



# ELASTIC CLOUD STORAGE (ECS) APPLIANCE

Dell EMC® Elastic Cloud Storage (ECS™) Appliance is a multi-purpose, software-defined cloud-storage platform. This 3rd Generation object-based solution from Dell EMC delivers enterprise class smart storage built for the next generation of applications and workloads. The ECS Appliance Gen1 and Gen2 U-Series offer 13 flexible configurations that start at 320TB and scale to 3.9 PB in a single rack. The Gen2 D-Series offers 4 dense configurations providing 4.5PB to 7.8PB in a single rack.

ECS APPLIANCE GEN-1 U-SERIES	
Features	Technical Specification
Node architecture	<ul style="list-style-type: none"> <li>• Intel x86 servers</li> <li>• JBOD direct attached storage</li> <li>• Up to 60 disk drives per server</li> </ul>
10 GbE Node network connectivity	<ul style="list-style-type: none"> <li>• 10 GbE HA network connectivity within rack</li> <li>• Up to 80 Gb/s via 10 GbE uplinks to customer network</li> </ul>
Dell EMC 40U Rack based solution	<ul style="list-style-type: none"> <li>• 4 and 8 node configurations</li> <li>• HA Power</li> </ul>
Multiple Storage Configurations	<ul style="list-style-type: none"> <li>• Unstructured storage up to 2,880 TB per rack</li> </ul>

ECS Appliance Gen-1 U-Series Detailed Specifications				
Features	ECS-U300	ECS-U2100	ECS-U2500	ECS-U3000
Architecture	<ul style="list-style-type: none"> <li>• Standard 40U deep cabinet</li> <li>• 2U 4-node server enclosure</li> <li>• 4U 60-disk drawer based disk enclosure</li> <li>• High density disk enclosure holds up to 480x6TB disks per rack</li> <li>• Fully accessible – field serviceable components</li> <li>• Conventional front to back cooling</li> <li>• HA Power cabling and cooling</li> </ul>			

## ECS Appliance Gen-1 U-Series Detailed Specifications

Features	ECS-U300	ECS-U700	ECS-U1100	ECS-U1500
ARCHITECTURE	<ul style="list-style-type: none"> <li>Standard 40U deep cabinet</li> <li>2U 4-node server enclosure</li> <li>4U 60-disk drawer based disk enclosure</li> <li>High density disk enclosure holds up to 480x6TB disks per rack</li> <li>Fully accessible – field serviceable components</li> <li>Conventional front to back cooling</li> <li>HA Power cabling and cooling</li> </ul>			
CONFIGURATION	4 Nodes = 4 servers + 4 disk enclosures	4 Nodes = 4 servers + 4 disk enclosures	4 Nodes = 4 servers + 4 disk enclosures	4 Nodes = 4 servers + 4 disk enclosures
NODE:DISK RATIO	1:15	1:30	1:45	1:60
DISK TYPE	6 TB 7200	6 TB 7200	6 TB 7200	6 TB 7200
RAW CAPACITY	360 TB	720 TB	1,100 TB	1,440 TB
DIMENSIONS	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 970 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 1,150 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 1,330 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 1,510 lbs
MAX POWER	3.6 kVA	4.1 kVA	4.6 kVA	5.1 kVA
MAX HEATLOAD	12,150 BTU/hr	13,838 BTU/hr	15,525 BTU/hr	17,213 BTU/hr
POWER SPECIFICATIONS	<ul style="list-style-type: none"> <li>Connection: 4 single Phase L6-30 (REDUNDANT POWER)</li> <li>2 Three-Phase WYE S52.30 (REDUNDANT POWER)</li> <li>2 Three-Phase Delta CS-8365C (REDUNDANT POWER)</li> <li>Input Voltage (VAC): 200 - 240</li> <li>Circuit Breaker (A) max. per AC Power Source: 30A / PDU</li> <li>Frequency (Hz): 60 (North America), 50 - 60 (International)</li> </ul>			
CONNECTIVITY	<ul style="list-style-type: none"> <li>Uplink Connectivity: up to 8x10 GbE uplinks to customer network (80 Gb/s maximum bandwidth), including high availability (HA) configuration</li> <li>Network: dual 10 GbE data switches (TOR) and single 1 GbE management switch (internal traffic) per rack</li> <li>Disk: single SAS cable connection between servers and disk enclosures</li> </ul>			
PROTOCOL	<ul style="list-style-type: none"> <li>TCP/IP</li> <li>Operating Temperature (°F/°C): 41 - 90 / 5 - 32</li> </ul>			
ENVIRONMENTAL SPECIFICATIONS	<ul style="list-style-type: none"> <li>Operating Temperature (°F/°C): 41 - 90 / 5 - 32</li> <li>Max. Altitude: 7,500 ft / 2,286 m @ 90°F/32°C</li> <li>Relative Humidity: 20 - 80% non-condensing</li> <li>Raised Floor: Not Required</li> </ul>			
OPTIONS	<ul style="list-style-type: none"> <li>ECS-G4-X60 60 6TB Drive Upgrade Kit (360TB)</li> <li>Server Module C70 for unstructured data (72TB)</li> <li>Support for 12 (3.5") 6 TB hard disk drives</li> <li>Includes 4 server blades with Dual Socket 4 Core CPU's - 64 GB of Memory</li> <li>LSI 92074i4e 8 port 6G SAS controller</li> </ul>			

