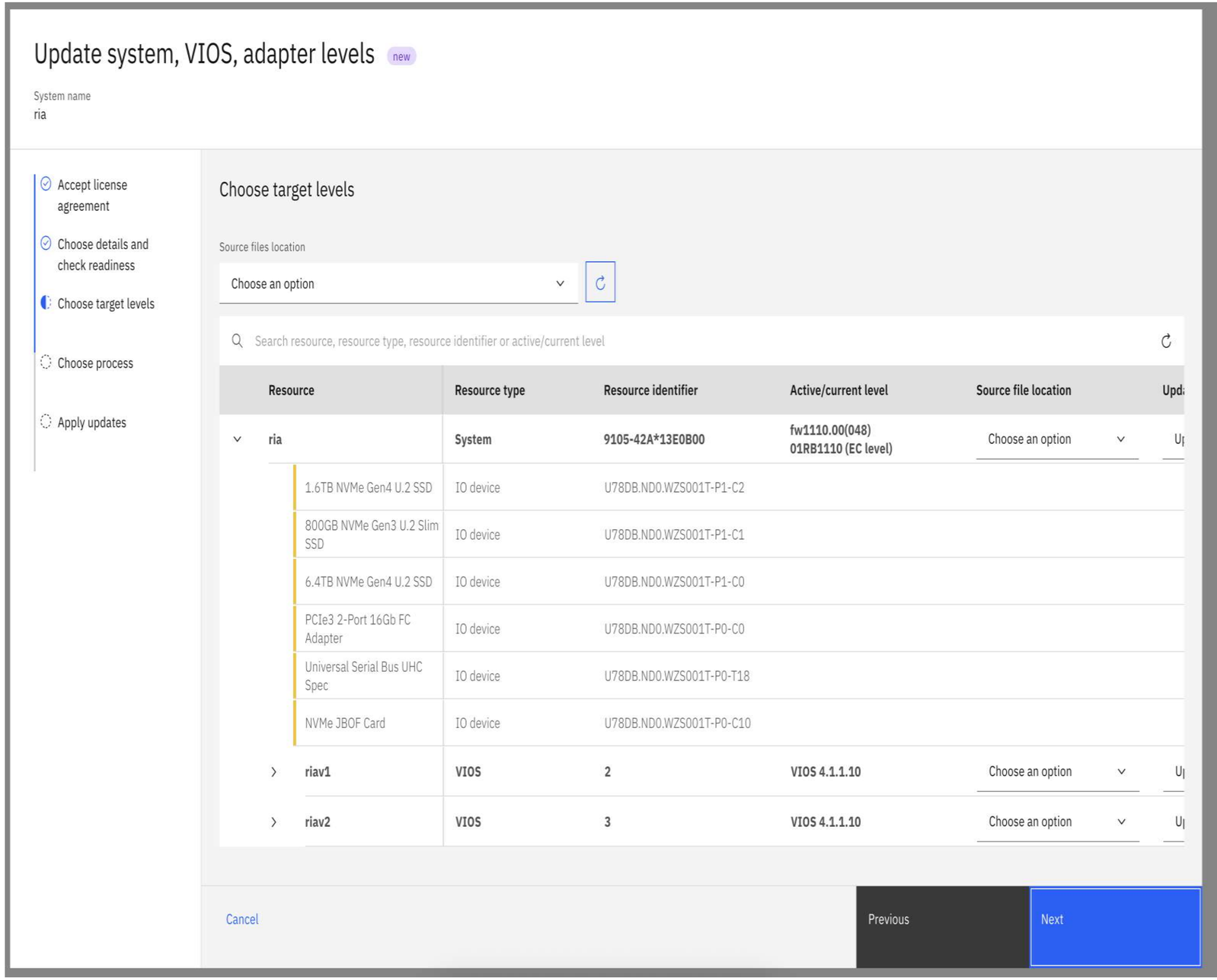
Choose details and check readiness

- **“Import files to HMC filesystem and perform update”** option downloads the image first from the selected source location to HMC and then start update process automatically.
- **“Import files only”** option only downloads the image from the selected source location to HMC. Same image can be used to update later.
- System readiness check is not required for “Import files only” option .
- System needs to be in ”Ready” state in order to proceed with update process.
- Warning/Error message will be displayed in “Messages” column, if system is not in “Ready” state.

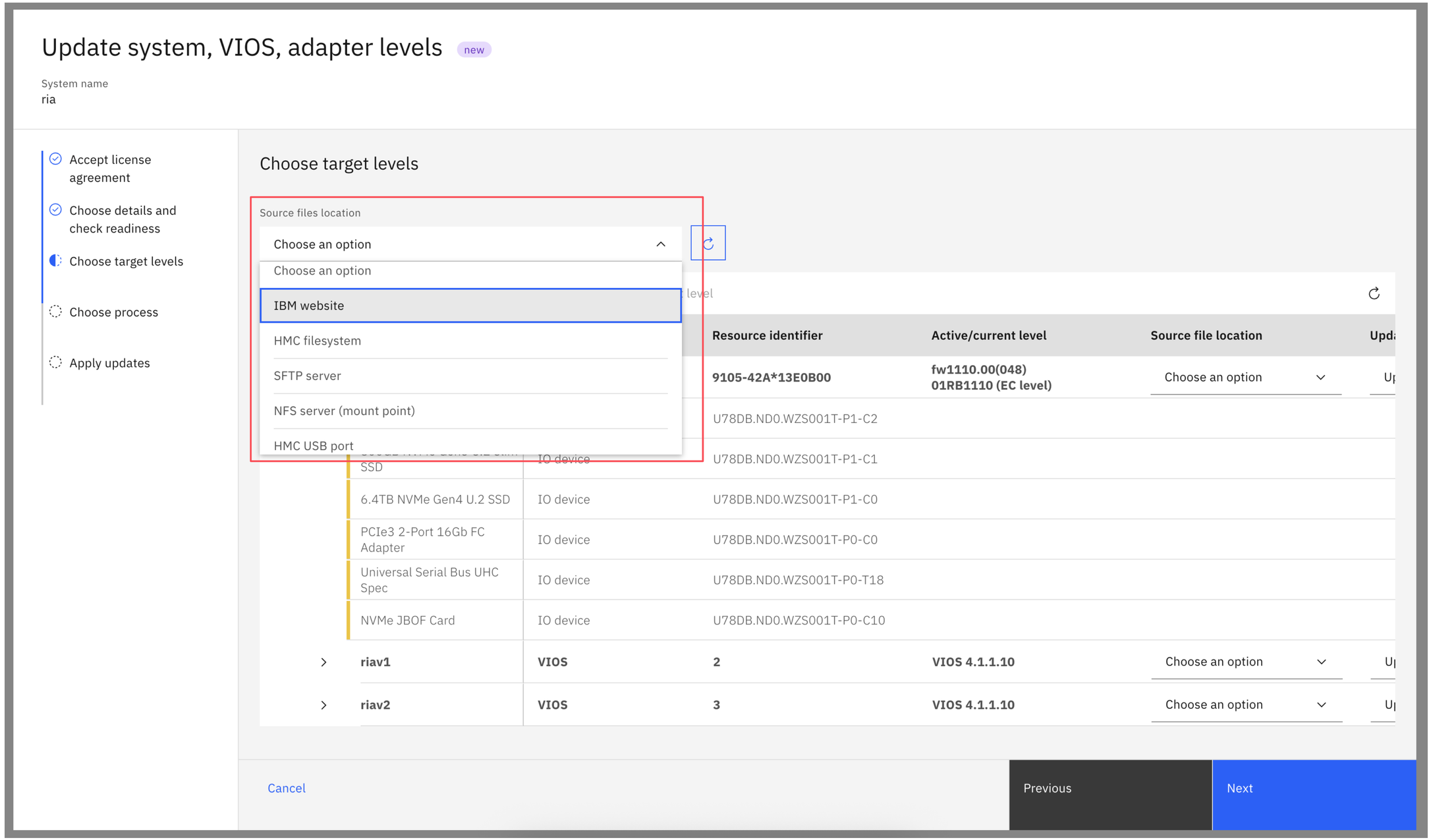


Choose details and check readiness

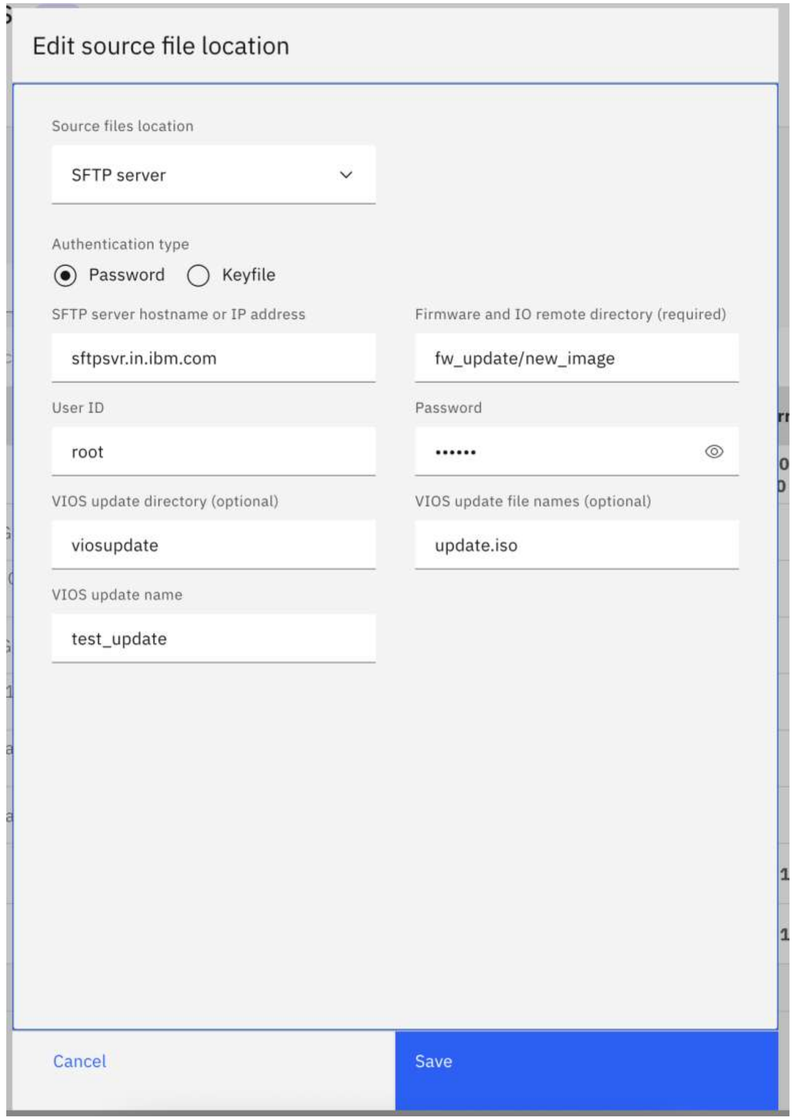
- Option to select the source file location from where the image will get download to HMC.
- Source file location can be also selected for individual resource(System/SRIOV/VIOS/IO) from corresponding table row.
- Option to select “Update/Upgrade/Resume” type. IO device can only be updated.
- **“Resume”** is only applicable for system firmware.
- **“HMC USB port”** source file location will not be visible for virtual HMC.
- Target levels will be populated automatically based on selected source file location and update/upgrade type.
- IO device owned by logical partition can not be updated.
- **“Do not update”** need to be selected for resource for which no update/upgrade required.

