

Proposta Comercial

Ao Ministério Público do Estado de Minas Gerais – MPMG

Pregão Eletrônico nº 374/2018

Objeto: Registro de Preços para a expansão de Solução de Infraestrutura Hiperconvergente definida em software para ambientes de virtualização para atender à Procuradoria-Geral de Justiça do Estado de Minas Gerais, visando a futuras contratações pela Procuradoria-Geral de Justiça do Estado de Minas Gerais, órgão gerenciador, e, se for o caso, pelos órgãos participantes

A **Servix Informática Ltda.**, empresa privada inscrita sob o CNPJ/ MF nº. 01.134.191/0003-09, devidamente representada por seu Sócio Diretor **Heitor Sakoda**, apresenta a seguinte Proposta Comercial:

LOTE 01									
EXPANSÃO DE SOLUÇÃO DE INFRAESTRUTURA HIPERCONVERGENTE DEFINIDA EM SOFTWARE PARA AMBIENTES DE VIRTUALIZAÇÃO									
ITEM	ESPECIFICAÇÕES	COD. SIAD	UN	QTDE TOTAL	PREÇO		PREÇO DEDUZIDO ICMS		MARCA MODELO
					Unit R\$	Total R\$	Unit. R\$	Total R\$	
1	NX-8035-G6 híbrido sistema consolidado de processamento de dados - identificação: hiperconvergente tipo 6; interface: 10 gigabits ethernet, mínimo 4 portas 10gbe SFP+; armazenamento: 4 discos HDD 10TB e 2 discos SSD 3,84TB. tensão: 2 circuitos de 220v;	1676130	UN	14	530.466,00	7.426.524,00	500.440,00	7.006.160,00	NUTANIX NX-8035-G6

Matriz

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2	NX-8035-G6 all flash sistema consolidado de processamento de dados - identificação: hiperconvergente tipo 6; interface: 10 gigabits ethernet, mínimo 4 portas 10gbe SFP+; armazenamento: 6 discos SSD 3,84TB. tensão: 2 circuitos de 220v;	1676261	UN	4	652.528,00	2.610.112,00	613.376,00	2.453.504,00	NUTANIX NX-8035-G6
3	NX-3155-G6 híbrido sistema consolidado de processamento de dados - identificação: hiperconvergente tipo 6; interface: 10 gigabits ethernet, mínimo 4 portas 10gbe SFP+; armazenamento: 4 discos HDD 6TB e 2 discos SSD 1,92TB; GPU: 1 placa gráfica NVIDIA TESLA V100; tensão: 2 circuitos de 220v;	1676270	UN	3	673.948,00	2.021.844,00	635.800,00	1.907.400,00	NUTANIX NX-3155-G6
4	Instalação, montagem e configuração de equipamentos de informática	2216	UN	2	9.800,00	19.600,00	9.800,00	19.600,00	SERVIÇO
5	Migração, instalação e configuração do ambiente de produção para sistema consolidado de	50024	UN	2	13.000,00	26.000,00	13.000,00	26.000,00	SERVIÇO

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	processamento de dados								
6	Operação assistida em sistema consolidado de processamento de dados	81558	UN	2	21.000,00	42.000,00	21.000,00	42.000,00	SERVIÇO
7	Expansão, instalação, montagem e configuração de equipamentos sistema consolidado de processamento de dados	83003	UN	2	8.400,00	16.800,00	8.400,00	16.800,00	SERVIÇO
8	Licença de software para solução de gestão centralizada do ambiente de virtualização de servidor - PRISM PRO NUTANIX	43494	UN	21	29.080,00	610.680,00	29.080,00	610.680,00	NUTANIX PRISM PRO
9	Licença de software CALM NUTANIX	82236	UN	8	83.588,00	668.704,00	83.588,00	668.704,00	NUTANIX CALM
10	Licença de software FLOW NUTANIX	82228	UN	15	38.332,00	574.980,00	38.332,00	574.980,00	NUTANIX FLOW
11	Switch brocade VDX6740 - 52 portas switch - tipo: gerenciável; instalação: rack 19'; porta: 48 slots SFP+; taxa transferência: mínimo 96mpps; memória: mínimo 2mb; endereços mac: mínimo 16384; slots de expansão: 4 slots qsfp+; protocolo:	1547313	UN	4	160.548,00	642.192,00	160.548,00	642.192,00	EXTREME VDX6740

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ipv6; tecnologia compatível: auto-midx;							
PREÇO TOTAL DO LOTE				14.659.436,00	PREÇO TOTAL DO LOTE COM DEDUÇÃO DO ICMS	13.968.020,00	
						TOTAL:	13.968.020,00

1) Condições Comerciais:

- a. Validade da proposta comercial: 60 dias.
- b. Prazo de entrega dos equipamentos e softwares: 60 dias corridos a partir da emissão da Autorização de Fornecimento
- c. Prazo de garantia: 36 meses contados a partir da data da emissão da respectiva nota fiscal (ou documento equivalente) ou da conclusão definitiva dos serviços, para os serviços prestados e as peças e materiais utilizados.
- d. Prazo de execução dos serviços: a prestação do serviço deverá ser iniciada em até 10 dias corridos, após a entrega e aceite definitivo dos equipamentos
- e. O prazo de substituição e/ou refazimento de todos os trabalhos que não satisfaçam as exigências contratuais, deverá ser de 5 dias úteis, contados da solicitação da CONTRATANTE.

2) Declarações

- a. Declaramos para todos os efeitos legais e administrativos, sob as penas da lei, que nos preços acima estão inclusas todas as despesas e custos diretos e indiretos, como impostos, taxas, fretes e garantias dos equipamentos.
- b. Declaramos para fins do disposto no Inciso V do Artigo 27 da Lei Federal nº 8.666/9, acrescido pela Lei nº. 9.854/99, em conformidade com o previsto no Inciso XXXIII, do Artigo 7º, da Constituição Federal de 1988, que não possuímos em nosso quadro de pessoal empregado (s) menor (es) de 18 (dezoito) anos em trabalho noturno, perigoso ou insalubre e de 16 (dezesesseis) anos em qualquer trabalho, salvo na condição de aprendiz, a partir dos 14 (quatorze) anos.

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3) **Dados da Empresa:**

- a. **Razão Social:** Servix Informática Ltda.
- b. **CNPJ MF:** 01.134.191.0003-09
- c. **Endereço:** Rua Santos Dumont, 57. Sala 202. CEP 45.653-380. Centro. Ilhéus – BA.
- d. **Home Page:** www.servix.com
- e. **E-mail:** editais@servix.com

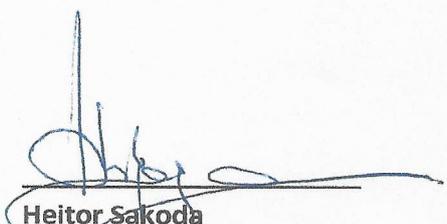
4) **Contato durante período de vigência para abertura de chamados**

- a. **Telefone fixo:** (11) 3525 3400
- b. **0800 24x7:** 0800-940-1420
- c. **Web-Site:** <http://servix.com/suporte/>

5) **Dados do Responsável pela Assinatura do Contrato:**

- a. **Nome:** Heitor Sakoda
- b. **RG:** 6.557.220-8
- c. **CPF:** 014.107.698-44
- d. **Estado Civil:** Casado
- e. **Cargo:** Sócio-Diretor
- f. **E-mail:** heitor.sakoda@servix.com

São Paulo, 06 de dezembro de 2018



Heitor Sakoda
Sócio-Diretor

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NX-1000 SERIES

	Per Node (4 per Block)
Model	NX-1065-G6 (Configure to Order) 
Server Compute*	Dual Intel Skylake: Silver 4108 [8 cores / 1.8 GHz], Silver 4114 [10 cores / 2.2 GHz]
Storage Capacity	HYBRID 1x SSD: [960 GB or 1.92 TB], 2x HDD: [2 TB, 4 TB, 6 TB] 2x M.2 Boot [240 GB]
Memory	128 GB, 192 GB, 256 GB, 384 GB
Network Connections	LOM: 2x 10GbBase-T, 1x 1GbE IPMI Add-on: 1x Dual-Port 10GbE SFP+ or 1x Quad-Port 10GbE SFP+ or 1x Dual-Port 10GbBase-T
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 18.98" (482mm), Depth: 33.27" (845mm) Rack Units: 2U
Weight	93 lbs. (42.18kg) stand-alone, 130.1 lbs. (59kg) package, 7.1 lbs (3.2kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-95% Non-Op Humidity Rng: 5-95%
Power Consumption	1519W maximum, 968W typical
Power Supply (Dual Supply / Block)	2.2kW Output @ 220V-240V, 10A-9.8A, 50-60Hz; 1.2kW Output @ 100V-127V, 14A-11A, 50-60Hz
Thermal Dissipation	5184 BTU/hr maximum, 3302 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

NX-1000 SERIES (cont.)

	Per Node (1 per Block)	
Model	NX-1175S-G5 (Configure to Order) 	
Server Compute	Single Intel Broadwell: E5-2620v4 [8 cores / 2.1 GHz], E5-2650v4 [12 cores / 2.2 GHz]	
Storage Capacity	HYBRID	ALL FLASH †
	2x SSD: [480 GB, 960 GB, 1.92 TB or 3.84 TB] 2x HDD: [2 TB, 4 TB or 6 TB]	2x, 4x SSD: [480 GB, 960 GB or 1.92 TB]
Memory	64 GB, 96 GB, 128 GB, 256 GB	
Network Connections	2x 1GbE, 1x 1GbE IPMI Add-on: 1x Dual-Port 1GbE or 1x Dual-Port 10GBase-T or 1x Dual or Quad-Port 10GbE SFP+	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 1.7" (43mm), Width: 19.05" (484mm), Depth: 25.60" (650mm)
Weight	31.90 lbs. (14.46kg) stand-alone, 90.15 lbs. (40.9kg) package, 5.25 lbs (2.4kg) node
System Cooling	5x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-95% Non-Op Humidity Rng (non-condensing): 5-95%
Power Consumption	260W maximum, 200W typical
Power Supply (Dual Supply / Block)	500W Out @100-120V, 6.1-2.6A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	690 BTU/hr maximum, 680 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

NX-3000 SERIES

Per Node (4 per Block)			
Model	NX-3060-G6 (Configure to Order) 		
Server Compute*	Dual Intel Skylake: Silver 4108 [8 cores / 1.8 GHz], Silver 4114 [10 cores / 2.2 GHz], Silver 4116 [12 cores / 2.1 GHz], Gold 5120 [14 cores / 2.2 GHz], Gold 6130 [16 cores / 2.1 GHz], Gold 6138 [20 cores / 2.0 GHz], Gold 6126 [12 cores / 2.6 GHz]		
Storage Capacity	HYBRID	ALL FLASH †	All-Flash with NVMe
	2x SSD: [960 GB, 1.92 TB or 3.84 TB]; 4x HDD: [2 TB];	2x, 4x or 6x SSD: [960 GB, 1.92 TB or 3.84 TB]	2x NVMe: [1.6 TB] + 4x SSD: [1.92 TB or 3.84 TB]
	2x M.2 Boot [240 GB]		
Memory	192 GB, 256 GB, 384 GB, 512 GB or 768 GB		
Network Connections	1x Dual 10GBase-T LOM Add-on: Up to 2x Dual-Port 10GbE SFP+ or 2x Quad-Port 10GbE SFP+ or 2x Dual-Port 10GBase-T or 1x Dual-Port 25GbE SFP+		
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS		

Per Block	
Dimensions	Height: 3.5" (89mm), Width: 19.05" (484mm), Depth: 31.50" (800mm): Rack Units: 2U
Weight	78 lbs. (35.38kg) stand-alone, 115 lbs. (52.16kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C); Non-Op Temp Rng: -40°-158°F (-40°- 70°C); Op Humidity Rng (non-condensing): 8-90%; Non-Op Humidity Rng (non-condensing): 5-95%
Power Consumption	2080W maximum, 1700W typical
Power Supply (Dual Supply / Block)	1.2kW Out @100-120V, 14-11A, 50-60Hz; 2.09kW Out @200-240V, 14-11A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	7098 BTU/hr maximum, 5800 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket
Trusted Protection Module (TPM) 2.0 Hardware Ready

NX-3000 SERIES (cont.)

Per Node (1 per Block)	
Model	NX-3155G-G6 (Configure to Order) 
Server Compute*	Silver 4116 [12 cores / 2.1 GHz], Gold 5120 [14 cores / 2.2 GHz], Gold 6130 [16 cores / 2.1 GHz], Gold 6148 [20 cores / 2.4 GHz], Gold 6152 [22 cores / 2.1 GHz], Platinum [28 cores / 2.1 GHz]
Storage Capacity	HYBRID
	2x SSD: [960 GB, 1.92 TB or 3.8 TB] + 4x HDD: [6 TB or 8 TB]
	ALL FLASH †
	6x SSD: [960 GB, 1.92 TB, or 3.8 TB]
	2x M.2 Boot [240 GB]
Memory	192 GB, 256 GB, 384 GB, 512 GB, 768 GB, 1 TB, 1.5 TB
Network Connections	LOM: 2x 10GBase-T, 1x 1GbE IPMI 1x-3x Add-on NIC: Dual-Port 10GBase-T or Dual-Port 10GbE SFP+ or Quad-Port 10GbE SFP+ or Dual-Port 25GbE SFP+ or Dual-Port 40GbE QSFP+
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS
GPU†	1x or 2x GPU: [M10, P40 or V100]

Per Block	
Dimensions	Height: 3.5" (89mm), Width: 17.2" (437mm), Depth: 28.46" (723mm) Rack Units: 2U
Weight	36 lbs. (16.4kg) stand-alone, 81 lbs. (36.74kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-86°F (10°-30°C); Non-Op Temp Rng: -40°-158°F (-40°- 70°C); Op Humidity Rng (non-condensing): 20-90%; Non-Op Humidity Rng: 5-95%
Power Consumption	1400W maximum power, 980W typical
Power Supply (Dual Supply / Block)	1.6kW Out: 100-240V, 13.A-8.0A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	4777 BTU/hr maximum, 3344 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket
† Optional

NX-3000 SERIES (cont.)