## ECS Appliance Gen-1 U-Series Detailed Specifications

Features	ECS-U1800	ECS-U2100	ECS-U2500	ECS-U3000
CONFIGURATION	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures
NODE CONFIGURATION	ECS-U1500 + ECS-U300	ECS-U1500 + ECS-U700	ECS-U1500 + ECS-U1100	ECS-U1500 + ECS-U1500
NODE:DISK RATIO	1:60 / 1:15	1:60 / 1:30	1:60 / 1:45	1:60 / 1:60
DISK TYPE	6TB 7200	6TB 7200	6TB 7200	6TB 7200
RAW CAPACITY	1,800 TB	2,160 TB	2,520 TB	2,880 TB
DIMENSIONS	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight:2,020 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2,200 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2,380 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2,560 lbs
MAX POWER	8.1 kVA	8.6kVA	9.1kVA	9.6 kVA
MAX HEATLOAD	27,338 BTU/hr	29,025 BTU/hr	30,713 BTU/hr	32,400 BTU/hr
POWER SPECIFICATIONS	<ul style="list-style-type: none"> <li>• Connection: 4 single Phase L6-30 (REDUNDANT POWER)</li> <li>• 2 Three-Phase WYE S52.30 (REDUNDANT POWER)</li> <li>• 2 Three-Phase Delta CS-8365C (REDUNDANT POWER)</li> <li>• Input Voltage (VAC): 200 - 240</li> <li>• Circuit Breaker (A) max. per AC Power Source: 30A / PDU</li> <li>• Frequency (Hz): 60 (North America), 50 - 60 (International)</li> </ul>			
CONNECTIVITY	<ul style="list-style-type: none"> <li>• UplinkConnectivity: up to 8x10 GbE uplinks to customer network (80 Gb/s maximum bandwidth), including high availability (HA) configuration</li> <li>• Network: dual 10 GbE data switches (TOR) and single 1 GbE management switch (internal traffic) per rack</li> <li>• Disk: single SAS cable connection between servers and disk enclosures</li> </ul>			
PROTOCOL	<ul style="list-style-type: none"> <li>• TCP/IP</li> <li>• Operating Temperature (°F/°C): 41 - 90/ 5 - 32</li> </ul>			
ENVIRONMENTAL SPECIFICATIONS	<ul style="list-style-type: none"> <li>• Max. Altitude: 7,500 ft/ 2,286 m @ 90°F/32°C</li> <li>• Relative Humidity: 20 - 80% non-condensing</li> <li>• Raised Floor: Not Required</li> </ul>			
OPTIONS	<ul style="list-style-type: none"> <li>• ECS-G4-X60 60 6TB Drive Upgrade Kit (360TB)</li> <li>• Server Module C70 for unstructured data (72TB)</li> <li>• Support for 12 (3.5") 6 TB hard disk drives <ul style="list-style-type: none"> <li>◦ Includes 4 server blades with Dual Socket 4 Core CPU's – 64 GB of Memory</li> </ul> </li> <li>• LSI 92074i4e 8 port 6G SAS controller</li> </ul>			