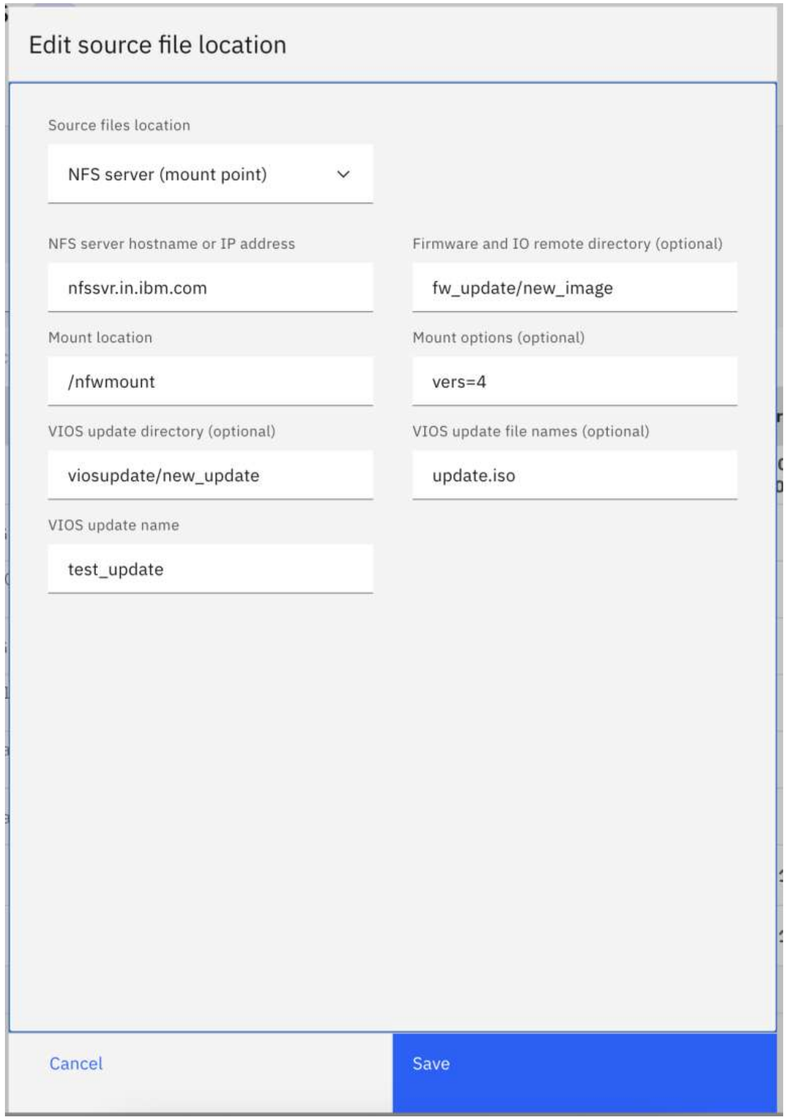


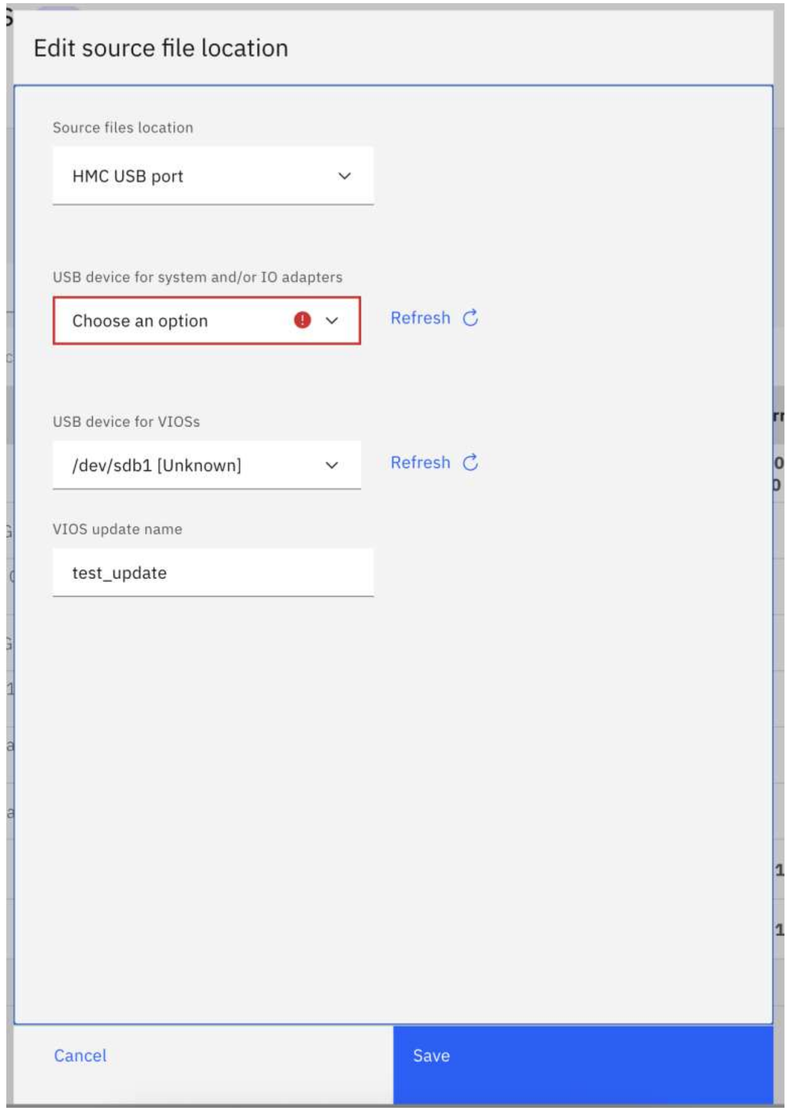
Source file location



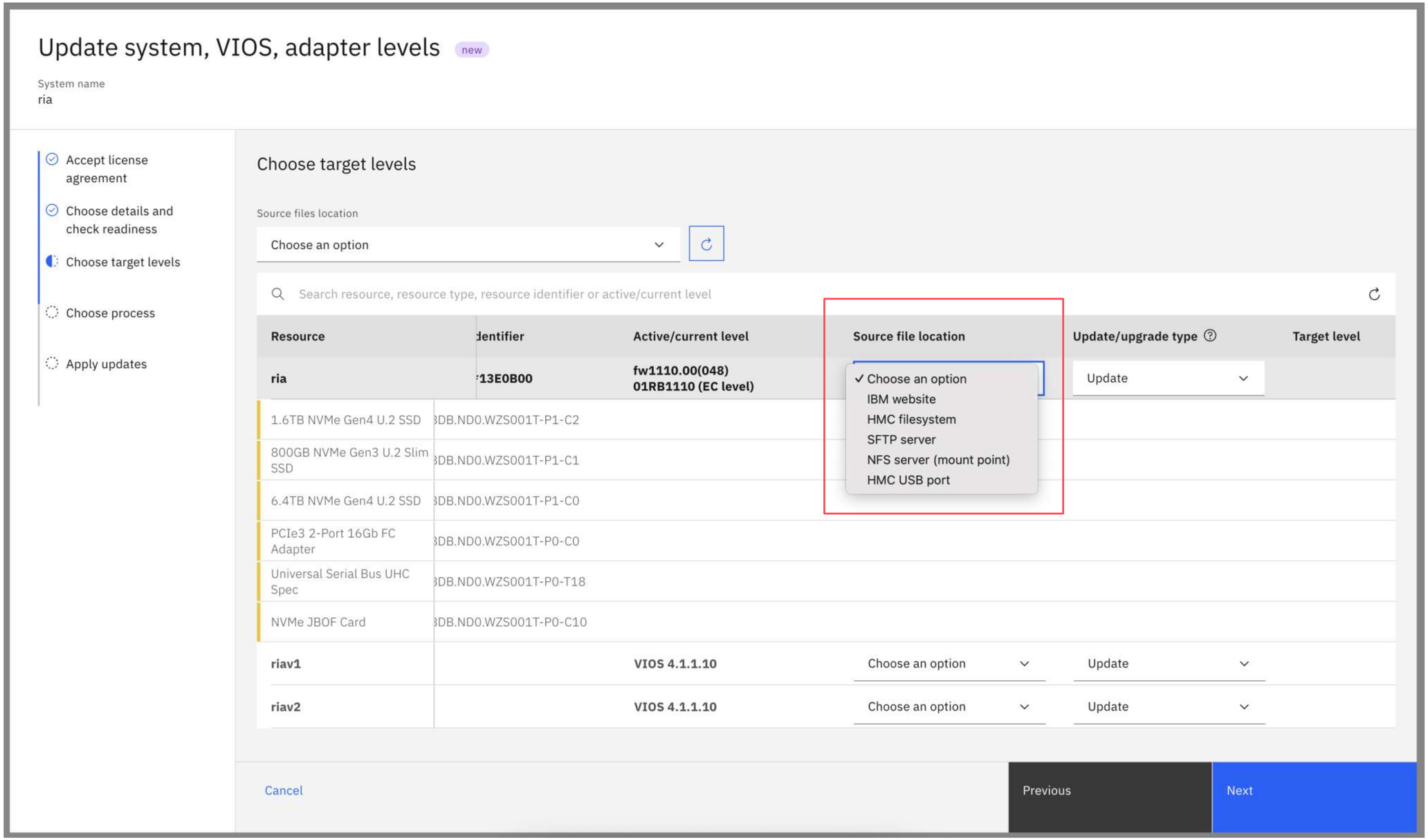
Inputs for source locations



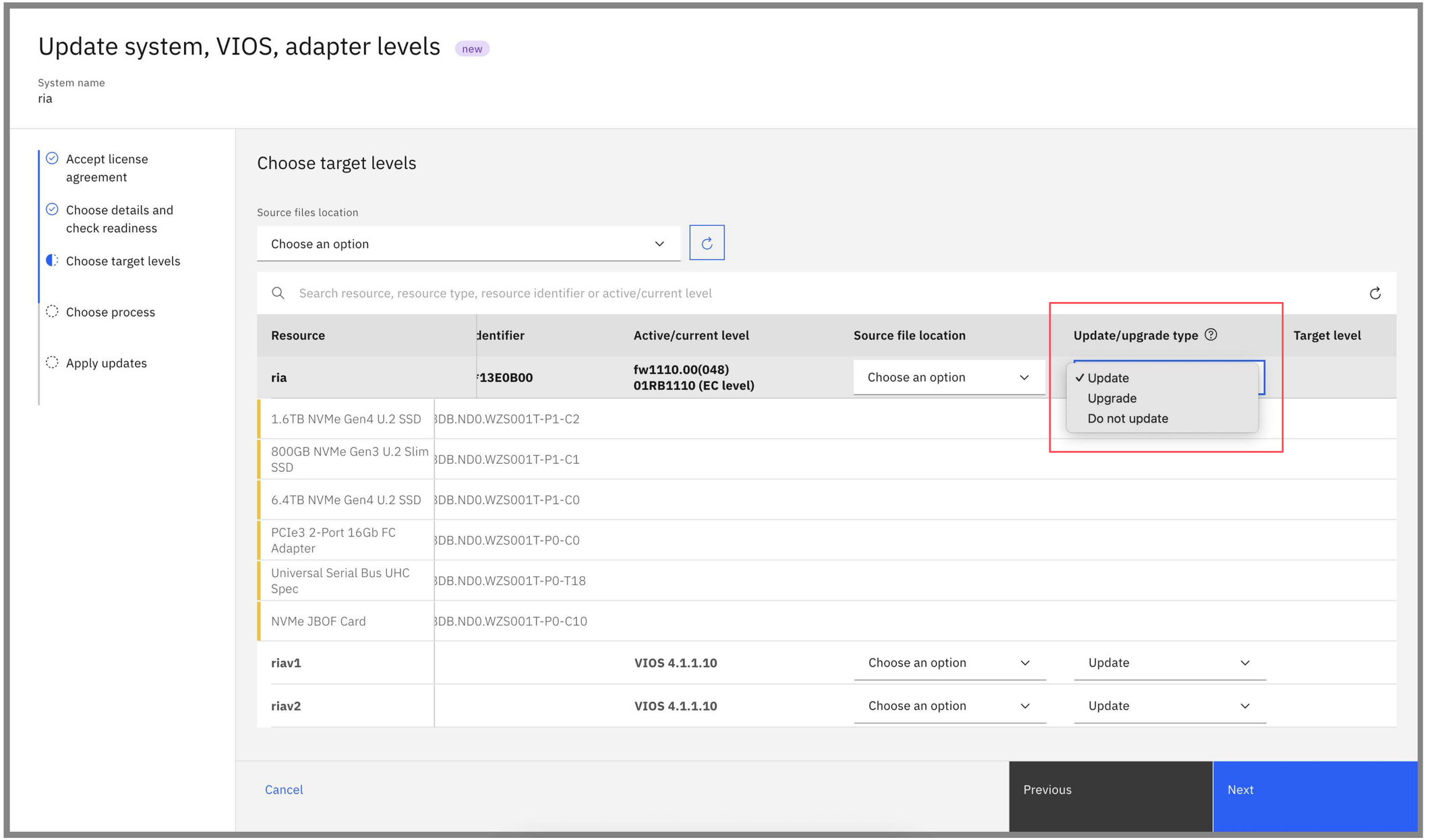




Source locations for individual resource



Select update/upgrade type



Update system, VIOS, adapter levels new

System name
ria

- Accept license agreement
- Choose details and check readiness
- Choose target levels
- Choose process
- Apply updates

ria	**9105-42A*13E0B00**	**fw1110.00(048) 01RB1110 (EC level)**	Choose an option	Update
1.6TB NVMe Gen4 U.2 SSD	U78DB.ND0.WZS001T-P1-C2			
800GB NVMe Gen3 U.2 Slim SSD	U78DB.ND0.WZS001T-P1-C1			
6.4TB NVMe Gen4 U.2 SSD	U78DB.ND0.WZS001T-P1-C0			
PCIe3 2-Port 16Gb FC Adapter	U78DB.ND0.WZS001T-P0-C0			
Universal Serial Bus UHC Spec	U78DB.ND0.WZS001T-P0-T18			
NVMe JBOF Card	U78DB.ND0.WZS001T-P0-C10			
riav1	**2**	**VIOS 4.1.0.10**	✓ Choose an option	Update
1 Gigabit Ethernet (UTP) 4 Port Adapter PCIE-4x/Short	U78DB.ND0.WZS001T-P0-C3 ent0,ent1,ent2,ent3	10240310		Update
PCIe3 2 PORT 25/10 Gb NIC&ROCE SFP28 ADAPTER	U78DB.ND0.WZS001T-P0-C4 ent4,ent5	001400321010		Update
PCIe3 4-Port 16Gb FC Adapter	U78DB.ND0.WZS001T-P0-C8 fcs0,fcs1,fcs2,fcs3	00014000020062400010	Choose an option	Update
PCIe3 2-Port 32Gb FC Adapter	U78DB.ND0.WZS001T-P0-C9 fcs4,fcs5	00014000020062400010	Choose an option	Update
3.2TB NVMe Gen4 U.2 SSD	U78DB.ND0.WZS001T-P1-C3 nvme0	53543435	Choose an option	Update
PCIe4 1.6TB NVMe Flash Adapter x8	U78DB.ND0.WZS001T-P0-C1 nvme1	53503432	Choose an option	Update
riav2	**3**	**VIOS 4.1.1.10**	Choose an option	Update

- ✓ Choose an option
- IBM website
- HMC filesystem
- SFTP server
- NFS server (mount point)
- HMC USB port

Cancel | Previous | Next

Update system, VIOS, adapter levels new

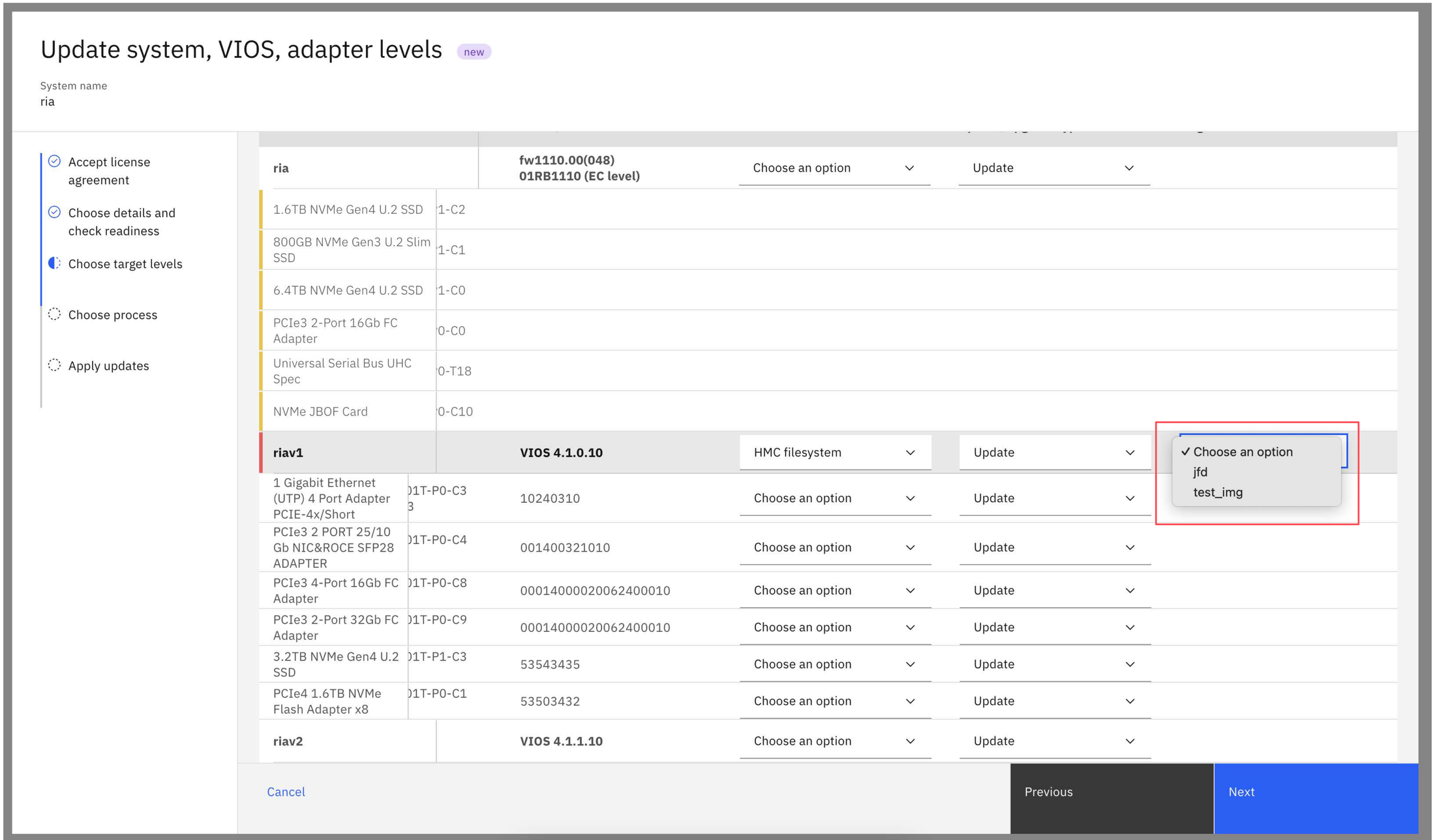
System name
ria

- Accept license agreement
- Choose details and check readiness
- Choose target levels
- Choose process
- Apply updates