Per Node (1 per Block)			
Model	NX-3170-G6 (Configure to Order) 		
Server Compute*	Dual Intel Skylake: Gold 5120 [14 cores / 2.2 GHz], Gold 6128 [6 cores / 3.4 GHz], Gold 6148 [20 cores / 2.4 GHz], Gold 6152 [22 cores / 2.1 GHz], Platinum 8176 [28 cores / 2.1 GHz]		
Storage Capacity	HYBRID	ALL FLASH ^f	All-Flash with NVMe
	2x SSD: [960 GB, 1.92 TB or 3.84 TB] + 6x HDD: [2 TB]	2x, 4x, 6x or 8x SSD: [960 GB, 1.92 TB or 3.84 TB]	2x NVMe: [1.6 TB] + 8x SSD: [1.92 TB or 3.84 TB]
	2x M.2 Boot [240 GB]		
Memory	192 GB, 256 GB, 384 GB, 512 GB, 768 GB, 1 TB, 1.5 TB		
Network Connections	LOM: 1x Dual-Port 10GBase-T, 1x 1GbE IPMI Add-on NIC: 2x Dual or Quad-Port 10GbE SFP+ or 2x Dual-Port 10GBase-T or 2x Dual-Port 25GbE SFP+		
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS		
GPU	1x M10, or 1x P40		

Per Block	
Dimensions	Height: 1.7" (43mm), Width: 17.02" (437mm), Depth: 28.5" (724mm) Rack Units: 1U
Weight	26 lbs. (11.8kg) stand-alone, 41 lbs. (18.6kg) package
System Cooling	8x 40x56mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-86°F (10°-30°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (noncondensing): 20-90% Non-Op Humidity Rng: 5-95%
Power Consumption	1053W maximum, 700W typical
Power Supply (Dual Supply / Block)	1.2kW Out @200-240V, 9.8/7.5-6A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	3650 BTU/hr maximum, 2388 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

NX-5000 SERIES

Per Node (1 per Block)										
Model	NX-5155-G6 (Configure to Order) 									
Server Compute*	Dual Intel Skylake: Silver 4108 [8 cores / 1.8 GHz]									
Storage Capacity	<table border="1"> <thead> <tr> <th>HYBRID</th> <th>ALL FLASH ^f</th> <th>All-Flash with NVMe</th> </tr> </thead> <tbody> <tr> <td>2x SSD + 10x HDD or 4x SSD + 8x HDD; SSD: [960 GB, 1.92 TB or 3.84 TB] + HDD: [4 TB, 6 TB or 8 TB]</td> <td>4x, 6x, 8x, 10x or 12x SSD: [960 GB, 1.92 TB or 3.84 TB]</td> <td>4x NVMe: [1.6 TB] + 4x, 6x, 8x SSD: [1.92 TB or 3.84 TB]</td> </tr> <tr> <td colspan="3">2x M.2 Boot [240 GB]</td> </tr> </tbody> </table>	HYBRID	ALL FLASH ^f	All-Flash with NVMe	2x SSD + 10x HDD or 4x SSD + 8x HDD; SSD: [960 GB, 1.92 TB or 3.84 TB] + HDD: [4 TB, 6 TB or 8 TB]	4x, 6x, 8x, 10x or 12x SSD: [960 GB, 1.92 TB or 3.84 TB]	4x NVMe: [1.6 TB] + 4x, 6x, 8x SSD: [1.92 TB or 3.84 TB]	2x M.2 Boot [240 GB]		
	HYBRID	ALL FLASH ^f	All-Flash with NVMe							
	2x SSD + 10x HDD or 4x SSD + 8x HDD; SSD: [960 GB, 1.92 TB or 3.84 TB] + HDD: [4 TB, 6 TB or 8 TB]	4x, 6x, 8x, 10x or 12x SSD: [960 GB, 1.92 TB or 3.84 TB]	4x NVMe: [1.6 TB] + 4x, 6x, 8x SSD: [1.92 TB or 3.84 TB]							
2x M.2 Boot [240 GB]										
Memory	192 GB, 256 GB, 384 GB, 512 GB, 768 GB, 1 TB, or 1.5 TB									
Network Connections	SIOM: 2x 10GBase-T, 1x 1GbE RJ45 (IPMI) Add-on (up to): 3x Dual or Quad-Port 10GbE SFP+ or 3x Dual-Port 10GBase-T or 3x-Dual-Port 25GbE SFP28 or 3x Dual-Port 40GbE QSFP+									
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS									

Per Block	
Dimensions	Height: 3.54" (90mm), Width: 17.76" (451mm), Depth: 31.18" (792mm) Rack Units: 2U
Weight	56.75 lbs. (25.74kg) stand-alone, 92.31 lbs. (41.87kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-90% Non-Op Humidity Rng (non-condensing): 5-95%
Power Consumption	1070W maximum, 700W typical
Power Supply (Dual Supply / Block)	1.6kW Output @100-240V, 13A-8A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	3650 BTU/hr maximum, 2388 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

NX-8000 SERIES

	Per Node (2 per Block)		
Model	NX-8035-G6 (Configure to Order) 		
Server Compute*	Dual Intel Skylake: Bronze 3106 [8 cores / 1.7 GHz], Silver 4108 [8 cores / 1.8 GHz], Silver 4114 [10 cores / 2.2 GHz], Silver 4116 [12 cores / 2.1 GHz], Gold 5120 [14 cores / 2.2 GHz], Gold 6128 [6 cores / 3.4 GHz], Gold 6134 [8 cores / 3.2 GHz], Gold 6140 [18 cores / 2.3 GHz], Gold 6148 [20 cores / 2.4 GHz], Gold 6152 [22 cores / 2.1 GHz]		
Storage Capacity	HYBRID	ALL FLASH ^f	All-Flash with NVMe
	2x SSD: [960 GB, 1.92 TB or 3.84 TB]; 4x HDD: [6 TB, 8 TB or 10 TB]	2x, 4x, or 6x SSD: [960 GB, 1.92 TB or 3.84 TB]	2x NVMe: [1.6TB] + 4x SSD: [1.92 TB or 3.84 TB]
	2x M.2 Boot [240 GB]		
Memory	96 GB, 192 GB, 256 GB, 384 GB, 512 GB or 768 GB		
Network Connections	2x 10GBase-T, 1x 1GbE IPMI Add-on: Up to 2x Dual-Port 10GbE SFP+ or 2x Quad-Port 10GbE SFP or 2x Dual-Port 10GBase-T or 2x Dual-Port 40GbE QSFP+ or 2x Dual-Port 25GbE SFP28		
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS		

	Per Block
Dimensions	Height: 3.5" (89mm), Width: 19.06" (484mm), Depth: 31.54" (801mm) Rack Units: 2U
Weight	70.55 lbs. (32kg) stand-alone, 100.7 lbs. (45.67kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 8-90% Non-Op Humidity Rng: 5-95%
Power Consumption	1302W maximum, 846W typical
Power Supply (Dual Supply / Block)	1.2kW Out @100-127V, 14-11A, 50-60Hz; 2.2kW Out @220-240V, 10-9.8A, 50-60Hz; 80PLUS (TITANIUM)
Thermal Dissipation	4443 BTU/hr maximum, 2888 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

NX-8000 SERIES (cont.)

Per Node (1 per Block)							
Model	NX-8155-G6 (Configure to Order) 						
Server Compute*	Dual Intel Skylake: Silver 4108 [8 cores / 1.8 GHz], Silver 4114 [10 cores / 2.2 GHz], Gold 5120 [14 cores / 2.2 GHz], Gold 6128 [6 cores / 3.4 GHz], Gold 6148 [20 cores / 2.4 GHz], Gold 6152 [22 cores / 2.1 GHz], Gold 6154 [18 cores / 3 GHz], Platinum 8180 [28 cores / 2.5 GHz]						
Storage Capacity	<table border="1"> <thead> <tr> <th>HYBRID</th> <th>ALL FLASH †</th> <th>All-Flash with NVMe</th> </tr> </thead> <tbody> <tr> <td>2x SSD + 10x HDD or 4x SSD + 8x HDD; SSD: [960 GB, 1.92 TB or 3.84 TB] + HDD: [4 TB, 6 TB or 8 TB]</td> <td>4x, 6x, 8x or 12x SSD: [960 GB, 1.92 TB or 3.84 TB]</td> <td>4x NVMe: [1.6 TB] + 8x SSD: [1.92 TB or 3.84 TB]</td> </tr> </tbody> </table>	HYBRID	ALL FLASH †	All-Flash with NVMe	2x SSD + 10x HDD or 4x SSD + 8x HDD; SSD: [960 GB, 1.92 TB or 3.84 TB] + HDD: [4 TB, 6 TB or 8 TB]	4x, 6x, 8x or 12x SSD: [960 GB, 1.92 TB or 3.84 TB]	4x NVMe: [1.6 TB] + 8x SSD: [1.92 TB or 3.84 TB]
	HYBRID	ALL FLASH †	All-Flash with NVMe				
2x SSD + 10x HDD or 4x SSD + 8x HDD; SSD: [960 GB, 1.92 TB or 3.84 TB] + HDD: [4 TB, 6 TB or 8 TB]	4x, 6x, 8x or 12x SSD: [960 GB, 1.92 TB or 3.84 TB]	4x NVMe: [1.6 TB] + 8x SSD: [1.92 TB or 3.84 TB]					
2x M.2 Boot [240 GB]							
Memory	192 GB, 256 GB, 384 GB, 512 GB, 768 GB, 1 TB, or 1.5 TB						
Network Connections	SIOM: 2x 10GBase-T, 1x 1GbE RJ45 (IPMI) Add-on (up to): 3x Dual or Quad-Port 10GbE SFP+ or 3x Dual-Port 10GBase-T or 3x-Dual-Port 25GbE SFP28 or 3x Dual-Port 40GbE QSFP+						
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS						

Per Block	
Dimensions	Height: 3.54" (90mm), Width: 17.76" (451mm), Depth: 31.18" (792mm) Rack Units: 2U
Weight	56.75 lbs. (25.74kg) stand-alone, 92.31 lbs. (41.87kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-90% Non-Op Humidity Rng (non-condensing): 5-95%
Power Consumption	1070W maximum, 700W typical
Power Supply (Dual Supply / Block)	1.6kW Output @100-240V, 13A-8A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	3650 BTU/hr maximum, 2388 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

NX-8000 SERIES (cont.)

	Per Node (1 per Block)	
Model	NX-8150-G5 (Configure to Order) 	
Server Compute*	Dual Intel Broadwell: E5-2667v4 [8 cores / 3.2 GHz], E5-2680v4 [14 cores / 2.4 GHz], E5-2695v4 [18 cores / 2.1 GHz], E5-2699v4 [22 cores / 2.2 GHz]	
Storage Capacity	HYBRID	ALL FLASH ^f
	4x SSD: [480 GB, 960 GB or 1.92 TB] 20x HDD: [1 TB or 2 TB]	24x SSD: [480 GB] 8x, 12x, 16x, 20x, or 24x SSD: [960 GB or 1.92 TB]
Memory	128 GB, 192 GB, 256 GB, 384 GB, 512 GB, 640 GB, 768 GB, 1 TB or 1.5 TB	
Network Connections	2x 10GBase-T SIOM, 1x 1GbE IPMI Add-on: 1x Dual-Port 10GbE SFP+ or 1x 10GBase-T or 1x Quad-Port 10GbE SFP+ or 1x Dual-Port 25GbE SFP+	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 19.56" (484mm), Depth: 30.08" (764mm) Rack Units: 2U
Weight	47.5 lbs. (21.5kg) stand-alone, 57.2 lbs. (25.9kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-150°F (-40°- 70°C) Op Humidity Rng (non-condensing): 8-95% Non-Op Humidity Rng: 5-95%
Power Consumption	650W maximum, 400W typical
Power Supply (Dual Supply / Block)	0.8kW Out @100-120V, 9.8-7A, 50-60Hz; 1.0kW Out @200-240V, 7-5A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	2217 BTU/hr maximum, 1364 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS (cont.)

