Client Team,

Attached are selected enterprise and business unit reports from your storage reporting for the week ending 06/11/2022. There is a slightly increased workload on VSIPUREFLASH32 and VSIPUREFLASH17 from the Foxe4 jb92bs* hosts this week. This contributed to total enterprise IOPS hitting an all-time high 295,000 IOPS on Monday, with excellent storage performance across the board. Slow and steady growth continues on Isilons this week, except VSIISILON01 where used storage decreased by 44 TiB. We continue to see significant increases in used storage on cohesityvsi01 (+143 TiB) and decreases on cohesityvsi01 (-119 TiB). Starting a week after the upgrade, cohesityhct01 had been reporting as an 8 or 9-node cluster until this week where it is reporting as a 10-node cluster again. Data Domain utilization has also increased by 224 TiB this week, getting great data reduction and increasing overall data reduction on the arrays. Memory utilization in the VMware cluster stg-prod-hwf-westcld01 has jumped from 39% to 69% this week, with one host up to 93% memory utilization. This cluster should be reviewed, and action taken as needed. For additional information, please login to your portal or see below for details. Have a great week!

Weekly Observations

- 27.1 PB Usable   (20.5 PB Raw)   20 arrays
  - 55.2% Used
  - 59.5% Allocated
  - 2.5 TB Orphaned
  - 4 arrays with red light alerts this week
    - 4 arrays with Hard Quota Threshold Exceeded
    - 2 arrays with 1 Failed Drives
    - 1 array with Number of Quotas Exceeding HARD Limit Thresholds
  - Pool/data store alerts
    - 10 data stores flagged for being over 80% Used
      - 2 data stores over 100% allocated and over 80% Used - review these pools first and expand as needed
        - vsi-pure-pjcm01-05
        - NW-VCTS-SIVT-02
    - No pools over 100% allocated
    - 2 data stores over 100% allocated

- Virtual/VMware Summary
  - 92 clusters, 514 Physical Hosts, 27371 VMs
  - 585 Data stores (+12)
  - Avg Resource Utilization
    - CPU   26.1%
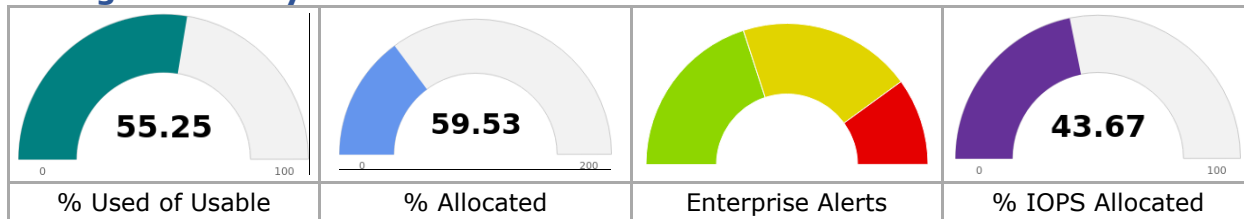   - Memory   34.8%
    - Disk   26.5%

Cohesityhct01 – Utilization trend since the upgrade in June


Application Performance Trend

Storage Summary

% Used of Usable	% Allocated	Enterprise Alerts	% IOPS Allocated
55.25	59.53		43.67

Enterprise Storage At a Glance

Raw Disk	Total Usable	Total Used	Total Free	Effective Free Space	% Allocated	Total Pools	Total Hosts	Total Snap	Orphans	Dedupe
21,469,149.87	28,453,308.28	15,719,097.69	12,734,210.60	12,396,000.00	59.53	24	316	43,172.49	57 (2,537 GiB)	6,162,643.72

Enterprise Monthly Performance & Growth (July)