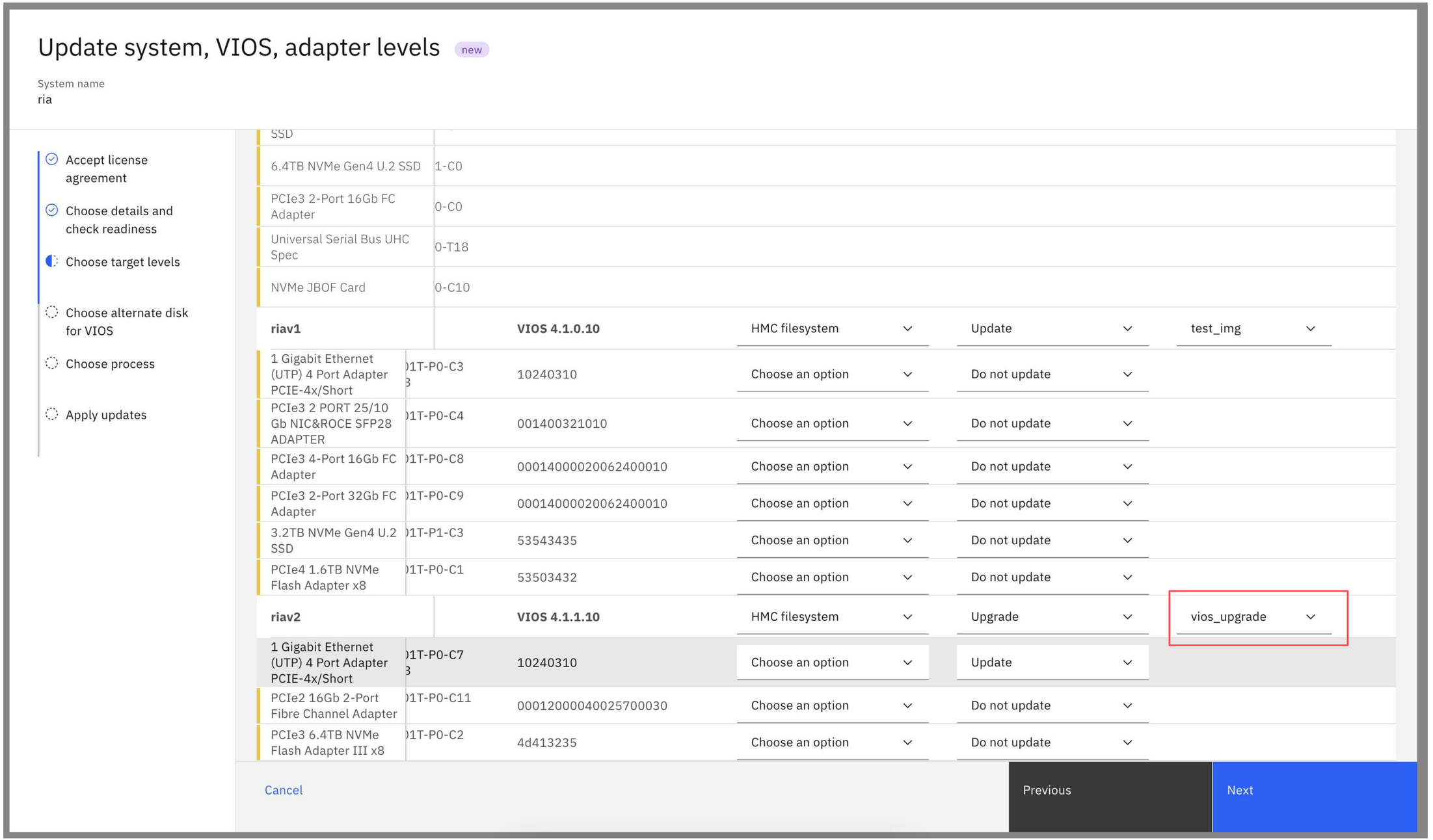
ria	**9105-42A*13E0B00**	**fw1110.00(048) 01RB1110 (EC level)**	Choose an option	Update
1.6TB NVMe Gen4 U.2 SSD	U78DB.ND0.WZS001T-P1-C2			
800GB NVMe Gen3 U.2 Slim SSD	U78DB.ND0.WZS001T-P1-C1			
6.4TB NVMe Gen4 U.2 SSD	U78DB.ND0.WZS001T-P1-C0			
PCIe3 2-Port 16Gb FC Adapter	U78DB.ND0.WZS001T-P0-C0			
Universal Serial Bus UHC Spec	U78DB.ND0.WZS001T-P0-T18			
NVMe JBOF Card	U78DB.ND0.WZS001T-P0-C10			
riav1	**2**	**VIOS 4.1.0.10**	Choose an option	✓ Update Upgrade Do not update
1 Gigabit Ethernet (UTP) 4 Port Adapter PCIE-4x/Short	U78DB.ND0.WZS001T-P0-C3 ent0,ent1,ent2,ent3	10240310	Choose an option	
PCIe3 2 PORT 25/10 Gb NIC&ROCE SFP28 ADAPTER	U78DB.ND0.WZS001T-P0-C4 ent4,ent5	001400321010	Choose an option	Update
PCIe3 4-Port 16Gb FC Adapter	U78DB.ND0.WZS001T-P0-C8 fcs0,fcs1,fcs2,fcs3	00014000020062400010	Choose an option	Update
PCIe3 2-Port 32Gb FC Adapter	U78DB.ND0.WZS001T-P0-C9 fcs4,fcs5	00014000020062400010	Choose an option	Update
3.2TB NVMe Gen4 U.2 SSD	U78DB.ND0.WZS001T-P1-C3 nvme0	53543435	Choose an option	Update
PCIe4 1.6TB NVMe Flash Adapter x8	U78DB.ND0.WZS001T-P0-C1 nvme1	53503432	Choose an option	Update
riav2	**3**	**VIOS 4.1.1.10**	Choose an option	Update

Cancel | Previous | Next

Choose VIOS update image from HMC

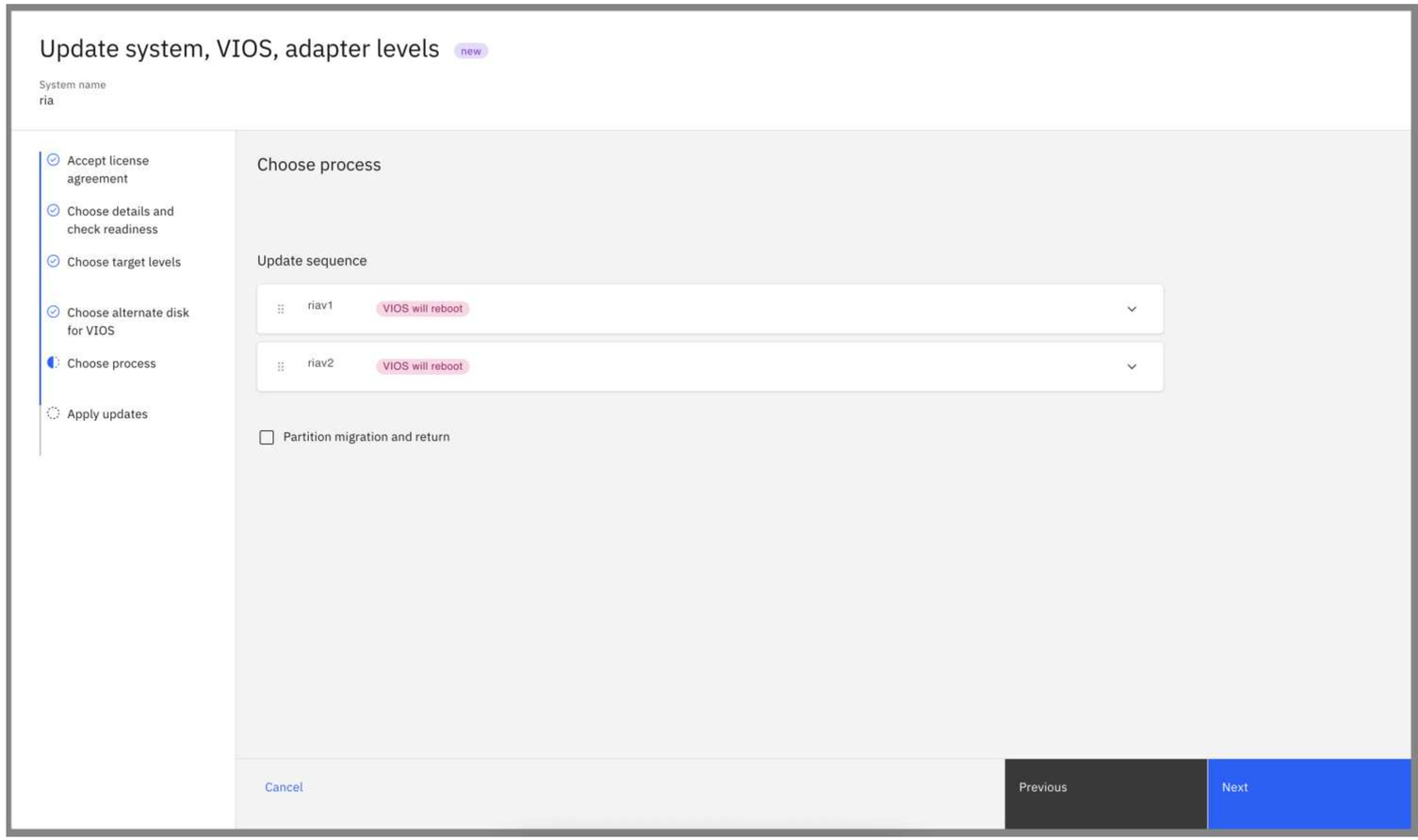


Choose VIOS upgrade image from HMC



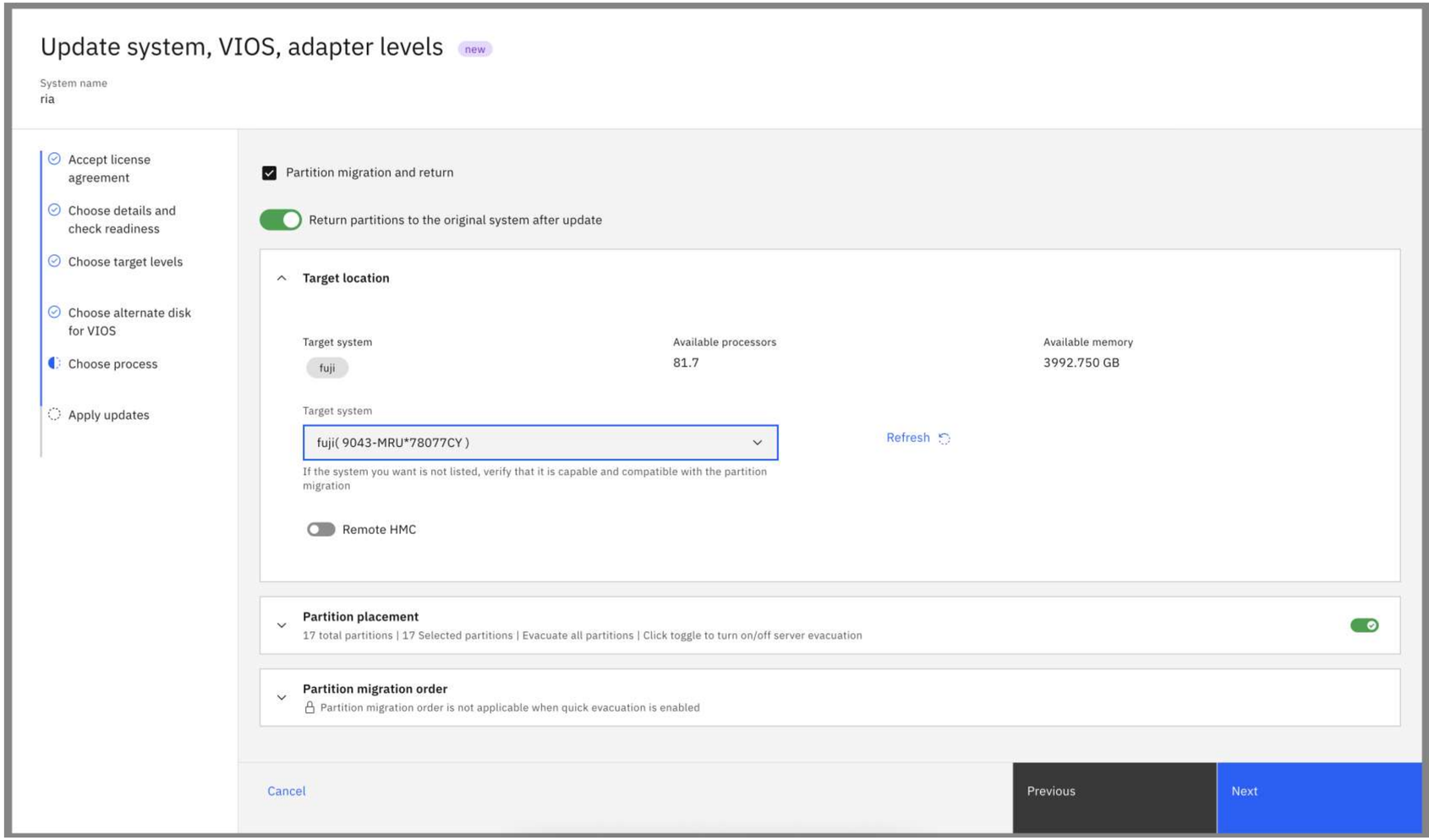
Choose process of updates

- System/VIOS can be drag and drop for altering the update sequence.
- If all the resources (System/VIOS/IO) selected to update and the update is disruptive, VIOS update sequence should be first before disruptive system firmware.
- **Partition migration and return** checkbox enables to migrate the partition to the selected target location and revert after the update is complete.
- **Return partitions to the original system after update** switch enables to return the partition to the system where the partitions were present before the update.