	Per Node (4 per Appliance)
Model	NX-1065S (Configure to Order) 
Server Compute	Single Intel Ivy Bridge: E5-2630v2 [6 cores / 2.6 GHz], E5-2680v2 [10 cores / 2.8 GHz]
Storage Capacity	HYBRID 1x SSD* [480 GB, 800 GB, 1.2 TB or 1.6 TB], 2x HDD* [2 TB, 4 TB or 6 TB]
Memory	64 GB, 128 GB, 192 GB, or 256 GB
Network Connections	2x 1GbE RJ45 and 1x 100 Mbps RJ45 (IPMI) Optional Add-on: Dual-Port 10 GbE or 2x 1GbE RJ45
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 17.36" (441mm), Depth: 30.04" (763mm)
Weight	66.45 lbs. (30.1kg) stand-alone, 90.15 lbs. (40.9kg) package, 5.25 lbs (2.4kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-95% Non-Op Humidity Rng: 5-95%
Power Consumption	470W maximum, 350W typical
Power Supply (Dual Supply / Block)	1.1kW Out @100-120V, 12.7-10.5A, 50-60Hz; 2.0kW Out @200-240V, 10.0-9.8A, 50-60Hz
Thermal Dissipation	1604 BTU/hr maximum, 1194 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

NX-1000 SERIES (cont.)

	Per Node (4 per Block)	
Model	NX-1065-G5 (Configure to Order) 	
Server Compute*	Dual Intel Broadwell: E5-2620v4 [8 cores / 2.1 GHz], E5-2640v4 [10 cores / 2.4 GHz]	
Storage Capacity	HYBRID	ALL FLASH †
	1x SSD: [480 GB, 960 GB or 1.92 TB] 2x HDD: [2 TB, 4 TB, 6 TB or 8 TB]	3x SSD: [480 GB, 960 GB, 1.92 TB or 3.84 TB]
Memory	64 GB, 96 GB, 128 GB, 192 GB, 256 GB, 384 GB, 512 GB or 1 TB	
Network Connections	LOM: 2x 1GbE, 1x 1GbE IPMI Add-on: 1x Dual-Port 10GbE SFP+ or 1x Quad-Port 10GbE SFP+ or 1x Dual-Port 10GBase-T or 1x Dual-Port 1GBase-T	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 18.98" (482mm), Depth: 33.27" (845mm) Rack Units: 2U
Weight	90 lbs. (40.8kg) stand-alone, 105 lbs. (47.6kg) package, 7 lbs (3.2kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-95% Non-Op Humidity Rng: 5-95%
Power Consumption	1393W maximum, 907W typical
Power Supply (Dual Supply / Block)	1.1kW Out @100-120V, 12.7-10.5A, 50-60Hz; 2.0kW Out @200-240V, 10.0-9.8A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	4755 BTU/hr maximum, 3094 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS

	Per Node (4 per Block)	
Model	NX-1065S-G5 (Configure to Order) 	
Server Compute	Single Intel Broadwell: E5-2609v4 [8 cores / 1.7 GHz], E5-2620v4 [8 cores / 2.1 GHz], E5-2650v4 [12 cores / 2.2 GHz]	
Storage Capacity	HYBRID	ALL FLASH ^f
	1x SSD: [480 GB, 960 GB or 1.92 TB] 2x HDD: [2 TB, 4 TB, 6 TB or 8 TB]	3x SSD [480 GB, 960 GB, 1.92TB, 3.84 TB]
Memory	64 GB, 96 GB, 128 GB, 256 GB	
Network Connections	2x 1GbE, 1x 1GbE IPMI	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 18.98" (482mm), Depth: 33.27" (845mm)
Weight	66.45 lbs. (30.1kg) stand-alone, 90.15 lbs. (40.9kg) package, 5.25 lbs (2.4kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-95% Non-Op Humidity Rng: 5-95%
Power Consumption	1160W maximum, 812W typical
Power Supply (Dual Supply / Block)	1.0kW Out @100-120V, 12.0-10.0A, 50-60Hz; 1.6kW Out @180-240V, 10.5-8.0A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	3958 BTU/hr maximum, 2770 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

PREVIOUS MODELS (cont.)

	Per Node (1 per Block)	
Model	NX-1155-G5 (Configure to Order) 	
Server Compute*	Dual Intel Broadwell: E5-2620v4 [8 cores / 2.1 GHz]	
Storage Capacity	HYBRID	ALL FLASH †
	2x SSD: [960 GB] 4x, 6x, 8x, 10x HDD: [4 TB] or 8x, 10x HDD: [6 TB]	4x, 6x, 8x, 10x, or 12x SSD: [960 GB or 1.92 TB]
Memory	64GB RAM	
Network Connections	1x 1GbE IPMI, 1x Dual-Port 1GbE, 1x Dual-Port 1GbE LOM, Add-on: 1x Dual-Port 10Gb SFP+ or 1x Dual 10GBase-T or Quad-Port 10Gb SFP+	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 19.25" (489mm), Depth: 31.22" (793mm) Rack Units: 2U
Weight	56 lbs. (25.40kg) stand-alone, 73.10 lbs. (33.16kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C); Non-Op Temp Rng: -40°-140°F (-40°- 60°C); Op Humidity Rng (non-condensing): 8-95%; Non-Op Humidity Rng: 5-95%
Power Consumption	659W maximum power, 625W typical
Power Supply (Dual Supply / Block)	0.8kW Out @100-127V, 9.8-7.0A, 50-60Hz; 1.0kW Out @200-240V, 7.0-5.0A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	2248.6 BTU/hr maximum, 2132.6 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS (cont.)

	Per Node (4 per Appliance)	
Model	NX-3060-G5 (Configure to Order) 	
Server Compute	Dual Intel Broadwell: E5-2620v4 [16 cores / 2.1 GHz], E5-2640v4 [20 cores / 2.4 GHz], E5-2650v4 [24 cores / 2.2 GHz], E5-2680v4 [28 cores / 2.4 GHz], E5-2695v4 [36 cores / 2.1 GHz]	
Storage Capacity	HYBRID	ALL FLASH ^f
	2x SSD: [480 GB, 960 GB, 1.92 TB or 3.84 TB] 4x HDD: [1 TB or 2 TB]	6x SSD: [480 GB, 960 GB, 1.92 TB or 3.84 TB]
Memory	128 GB, 192 GB, 256 GB, 384 GB, 512 GB or 1 TB	
Network Connections	2x 1 GbE, 1x 1 GbE RJ45 (IPMI) Add-on: Dual-Port 10 GbE or Quad-Port 10 GbE or Dual-Port 10 GBASE-T or Dual-Port 40GbE QSFP+	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	
GPU	Not Applicable	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 18.98" (482mm), Depth: 31.50" (800mm): Rack Units: 2U
Weight	90 lbs. (40.8kg) stand-alone, 105 lbs. (47.6kg) package, 7 lbs (3.2kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-95% Non-Op Humidity Rng: 5-95%
Power Consumption	1764W maximum, 1150W typical
Power Supply (Dual Supply / Block)	1.1kW Out @100-120V, 12.7-10.5A, 50-60Hz; 2.0kW Out @200-240V, 10.0-9.8A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	6019 BTU/hr maximum, 2924 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

PREVIOUS MODELS (cont.)

	Per Node (1 per Block)	
Model	NX-3155G-G5 (Configure to Order) 	
Server Compute*	Dual Intel Broadwell: E5-2650v4 [12 cores / 2.2Ghz], E5-2667v4 [8 cores / 3.2Ghz], E5-2680v4 [14 cores / 2.4 GHz], E5-2695v4 [18 cores / 2.1GHz], Platinum 8176 [28 cores / 2.1 GHz]	
Storage Capacity	HYBRID	ALL FLASH ^f
	2x SSD: [480 GB, 960 GB or 1.92 TB] 4x HDD: [2 TB, 4 TB, 6 TB or 8 TB]	6x SSD: [960 GB, 1.92 TB, or 3.8 TB]
	2x M.2 Boot [240 GB]	
Memory	128 GB, 192 GB, 256 GB, 384 GB, 512 GB, 640 GB, 768 GB, 1 TB, 1.5 TB	
Network Connections	4x 1GbE, 1x 1GbE IPMI Add-on: Up to 3x Dual-Port 10GBase-T or 3x Dual-Port 10GbE or 3x Quad-Port 10GbE	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	
GPU	Up to 2x M10, 2x M60 or 2x P40	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 19.25" (489mm), Depth: 31.22" (793mm) Rack Units: 2U
Weight	60.63 lbs. (27.52kg) stand-alone, 78 lbs. (35.33kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C); Non-Op Temp Rng: -40°-158°F (-40°- 70°C); Op Humidity Rng (non-condensing): 8-95%; Non-Op Humidity Rng: 5-95%
Power Consumption	1492W maximum power, 1350W typical
Power Supply (Dual Supply / Block)	1.0kW Out @100-127V, 13.0-9.0A, 50-60Hz; 1.6kW Out @200-240V, 10.0- 8.0A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	5092 BTU/hr maximum, 4607 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS (cont.)

	Per Node (1 per Block)	
Model	NX-3175-G5 (Configure to Order) 	
Server Compute*	Dual Intel Broadwell: E5-2650v4 [12 cores / 2.2 GHz], E5-2667v4 [8 cores / 3.2 GHz], E5-2680v4 [14 cores / 2.4 GHz], E5-2695v4 [18 cores / 2.1 GHz], E5-2699v4 [22 cores / 2.2 GHz]	
Storage Capacity	HYBRID	ALL FLASH ^f
	2x SSD: [480 GB, 960 GB or 1.92 TB] 2x HDD: [2 TB, 4 TB, 6 TB or 8 TB]	4x SSD: [480 GB] 2x or 4x SSD: [960 GB, 1.92 TB or 3.84 TB]
Memory	128 GB, 192 GB, 256 GB, 384 GB, 512 GB, 640 GB, 768 GB, 1 TB, 1.5 TB	
Network Connections	2x 10GbE, 1x 1GbE IPMI Add-on: 1x Dual-Port 10GbE, 1x Quad-Port 10GbE or 1x Dual-Port 10GBase-T	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	
GPU	1x M10, 1x M60 or 1x P40	

	Per Block
Dimensions	Height: 1.7" (43mm), Width: 19.09" (485mm), Depth: 30.79" (782mm) Rack Units: 1U
Weight	33 lbs. (14.9kg) stand-alone, 46.7 lbs. (21.2kg) package
System Cooling	8x 40x56mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-140°F (-40°- 60°C) Op Humidity Rng (non-condensing): 8-90% Non-Op Humidity Rng: 5-95%
Power Consumption	873W maximum, 567W typical
Power Supply (Dual Supply / Block)	0.8kW Out @100-127V, 9.8-7.0A, 50-60Hz; 1.0kW Out @200-240V, 7.0- 5.0A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	2979 BTU/hr maximum, 1936 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS (cont.)

	Per Node (2 per Block)
Model	NX-6035-G5 (Configure to Order) 
Server Compute*	Dual Intel Broadwell: E5-2620v4 [8 cores / 2.1 GHz], E5-2640v4 [10 cores / 2.4 GHz]
	HYBRID
Storage Capacity	1x SSD: [960 GB or 1.92 TB] 5x HDD: [4 TB, 6 TB or 8 TB]
Memory	64 GB, 128 GB, 192 GB, 256 GB, 384 GB, 512 GB or 1 TB
Network Connections	2x 1GbE, 1x 1GbE IPMI Add-on: Up to 2x Dual-Port 10GbE or 2x Quad-Port 10GbE or 2x Dual-Port 10GBase-T or 2x Dual-Port 40GbE QSFP+
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 19.56 (484mm), Depth: 33.39" (848mm) Rack Units: 2U
Weight	79 lbs. (35.83kg) stand-alone, 94 lbs. (42.63kg) package, 7.7 lbs (3.5kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-90% Non-Op Humidity Rng: 5-95%
Power Consumption	832W maximum, 546W typical
Power Supply (Dual Supply / Block)	0.8kW Out @100-140V, 10-7A, 50-60Hz; 1.6kW Out @180-240V, 11-8A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	2839 BTU/hr maximum, 1863 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS (cont.)

	Per Node (2 per Block)	
Model	NX-6035C-G5 (Configure to Order) 	
Server Compute*	Dual Intel Broadwell: E5-2609v4 [8 cores / 1.7 GHz], E5-2620v4 [8 cores / 2.1 GHz]	
	HYBRID	ALL FLASH †
Storage Capacity	1x SSD: [960 GB or 1.92 TB] 5x HDD: [4 TB, 6 TB or 8 TB]	2x, 4x, or 6x SSD: [960 GB, 1.92 TB or 3.84 TB]
Memory	64 GB, 128 GB, 192 GB, 256 GB	
Network Connections	2x 1GbE, 1x 1GbE IPMI Add-on: Up to 2x Dual-Port 10GbE or 2x Quad-Port 10GbE or 2x Dual-Port 10GBase-T	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 19.56 (484mm), Depth: 33.39" (848mm) Rack Units: 2U
Weight	79 lbs. (35.83kg) stand-alone, 94 lbs. (42.63kg) package, 7.7 lbs (3.5kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-90% Non-Op Humidity Rng: 5-95%
Power Consumption	812W maximum, 528W typical
Power Supply (Dual Supply / Block)	0.8kW Out @100-140V, 10-7A, 50-60Hz; 1.6kW Out @180-240V, 11-8A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	2771 BTU/hr maximum, 1802 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS (cont.)

