VASTronaut Certified Administrator Exam (BETA)

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Please note, this exam is still in development.ALL DETAILS ARE SUBJECT TO CHANGE.

Certification Details

Ideal Exam Candidate: This exam targets the following skills and knowledge that a VASTronaut Administrator requires manage a VAST environment:·

Has a data size greater than 500TB and experiences a data growth of about 5% per year.

Works in industries such as education, federal government, finance, media & entertainment, and general enterprise.

Utilizes a diverse range of primary protocols, including file, object, and block, specifically NFS v3, S3, SMB, and NFS v4, with infrequent use of GPU direct.

Has existing storage solutions like Isilon, NetApp, Pure, GPFS/Luster, Powerscale, Weka, and DDN.

Uses the storage for a variety of use cases, such as backup, home directories, data analytics, trading, and HPC.

May have a complex environment, including single or multi-protocol setups, simple or complex replication, and multi-site deployments.

Exam Details

Title: **VASTronaut Certified Administrator - Beta***

Code: **VCP-AD1**

Cost: **$300**

# of questions: **170**

Time limit: **120 minutes**

Passing score: **unpublished**

*Passing a beta exam also qualifies you to earn your certification.

Exam Process:

Once the exam is available, log into **university.vastdata.com** to select and purchase your exam attempt. At your scheduled testing time, please ensure you are in a quiet and isolated room for the duration of the exam.

A proctor will verify your identity before starting and will monitor the exam for its duration. Once you start the exam you cannot pause or leave the view of your webcam until the exam is complete - please plan accordingly.

Once you complete the exam, you will receive your preliminary results immediately. Please note that the exam may be reviewed for any abnormalities. If any are detected your results may be overturned at a later stage. If you are attempting a beta exam, your results may be delayed until the final version of the exam is available.

Exams attempted during conferences may have a slightly different process. Please check the conference website for any additional details.

Recommended Exam Prerequisites:

To be best prepared to pass this exam, it is highly recommended that exam candidates have:

· At least 6 months of real-world, hands-on experience with a production VAST environment

· Completed VAST Fundamentals (101) and Operating VMS (201) courses

· Watched the VAST Customer Webinar Series on YouTube

· Review the topics listed below in the Administrator's Guide and other reference materials

Exam Content
Below are the topics including the % of the exam (i.e. number of exam items/questions) allocated to each topic.

ID	Topic	% of exam
	Manage Hardware Maintenance	9%
HW-01	Given a planned maintenance window, safely deactivate a CNode from the cluster using the VMS WebUI.	
HW-02	After a CNode has been physically serviced, activate the CNode and verify it has successfully rejoined the cluster.	
HW-03	From the VMS, monitor the health and status of all hardware components, including CNodes, DNodes, and switches.	
HW-04	Before deactivating a CNode, verify the status of all VIP pools to ensure the minimum CNode requirement is met.	
HW-05	Interpret hardware-related alerts and events in the VMS to identify a failing component.	
	Create / Define Networking	10%
NET-01	Create a new Virtual IP (VIP) pool for a new tenant, specifying an IP range, subnet, and gateway.	
NET-02	Configure the VAST Cluster DNS Service to handle name resolution for a newly created VIP pool.	
NET-03	Assign a specific VLAN tag to a VIP pool to segment traffic on the data network.	
NET-04	Configure a Layer 3 BGP session to advertise VIP pool routes to the upstream network.	
NET-05	Dedicate a group of CNodes to a specific VIP pool to isolate workloads.	
NET-06	Modify an existing VIP pool to add a new IP range without disrupting existing client connections.	
NET-07	From the VMS, monitor the status of BGP peering connections to the upstream switches.	
	Configure and View Alerting	5%
ALRT-01	Configure the SMTP server settings in the VMS to enable email notifications for alerts.	
ALRT-02	Add a new syslog server endpoint to forward all critical and major alarms for external logging.	
ALRT-03	Create a custom webhook to send alert notifications to a third-party collaboration tool.	
ALRT-06	During a planned maintenance, disable all default notification actions to prevent false alarms.	
ALRT-07	Download a CSV report of all alarms and events from the past 24 hours for offline analysis.	