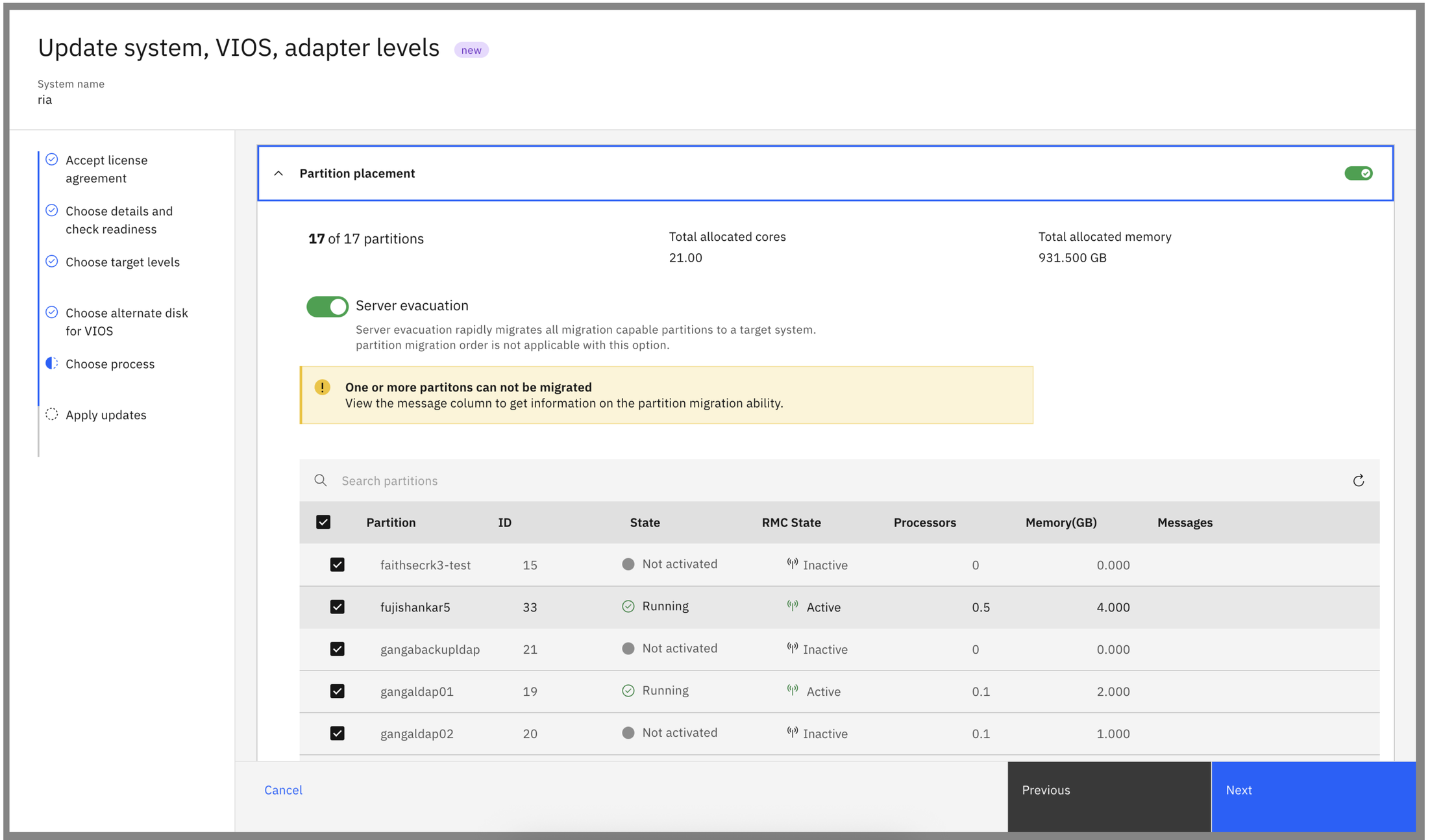


Choose process – Partition migration

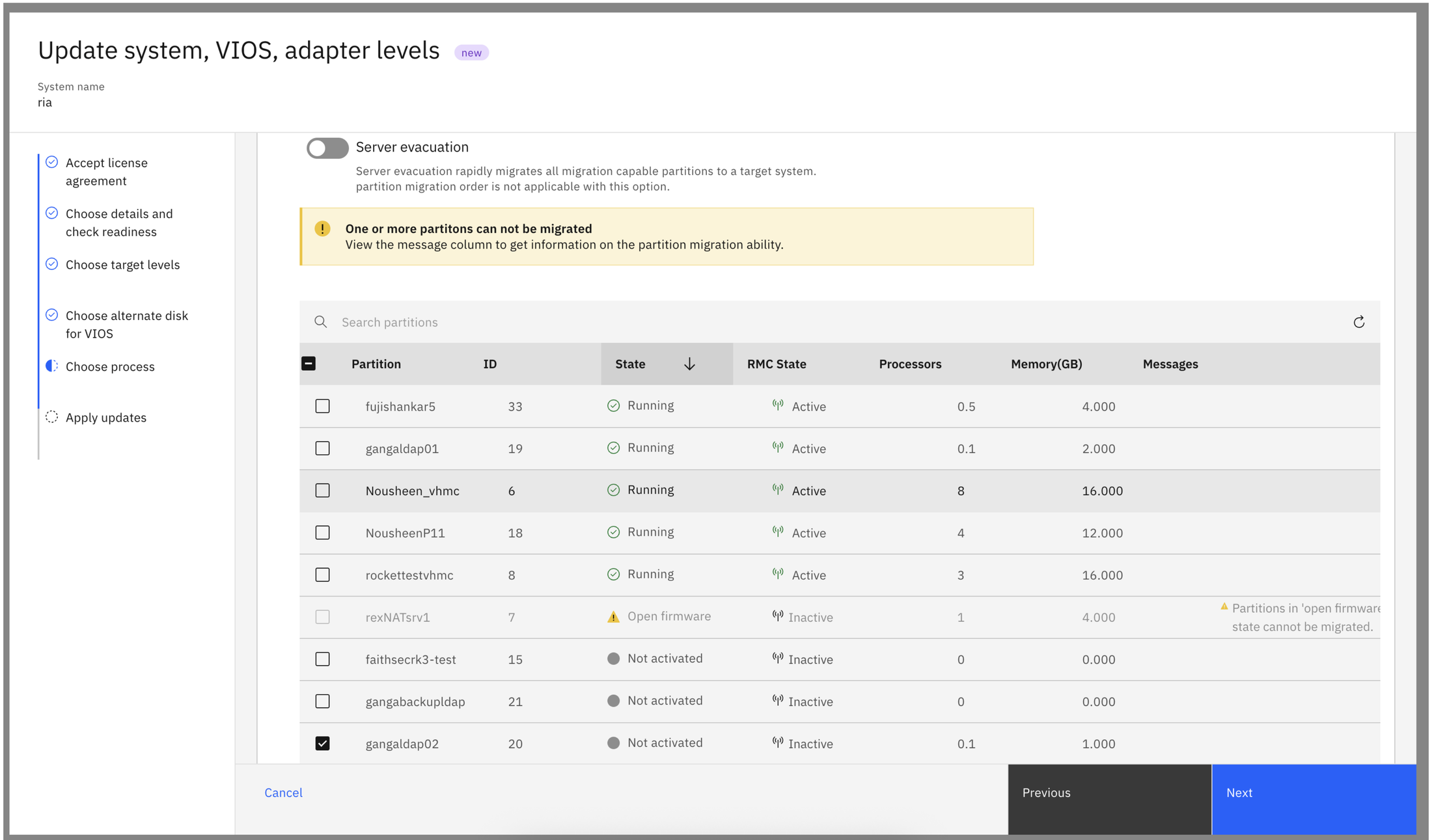
- **Remote HMC** switch enables to migrate the partitions to a system managed by remote HMC. When selected partitions are not automatically migrated back to the system after the update.
- By default, all the partitions are selected for migration. Partitions can be individually selected to migrate by toggling **Server evacuation** switch.
- In case of selected partitions for migration, partition migration sequence can be specified for a set of partitions that needs to be migrated initially.