	Per Node (1 per Block)	
Model	NX-6155-G5 (Configure to Order) 	
Server Compute*	Dual Intel Broadwell: E5-2620v4 [8 cores / 2.1 GHz], E5-2640v4 [10 cores / 2.4 GHz], E5-2650v4 [12 cores / 2.2 GHz], E5-2680v4 [14 cores / 2.4 GHz], E5-2695v4 [18 cores / 2.1 GHz]	
	HYBRID	ALL FLASH ^f
Storage Capacity	2x SSD: [960 GB, 1.92 TB or 3.84 TB] 10x HDD: [4 TB or 6 TB]	4x, 6x, 8x, 10x, or 12x SSD: [960 GB, 1.92 TB or 3.84 TB]
Memory	64 GB, 128 GB, 192 GB, 256 GB, 384 GB, 512 GB, 640 GB, 768 GB, 1 TB or 1.5 TB	
Network Connections	4x 1GbE, 1x 1GbE IPMI Add-on: Up to 3x Dual-Port 10GbE SFP+ or 3x Quad-Port 10GbE SFP+ or 3x Dual-Port 10GBase-T or 3x Dual-Port 40GbE QSFP+	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 19.25" (489mm), Depth: 31.22" (793mm) Rack Units: 2U
Weight	56 lbs. (25.4kg) stand-alone, 65.1 lbs. (29.53kg) package
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 8-95% Non-Op Humidity Rng: 5-95%
Power Consumption	659W maximum, 625W typical
Power Supply (Dual Supply / Block)	0.8kW Out @100-104V, 9.8-7.0A, 50-60Hz; 1.0kW Out @180-240V, 7.0-5.0A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	2249 BTU/hr maximum, 2133 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

* number of cores per CPU socket

PREVIOUS MODELS (cont.)

	Per Node (2 per Appliance)	
Model	NX-8035-G5 (Configure to Order) 	
Server Compute	Dual Intel Broadwell: E5-2640v4 [20 cores / 2.4 GHz], E5-2643v4 [12 cores / 3.4 GHz], E5-2650v4 [24 cores / 2.2 GHz], E5-2680v4 [28 cores / 2.4 GHz], E5-2695v4 [36 cores / 2.1 GHz]	
Storage Capacity	HYBRID	ALL FLASH ^f
	2x SSD: [480 GB, 960 GB, 1.92 TB or 3.84 TB] 4x HDD: [4 TB, 6 TB or 8 TB]	6x SSD: [480 GB] 2x, 4x, or 6x SSD: [960 GB, 1.2 TB or 3.84 TB]
Memory	128 GB, 192 GB, 256 GB, 384 GB, 512 GB or 1 TB	
Network Connections	2x 1 GbE, 1x 1 GbE RJ45 (IPMI) Add-on: Up to 2x Dual-Port 10 GbE or 2x Quad-Port 10 GbE or 2x Dual-Port 10GBASE-T or 2x Dual-Port 40GbE QSFP+	
Certifications	CSAus, FCC, CSA, ICES, CE, KCC, RCM, VCCI-A, BSMI, EAC, SABS, INMETRO, S-MARK, UKRSEPRO, BIS	

	Per Block
Dimensions	Height: 3.46" (88mm), Width: 19.56" (484mm), Depth: 33.39" (848mm) Rack Units: 2U
Weight	79 lbs. (35.83kg) stand-alone, 94 lbs. (42.63kg) package, 7.7 lbs (3.5kg) node
System Cooling	4x80mm heavy duty fans with PWM fan speed controls
Operating Environment	Op Temp Rng: 50°-95°F (10°-35°C) Non-Op Temp Rng: -40°-158°F (-40°- 70°C) Op Humidity Rng (non-condensing): 20-90% Non-Op Humidity Rng: 5-95%
Power Consumption	949W maximum, 622W typical
Power Supply (Dual Supply / Block)	0.8kW Out @100-140V, 10-7A, 50-60Hz; 1.6kW Out @180-240V, 11-8A, 50-60Hz; 80PLUS TITANIUM
Thermal Dissipation	3238 BTU/hr maximum, 2123 BTU/hr typical
Operating Requirements	Input Voltage: 100-240V AC auto-range, Input Frequency: 50-60Hz

Highlights

- Transforms networks to deliver cloud scale, agility, and operational efficiency with data center fabrics
- Supports 1, 10, and 40 GbE options for optimal flexibility and scale
- Meets today's application demands with high performance and low latency
- Delivers line-rate throughput for all ports and packet sizes
- Fits into any data center design by leveraging 10 GbE/40 GbE uplinks, Ports on Demand (PoD), and Capacity on Demand (CoD)
- Maximizes network availability with efficiency and resiliency
- Supports storage environments with advanced flexibility
- Automates infrastructure provisioning, validation, troubleshooting, and remediation workflows



ExtremeSwitching™ VDX 6740, 6740T, and 6740T-1G

Advanced Features to Transform Data Centers

Data centers continue to evolve, creating a need for an infrastructure that can support growth in Virtual Machines (VMs), distributed applications, and data, as well as the transition to cloud-based computing—without compromising performance. The ExtremeSwitching VDX® 6740 and the VDX family of switches deliver the performance, flexibility, and efficiency essential to modern data centers, including cloud and highly virtualized environments.

VDX 6740 Switch

The VDX 6740 (Figure 1) offers 48 10 Gigabit Ethernet (GbE) SFP+ ports and four 40 GbE QSFP+ ports. Each 40 GbE port can be broken out into four independent 10 GbE SFP+ ports, providing an additional 16 10 GbE SFP+ ports. In addition, the switch features low power consumption, consuming 1 watt per 10 GbE port.

VDX 6740T Switch

The VDX 6740T (Figure 2) offers 48 10GBASE-T ports and four 40 GbE QSFP+ ports. Each 40 GbE port can be broken out into four independent 10 GbE SFP+ ports, providing an additional 16 10 GbE SFP+ ports. The switch also features low power consumption, consuming less than 5 watts per 10 GbE port.



Figure 1: The VDX 6740 Switch provides 48 10 GbE SFP+ ports and four 40 GbE QSFP+ ports.



Figure 2: The VDX 6740T Switch provides 48 1000BASE-T/10GBASE-T ports and four 40 GbE QSFP+ ports.



Figure 3: The VDX 6740T-1G Switch provides 48 1000BASE-T/10GBASE-T ports and four 40 GbE QSFP+ ports.

VDX 6740T-1G Switch

The VDX 6740T-1G (Figure 3) offers 48 1000BASE-T ports and two 40 GbE QSFP+ ports. Each 40 GbE port can be broken out into four independent 10 GbE SFP+ ports, providing an additional eight 10 GbE SFP+ ports for uplink. All 48 1000BASE-T ports can be upgraded to 48 10GBASE-T ports via the Capacity on Demand (CoD) software license. Two 40 GbE ports are enabled as part of the base license. The additional two 40 GbE ports can be upgraded via the Ports on Demand (PoD) software license.

The VDX 6740, 6740T, and 6740T-1G are all Ethernet fabric Top-of-Rack (ToR) switches that support a demanding data center environment. The VDX 6740 series of switches provides the advanced feature set that data centers require while delivering the high performance and low latency virtualized environments demand. Together with data center fabrics, these switches transform data center networks to support the New IP by enabling cloud-based architectures that deliver new levels of scale, agility, and operational efficiency. These highly automated, software-driven, and programmable data center fabric design solutions support a breadth of network virtualization options and scale for data center environments ranging from tens to thousands of servers.

Moreover, they make it easy for organizations to architect, automate, and integrate current and future data center technologies while they transition to a cloud model that addresses their needs, on their own timetable and on their terms.

Transforms Networks to Deliver New Levels of Scale, Agility, and Operational Efficiency

VDX switches allow organizations to evolve their data center networks at their own pace, with full investment protection. As the foundation for several data center architectures, VDX switches support Extreme IP fabrics, Extreme VCS® fabrics, as well as network virtualization, including controller-based network virtualization architectures, such as VMware NSX-V-certified, and standards-based controller-less architectures with Extreme BGP-EVPN Network Virtualization for architectural flexibility (see Figure 4).

For organizations seeking automated provisioning capabilities to improve IT agility, VDX switches, together with Extreme VCS Fabric technology, accelerate time to value through automated provisioning of network devices and network virtualization. Automated service and resource upgrades further reduce ongoing maintenance time and costs. High availability is achieved through non-disruptive In-Service Software Upgrade (ISSU) and self-healing fabrics.

Optionally, for DevOps-centric organizations, VDX switches can be provisioned using Extreme Workflow Composer™ and Extreme Workflow Composer Automation Suites.

Read more about Extreme Data Center Fabrics.

Turnkey and Customizable Lifecycle Automation

Organizations that aim to automate the entire network lifecycle but lack sufficient engineering resources can leverage Workflow Composer, a server-based, DevOps-inspired network automation platform powered by StackStorm. The Workflow Composer platform automates the entire infrastructure lifecycle—from provisioning and validation to troubleshooting and remediation. It also integrates across IT domains for end-to-end event-driven workflow automation. For more information, see the Extreme Workflow Composer At-A-Glance.

Extreme Data Center Fabrics and Network Virtualization Options

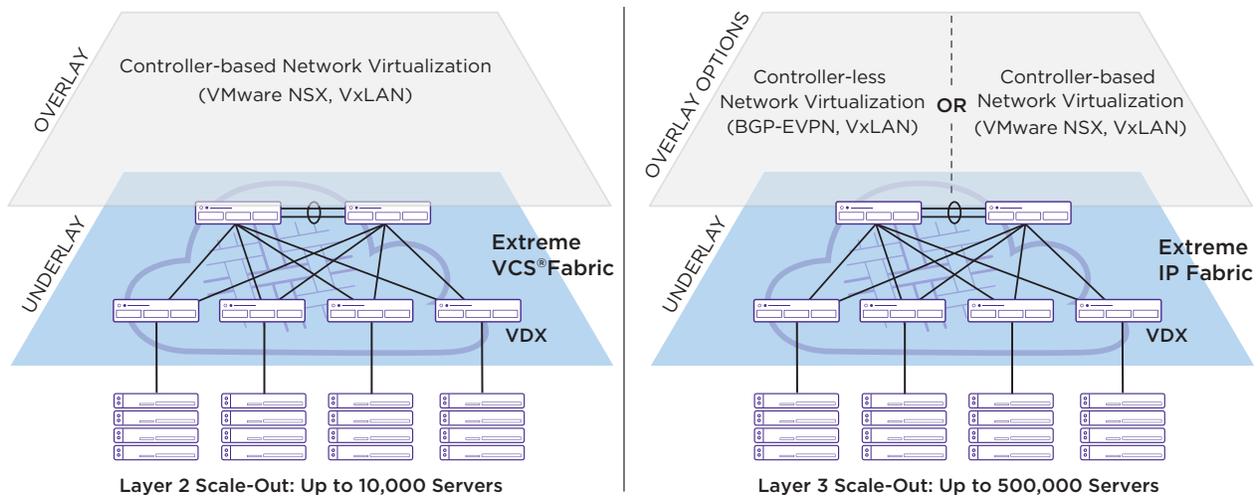


Figure 4: Multiple network architectures offer the flexibility that can help organizations rapidly adapt to changing business conditions and traffic patterns.

Designed to run with the Workflow Composer platform, Workflow Composer Automation Suites are ideal for IT organizations that seek to embrace automation yet possess limited automation training or time. The suites provide out-of-the-box network lifecycle automation for commonly performed tasks, and are packaged to address major use cases.

The Automation Suites Include

- **Network Essentials:** Basic building blocks to help organizations with limited resources get up and running quickly, including workflows that automate steps common to most networks.
- **Data Center Fabrics:** A collection of workflows specific to provisioning, troubleshooting, and remediating data center fabrics, including Extreme IP fabric deployments.
- **Internet Exchange Points:** Workflows to automate steps specifically associated with Layer 2 Internet exchange connectivity, such as tenant provisioning and maintenance.

Each automation suite includes documentation and a collection of turnkey yet customizable workflows, services, sensors, actions, and rules. Organizations can use Automation Suites as-is or as starter kits for building or customizing workflows specific to their data center requirements to reduce time-to-value.

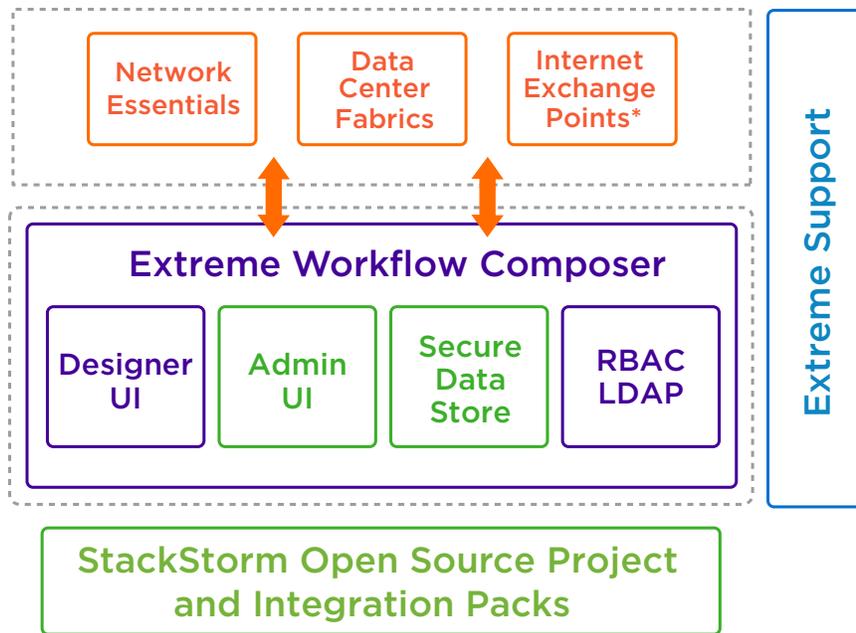
For more information, see the Workflow Composer Automation Suites At-A-Glance.