Group	Device Name	sum(Usable Growth)	↓ sum(Used Growth)	sum(Free Growth)	sum(IOPS Growth)
⊟ DATA_DOMAIN (2)		502,011.85	581,385.00	-79,373.15	0.00
		215,717.8	295,343.4	-79,625.6	0.00
		286,294.05	286,041.6	252.45	0.00
⊟ PURE_DEVICE (7)		44,259.35	46,897.72	-2,638.35	-8,328.42
		1,081.11	22,724.76	-21,643.63	-3,736.22
		5,970.33	12,623.47	-6,653.14	922.33
		21,950.12	4,395.31	17,554.81	-2,406.84
		0.00	3,640.48	-3,640.47	0.00
		6,637.66	2,878.29	3,759.37	-934.88
		-6,863.18	687.44	-7,550.63	-2,860.62
		15,483.31	-52.03	15,535.34	687.81
⊟ COHESITY_BACKUP (2)		-802,768.92	-123,727.58	-679,041.34	0.00
		-181,955.71	735,210.05	-917,165.76	0.00
		-620,813.21	-858,937.63	238,124.42	0.00
⊟ ISILON_DEVICE (9)		-9,345.63	-153,536.47	144,190.84	-0.58
		0.00	29,362.58	-29,362.58	-229.27
		0.00	17,585.92	-17,585.92	311.22
		0.00	6,484.43	-6,484.43	-42.34

Enterprise Performance Trend
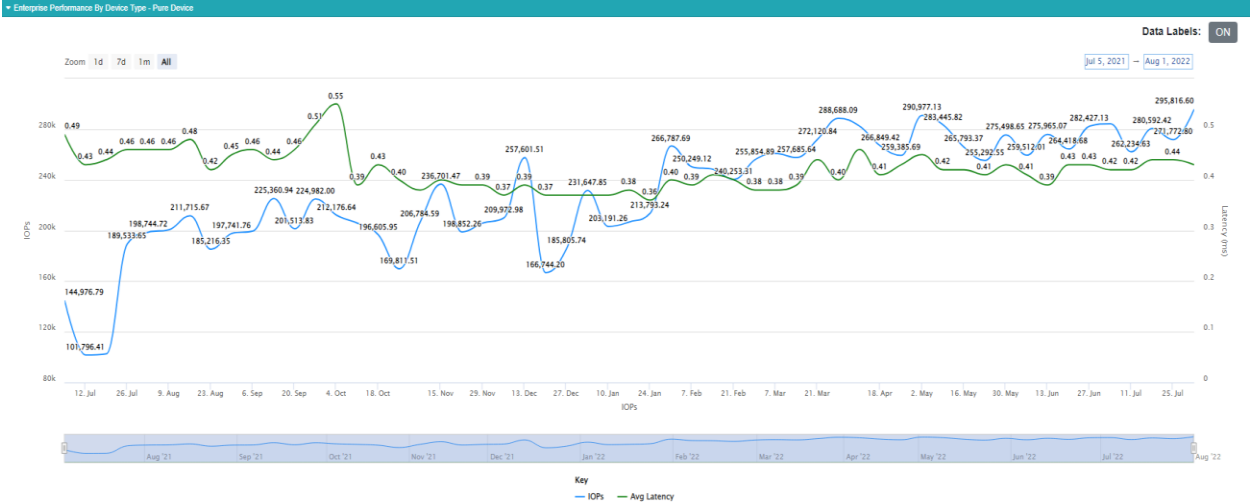
Current Capacity by Data Center

Data Center	Total Used	Provisioned Free	Unprovisioned Free	Over-Provisioned Free
MC	4021189.53	411546.95	2652455.95	0.0
MC-Backup	2757727.14	0.0	2716548.64	0.0
TMC	5933851.16	807436.74	2994401.61	0.0
TMC-Backup	3006329.86	0.0	3151820.7	0.0