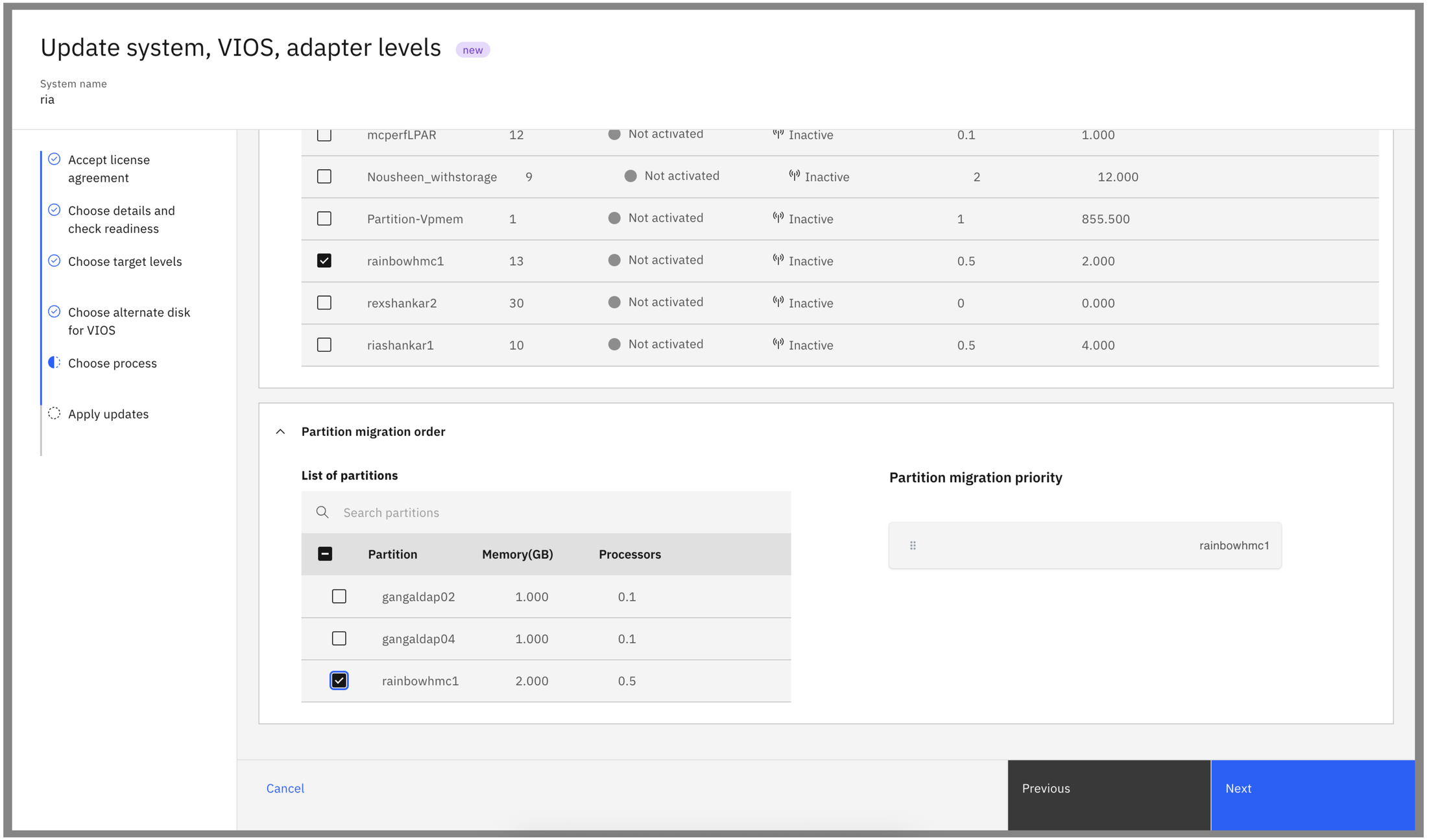
Migration – Server evacuation



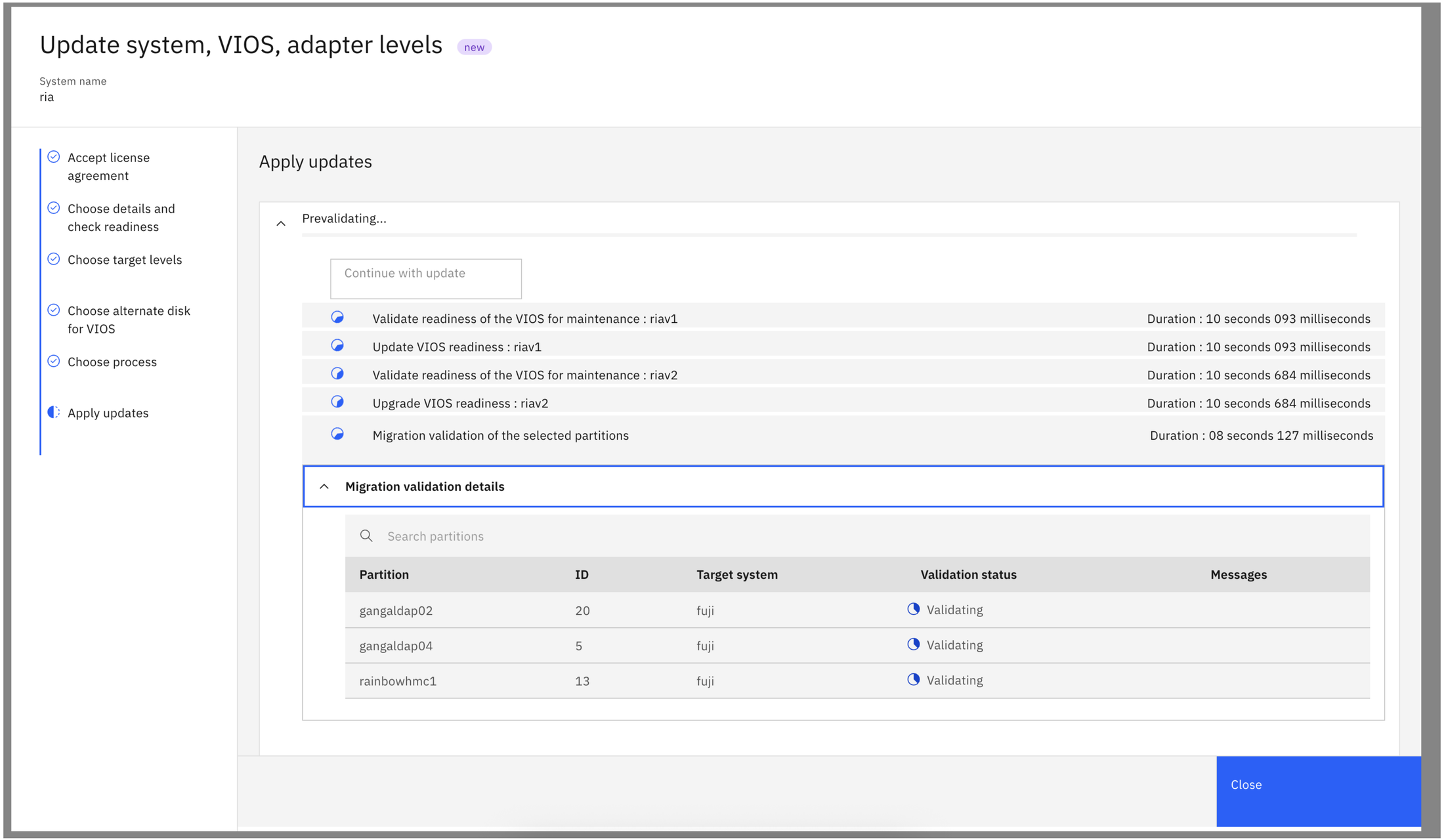
Migration – Selected partition migration



Migration – Select partition migration order

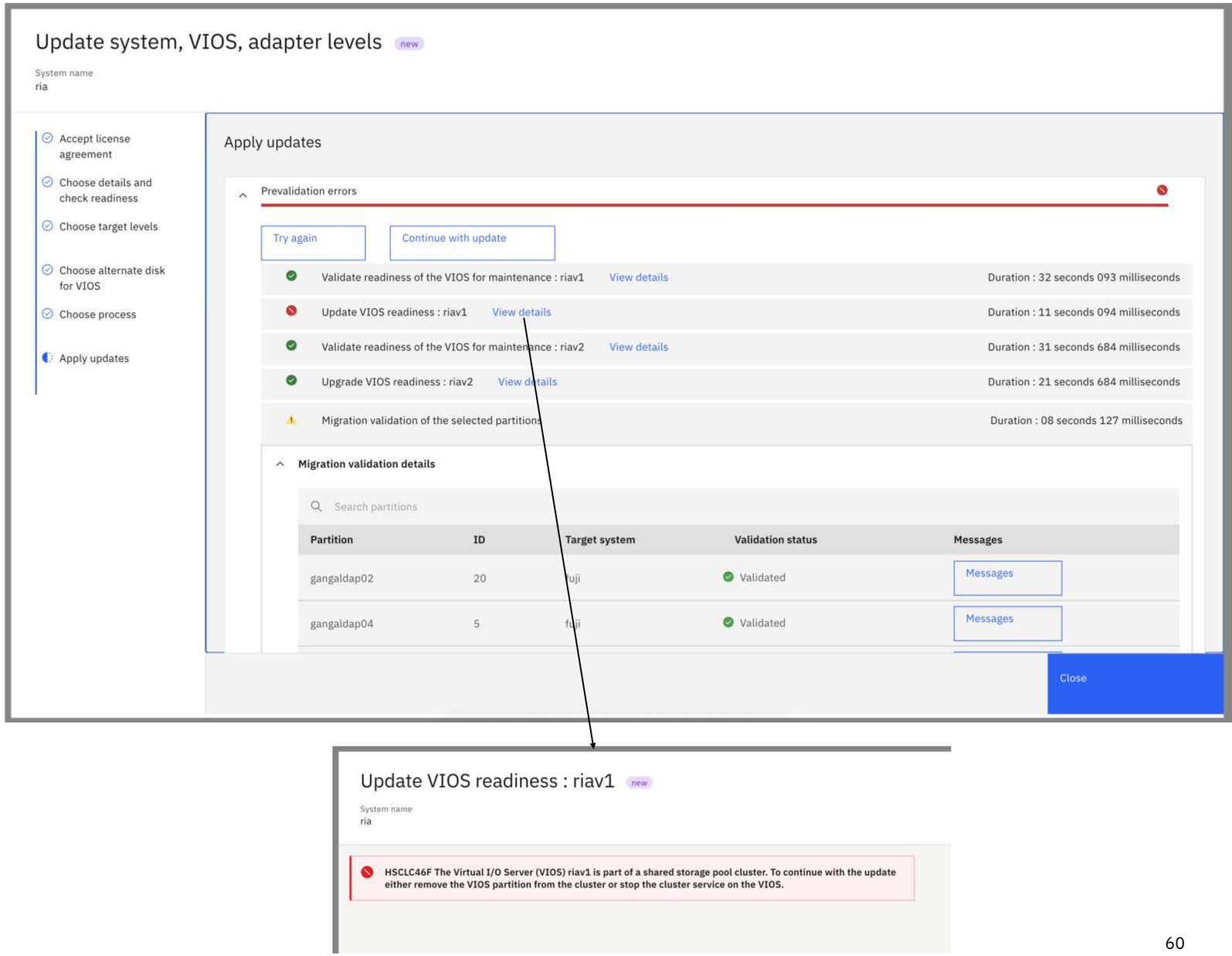


Apply updates - progress

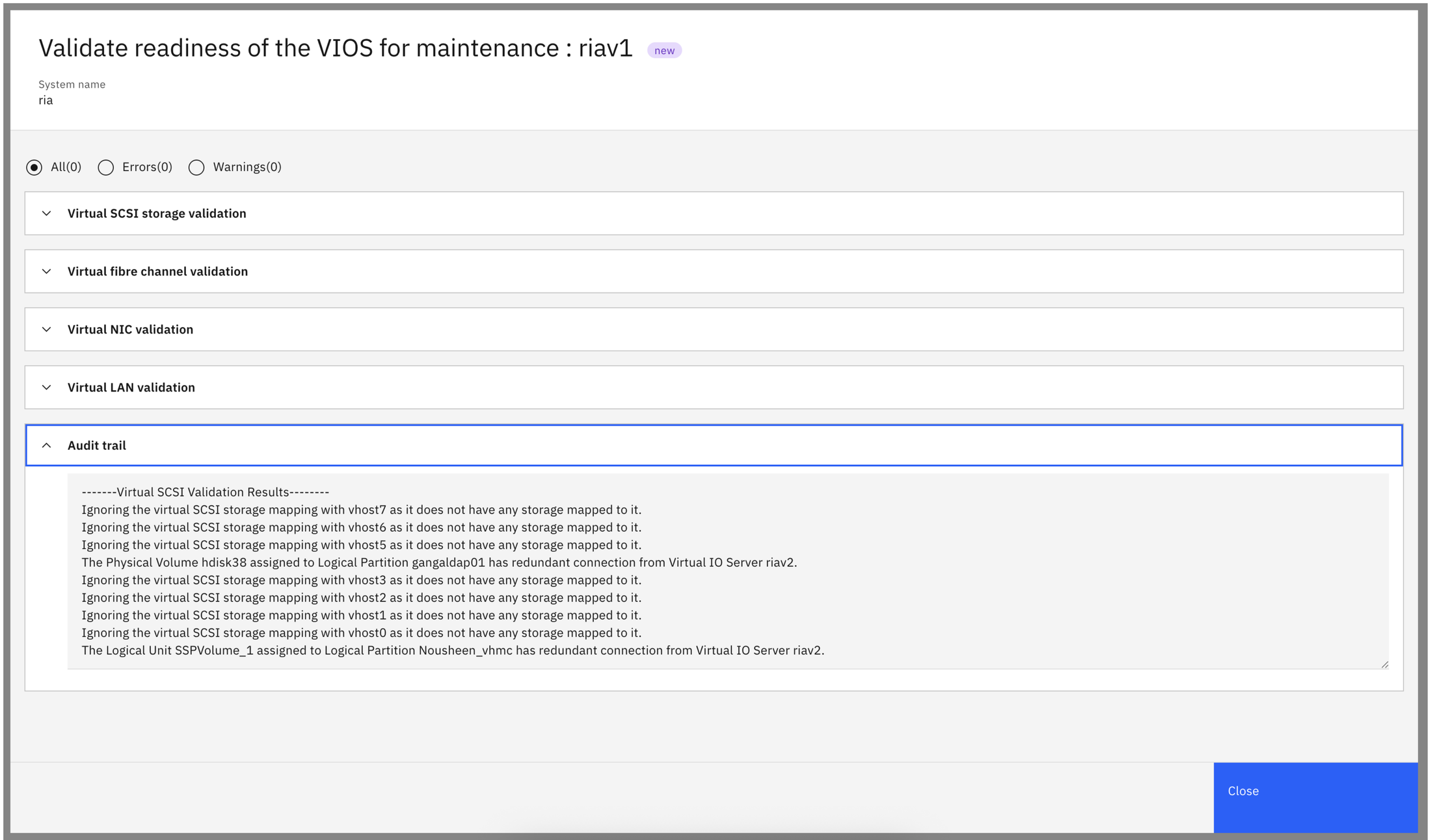


Apply updates – prevalidation, download, LPM validation

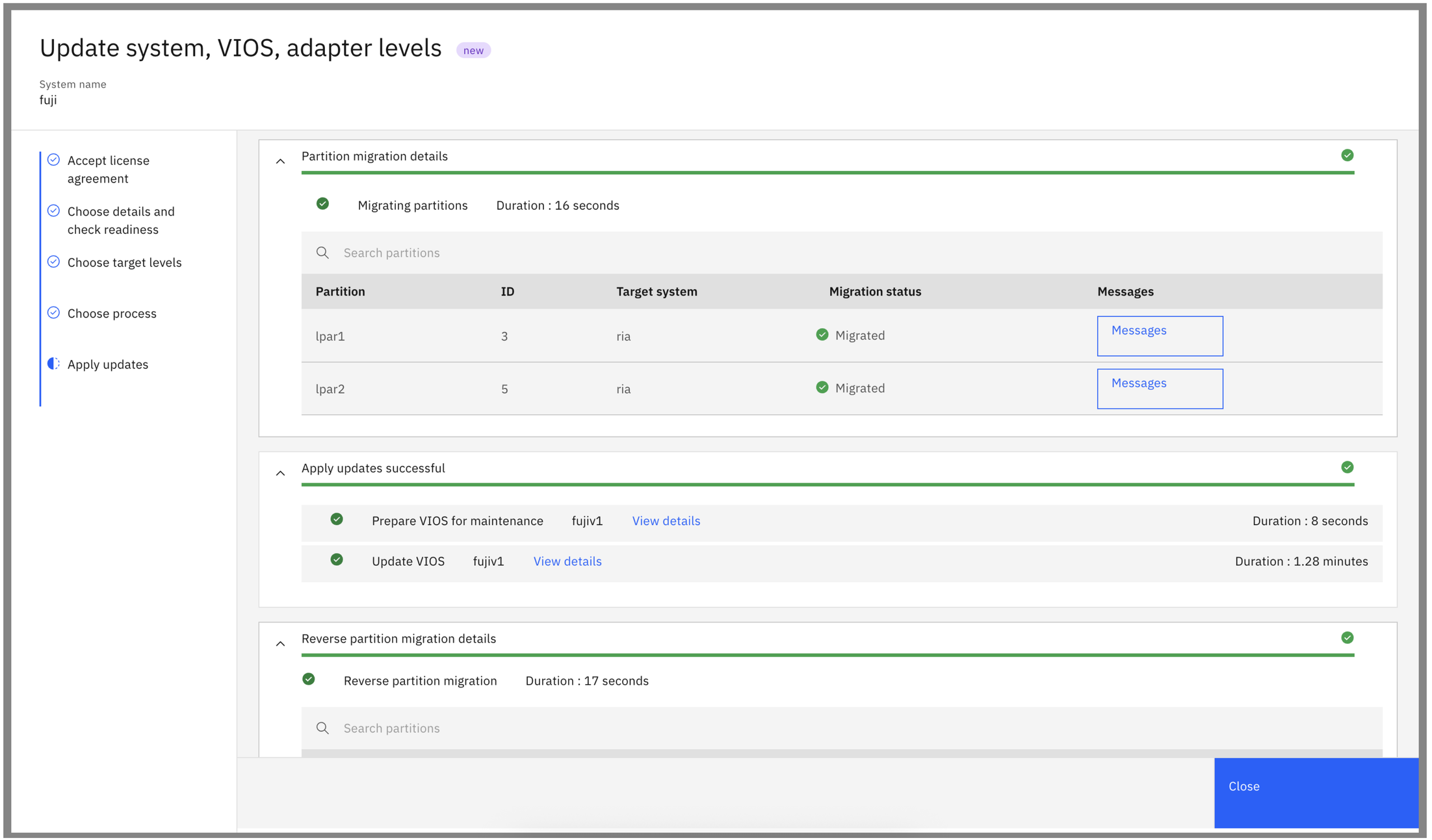
- During VIOS upgrade /update or partition migration prevalidation is done. If the validation is successfully completed, **Continue with update** enables to download the images.
- If there are errors during validation, click **Try again** can be used to validate again after fixing the errors.
- If the validation is completed successfully and the update images are downloaded, the updates are applied.
- **View details** helps to view more details about the operation.



Prevalidation – VIOS Maintenance validation



Update platform – migrate, update and reverse migration



To recap: Unmatched Business Resiliency

Reduced Risk

Enables faster & more frequent maintenance updates, keeping systems secure, stable, and compatible with evolving software and hardware requirements, lowering risks of performance degradation, security breaches or unplanned downtimes.