Additionally, VDX switches offer programmability and interoperability options through a PyNOS Library and YANG model-based REST and Netconf APIs. Cloud orchestration and control through OpenStack and OpenDaylight-based SDN controller support enable full network integration with compute and storage resource provisioning and management.

Meets Today's Application Demands with High Performance and Low Latency

As data centers virtualize more of their servers and VM density per server increases, organizations will require higher bandwidth connectivity to support the explosion of data and application processing. With 1/10 GbE connections, VDX 6740, 6740T, and 6740T-1G switches deliver the high-performance computing needed to keep up with the demands of a virtualized data center, allowing organizations to reduce network congestion, improve application performance, and meet the capacity required by 1 GbE and 10 GbE servers. The 40 GbE uplinks can easily aggregate high-bandwidth traffic and reduce bottlenecks that occur when aggregating multiple 10 GbE connections, keeping data center networks working at peak performance.

Workflow Composer Automation Suites



Availability TBD

Figure 5: The Extreme Workflow Composer Automation Suite Architecture.

In a VCS fabric, VDX 6740 switches also help maximize network utilization with hardware-based Extreme Inter-Switch Link (ISL) Trunking. Organizations can create an 80 GbE trunk by utilizing two 40 GbE ports, or a 160 GbE trunk with 16 10 GbE ports. The ISL trunk is automatically formed between two VDX 6740, 6740T, and 6740T-1G switches when they are linked together, allowing traffic to be equally distributed among all ports. This increases link efficiency and limits traffic disruptions, especially during high traffic times. Also, 40 GbE and 10 GbE trunking is supported between VDX 6740, 6940, and 8770 switches. Refer to the Network OS Management Configuration Guide for more information.

Extreme Metro VCS technology provides an innovative solution to interconnect data centers and their traffic flows over distance, guaranteeing supported traffic characteristics. Metro VCS technology configured for regular Ethernet traffic supports 10 GbE ISLs up to 80 km,

40 GbE ISLs up to 40 km, and 100 GbE ISLs up to 40 km. To configure Metro VCS technology for lossless traffic applications (DCB/FCoE), refer to the Metro VCS Pre-deployment Guide for details.

While an increase in traffic can also create latency issues, VDX 6740 switches deliver very low latency through wire-speed ports with 850 ns (VDX 6740) and 3 μ s (VDX 6740T/6740T-1G) any-port-to-any-port latency. In addition, the switches deliver an industry-leading 24 MB deep buffer per switch. This provides the buffering capacity to handle increases in traffic, especially during peak times when ports are congested, allowing traffic to be distributed across the ports. The VDX 6740, 6740T, and 6740T-1G feature a single ASIC design, instead of multiple ASIC designs commonly found on other switches, further improving performance and reducing latency since all ports can communicate via one ASIC.

Fits into Any Data Center Design

Access ports are positioned to allow for easy server connectivity and to simplify cabling. With a choice of front-to-back or back-to-front airflow, these switches are ideal for ToR deployments connecting servers, storage, and other switches, as well as for providing compatibility for either hot aisle or cold aisle data center designs. With dual-speed functionality, each 1 GbE port also supports 10 GbE connections, providing the flexibility needed to support a mixed environment as data centers transition to higher bandwidth.

The switches are designed to connect data centers with multiple options to meet individual design requirements. This flexible design provides investment protection, giving organizations a single switch that can support varying data center requirements. The following features help organizations meet their evolving needs:

- **10 GbE or 40 GbE uplinks:** The 40 GbE SFP+ ports offer the flexibility to expand and interconnect the network infrastructure intelligently and efficiently while reducing bottlenecks. The switches offer the option to separate the 40 GbE uplinks into four 10 GbE uplinks via breakout cables. As capacity and need increase, organizations can revert to 40 GbE when ready.
- **Ports on Demand:** Ports on Demand (PoD) enables organizations to activate 24 to 64 ports. They can purchase the number of ports that they currently need and seamlessly scale up later by simply applying a software license. This flexible and cost-efficient “pay as you grow” licensing model solves scalability challenges by allocating IT resources as needed.
- **Capacity on Demand:** The Capacity on Demand (CoD) license for the VDX 6740T-1G enables organizations to upgrade all 48 1000BASE-T ports to 48 10GBASE-T. This helps organizations migrate seamlessly from 1 GbE to 10 GbE via a software license without ripping and replacing the physical switch.

Maximizes Network Availability with Efficiency and Resiliency

Extreme data center fabrics create a more efficient and resilient network, and deliver the high performance and high reliability required by today’s data centers.

Optimizing East-West Traffic

Traditional data centers are architected with a rigid, three-tier tree topology optimized for the north-south traffic flow of client-server computing environments, compromising performance, increasing latency, and creating bottlenecks. With the increased prevalence of virtualization and distributed applications, data center network traffic is now predominantly east-west, or server-server. Data center fabrics were designed and optimized to address these traffic patterns by moving traffic through any of the active paths and avoiding the multiple hops required in other tiered topologies.

In-Service Software Upgrade

The VDX 6740 family of switches delivers a highly efficient ToR In-Service Software Upgrade (ISSU) by leveraging a software model that uses a dual-OS infrastructure on a multi-core CPU. This enables data center administrators to deliver enterprise-class business continuity on ToR switches during a software upgrade/downgrade process. This software change process is non-disruptive to Layer 2, Layer 3, Fibre Channel, and FCoE traffic. Moreover, the ISSU implementation is hardware-optimized, thus reducing the time it takes to complete the upgrade/downgrade process.

Supports Storage Environments with Advanced Flexibility

The VDX 6740, 6740T, and 6740T-1G offer advanced storage support with multiple storage connectivity options, including FCoE, Fibre Channel (VDX 6740 only), iSCSI, and NAS storage. They also feature Data Center Bridging (DCB), which enables the reliable exchange of storage traffic over the LAN network, eliminating packet loss when network congestion occurs and allocating bandwidth as needed to keep the network running efficiently. Moreover, the switches offer Network-Attached Storage (NAS) Auto QoS intelligence to prioritize delay-sensitive IP storage traffic within the fabric and to help ensure consistent performance while decreasing latency.

The VDX 6740 features 32 Flex Ports, which can take either a 10 GbE or 16 Gbps Fibre Channel personality. In Fibre Channel mode, these Flex Ports can be used to either directly connect Fibre Channel storage to VCS fabrics or bridge FCoE traffic to Fibre Channel SANs, thus protecting existing SAN investments. The Flex Ports and FCoE features on the VDX 6740 can be turned on with an add-on software license.

VDX 6740, 6740T, and 6740T-1G Feature Overview

Overview	VDX 6740	VDX 6740T	VDX 6740T-1G
Form factor	1U	1U	1U
Switching bandwidth (data rate, full duplex)	1.28 Tbps	1.28 Tbps	1.28 Tbps
Switch performance	960 Mpps	960 Mpps	960 Mpps
Port-to-port latency	850 ns	3 μ s	3 μ s
Dimensions and weight	Width: 43.99 cm (17.32 in.) Height: 4.32 cm (1.75 in.) Depth: 40.99 cm (16.14 in.) Weight: 8.66 kg (19.1 lb)	Width: 43.74 cm (17.22 in.) Height: 4.27 cm (1.68 in.) Depth: 53.65 cm (21.12 in.) Weight: 10.82 kg (23.85 lb)	Width: 43.74 cm (17.22 in.) Height: 4.27 cm (1.68 in.) Depth: 53.65 cm (21.12 in.) Weight: 10.82 kg (23.85 lb)
10 GbE SFP+ ports	Up to 64	Up to 16	Up to 16
2/4/8/16 Gbps Fibre Channel Flex Ports	Up to 32 (out of 64 10 GbE ports) Port types supported: E_Port (connecting to EX_Port only), F_Port, N_Port (Access Gateway mode)	0	0
1/10 GBASE-T	0	48	48
40 GbE QSFP+ (10 GbE breakout cable)	4	4	4
10 GbE Ports on Demand (PoD)	24, 32, 40, 48, 56, 64	24, 32, 40, 48, 56, 64	N/A
10 GbE Capacity on Demand (CoD)	N/A	N/A	16, 32, 48
Power supplies	Two hot-swappable, load-sharing	Two hot-swappable, load-sharing	Two hot-swappable, load-sharing
Cooling fans	N+1 redundant, integrated into power supplies	N+1 redundant, five hot-swappable fan units	N+1 redundant, five hot-swappable fan units
Airflow	Front to back Back to front	Front to back Back to front	Front to back Back to front

Specifications	
Scalability Information¹	
Connector options	Out-of-band Ethernet management: RJ45 (fixed) Console management: RJ45 to RS-232 (fixed) Firmware and diagnostic: USB
Maximum VLANs	4,096
Maximum MAC addresses	160,000
Maximum port profiles (AMPP)	1,024
Maximum members in a standard LAG	64
Maximum per-port priority pause level	8
Maximum switches that a vLAG can span	8
Maximum members in a vLAG	64
Maximum ACLs	13,000
Maximum ARP entries	32,000
Maximum IPv4 unicast routes	12,000
Maximum IPv6 unicast routes	3,000 ²
HA/ISSU	ISSU fully supported
Mechanical	
Enclosure	Front-to-rear, rear-to-front airflow; 19-inch EIA-compliant; power from non-port side
Environmental	
Temperature	Operating: 0°C to 40°C (32°F to 104°F) Non-operating and storage: -25°C to 70°C (-13°F to 158°F)
Humidity	Operating: 10% to 85% non-condensing Non-operating and storage: 10% to 90% non-condensing
Altitude	Operating: Up to 3,048 meters (10,000 feet) Non-operating and storage: Up to 12 kilometers (39,370 feet)
Shock	Operating: 20 G, 11 ms half-sine Non-operating and storage: Square wave, 44 G, 15 ms
Vibration	Operating: 0.5 G peak, 0.7 G ms random, 5 to 500 Hz Non-operating and storage: 2.0 g sine, 1.4 G rms random, 5 to 500 Hz
Airflow	VDX 6740T port-side-intake: Maximum: 49.3 CFM; Nominal: 26.3 CFM VDX 6740T port-side-exhaust: Maximum: 51.9 CFM; Nominal: 27.3 CFM VDX 6740 port-side-intake and port-side-exhaust: Maximum: 25.7 CFM; Nominal: 11.5 CFM
Heat Dissipation	1,672.41 BTU/hr
Power	
Power Supplies	Two internal, redundant, field-replaceable, load-sharing AC power supplies
Power Inlet	C13
Input Voltage	85 to 264 VAC nominal
Input Line Frequency	50 to 60 Hz
Inrush Current	Limited to 30 A peak at 240 VAC during cold startup at 25°C ambient
Maximum Current	66 A max at 100 VAC/60 Hz
Maximum Power Consumption	VDX 6740: 110 W VDX 6740T: 460 W VDX 6740T-1G: 276 W (Base SKU)

¹ Please refer to the latest version of the release notes for the most up-to-date scalability numbers supported in software.