Current Capacity by Classification
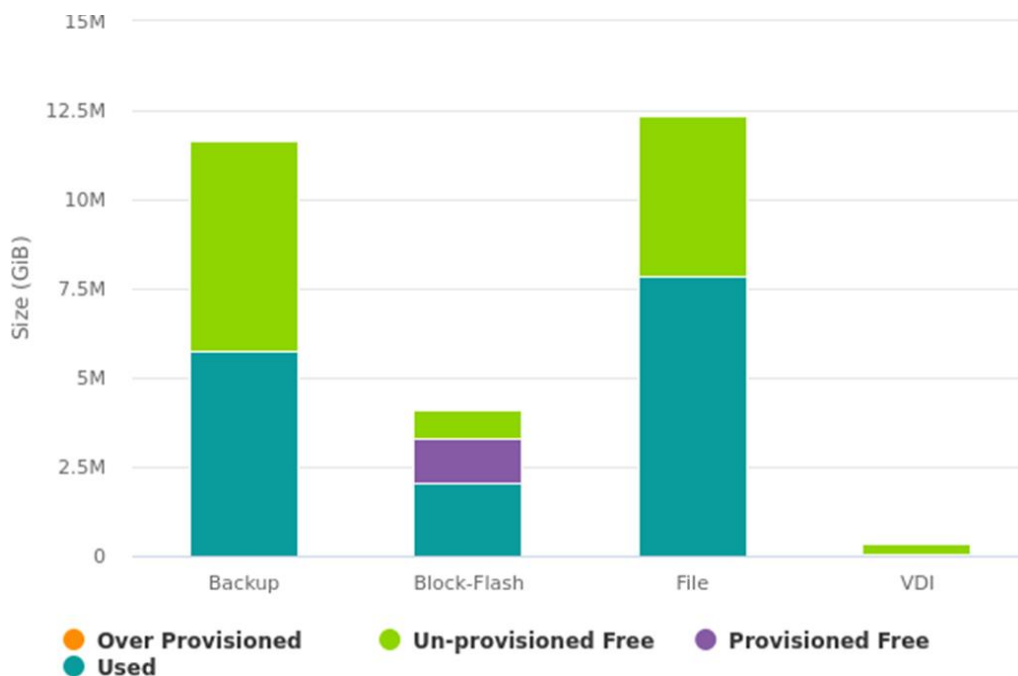
Classification	Total Used	Provisioned Free	Unprovisioned Free	Over-Provisioned Free
Backup	5764057.0	0.0	5868369.34	0.0
Block-Flash	2064623.95	1218983.69	830112.65	0.0
File	7832821.69	0.0	4533387.12	0.0
VDI	57595.05	0.0	283357.79	0.0

Business Unit Storage Over Utilization Pool/Datastore Alerts: 10

Source	Array Name	Category	Application	Device Type	Pool Name	Utilization %	Used (GiB)	Usable (GiB)	Allocated (GiB)	Allocated %
Datastore	VSIVCENTER.ct.org	N/A	N/A	N/A	NW-BHFS-NJTX-02	80.02%	1489.86	1861.75	2849.84	153.07%
Datastore	SIVCENTER.ct.org	N/A	N/A	N/A	LocalVSIeCTFS-mc-rds-esin04	81.21%	302.52	372.5	303.67	81.52%
Datastore	SIVCENTER.ct.org	N/A	N/A	N/A	LocalVSIeCTFS-mc-rds-esin01	81.21%	302.52	372.5	303.67	81.52%
Datastore	SIVCENTER.ct.org	N/A	N/A	N/A	LocalVSIeCTFS-mc-rds-esin02	81.21%	302.51	372.5	303.66	81.52%
Datastore	VSIVCENTER.ct.org	N/A	N/A	N/A	LocalVSIeCTFS-tmc-rdsnp-esin01	81.29%	302.82	372.5	303.82	81.56%

Source	Array Name	Category	Application	Device Type	Pool Name	Utilization %	Used (GiB)	Usable (GiB)	Allocated (GiB)	Allocated %
Datastore	VSIVCENTER.ct.org	N/A	N/A	N/A	LocalVSIeCTFS-tmc-rds-esin06	81.38%	303.15	372.5	304.1	81.64 %
Datastore	VSIVCENTER.ct.org	N/A	N/A	N/A	LocalVSIeCTFS-tmc-rds-esin05	81.35%	303.03	372.5	303.73	81.54 %
Datastore	VSIVCENTER.ct.org	N/A	N/A	N/A	LocalVSIeCTFS-tmc-rds-esin01	81.37%	303.12	372.5	304.01	81.61 %
Datastore	VSIVCENTER.ct.org	N/A	N/A	N/A	NJY-CTFS-ORTX-01	82.38%	1533.66	1861.75	1560.93	83.84 %
Datastore	VSIVCENTER.ct.org	N/A	N/A	N/A	NYM-pure-klpk01-05	84.26%	25884.67	30719.75	40576.66	132.09 %