## ECS APPLIANCE GEN-2 U-SERIES

Features	Technical Specification
Node architecture	<ul style="list-style-type: none"> <li>• Intel x86 servers</li> <li>• JBOD direct attached storage</li> <li>• Up to 60 disk drives per node</li> </ul>
10 GbE Node network connectivity	<ul style="list-style-type: none"> <li>• 10 GbE HA network connectivity within rack</li> <li>• Up to 80 Gb/s via 10 GbE uplinks to customer network</li> </ul>
Dell EMC 40U Rack based solution	<ul style="list-style-type: none"> <li>• 4 and 8 node configurations</li> <li>• HA Power</li> </ul>
Multiple Storage Configurations	<ul style="list-style-type: none"> <li>• Unstructured storage up to 3,840 TB per rack</li> </ul>

## ECS Appliance Gen-2 U-Series Detailed Specifications

Features	ECS-U400	ECS-U400-T	ECS-U2000	ECS-U2800	ECS-U4000
ARCHITECTURE	<ul style="list-style-type: none"> <li>• Standard 40U deep cabinet</li> <li>• 2U 4-node server enclosure</li> <li>• 4U 60-disk drawer based disk enclosure</li> <li>• High density disk enclosure holds up to 480x8TB disks per rack</li> <li>• Fully accessible – field serviceable components</li> <li>• Conventional front to back cooling</li> <li>• HA Power cabling and cooling</li> </ul>				
CONFIGURATION	4 Nodes = 4 servers + 4 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures
NODE:DISK RATIO	1:10	1:10	1:30	1:45	1:60
DISK TYPE	8TB 7200	8 TB 7200	8TB 7200	8TB 7200	8TB 7200
RAW CAPACITY	320 TB	640 TB	1,920 TB	2,880 TB	3,840 TB
DIMENSIONS	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 910 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 1360 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 1,840 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2,200 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2,560 lbs
MAX POWER	3.5kVA	6.3kVA	7.6kVA	8.6kVA	9.6kVA
MAX HEATLOAD	11,813 BTU/hr	21,263 BTU/hr	25,650 BTU/hr	29,025 BTU/hr	32,400 BTU/hr
POWER SPECIFICATIONS	<ul style="list-style-type: none"> <li>• Connection: 4 single Phase L6-30 (REDUNDANT POWER)</li> <li>• 2 Three-Phase WYE S52.30 (REDUNDANT POWER)</li> <li>• 2 Three-Phase Delta CS-8365C (REDUNDANT POWER)</li> <li>• Input Voltage (VAC): 200 - 240</li> <li>• Circuit Breaker (A) max. per AC Power Source: 30A / PDU</li> <li>• Frequency (Hz): 60 (North America), 50 - 60 (International)</li> </ul>				

CONNECTIVITY	<ul style="list-style-type: none"> <li>UplinkConnectivity: up to 8x10GbE uplinks to customer network (80 Gb/s maximum bandwidth), including high availability (HA) configuration</li> <li>Network: dual 10 GbE data switches (TOR) and single 1 GbE management switch (internal traffic) per rack</li> <li>Disk: Dual SAS cable connection between servers and disk enclosures</li> </ul>
PROTOCOL	<ul style="list-style-type: none"> <li>TCP/IP</li> </ul>
ENVIRONMENTAL SPECIFICATIONS	<ul style="list-style-type: none"> <li>Operating Temperature (°F/°C): 41 - 90/ 5 - 32</li> <li>Max. Altitude: 7,500 ft/ 2,286 m @ 90°F/32°C</li> <li>Relative Humidity: 20 - 80% non-condensing</li> <li>Raised Floor: Not Required</li> </ul>
OPTIONS	<ul style="list-style-type: none"> <li>ES5-40-T8T 40 8TB Drive Upgrade Kit (320TB)</li> <li>Four Node Expansion (Server + 4 DAEs)</li> </ul>