Increased Productivity

Automate and simplify complex IT tasks reduces time on task and the need for specialized skills and enables easier, faster, and non-disruptive updates.

Improved Business Continuity

Minimize disruptions to business processes and mission-critical applications caused by maintenance windows while ensuring compliance with Service Level Agreements.

P11 Streamlined IBM Power support with Automated First Failure Data Capture

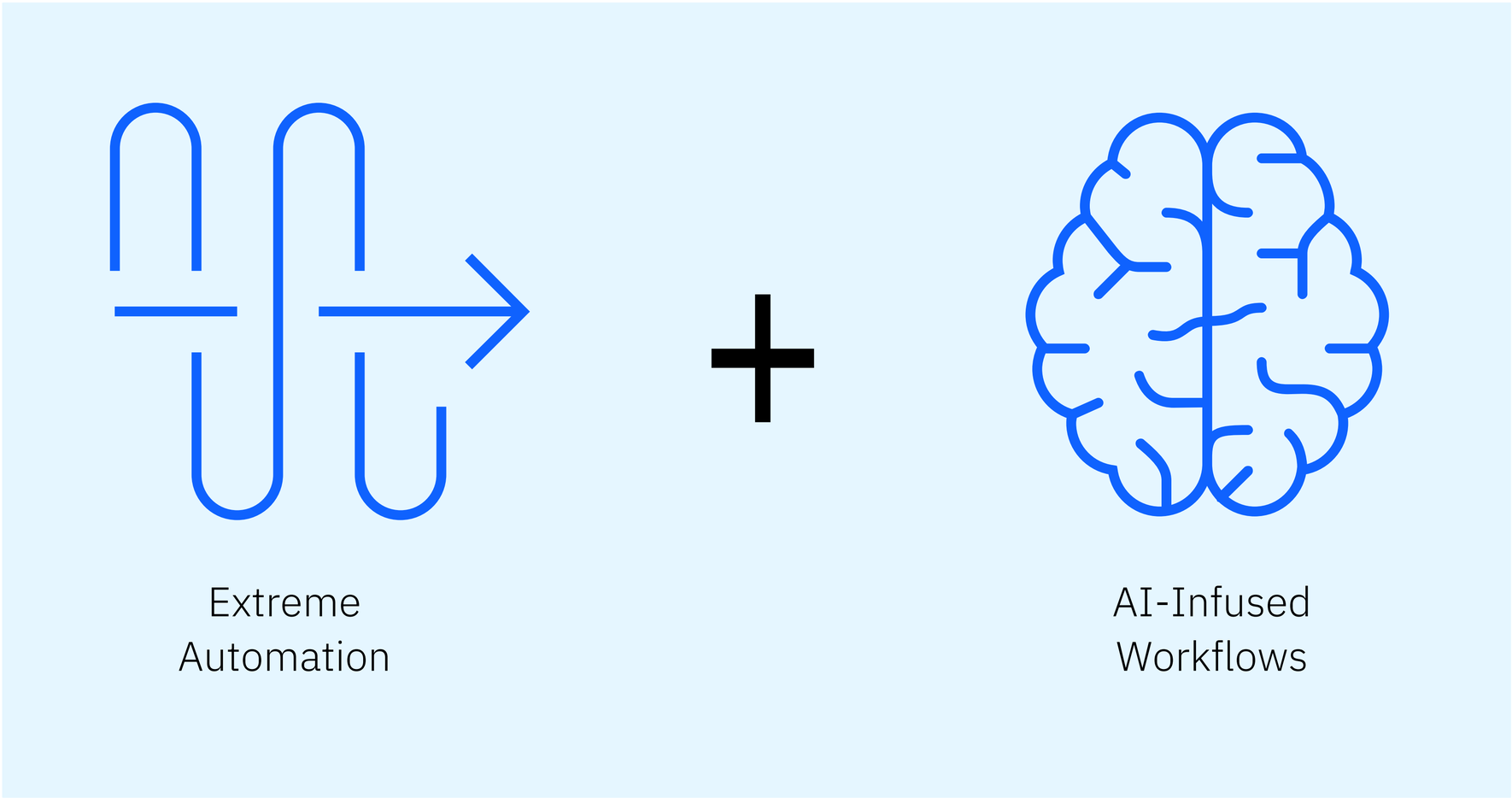
The Challenge

- Opening a support case and sending diagnostic data
  => **manual and time-consuming**.

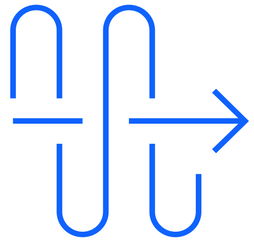
- Requires interaction with **multiple tools and interfaces**.

- Involves **lengthy back-and-forth with IBM Support**.

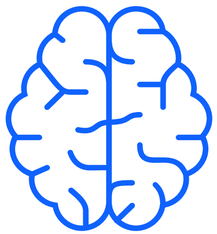
IBM Power's Vision: Deliver Autonomous IT through…



Faster error resolution delivered through Platform Automation & AI-Infused Workflows



Extreme Automation built into Power 11 to accelerate support case creation and log collection.



AI-Infused Workflows used by IBM Support to speed root cause analysis and remediation recommendations.

Video: Power 11 Automated First Failure Data Capture

Automated FFDC Log Transmission

IBM **Power**

With Power 11...

every support case is resolved faster,
saving staff time, minimizing downtime and reducing costs for your organization.

Address Complexity

Power 11 simplifies the process of creating a support case, lowering the knowledge barrier to create the case and automating the selection, collection and transfer of the necessary log files to the IBM support team.

Reduce IT Admin Overload

Power 11 reduces the administrator work required to submit and resolve new support cases, saving hours per case and improving productivity.

Minimize costs due to business disruption

IBM TLS AI-infused workflows shorten the time to resolve support cases which in turn reduces the risk of business impact.

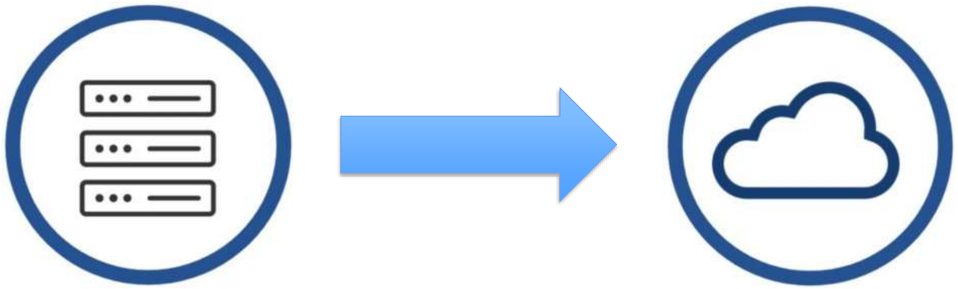
IBM i
Migrate While Active

IBM i Migrate While Active

IBM i
continuous innovation
continuous integration

Easily migrate from on premise to Power Virtual Server or another on-premise server

- IBM i standardized tooling to **migrate while active** with minimal impact to production
- Production downtime reduced from days to minutes/hours
  - Dependent on total data size, change rate and network bandwidth
- Automation to reduce the time it takes to seed the base copy
  - Eliminates multiple tools and manual processes for multi-step SAVE/RESTORE
- Production on premise remains available while changes are synchronized in real-time to the target system
  - Eliminates third party replication tools or multiple point in time SAVE/RESTORE iterations



IBM i Migrate While Active Demo

IBM i
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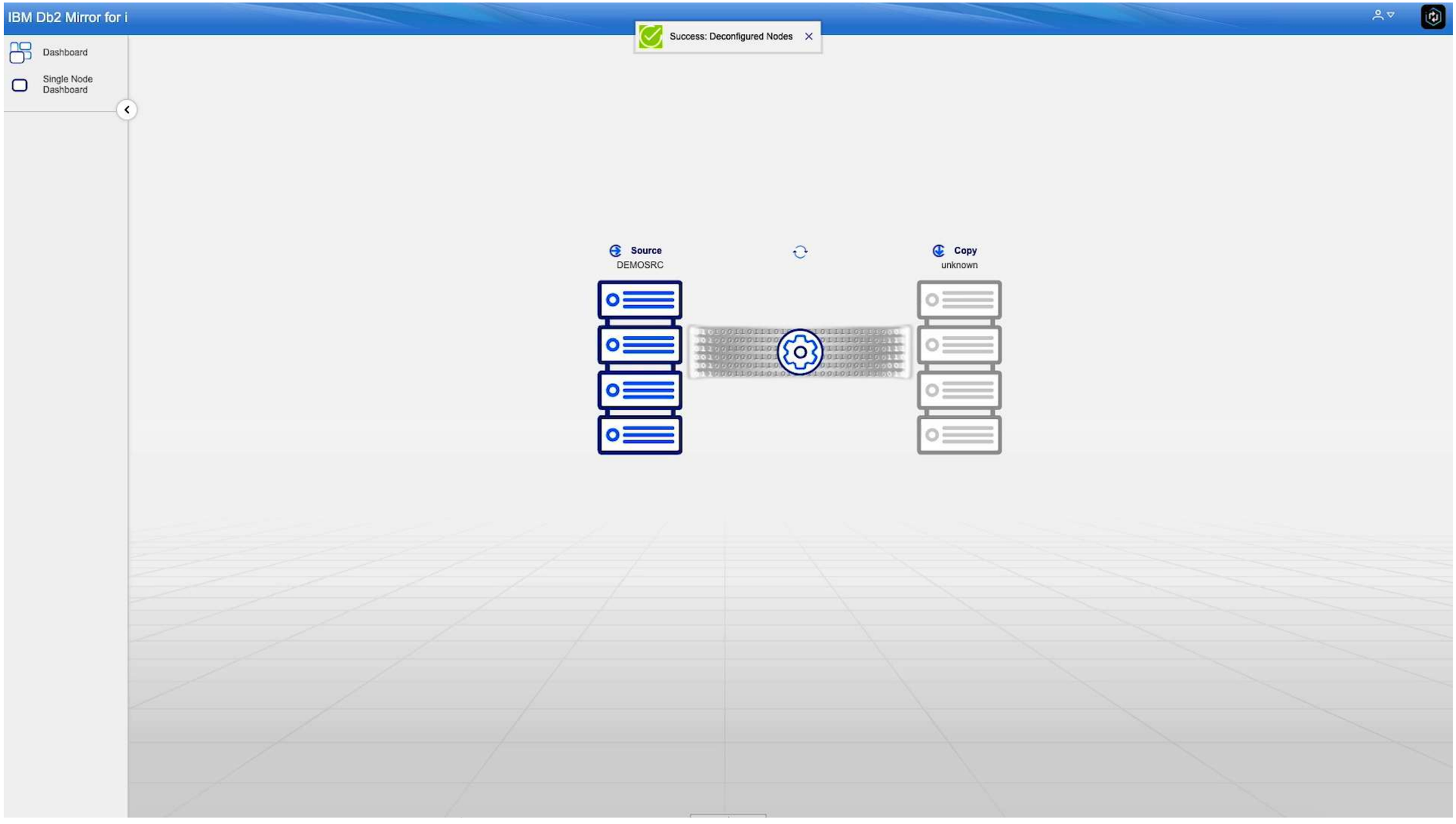

IBM i Migrate While Active – Support Document

IBM i
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IBM i Migrate While Active

News

Abstract

Available starting on December 13th 2024, IBM i Migrate While Active provides the capability to safely and easily migrate an IBM i partition. A new instance of the IBM i partition, otherwise known as the copy node, is established and maintained by Migrate While Active until such time that a client decides to finalize the migration.

This wiki page aggregates resources and enhancements for IBM i Migrate While Active.

Content

IBM i Technology Updates > **IBM i Migrate While Active** >

IBM i Migrate While Active orchestrates the migration of an IBM i logical partition (LPAR) to a different location. That location can be within the same server, same data center, or to a remote location such as IBM Power Virtual Server in IBM Cloud.

The process starts with taking a source LPAR at IBM i 7.4, IBM i 7.5, or higher, making a copy of that LPAR, and migrating data from the source to the copy. While the source node is still active, changed data will be continuously migrated to the copy node. When the two nodes are "in sync", a cutover to the new node can be performed, which completes the migration.

Migrate While Active is optimized for migration where a physical tape cannot be used for a traditional D-Mode IPL and restore. It handles the save to optical media so a network install may be performed.

Migrate While Active begins with System Migration, which establishes the copy node, as denoted by the number 1 in in the figure below.

Migrate While Active includes the capability to continuously synchronize the copy node. This is denoted by the number 2 in in the figure below.