Safety Compliance

CAN/CSA C22.2 No. 60950-1-07 including A1 / UL 60950-1-07, Ed. 2 including A1

CAN/CSA-C22.2 No. 60950-1 Second Edition EN 60950-1 Second Edition +A1/A12

EN 60950-1 Second Edition +A1/A12

IEC 60950-1 Second Edition +A1

GB 4943.1-2011 and GB9254-2008

CNS14336-1(99)

EMC

FCC Class A

ICES-003 Class A

VCCI-Class A

CE

C-Tick

BSMI

GOST

KCC Class A

CCC

Immunity

ANSI C63.4

ICES-003 Class A

CISPR22 and JEIDA (Harmonics)

EN55022 Class A and EN55024

CISPR22

AS/NZS CISPR22

CNS 13438(95)

51318.22-99 and 51318.24-99

KN22 and KN24

GB17625.1-2003

Environmental Regulatory Compliance

RoHS-6 (with lead exemption) Directive 2002/95/EC

Standards Compliance

VDX 6740 products conform to the following Ethernet standards:

- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1s Multiple Spanning Tree
- IEEE 802.1w Rapid Reconfiguration of Spanning Tree Protocol
- IEEE 802.3 Ethernet
- IEEE 802.3ad Link Aggregation with LACP
- IEEE 802.3ae 10G Ethernet
- IEEE 802.1Q VLAN Tagging
- IEEE 802.1p Class of Service Prioritization and Tagging
- IEEE 802.1v VLAN Classification by Protocol and Port
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- IEEE 802.3x Flow Control (Pause Frames)
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-X

The following draft versions of the Data Center Bridging (DCB) and Fibre Channel over Ethernet (FCoE) standards are also supported on the VDX 6740:

- IEEE 802.1Qbb Priority-based Flow Control
- IEEE 802.1Qaz Enhanced Transmission Selection
- IEEE 802.1 DCB Capability Exchange Protocol (Proposed under the DCB Task Group of IEEE 802.1 Working Group)
- FC-BB-5 FCoE (Rev 2.0)

The VDX 6740 products conform to the following Fibre Channel standards:

- FC-GS-5 ANSI INCITS 427:2007 (includes the following)
 - FC-GS-4 ANSI INCITS 387: 2004
- FC-SP-2 INCITS 496-2012 (AUTH-A, AUTH-B1 only)
- FC-DA INCITS TR-36: 2004 (includes the following)
 - FC-FLA INCITS TR-20: 1998
 - FC-PLDA INCITS TR-19: 1998
- FC-MI-2 ANSI/INCITS TR-39-2005
- FC-PI INCITS 352: 2002
- FC-PI-2 INCITS 404: 2005
- FC-PI-4 INCITS 1647-D, revision 7.1 (under development)
- FC-FS-2 ANSI/INCITS 424:2006 (includes the following)
 - FC-FS INCITS 373: 2003
- FC-LS INCITS 433: 2007
- MIB-FA INCITS TR-32: 2003

RFC Support

- RFC 768 User Datagram Protocol (UDP)
- RFC 783 TFTP Protocol (revision 2)
- RFC 791 Internet Protocol (IP)
- RFC 792 Internet Control Message Protocol (ICMP)
- RFC 793 Transmission Control Protocol (TCP)
- RFC 826 ARP
- RFC 854 Telnet Protocol Specification
- RFC 894 A Standard for the Transmission of IP Datagram over Ethernet Networks
- RFC 959 FTP
- RFC 1027 Using ARP to Implement Transparent Subnet Gateways (Proxy ARP)
- RFC 1112 IGMPv1
- RFC 1157 Simple Network Management Protocol (SNMP) v1 and v2
- RFC 1305 Network Time Protocol (NTP) Version 3
- RFC 1492 TACACS+
- RFC 1519 Classless Inter-Domain Routing (CIDR)
- RFC 1584 Multicast Extensions to OSPF
- RFC 1765 OSPF Database Overflow
- RFC 1812 Requirements for IP Version 4 Routers
- RFC 1997 BGP Communities Attribute
- RFC 2068 HTTP Server
- RFC 2131 Dynamic Host Configuration Protocol (DHCP)
- RFC 2154 OSPF with Digital Signatures (Password, MD-5)
- RFC 2236 IGMPv2
- RFC 2267 Network Ingress Filtering
- RFC 2328 OSPF v2
- RFC 2370 OSPF Opaque Link-State Advertisement (LSA) Option Partial Support
- RFC 2375 IPv6 Multicast Address Assignments
- RFC 2385 Protection of BGP Sessions with the TCP MD5 Signature Option
- RFC 2439 BGP Route Flap Damping
- RFC 2460 Internet Protocol, Version 6 (v6) Specification (on management interface)
- RFC 2462 IPv6 Stateless Address Auto-Configuration
- RFC 2464 Transmission of IPv6 Packets over Ethernet Network (on management interface)

RFC Support (cont.)

RFC 2474	Definition of the Differentiated Services Field in the IPv4 and IPv6 Headers
RFC 2571	An Architecture for Describing SNMP Management Frameworks
RFC 2711	IPv6 Router Alert Option
RFC 2865	Remote Authentication Dial-In User Service (RADIUS)
RFC 3101	The OSPF Not-So-Stubby Area (NSSA) Option
RFC 3176	sFlow
RFC 3137	OSPF Stub Router Advertisement
RFC 3392	Capabilities Advertisement with BGPv4
RFC 3411	An Architecture for Describing SNMP Frameworks
RFC 3412	Message Processing and Dispatching for the SNMP
RFC 3413	Simple Network Management Protocol (SNMP) Applications
RFC 3587	IPv6 Global Unicast Address Format
RFC 3623	Graceful OSPF Restart - IETF Tools
RFC 3768	VRRP
RFC 4271	BGPv4
RFC 4291	IPv6 Addressing Architecture
RFC 4292	IP Forwarding MIB
RFC 4293	Management Information Base for the Internet Protocol (IP)
RFC 4443	ICMPv6 (replaces 2463)
RFC 4456	BGP Route Reflection

RFC 4510	Lightweight Directory Access Protocol (LDAP): Technical Specification Road Map
RFC 4601	Protocol Independent Multicast—Sparse Mode (PIM-SM): Protocol Specification (Revised)
RFC 4724	Graceful Restart Mechanism for BGP
RFC 4861/5942	IPv6 Neighbor Discovery
RFC 4893	BGP Support for Four-Octet AS Number Space
RFC 5880	Bidirectional Forwarding Detection (BFD)
RFC 5881	Bidirectional Forwarding Detection (BFD) for IPv4 and IPv6 (Single Hop)
RFC 5882	Generic Application of Bidirectional Forwarding Detection (BFD)
RFC 5883	Bidirectional Forwarding Detection (BFD) for Multihop Paths

IPv6 Routing

RFC 2740	OSPFv3 for IPv6
RFC 2545	Use of BGP-MP extensions for IPv6

IPv6 Multicast

RFC 2710	Multicast Listener Discovery (MLD) for IPv6
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VRRP/VRRPe

RFC 5798	VRRP Version 3 for IPv4 and IPv6
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Network OS Software Capabilities

	VSC Fabrics	IP Fabrics
Software Scalability		
Maximum switches in a fabric	48	Unlimited
Maximum ECMP paths in a fabric	32	32
Maximum LAGs in a fabric	2,000	Unlimited
Layer 2 Switching		
Service Node Load Balancing BFD/ARP Optimizations	X	X
Conversational MAC Learning	X	X
Virtual Link Aggregation Group (vLAG) spanning	X	X
Layer 2 Access Control Lists (ACLs)	X	X
Supports 2K ingress and egress ACLs	X	X
Edge Loop Detection (ELD)	X	X
Address Resolution Protocol (ARP) RFC 826	X	X
Private VLANs	X	
Maintenance Mode/Graceful Traffic Diversion	X	
Distributed VXLAN Gateway	X	
Diagnostic Ports	X	
IP Maps Support	X	
L2 Loop prevention in an overlay environment		X
High availability/In-Service Software Upgrade— hardware-enabled	X	X
IGMP snooping support for multicast flooding	X	X
IGMPv1/v2 Snooping	X	X
IGMPv3	X	X
MAC Learning and Aging	X	X
Link Aggregation Control Protocol (LACP) IEEE 802.3ad/802.1AX	X	X
Virtual Local Area Networks (VLANs)	X	X
VLAN Encapsulation 802.1Q	X	X
Per-VLAN Spanning Tree (PVST+ /PVRST+)	X	X
Rapid Spanning Tree Protocol (RSTP) 802.1w	X	X
Multiple Spanning Tree Protocol (MSTP) 802.1s	X	X
STP PortFast, BPDU Guard, BPDU Filter	X	X
STP Root Guard	X	X
Pause Frames 802.3x	X	X
Static MAC Configuration	X	X
Uni-Directional Link Detection (UDLD)	X	X
Uplink switch for VDX switches, VCS fabrics, and the VCS Virtual Fabric feature	X	
Transparent LAN Services	X	
L2 Traceroute for VXLAN	X	X
BUM Storm Control	X	X
Border Gateway Protocol (BGP4+)	X	X
DHCP Helper	X	X
Layer 3 ACLs	X	X
Multicast: PIM-SM, IGMPv2	X	X
OSPF v2/v3	X	X
Static routes	X	X
IPv4/v6 ACL	X	X

	VSC Fabrics	IP Fabrics
Layer 3 Switching		
Policy-Based Routing (PBR)	X	X
Bidirectional Forwarding Detection (BFD)	X	X
32-Way ECMP	X	X
VRF Lite	X	X
VRF-aware OSPF, BGP, VRRP, static routes	X	X
VRRP v2 and v3	X	X
uRPF for IPv4 and IPv6	X	
IPv4/IPv6 dual stack	X	X
IPv6 ACL packet filtering	X	X
BGP automatic neighbor discovery for IP fabric		X
BGP Additional-Path	X	X
BGP-Allow AS	X	X
BGP Generalized TTL Security Mechanism (GTSM)	X	X
BGP graceful shutdown for maintenance mode		X
BGP Peer Auto Shutdown	X	X
Multicast Refactoring	X	X
IPv6 routing	X	X
OSPF Type-3 LSA Filter	X	X
Wire-speed routing for IPv4 and IPv6 using any routing protocol	X	X
BGP-EVPN Control Plane Signaling RFC 7432		X
BGP-EVPN VXLAN Standard-based Overlay		X
Multi-VRF	X	X
IP Unnumbered Interface		X
Intersubnet Routing (Symmetric and Asymmetric)		X
IP over Port Channel		X
VRRP-E	X	X
Fabric Virtual Gateway	X	X
Static Anycast Gateway		X
ARP Suppression		X
Automation and Programmability		
OpenFlow 1.3	X	X
REST API with YANG data model	X	X
Puppet	X	X
Python	X	X
PyNOS libraries	X	X
VMware vRealize plugins	X	X
DHCP automatic fabric provisioning	X	X
Netconf API	X	X
Multitenancy and Virtualization		
TRILL FGL-based VCS Virtual Fabric feature	X	
Virtual fabric extension	X	
VM-Aware Network Automation	X	
BFD for virtual fabric extension	X	
Automatic Migration of Port Profiles (AMPP)	X	X

Network OS Software Capabilities (cont.)

	VSC Fabrics	IP Fabrics
DCB		
Priority-based Flow Control (PFC) 802.1Qbb	X	
Enhanced Transmission Selection (ETS) 802.1Qaz	X	
Manual configuration of lossless queues for protocols other than FCoE and iSCSI	X	
Data Center Bridging Exchange (DCBX)	X	
DCBX Application Type-Length-Value (TLV) for FCoE and iSCSI	X	
IP Storage		
Inter-Switch Link (ISL)	X	
Deep on-chip packet buffer	X	X
Auto QoS for NAS	X	X
VCS fabric auto forming/auto healing	X	X
Fibre Channel/FCoE		
Multi-hop Fibre Channel over Ethernet (FCoE); requires Extreme Networks VCS Fabric technology	X	
FC-BB5 compliant Fibre Channel Forwarder (FCF)	X	
Native FCoE forwarding	X	
FCoE to Fibre Channel Bridging	X	
FCoE on VDX 8770	X	
FCoE on QSFP+ port	X	
Multi-hop Access Gateway Support	X	
End-to-end FCoE (initiator to target)	X	
FCoE Initialization Protocol (FIP) v1 support for FCoE device login and initialization	X	
Name Server-based zoning	X	
Supports connectivity to FIP Snooping Bridge (FSB) device	X	
FCoE traffic over standard LAG	X	
Interface Binding	X	
Dual Personality Ports	X	
Logical SANs	X	
High Availability		
ISSU L2 and L3	X	X
BFD	X	X
OSPF3-NSR	X	X
BGP4-GR	X	X
Management Module Failover	X	X
Quality of Service (QoS)		
ACL-based QoS	X	X
Eight priority levels for QoS	X	X
Class of Service (CoS) IEEE 802.1p	X	X
DSCP Trust	X	X
DSCP to Traffic Class Mutation	X	X
DSCP to CoS Mutation	X	X
DSCP to DSCP Mutation	X	X
Random Early Discard	X	X
Per-port QoS configuration	X	X

	VSC Fabrics	IP Fabrics
Quality of Service (QoS) cont.		
ACL-based Rate Limit	X	X
Dual-rate, three-color token bucket	X	X
ACL-based remarking of CoS/DSCP/Precedence	X	X
ACL-based sFlow	X	X
Scheduling: Strict Priority (SP), Deficit Weighted Round-Robin (DWRR), Hybrid	X	X
Scheduling (Hybrid)		
Queue-based Shaping	X	X
Flow-based QoS	X	X
Management and Monitoring		
Logical chassis management	X	
IPv4/IPv6 management	X	X
Industry-standard Command Line Interface (CLI)	X	X
Netconf API	X	X
REST API with YANG data model	X	X
VDX Plugin for OpenStack	X	X
Link layer discovery protocol (LLDP) IEEE 802.1AB	X	X
MIB II RFC 1213 MIB	X	X
Switch Beaconing	X	X
Management VRF	X	X
Switched Port Analyzer (SPAN)	X	X
Telnet	X	X
SNMP v1, v2C, v3	X	X
sFlow RFC 3176	X	X
Out-of-band management	X	X
Remote SPAN (RSPAN)	X	X
RMON-1, RMON-2	X	X
NTP	X	X
Management Access Control Lists (ACLs)	X	X
Role-Based Access Control (RBAC)	X	X
Range CLI support	X	X
UDLD	X	X
OpenStack Neutron ML2 plugin	X	X
Python	X	X
Puppet	X	X
Distributed Configuration Management	X	
Maps switch health monitoring	X	
Security		
Port-based Network Access Control 802.1X	X	X
RADIUS (AAA)	X	X
TACACS+	X	X
Secure Shell (SSHv2)	X	X
BPDU Drop	X	X
Lightweight Directory Access Protocol (LDAP)	X	X
Secure Copy Protocol	X	X
Port Security	X	X