Business Unit Executive Dashboard

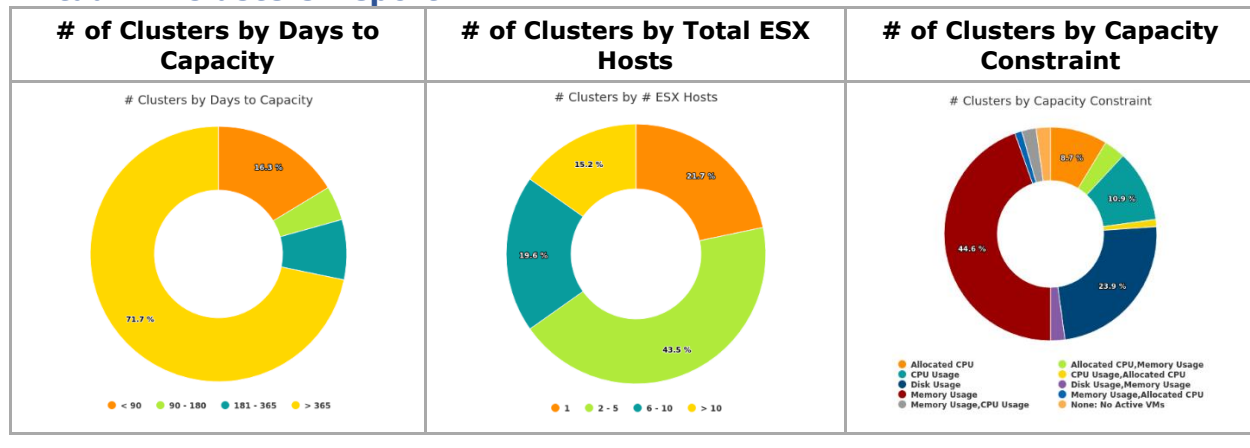| Storage Capacity (TB) Distribution by Classification	Storage Capacity (TB) Distribution by Device Type	Storage Capacity (TB) Distribution by Data Center
Capacity (TB) by Classification	Capacity (TB) by Device Type	Capacity (TB) by Data Center
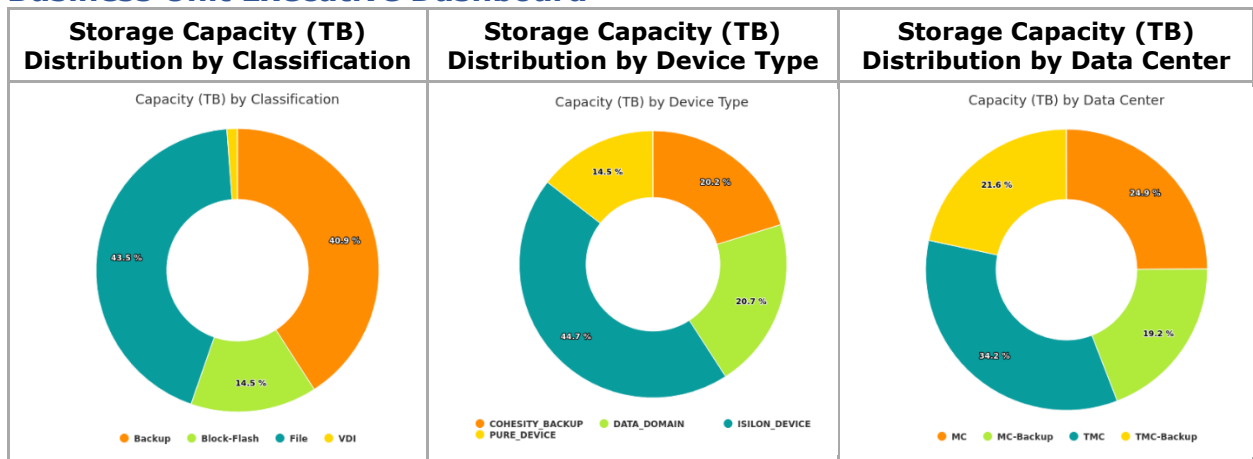
Virtual Machine Summary