ECS APPLIANCE GEN-2 D-SERIES	
Features	Technical Specification
Node architecture	<ul style="list-style-type: none"> <li>Intel x86 servers</li> <li>JBOD direct attached storage</li> <li>Up to 98 disk drives per node</li> </ul>
10 GbE Node network connectivity	<ul style="list-style-type: none"> <li>10 GbE HA network connectivity within rack</li> <li>Up to 80 Gb/s via 10 GbE uplinks to customer network</li> </ul>
Dell EMC 40U Rack based solution	<ul style="list-style-type: none"> <li>8 node configurations</li> <li>HA Power</li> </ul>
Multiple Storage Configurations	<ul style="list-style-type: none"> <li>Unstructured storage up to 7,840 TB per rack</li> </ul>

ECS Appliance Gen-2 D-Series Detailed Specifications				
Features	ECS-D4500	ECS-D5600	ECS-D6200	ECS-D7800
ARCHITECTURE	<ul style="list-style-type: none"> <li>Standard 40U deep cabinet</li> <li>2U 4-node server enclosure</li> <li>4U 98-disk drawer based disk enclosure</li> <li>High density disk enclosure holds up to 784x8TB disks per rack</li> <li>Conventional front to back cooling</li> <li>HA Power cabling and cooling</li> </ul>			
CONFIGURATION	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures	8 Nodes = 8 servers + 8 disk enclosures
NODE:DISK RATIO	1:70	1:70	1:98	1:98
DISK TYPE	8TB 7200	10TB 7200	8 TB 7200	10 TB 7200
RAW CAPACITY	4,480 TB	5,600 TB	6,272 TB	7,840 TB
DIMENSIONS	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2100 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2100 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2750 lbs	Height: 75 in/ 190.8 cm Width: 24 in/ 60.96 cm Depth: 44 in/ 111.76 cm Weight: 2750 lbs
MAX POWER	10.0kVA	10.0kVA	11.8kVA	11.8kVA

MAX HEATLOAD	33,750 BTU/hr	33,750 BTU/hr	39,825 BTU/hr	39,825 BTU/hr
POWER SPECIFICATIONS	<ul style="list-style-type: none"> <li>• Connection: 6 single Phase L6-30 (REDUNDANT POWER)</li> <li>• 2 Three-Phase WYE S52.30 (REDUNDANT POWER)</li> <li>• 2 Three-Phase Delta CS-8365C (REDUNDANT POWER)</li> <li>• Input Voltage (VAC): 200 - 240</li> <li>• Frequency (Hz): 60 (North America), 50 - 60 (International)</li> </ul>			
CONNECTIVITY	<ul style="list-style-type: none"> <li>• UplinkConnectivity: up to 8x10 GbE uplinks to customer network (80 Gb/s maximum bandwidth), including high availability (HA) configuration</li> </ul>			
PROTOCOL	<ul style="list-style-type: none"> <li>• Network: dual 10 GbE data switches (TOR) and single 1 GbE management switch (internal traffic) per rack</li> <li>• Disk: Dual SAS cable connection between servers and disk enclosures</li> <li>• TCP/IP</li> </ul>			
ENVIRONMENTAL SPECIFICATIONS	<ul style="list-style-type: none"> <li>• Operating Temperature (°F/°C): 41 - 90/ 5 - 32</li> <li>• Max. Altitude: 7,500 ft/ 2,286 m @ 90°F/32°C</li> <li>• Relative Humidity: 20 - 80% non-condensing</li> <li>• Raised Floor: Not Required</li> </ul>			
OPTIONS	<ul style="list-style-type: none"> <li>• ES5-112-T8T (112 8TB Drive Upgrade Kit - 896TB)</li> </ul>			