Ordering Information

SKU	Description
Software License	
BR-VDX6740-FCoE	Software, FCoE license for VDX 6740 and 6740T
Hardware	
BR-VDX6740-24-F	VDX 6740, 24P SFP+ ports only—no optics, AC, non-port-side exhaust airflow
BR-VDX6740-24-R	VDX 6740, 24P SFP+ ports only—no optics, AC, port-side exhaust airflow
BR-VDX6740-48-F	VDX 6740, 48P SFP+ ports only—no optics, AC, non-port-side exhaust airflow
BR-VDX6740-48-R	VDX 6740, 48P SFP+ ports only—no optics, AC, port-side exhaust airflow
BR-VDX6740-64-F	VDX 6740, 64P SFP+ ports only—no optics, AC, non-port-side exhaust airflow
BR-VDX6740-64-R	VDX 6740, 64P SFP+ ports only—no optics, AC, port-side exhaust airflow
BR-VDX6740-64-ALLSW-F	VDX 6740, 64P SFP+ ports only—no optics, AC, FCoE, VCS fabric, non-port-side exhaust airflow
BR-VDX6740-64-ALLSW-R	VDX 6740, 64P SFP+ ports only—no optics, AC, FCoE, VCS fabric, port-side exhaust airflow
BR-VDX6740T-24-F	VDX 6740T, 24P 10GBASE-T ports only—no optics, AC, non-port-side exhaust airflow
BR-VDX6740T-24-R	VDX 6740T, 24P 10GBASE-T ports only—no optics, AC, port-side exhaust airflow
BR-VDX6740T-48-F	VDX 6740T, 48P 10GBASE-T ports only—no optics, AC, non-port-side exhaust airflow
BR-VDX6740T-48-R	VDX 6740T, 48P 10GBASE-T ports only—no optics, AC, port-side exhaust airflow
BR-VDX6740T-64-F	VDX 6740T, 48P 10GBASE-T and 4 QSFP+ ports only—no optics, AC, non-port-side exhaust airflow
BR-VDX6740T-64-R	VDX 6740T, 48P 10GBASE-T and 4 QSFP+ ports only—no optics, AC, port-side exhaust airflow
BR-VDX6740T-64-ALLSW-F	VDX 6740T, 48P 10GBASE-T and 4 QSFP+ ports only—no optics, AC, FCoE, VCS fabric, non-port-side exhaust airflow
BR-VDX6740T-64-ALLSW-R	VDX 6740T, 48P 10GBASE-T and 4 QSFP+ ports only—no optics, AC, FCoE, VCS fabric, port-side exhaust airflow
BR-VDX6740T-56-1G-F	VDX 6740T-1G, 48P 1000BASE-T and 2 40 GbE QSFP+ ports, upgradable to 10GBASE-T via license only—no optics, AC, non-port-side exhaust airflow
BR-VDX6740T-56-1G-R	VDX 6740T-1G, 48P 1000BASE-T and 2 40 GbE QSFP+ ports, upgradable to 10GBASE-T via license only—no optics, AC, port-side exhaust airflow
BR-VDX6740-8x10G-POD	8-port PoD license for VDX 6740 and 6740T
BR-VDX6740-2x40G-POD	2-port 40 GbE PoD license for VDX 6740 and 6740T
BR-VDX6740T-1G-16X10G-COD	16-port 1 GbE to 10 GbE Capacity on Demand (CoD) upgrade license for VDX 6740T-1G
FRU and Optics	
XEN-250WPSAC-F	FRU 250 W AC power supply/fan, non-port-side exhaust airflow, VDX 6740
XEN-250WPSAC-R	FRU 250 W AC power supply/fan, port-side exhaust airflow, VDX 6740
XBR-500WPSAC-01-F	FRU 500 W AC power supply/fan, non-port-side exhaust airflow, VDX 6740T, 6740T-1G
XBR-500WPSAC-01-R	FRU 500 W AC power supply/fan, port-side exhaust airflow, VDX 6740T, 6740T-1G
XBR-AC-FAN-F	AC fan, non-port-side exhaust airflow, VDX 6740T, 6740T-1G
XBR-AC-FAN-R	AC fan, port-side exhaust airflow, VDX 6740T, 6740T-1G
XEN-R000291	FRU, VDX 6740 fixed rack-mount kit for 4-post racks
XEN-R000292	FRU, VDX 6740 mid-mount kit for 2-post racks
XEN-R000293	Flush-mount kit for 2-post racks for VDX 6740
XEN-R000294	FRU, universal 2-post mid-mount kit/flush-mount kit, VDX 6740T/6740T-1G
XEN-R000295	FRU, universal rack-mount kit, 4-post, 24- to 32-inch depth rack, VDX 6740T/6740T-1G
XEN-R000296	FRU, universal rack-mount kit for 4 post racks, VDX 6740T/6740T-1G



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Nutanix Acropolis

Traditional infrastructure is extremely siloed and complex forces businesses to make decisions based on datacenter resources and technology limitations rather than the unique needs and characteristics of the applications. As a result, a significant chunk of IT effort is spent is on just scaling and managing the infrastructure vs focusing on the applications and business value they provide.

TURNKEY SOLUTION FOR ANY APPLICATION AT ANY SCALE

Enterprise Cloud is a model for IT infrastructure and platform services that delivers the agility, simplicity, and pay-as-you-grow economics of public clouds without sacrificing the security, control and performance of a private infrastructure. Enterprise Cloud (EC) is made of three core components: Prism, Acropolis, and Calm. Prism is the management plane that provides a unified management interface that generates actionable insights for optimizing virtualization, infrastructure management and everyday operations. Acropolis is the foundation of the platform that starts with hyper-converged infrastructure then adds built-in virtualization, storage services, virtual networking and cross-hypervisor application mobility creating a turnkey solution that can be deployed out-of-the-box in 60 minutes or less. Calm adds native application orchestration and lifecycle management to the Nutanix Enterprise Cloud Platform. Calm decouples application management from the underlying infrastructure – enabling applications to be easily deployed into private or public cloud environments. The addition of advanced application management to the Nutanix platform turns common tasks into repeatable automations accessible to all IT teams, without giving up control across the infrastructure stack.

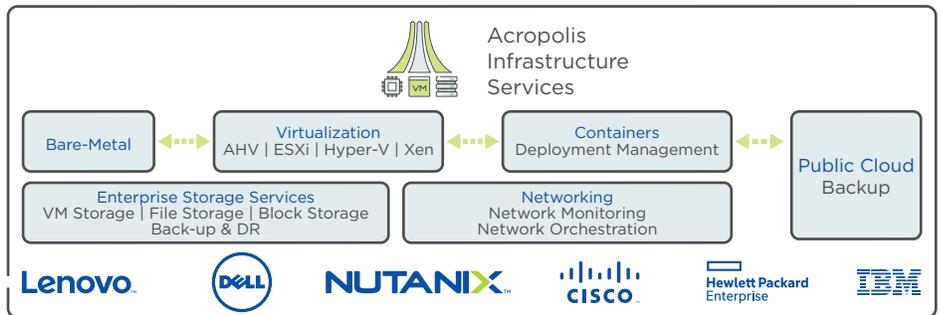


Fig 1: Acropolis "All-in-One" Solution at a glance

Calm adds native application orchestration and lifecycle management to the Nutanix Enterprise Cloud Platform. Calm decouples application management from the underlying infrastructure – enabling applications to be easily deployed into private or public cloud environments. The addition of advanced application management to the Nutanix platform turns common tasks into repeatable automations accessible to all IT teams, without giving up control across the infrastructure stack.

KEY COMPONENTS

Nutanix Acropolis has 5 key components that make it a complete solution for delivering any infrastructure service:

Built-in AHV Virtualization

Nutanix Acropolis includes AHV, our native virtualization solution, and additionally supports the virtualization solutions of VMware ESXi, Microsoft Hyper-V and Citrix XenServer. Nutanix AHV is a comprehensive enterprise virtualization solution tightly integrated into Acropolis and is provided with no additional license cost. AHV delivers the features required to run enterprise applications, for example:

- Combined VM Operations and Performance Monitoring via Nutanix Prism
- Backup, Disaster Recovery, Host and VM High Availability
- Dynamic Scheduling (Intelligent placement and resource contention avoidance)
- Broad Ecosystem Support (Certified Citrix Ready, Microsoft Validated via SVVP)

NUTANIXTM
YOUR ENTERPRISE CLOUD

Platform Services

Nutanix Acropolis delivers a comprehensive set of software-defined platform services so that IT organizations can consolidate all their workloads on the Nutanix platform and manage them centrally. The use cases include:

- VM-centric storage to support almost any virtualized application
- Container Centric storage with persistent storage support for Kubernetes and Docker.
- Nutanix Volumes, a native block storage solution, for physical applications
- Nutanix Files, a native file storage solution for unstructured data such as large-scale home directories, user profiles and more.

Enterprise Storage Capabilities

Nutanix Acropolis employs MapReduce technology to deliver highly distributed Enterprise grade storage to ensure no single points of failure and negligible impact to real-time performance. Nutanix Enterprise Storage capabilities include, but are not limited to:

- Performance acceleration capabilities such as caching, data tiering & data locality
- Storage optimization technologies, such as De-dupe, Compression & Erasure Coding
- Data protection technologies to support snapshots to local, remote and cloud based sites
- Disaster Recovery features, such as, synchronous, asynchronous, and near-synchronous replication.

Networking Services

Nutanix Acropolis provides a comprehensive set of services to visualize the network, automate common network operations and secure the network through native services and partner integration. These services include, but are not limited to:

- Application-centric visualization of the physical and virtual network topology to instantly diagnose and fix common networking issues.
- Open APIs that enable network devices and services such as top-of-rack switches, application delivery controllers (ADC) and firewalls to automatically adapt based on application lifecycle events.

Enterprise Cloud is the Future of IT

World's most advanced data-centers rely on Nutanix technology and solutions to power their workloads at any scale. It's time for businesses to move away from legacy infrastructure. Eliminate the need for stand alone SAN or NAS-based storage and expensive virtualization and mitigate complexity and silos. Let Enterprise Cloud enable the possibility to run applications in the right environment at the right time.



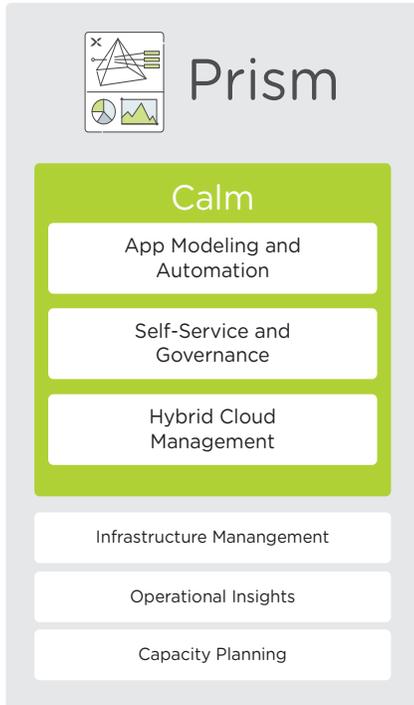
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Nutanix makes infrastructure invisible, elevating IT to focus on the applications and services that power their business. The Nutanix enterprise cloud platform leverages web-scale engineering and consumer-grade design to natively converge compute, virtualization and storage into a resilient, software-defined solution with rich machine intelligence. The result is predictable performance, cloud-like infrastructure consumption, robust security, and seamless application mobility for a broad range of enterprise applications. Learn more at www.nutanix.com or follow us on [Twitter@nutanix](https://twitter.com/nutanix).

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Advanced application-level orchestration that transforms how IT teams manage applications and support the business.

Nutanix Calm: Application Centric Automation

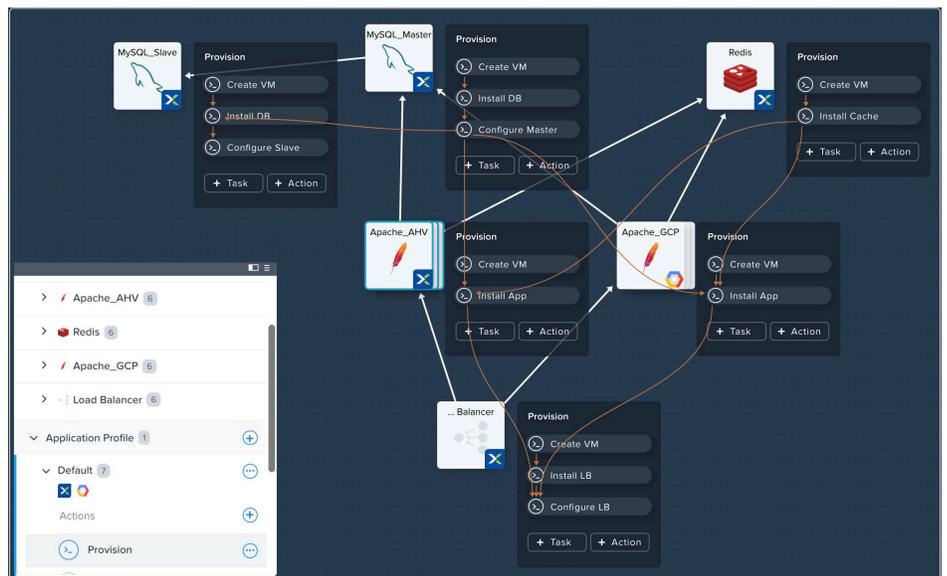


IT teams constantly seek to improve overall IT agility and enable more rapid innovation. However, application development and delivery is growing in complexity, making this agility particularly challenging. Organizational silos create cross-discipline overhead and slow the ability to deliver business value.