The Migrate While Active user decides when to end the continuous synchronization and allow the copy node to be promoted into a state where it can be used. This is denoted by the number 3 in the figure below.

https://lnkd.in/gErMkPT7
https://www.ibm.com/support/pages/ibm-i-migrate-while-active

IBM i Migrate While Active – IBM Docs

IBM i
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continuous integration

IBM i Migrate While Active

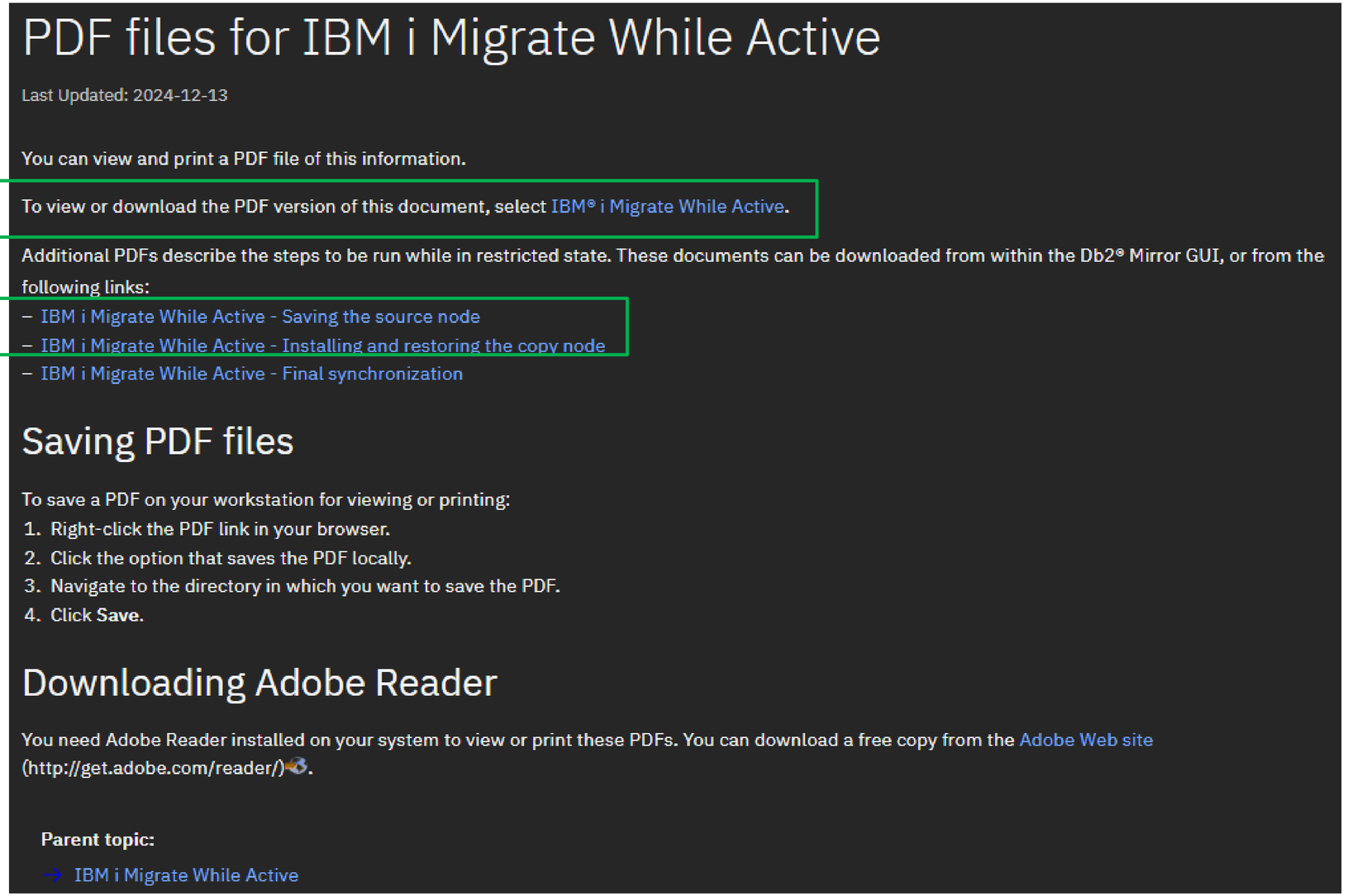
Last Updated: 2024-12-13

IBM® i Migrate While Active provides the capability to safely and easily migrate an IBM i partition.

- **PDF files for IBM i Migrate While Active**
  You can view and print a PDF file of this information.
- **What's new for IBM i 7.5**
  IBM i Migrate While Active was announced in October 2024. This topic was added to IBM Documentation at that time.
- **Introduction**
  IBM i Migrate While Active orchestrates the migration of an IBM i logical partition (LPAR) to a different location. That location can be within the same server, same data center, or to a remote location such as IBM Power® Virtual Server in IBM Cloud®.
- **Concepts**
  This section contains an explanation of the fundamental pieces of IBM i Migrate While Active.
- **System migration stage**
  The system migration stage consists of the steps required to set up the IBM i Migrate While Active environment. This includes configuring migration settings, saving the source node, transferring the save, and then restoring the save onto the copy node. At the end of the system migration stage, the environment is ready for data synchronization to begin.
- **Data synchronization stage**
  Once the system migration to the copy node has completed, IBM i Migrate While Active will enter what is known as the data synchronization stage. During this stage, changes to objects within SYSBAS are tracked using the integrated file system and library tracking lists. These tracking lists are used by Migrate While Active to understand which objects need to be migrated to the copy node.
- **Cutover stage**
  The cutover stage is the point where migration to the copy node is finalized, and the relationship between the source and copy node is severed. When the cutover stage is complete, the source node will no longer interact with the copy node and the copy node is fully capable of being used as an independent instance of an IBM i.
- **Managing and monitoring IBM i Migrate While Active**
  Managing and monitoring Migrate While Active varies greatly depending upon the migration stage.
- **Work with Migration Status (WRKMIGSTS) command**
  The Work with Migration Status (WRKMIGSTS) CL command provides a menu-driven interface to interact with Migrate While Active. The WRKMIGSTS command must be used when the source or copy node is in restricted state since it is not possible to use the Db2® Mirror GUI during this time.
- **IBM i Migrate While Active services**
  SQL services provide the interfaces used to configure, monitor, and manage a migration using IBM i Migrate While Active.

https://www.ibm.com/docs/en/i/7.5?topic=availability-i-migrate-while-active
https://www.ibm.com/docs/en/i/7.4?topic=availability-i-migrate-while-active

IBM i Migrate While Active – IBM Docs



PDF files for IBM i Migrate While Active

Last Updated: 2024-12-13

You can view and print a PDF file of this information.

To view or download the PDF version of this document, select IBM® i Migrate While Active.

Additional PDFs describe the steps to be run while in restricted state. These documents can be downloaded from within the Db2® Mirror GUI, or from the following links:

- IBM i Migrate While Active - Saving the source node
- IBM i Migrate While Active - Installing and restoring the copy node
- IBM i Migrate While Active - Final synchronization

Saving PDF files

To save a PDF on your workstation for viewing or printing:

1. Right-click the PDF link in your browser.
2. Click the option that saves the PDF locally.
3. Navigate to the directory in which you want to save the PDF.
4. Click **Save**.

Downloading Adobe Reader

You need Adobe Reader installed on your system to view or print these PDFs. You can download a free copy from the Adobe Web site (http://get.adobe.com/reader/).

Parent topic:

→ IBM i Migrate While Active

https://www.ibm.com/docs/en/i/7.5?topic=active-pdf-files-i-migrate-while
https://www.ibm.com/docs/en/i/7.4?topic=active-pdf-files-i-migrate-while

Protect your business with IBM Power Cyber Vault

Average total cost of a data breach in 2024

$4.88 million

Increase from 2024

+11%

Source: IBM Cost of a Data Breach report 2024
Measured in US Dollars

Worldwide regulation

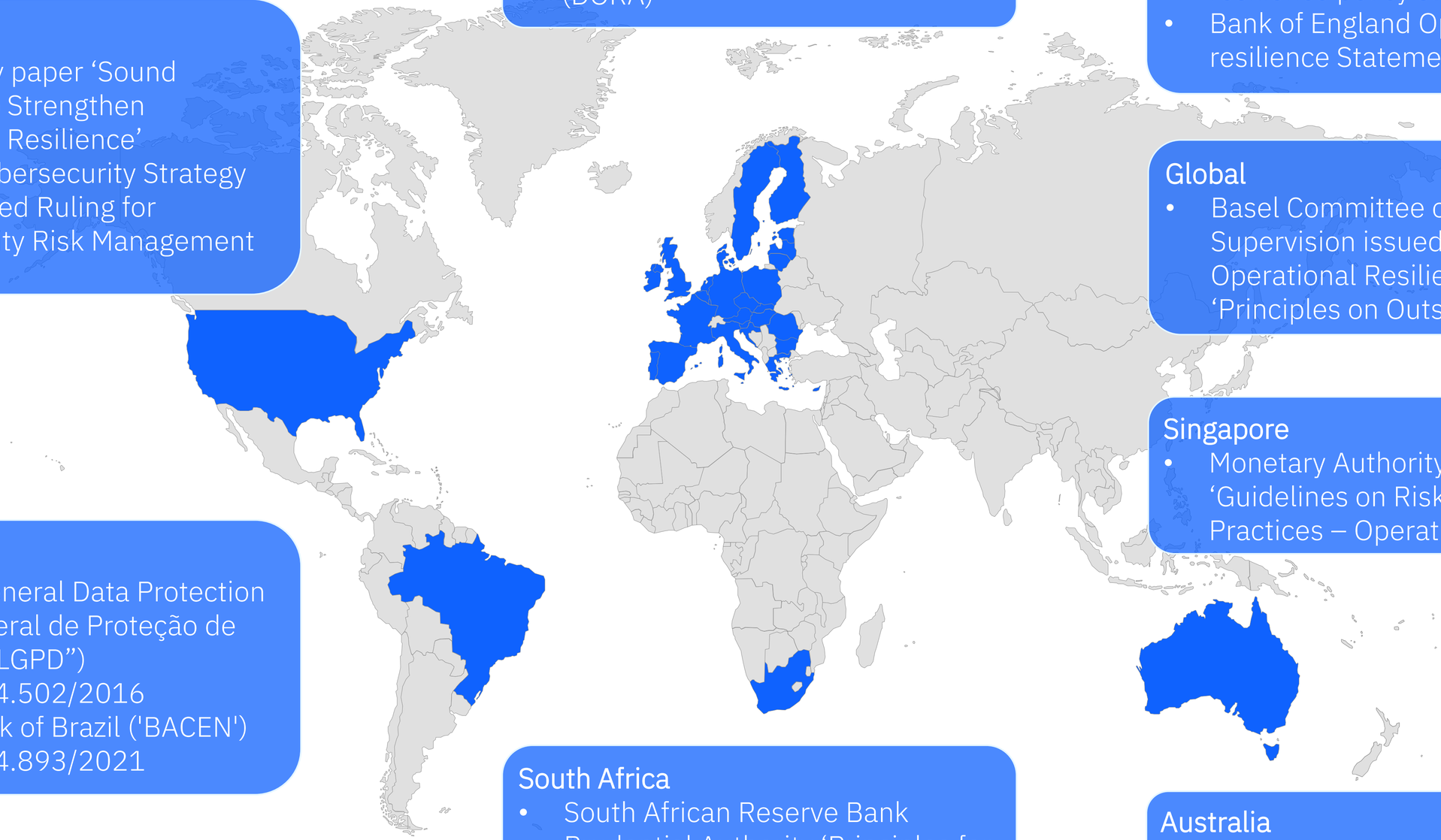
United States
- Interagency paper ‘Sound Practices to Strengthen Operational Resilience’
- National Cybersecurity Strategy
- SEC Proposed Ruling for Cybersecurity Risk Management Rule 10

Europe
- Digital Operational Resiliency Act (DORA)

United Kingdom
- FCA PS21/3 Building operational resilience policy statement
- Bank of England Operational resilience Statement of policy

Global
- Basel Committee on Banking Supervision issued ‘Principles for Operational Resilience’ and ‘Principles on Outsourcing’

Singapore
- Monetary Authority of Singapore ‘Guidelines on Risk Management Practices – Operational Risk’

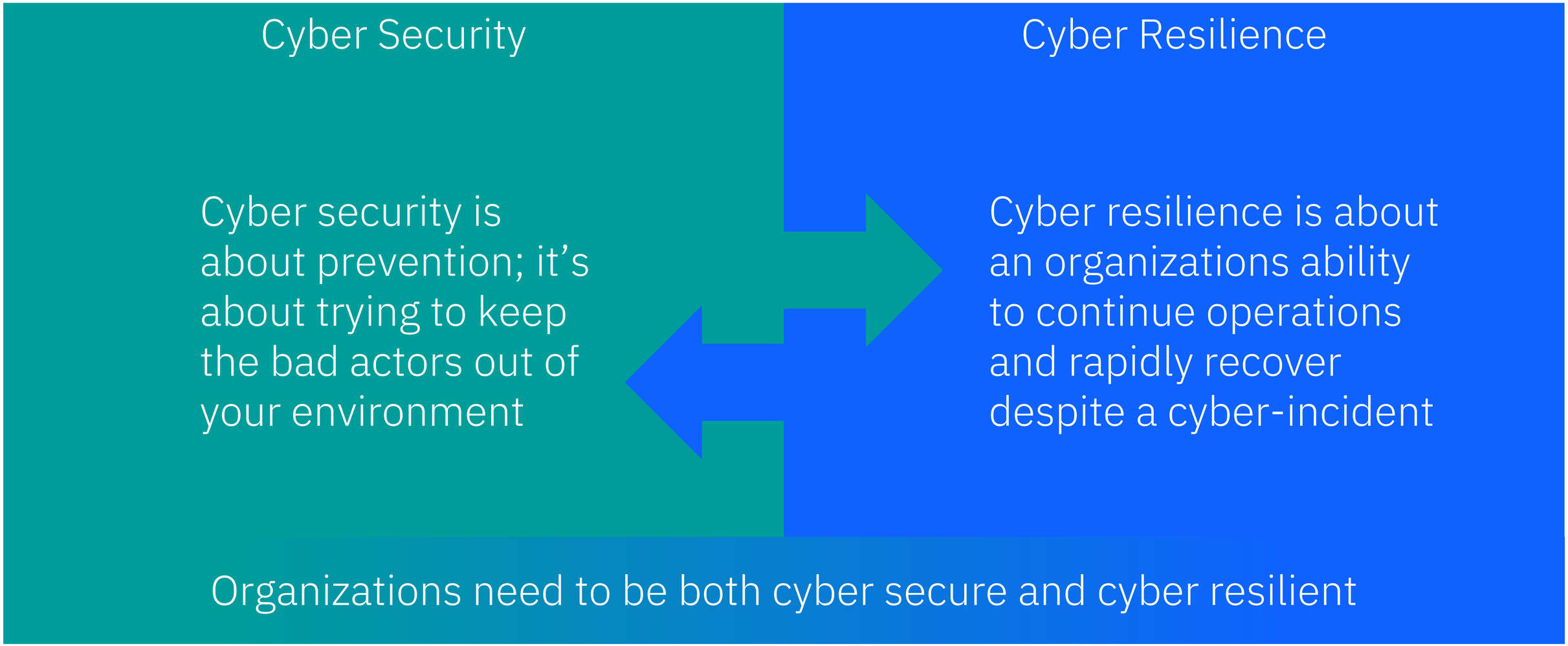


Brazil
- Brazilian General Data Protection Law (“Lei Geral de Proteção de Dados” or “LGPD”)
- Resolution 4.502/2016
- Central Bank of Brazil ('BACEN') Resolution 4.893/2021

South Africa
- South African Reserve Bank Prudential Authority ‘Principles for operational resilience’

Australia
- Prudential Standard CPS 230 - Operational Risk Management

Cyber Security and Cyber Resilience



Traditional resiliency solutions will not protect you from cyber attack

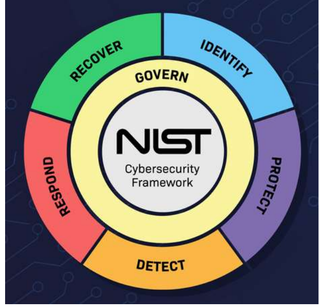
	Traditional Approaches	What's required for Cyber Resiliency
Data Replication	Backups or clones stored in secondary storage	Immutable, point in time copies stored in an isolated environment
Error detection	System and application outages are detected immediately	Proactive data validation on point in time copies to allow rapid response
Recovery points	System and application outages are detected immediately	Multiple recovery points to account for corruption from cyberattacks
Recovery Scope	Continuous availability and disaster recovery	Forensic, surgical or catastrophic recovery capabilities
Anomaly Detection	Rely on SIEM and EDR systems, which have high false positive rates	Multi-layer malware and ransomware detection technologies to spot attacks faster and more accurately