- Number of VCenters: 16
- Number of Clusters: 92
- Number of ESX Hosts: 514
- Number of Virtual Machines: 27371
- Average Resource Utilization
  - Compute: 26.15%
  - Memory: 34.78%
  - Disk: 26.51%
- These VM's have red light alerts:
  - ptk-mc-p1b1-vc.ct.org: 1 Duplicate VMs - See Yellow light Alerts for Specific Duplicate Names
  - ptk-mc-p1b2-vc.ct.org: 7 Duplicate VMs - See Yellow light Alerts for Specific Duplicate Names
  - ptk-mc-p1b3-vc.ct.org: 2 Duplicate VMs - See Yellow light Alerts for Specific Duplicate Names

- SIVCENTER.ct.org: ESX Hosts w/different speeds in same cluster, Cluster =>sic-prod-int-cerncld01 mhz speeds in cluster = 2095 to 2594 Speed Pct Difference = 23.8%
- VSIVCENTER.ct.org: ESX Hosts w/different speeds in same cluster, Cluster => vsi-prod-ptk-ecw01 mhz speeds in cluster = 1995 to 2694 Speed Pct Difference = 35.0%
- VSIVCENTER.ct.org: ESX Hosts w/different speeds in same cluster, Cluster => vsi-prod-ptk-cerncld01 mhz speeds in cluster = 2095 to 2793 Speed Pct Difference = 33.3%
- VSIVCENTER.ct.org: ESX Hosts w/different speeds in same cluster, Cluster => vsi-prod-ptk-linux01 mhz speeds in cluster = 1995 to 2594 Speed Pct Difference = 30.0%
- VSIVCENTER.ct.org: ESX Hosts w/different speeds in same cluster, Cluster => vsi-prod-ptk-sql01 mhz speeds in cluster = 1995 to 2594 Speed Pct Difference = 30.0%
- VSIVCENTER.ct.org: ESX Hosts w/different speeds in same cluster, Cluster => vsi-prod-ptk-clin01 mhz speeds in cluster = 1995 to 2594 Speed Pct Difference = 30.0%
- VSIVCENTER.ct.org: 1 VMs with vCPU > ESX Host CPUs | See Yellow light Alerts for Details
- VSIVCENTER.ct.org: 9 Duplicate VMs - See Yellow light Alerts for Specific Duplicate Names
- VSIVCENTER.ct.org: (1) Duplicate Data Store Name(s) Found | See Yellow Light Alerts for Specific Duplicate Names
