

# EMC Invista

EMC® Invista™ is a high-performance, network-based storage virtualization system. Invista simplifies the movement of data across tiers of heterogeneous storage, centralizes and simplifies volume management, and provides heterogeneous local replication.

## Features

### Online Data Mobility

- Move production volumes among heterogeneous arrays
- No host disruption or downtime

### Volume Management

- Create striped, concatenated, and sliced volumes

### Invista Clones (optionally licensed)

- Create full-copy, point-in-time clones with source and target on heterogeneous storage
- Incremental resynchronization and restore

## Reliability and Availability

- Highly available configurations have no single point of failure
- Standby power supply
- Non-disruptive software and hardware upgrades
- Dual (A/B) fabric support

## System Capacities

(Capacities are per Invista unless otherwise noted.)

Number of Data Path Controllers (DPCs)	1 <sup>1</sup> , 2, or 4
Max. Usable Capacity	4 PB
Max. Virtual Volumes	3,750
Max. Storage Elements <sup>2</sup>	3,750
Min./Max. Virtual Volume Size	100 MB/2 TB
Min./Max. Storage Extent Size	No Invista limit/2 TB
Number of Initiators	800

<sup>1</sup> Not supported in high-availability configurations.

<sup>2</sup> A Storage Element is a volume from a physical array that is imported into Invista.

## Connectivity

Invista currently supports the Cisco SSM and Brocade AP-7420 Data Path Controllers.

32 physical FC ports per Cisco SSM	1/2 Gb/s, auto-sensing
16 physical FC ports per Brocade AP-7420	1/2 Gb/s, auto-sensing
Number of FC SAN ports	No Invista limit
Maximum number of ISLs between host and array	3

Hosts and arrays can connect to Invista through standard FC SANs, enabling host fan-in and array fan-out.

The Cisco SSM is a line card for Cisco MDS chassis. Any port on an MDS with an SSM card may be used to connect to the SSM/Invista.

## Read/Write I/O Limits

	Brocade AP-7420		Cisco SSM	
DPC Qty.	2	4	2	4
IOPS	1,000,000	2,000,000	800,000	1,600,000
GB/s	3.6	7.2	6.0	12.0

All limits are per Invista system. Actual results may vary depending on I/O workload. Note that since Invista does not cache I/Os, the above I/O limits are independent of cache hit ratios.

## Online Data Mobility Limits and Performance

	Brocade AP-7420	Cisco SSM
Simultaneous data mobility jobs	8	8
Throughput (MB/s)	40	360

EMC Invista systems can be part of a comprehensive information lifecycle strategy—a strategy that helps your enterprise attain the maximum value from its information, at the lowest TCO, at every point in the information lifecycle.

Invista enables ILM by moving the right data to the right tier of storage at the right time.



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## Clone Limits and Performance

	AP-7420-based system	SSM-based system
Number of clones	1,500	1,500
Number of primaries	256	256
Clones per primary	3	8
Max. clone size	2 TB	2 TB
Simultaneous clone synchronizations	20	20
Synchronization throughput (MB/s)	100	900

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## Management

EMC ControlCenter® Integration  
Web-based Graphical User Interface (GUI) with SSL security  
Command Line Interface (CLI)  
Redundant 10/100 Ethernet Ports  
Firewall-Protected Management Network

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## Interoperability

Please see the EMC Support Matrix for details.

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## Environmental Specifications

Note: All Cisco specifications are for a 9509-based system with four SSM cards. All Brocade specifications are for a four AP-7420-based system. All systems include an Invista cabinet. All specifications apply to both Cisco and Brocade configurations unless otherwise noted.

### Physical

Height (in./cm) <sup>3</sup>	75/191
Width (in./cm)	24/61
Depth (in./cm)	41.5/105
Max. Weight (lb/kg)	880/400
Front Service Area	48 in. wide, 26.5 in. deep (122 cm x 67 cm)
Rear Service Area	24 in. wide, 36 in. deep (61 cm x 91 cm)

<sup>3</sup>An additional 18 in./46 cm is required for ceiling/top clearance.

Note: Field-mount configurations for use with third-party cabinets are also available. Please see your EMC representative for details.

	Brocade AP-7420	Cisco SSM		
Chassis	N/A	9216/A	9506	9509
DPC Qty.	4	4	4	4
Heat (Btu/hr)	5,500	9,000	12,500	18,000
Power (KVA)	1.5	3.0	4.0	4.5
Noise (dBA)	80	80	78	78

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## Power Specifications

Redundant power supplies on all components, including cabinet.

Invista cabinet requires 3-phase power (Delta or Wye).

For both North America and International	3-phase
Input Voltage (VAC)	200-240
Frequency (Hz)	50/60
Circuit Breaker (Amps), recommended	3-Phase Delta 50A; 3-Phase Wye 30A
Power Drops	2

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## Environmental

Operating Temperature (°F/°C)	50–104°F/10–40°C
Non-Operating Temperature (°F/°C)	–13–158°F/–25–70°C
Operating Humidity (%), non-condensing	20–80%
Non-Operating Humidity (%), non-condensing	20–85%
Altitude (ft/m), max.	8000 ft / 2438.4 m
Raised Floor	Recommended

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## Warranty and Maintenance

Two-year hardware warranty included. Software maintenance and extended hardware warranties are available.

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## Other

Keyed cabinet for increased physical security.  
Long-distance optics available.  
1 TB = 1,024 GB; 1 GB = 1,024 MB



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