Ensure business continuity with cyber resilience that stops ransomware fast, protects critical data, and gets you back up and running quickly

- Proactive protection with immutable copies
- Guaranteed Detection of ransomware within <1 min
- Automated Response
- Rapid Recovery to meet predictable Recovery Point Objective (RPO) and Recovery Time Objective (RTO) requirements

IBM Power Cyber Vault solves for that

CyberVault provides the full scope of resiliency aligned to the recognized NIST Cyber Resiliency Guidance Framework



Identify risks

Know your assets and risks – gathering intelligence is the first step with a personalized workshop

Protection

Schedule and store immutable copies to protect workloads against cyber corruption and encryption

Detection

Use integrated, AI-enhanced, multi-layer malware and ransomware detection technologies to spot attacks faster and more accurately and to limit damage

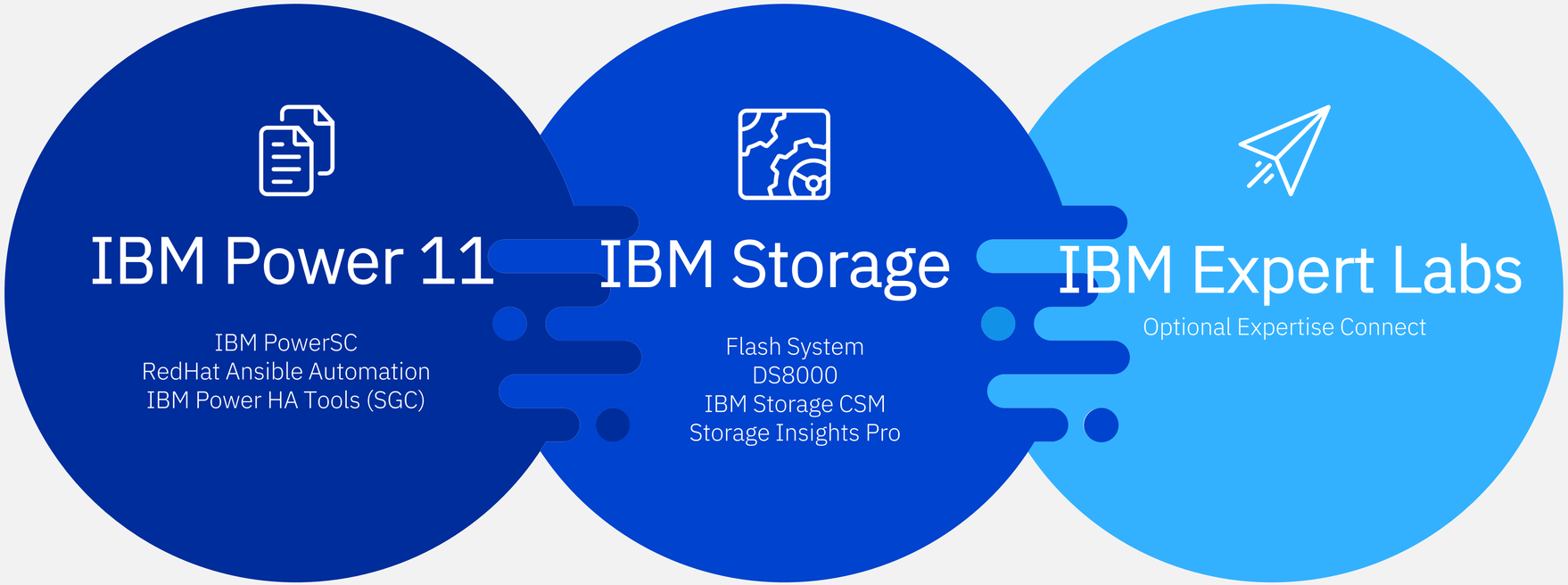
Response

Recovery

Every Minute Counts: Use cyber vault clean room automated technology for testing and recovery to meet return to operations requirements

IBM Power Cyber Vault solves for that

A fully integrated cyber resilience solution with in-line threat detection and automated response and quick recovery designed to maximize business continuity and minimize risk and complexity



IBM i + IBM Power Cyber Vault

IBM Power Cyber Vault with

- ✓ IBM i
- ✓ PowerSC
- ✓ Power HA Tools - Safeguarded Copy

in a complete Cyber Resilient Solution*.

IBM Power Cyber Vault Solution

Identify

IBM Technology Expert Labs Power Cyber Vault Deployment

- **Design Workshop** for client specific requirements
- **Power Cyber Vault Deployment** to customize and enable the unified Power Cyber Vault to meet client needs

Protect

IBM Storage

- **Immutable Copies** for Data Protection
- **Ransomware Detection** for real-time threat detection
- **Flash copy-speed recovery** for rapid restore of snapshot data
- **Storage Insights Pro** for comprehensive reporting

Detect

IBM i on IBM Power 11 Server

- IBM i v 7.4, 7.5, 7.6
- **Alerts on active attacks** and reports to **PowerSC** via Storage Insights Pro
- **Secure Boot and Memory Encryption** built in
- **Scalable and Flexible Architecture** from Entry to Enterprise servers

Respond and Recover

Automated response to attacks, creating Power Cyber Vault clean rooms for testing and validation

Automated multi-level testing and validation of Power Cyber Vault images to **accelerate system recovery**

* Expert Care Premium Support, & additional cores/adapters required.

Power**SC** provides a user-friendly, web-based UI to manage Security & Compliance

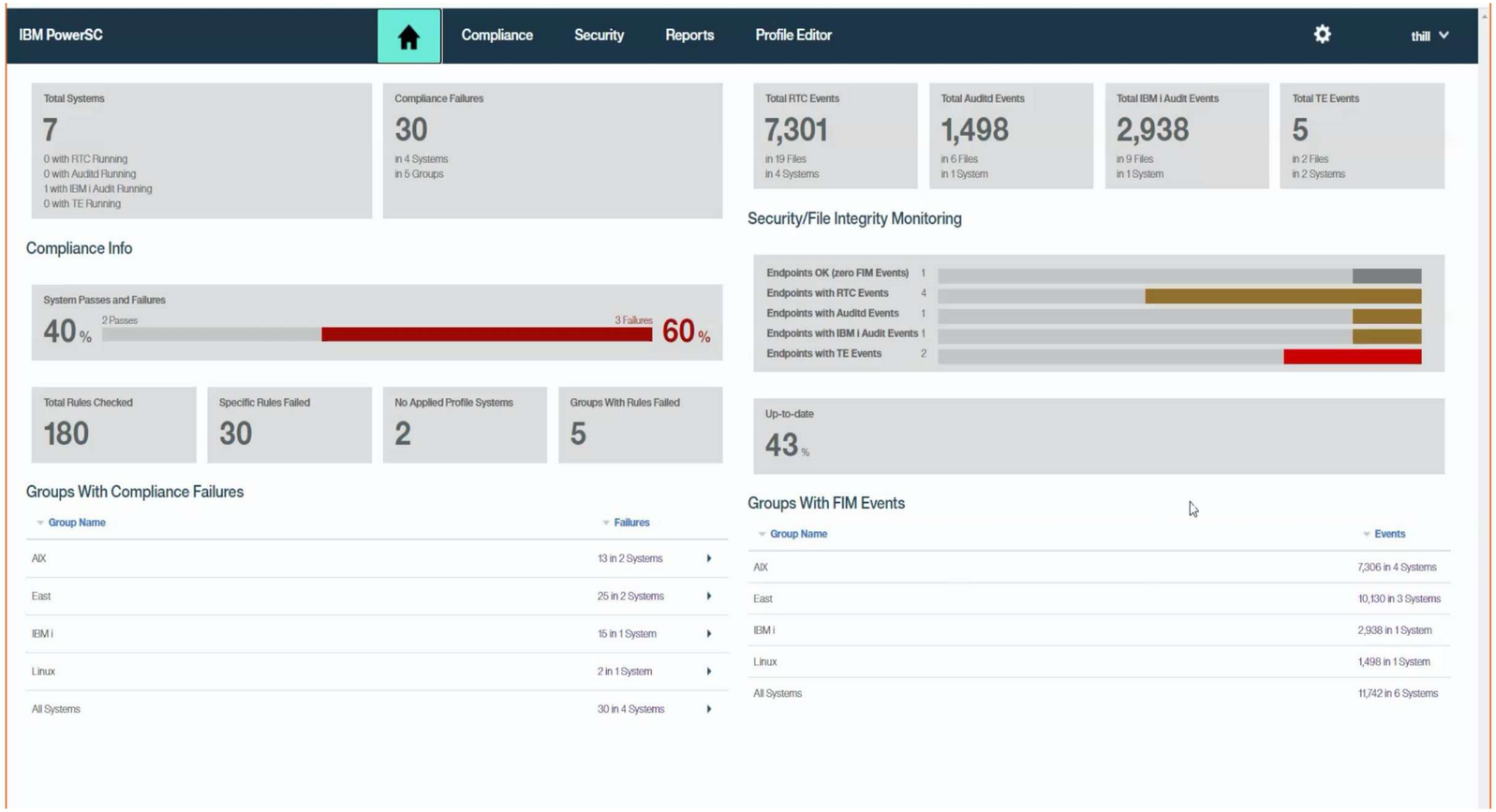
Compliance and Drift Analysis
- HIPAA, PCI, CIS, and more

Security
- File Integrity Monitoring (FIM)
- Allow/Block listing
- Anti-virus support (ClamAV)
- Integration with IBM QRadar
- Integration with IBM Safeguarded Copy
- Endpoint Detection & Response (EDR)

Patch Management
- Trusted Network Connect (TNC)
- Detect & alert policy issues
- Policy enforcement

Multifactor Authentication
- Policy-based and Centrally administered
- Simplified logins (Tokens and SSO)

Single pane of glass to manage AIX, Linux, and IBM i endpoints



Automation
- Rest API Support
- Swagger Support
- Built in Security Reporting

IBM Power Cyber Vault: Protect and Detect Flow

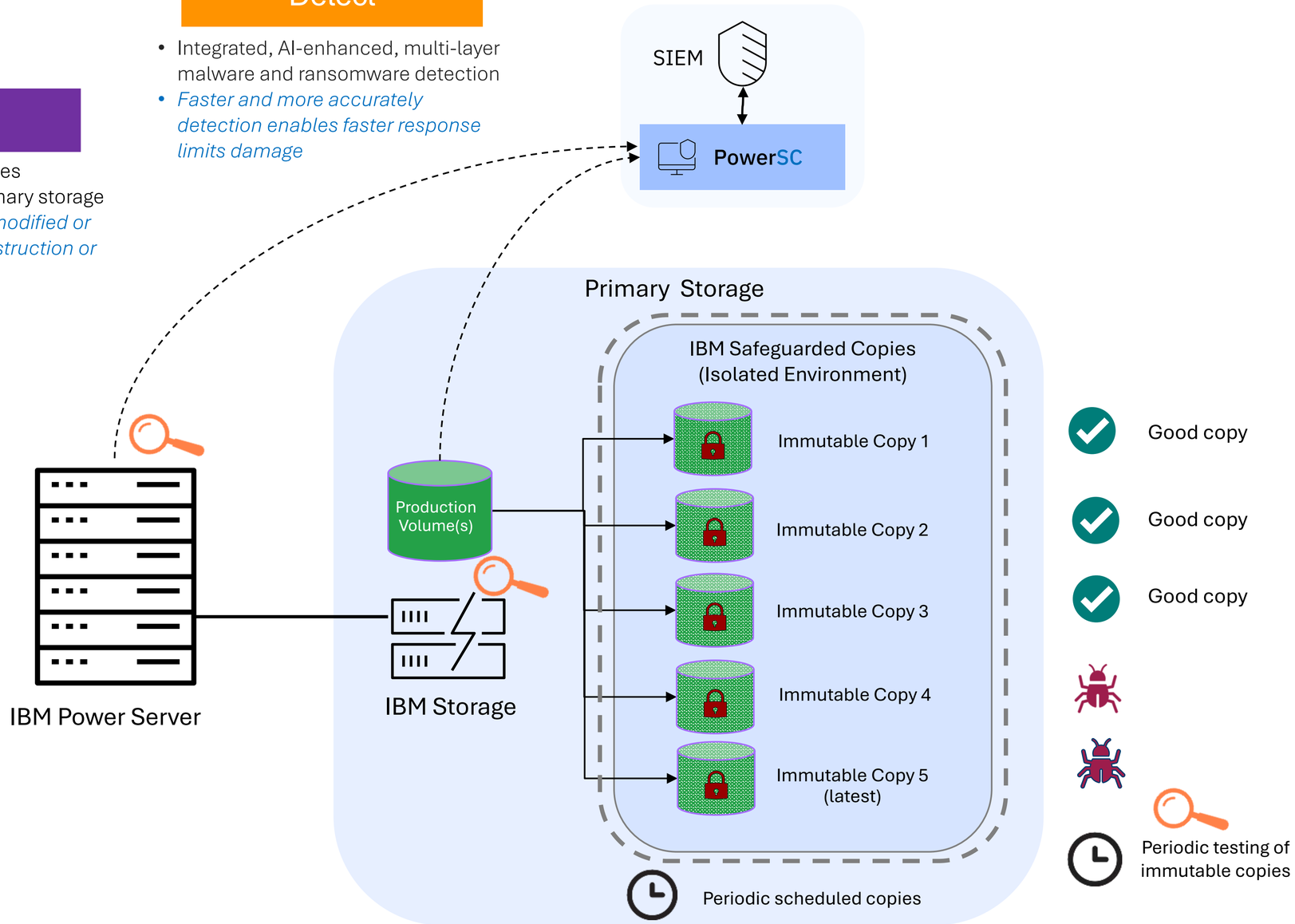
Protect
Detect

Protect

- Periodic, immutable copies (snapshots) saved in primary storage
- *Protect data from being modified or deleted due to errors, destruction or ransomware*

Detect

- Integrated, AI-enhanced, multi-layer malware and ransomware detection
- *Faster and more accurately detection enables faster response limits damage*



IBM Power Cyber Vault: Respond and Recover flow

Respond
Recover