Calm provides advanced application-level orchestration that transforms how IT teams manage applications and support the business. Fully integrated into the Nutanix platform, Calm delivers a powerful, common management framework that can be simultaneously leveraged by multiple IT teams to rapidly create and deliver applications.

By approaching applications as complete entities, not just virtual machines (VMs), Calm automates how applications are created, consumed and governed. Calm delivers simple, repeatable and automated management of applications across a variety of environments, including private and public clouds.

CUSTOMIZABLE BLUEPRINTS



NATIVE CAPABILITIES

- **Application Lifecycle Management:** Fully automate the provisioning, scaling, and deletion of both traditional multi-tiered applications and modern distributed services using pre-integrated blueprints that make management of applications in private and public clouds extremely simple.
- **Customizable Blueprints:** Simplify the set-up and management of custom enterprise applications by incorporating all elements of each app, including relevant VMs, configurations and related binaries, into an easy-to-use-blueprint that is managed by the infrastructure team. IT teams can eliminate the hours and days currently devoted to routine application management.
- **Nutanix Marketplace:** Blueprints can be published directly to end users through the Nutanix Marketplace, giving application owners and developers the ability to request IT services that can then be instantly provisioned.
- **Governance:** Calm maintains control with role-based governance that limits user operations based on permissions. Additionally, all activities and changes are centrally logged for end-to-end traceability, aiding security teams with key compliance initiatives.
- **Hybrid Cloud Management:** Automate the provisioning of Hybrid Cloud architectures, scaling both multi-tiered and distributed applications across different cloud environments, including AWS. Calm shows the overall utilization and true cost of your public cloud consumption at a glance so that decisions are based on business needs and budget requirements.



Turn time-consuming tasks into one-click automations



Foster collaboration and eliminate knowledge silos



Maintain visibility and control of public cloud consumption



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VISUALIZE
AUTOMATE
SECURE

Nutanix Flow

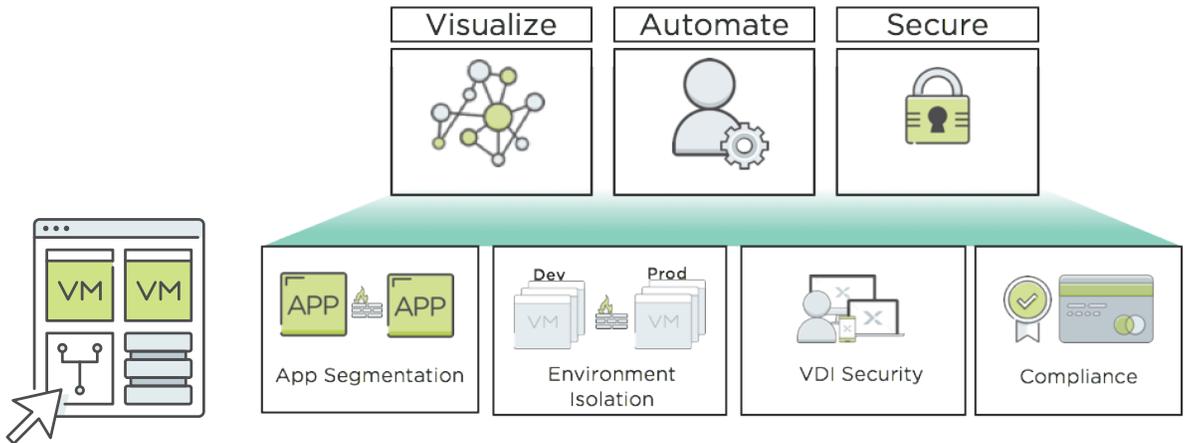
Functions

VM Microsegmentation
Application Visualization
Service Chaining
Policy-based Control
Network Automation
NFV Support

The network is the foundation for the connected Enterprise. With increasing application complexity, driven by distributed services and rapid growth in SaaS and cloud-based offerings, the need to easily visualize, analyze and govern network communications becomes critical.

Nutanix Flow delivers advanced networking and security services, providing visibility into the virtual network, application-centric protection from network threats and automation of common networking operations.

Fully integrated into Nutanix Enterprise Cloud OS and Nutanix AHV virtualization, Flow allows organizations to deploy software-defined virtual networking without the complexity of installing and managing additional products that have separate management and independent software maintenance requirements.



Key Benefits

- Application centric firewall policies for VMs
- Always-on native networking functionality with no additional software or management consoles
- Works with any network topology or architecture
- Application and network visibility
- Automated policy change management tied to VM lifecycle
- Prevent the propagation of network security threats
- Expand functionality via third-party network inspection and policy tools

APPLICATION VISUALIZATION

Setting the right application-centric network policies requires a complete understanding of workload behavior. Nutanix Flow provides detailed visualization of communications between VMs, making it simple and straight-forward to set the right policies for the environment.

Network Isolation and Microsegmentation

Microsegmentation provides granular control and governance of all traffic into and out of a virtual machine (VM), or groups of VMs. It ensures that only permitted traffic between application tiers or other logical boundaries is allowed and protects against advanced threats propagating within the virtual environment.

Nutanix Flow differs from traditional perimeter firewalls by allowing network policy to be attached to VMs and applications, rather than specific network segments (e.g., VLANS) or identifiers (IP addresses). Through centralized management from Prism, policies are auto-updated throughout the VM lifecycle, removing the burdens of change management.

Service Insertion and Chaining

Nutanix Flow functionality can be extended to leverage virtualized network functions from third-party software. These services are inserted in-line or in tap-mode with VM traffic, and can be easily enabled for all traffic, or deployed only for specific network traffic. Common network functions include virtual firewalls, load balancers, threat detection, and application performance monitoring.

Network Automation

Flow provides API based notifications enabling third-party network devices to observe VM lifecycle events, such as the instantiation of a new VM into the Nutanix environment. This enables automation of typical network configuration changes, such as the provisioning of VLANs or dynamically updating firewall and load balancer policies.

RESOURCES

- nutanix.com/products/flow
- nutanix.com/products/acropolis

PRICING AND AVAILABILITY

Nutanix Flow is built into the Nutanix Enterprise Cloud OS software, and works seamlessly with AHV virtualization. Capabilities are delivered with AHV and are licensed separately from Acropolis Editions.

	All Acropolis Editions	Flow License
Basic Service Insertion and Chaining	✓	
Network Automation	✓	
Application Flow Visualization		✓
Policy-Based Service Insertion and Chaining		✓
Application Security with Microsegmentation		✓



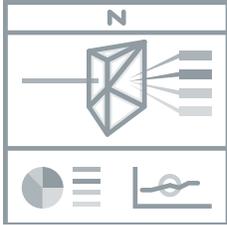
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Nutanix delivers invisible infrastructure for next-generation enterprise computing, elevating IT to focus on the applications and services that power their business. The company's software-driven Xtreme Computing Platform natively converges compute, virtualization and storage into a single solution to drive simplicity in the datacenter. Using Nutanix, customers benefit from predictable performance, linear scalability and cloud-like infrastructure consumption.
Learn more at www.nutanix.com or follow us on [Twitter@nutanix](https://twitter.com/nutanix).

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Intuitive,
Beautiful,
Insightful

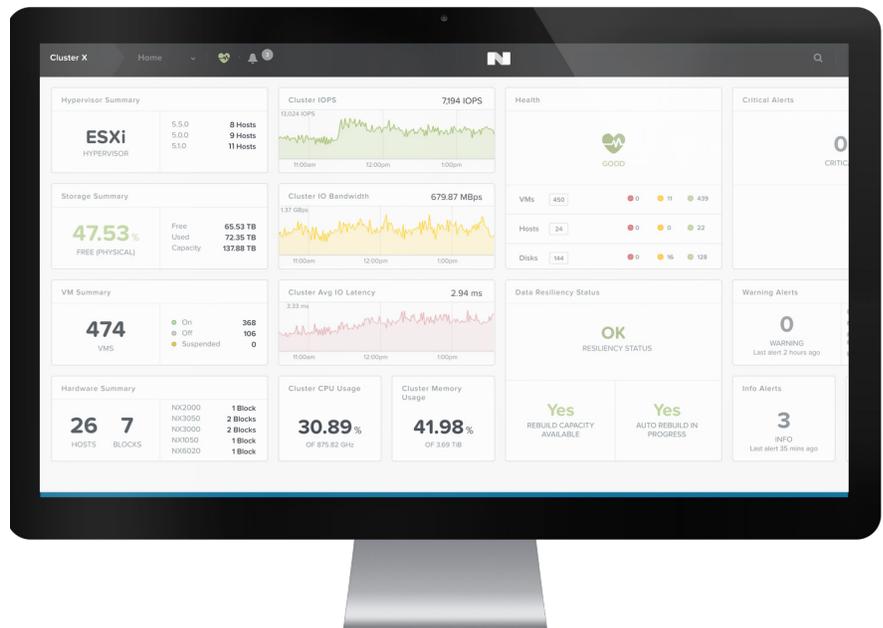
Nutanix Prism

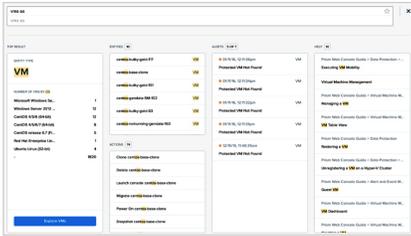


Enterprise clouds require machine intelligence and automation to simplify complex operations from many clicks to a single click, and eventually from a single click to zero-touch management.

Nutanix Prism is an end-to-end consumer-grade management solution for virtualized datacenter environments that brings unprecedented simplicity by combining several aspects of administration and reporting. Powered by advanced machine learning technology, Prism can mine large volumes of system data to automate common tasks and generate actionable insights for optimizing virtualization, infrastructure management and everyday operations.

Prism has been designed ground-up for an uncluttered, yet rich experience and provides an intuitive user interface to simplify and streamline common datacenter workflows, eliminating the need to have disparate management solutions for different tasks.





ONE-CLICK INFRASTRUCTURE MANAGEMENT

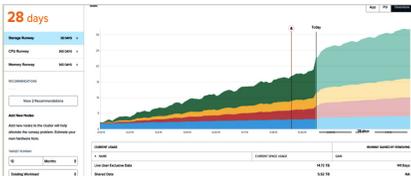
Prism manages the entire stack from the storage and compute infrastructure all the way up to virtual machines (VMs).

- **Cluster Management:** Streamlined deployment, maintenance and scaling of hosts with a single click.
- **Virtual Network Management:** Simplified set-up and management of virtual networking for hosts and virtual machines.
- **VM Management:** End-to-end VM lifecycle management, from creation and initial placement, to high availability and migration.
- **Storage Management:** Intuitive VM-centric control of storage services.
- **Prism Self Service:** Frictionless access to infrastructure resources.
- **Network Visualization:** VM-centric operational view of the network.

ONE-CLICK OPERATIONAL INSIGHTS

Prism's advanced machine learning technology provides one-click insight for detailed infrastructure trending, analysis and optimization, simplifying routine operational tasks.

- **Prism Search:** Integrated Google-like search experience to query and perform actions with a single click.
- **Customizable Operations Dashboard:** Visually rich dashboards that give actionable summary of applications, virtual machines and infrastructure state at-a-glance.
- **Scheduled Reporting:** Existing out of the box reports or custom reports to share KPIs within the organization.



ONE-CLICK PLANNING

Prism includes a powerful application and VM-centric capacity planning engine that is powered by Nutanix's patent-pending X-Fit technology.

- **Capacity Behavior Analytics:** Predictive analysis of capacity usage and trends based on workload behavior enabling pay-as-you-grow scaling.
- **Capacity Optimization Advisor:** Infrastructure optimization recommendations to improve efficiency and performance based on VM behavioral analysis.
- **Just In Time Forecast:** Capacity expansion forecast to meet future workload growth.

ONE-CLICK PERFORMANCE MONITORING

Prism learns the real-time performance behavior of VMs and workloads, and detects anomalies automatically providing early warning signs.

- **Anomaly Detection:** Predictive monitoring based on behavioral analysis instead of static thresholds detects performance issues before they impact workloads.
- **Bottleneck Detection:** Guidance for correct VM resource allocation is provided based on behavioral analysis and machine learning.

Prism is available in two editions – Prism Starter and Prism Pro. Prism Starter is included with every edition of Acropolis for single and multiple site management. Prism Pro is available as an add-on subscription.

PRISM EDITIONS

FEATURES	STARTER	PRO
Cluster Management		
Single Site Management (Prism Element)	✓	✓
Multi Site Management	✓	✓
VM Management	✓	✓
Storage Management	✓	✓
Multi-Hypervisor Management	✓	✓
Network Visualization	✓	✓
Prism Self Service Management	✓	✓
One-Click Centralized Upgrades		✓
One-Click Planning		
Capacity Behavior Trends		✓
Just in Time Forecast		✓
VM Right Sizing		✓
One-Click Performance Monitoring		
Alert Analysis	✓	✓
Bottleneck Detection		✓
Anomaly Detection		✓
One-Click Operational Insights		
Prism Advanced Search		✓
Customizable Dashboard		✓
Scheduled Reporting		✓



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