- VSIVCENTER.ct.org: Cluster VM Build Capacity = 0, Resource Constraint = Disk Usage, Cluster Name = si-prod-mef-vrtx01
- VSIVCENTER.ct.org: Cluster VM Build Capacity = -22, Resource Constraint = Allocated CPU, Cluster Name = nym-prod-dw-clin01
- VSIVCENTER.ct.org: Cluster VM Build Capacity = 0, Resource Constraint = Disk Usage, Cluster Name = bs-prod-ofk-vrtx01
- VSIVCENTER.ct.org: Cluster VM Build Capacity = 0, Resource Constraint = Disk Usage, Cluster Name = esxi-rahm-und01.ct.org
- ptk-hh-p1b1-vc.ct.org: 4 Duplicate VMs - See Yellow light Alerts for Specific Duplicate Names
- ptk-hh-p1b2-vc.ct.org: 7 Duplicate VMs - See Yellow light Alerts for Specific Duplicate Names
- ptk-hh-p1b3-vc.ct.org: 13 Duplicate VMs - See Yellow light Alerts for Specific Duplicate Names
- VSIVCENTER.ct.org: 1 Clusters Unable to support full workload in N-1 Configuration => vsi-prod-nyc-citydwb01,
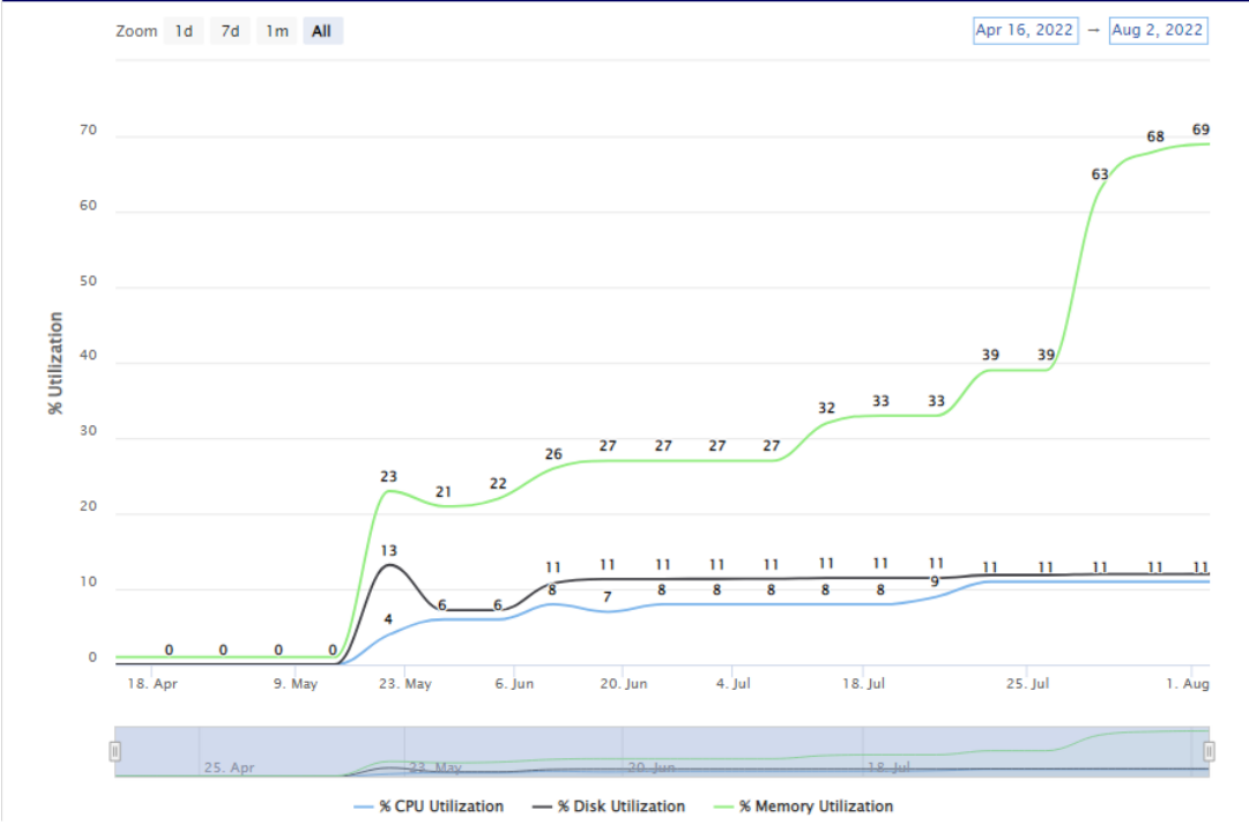
ESX Host Name	Total VM's	Avg % CPU Util	Avg GHz/CPU	Total Memory (GiB)	Avg % Memory Util	VM Build Capacity
	18	14	2.10	254.69	93%	-2
	17	14%	2.10	254.69	86%	-1
	14	8	2.79	1,023.47	56%	11

Virtual All Clusters Report

# of Clusters by Days to Capacity	# of Clusters by Total ESX Hosts	# of Clusters by Capacity Constraint
# Clusters by Days to Capacity	# Clusters by # ESX Hosts	# Clusters by Capacity Constraint

# of Clusters by Days to Capacity

Clusters by Days to Capacity

16.3 %
71.7 %

● < 90 ● 90 - 180 ● 181 - 365 ● > 365

# of Clusters by Total ESX Hosts

Clusters by # ESX Hosts

15.2 %
21.7 %
19.6 %
43.5 %

● 1 ● 2 - 5 ● 6 - 10 ● > 10

# of Clusters by Capacity Constraint

Clusters by Capacity Constraint

8.7 %
10.9 %
44.6 %
23.9 %

● Allocated CPU   ● Allocated CPU,Memory Usage
● CPU Usage   ● CPU Usage,Allocated CPU
● Disk Usage   ● Disk Usage,Memory Usage
● Memory Usage   ● Memory Usage,Allocated CPU
● Memory Usage,CPU Usage ● None: No Active VMs

Have a blessed, safe week!