Exam Content

Below are the topics including the % of the exam (i.e. number of exam items/questions) allocated to each topic.

	Monitor Performance KPIs	13%
PERF-01	Use the "CNode Bandwidth and Latency" predefined analytics report to identify a CNode with abnormally high latency.	
PERF-02	Using the Data Flow analytics tool, identify the top 5 users generating the most IOPS on the cluster.	
PERF-03	Create a custom analytics report to display the average read bandwidth and write IOPS for a specific view.	
PERF-04	Monitor the RPO (Recovery Point Objective) of an asynchronous replication path using the Protected Path analytics.	
PERF-05	Configure Prometheus to scrape performance metrics from the VAST Cluster's API endpoint.	
PERF-06	Analyze the capacity analytics page to determine the current data reduction ratio for the cluster.	
	Software Maintenance	5%
SW-02	Review the release notes and upgrade prerequisites for a new VAST OS version.	
SW-05	Monitor the progress of the cluster upgrade and verify the health of all nodes post-upgrade.	
	Auditing Access	15%
AUD-01	Enable global protocol auditing and configure the audit logs to be saved to a file in JSON format.	
AUD-02	Create a new view policy that enables per-view auditing for all access attempts.	
AUD-03	Access and review the audit log files to trace a specific user's activity on a protected view.	
AUD-05	From the VAST DB, query the audit log table to find all failed login attempts within the last 7 days.	
TEN-02	Configure a specific range of client IP addresses that are allowed to access a tenant's resources.	
TEN-03	Assign a pre-configured QoS policy to a tenant to limit their total bandwidth and IOPS.	
TEN-04	Create a view and a view policy that are exclusive to a single tenant.	
TEN-05	Verify that a user from one tenant cannot access the data or resources of another tenant.	

Exam Content

Below are the topics including the % of the exam (i.e. number of exam items/questions) allocated to each topic.

Create / Define Administrative Access		4%
ADM-02	Create a new local administrative user in the VMS and assign them the "Storage Admin" role.	
ADM-05	Test and verify that an Active Directory user can successfully log in to the VMS with their assigned role.	
Escalate Support to VAST		**5%**
SUP-02	From the VMS, generate and download a comprehensive support bundle for a specific issue.	
SUP-05	Interpret the output of the cluster diagnostics CLI command to gather initial troubleshooting data.	
CLI vs. WebUI vs. API		**4%**
IF-01	Use the VAST CLI to create 100 new views from a CSV file in a single command.	
IF-02	Use the VMS WebUI to visually monitor the real-time performance of the top 10 most active views.	
IF-03	Write a simple Python script that uses the VAST REST API to retrieve the total capacity of the cluster.	
IF-04	Identify a configuration task that can only be performed through the CLI, such as certain advanced network settings.	
IF-05	Explain the primary use case for each interface: WebUI for visualization, CLI for scripting, and API for integration.	
Basic Data Architecture		**7%**
ARCH-01	Explain the difference between logical, physical, and usable capacity as displayed in the VMS.	
ARCH-02	Describe how VAST's similarity-based data reduction works to save capacity.	
ARCH-03	Explain the role of erasure coding in protecting data against drive failures.	
ARCH-04	From the VMS dashboard, identify the current data reduction ratio and explain what it represents.	
ARCH-05	Briefly describe the VAST DASE (Disaggregated Shared-Everything) architecture and its benefits.	

Exam Content

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Identify Effects of Configuration Changes on End Users	13%
CHG-01 — Before applying a change to a view policy, predict the impact on clients currently accessing that view.	
CHG-02 — Apply a new, more restrictive QoS policy to a view and describe the expected performance change for users.	
CHG-03 — Plan and communicate a network change, such as modifying a VIP pool's IP range, to minimize user disruption.	
CHG-04 — During a non-disruptive cluster upgrade, explain the expected behavior for connected NFS and S3 clients.	
CHG-05 — After modifying a tenant's client IP range, verify that the correct clients can still access their data.	
Data and Client Segmentation	**10%**
SEG-01 — Configure a dedicated VIP pool and CNode group to create an isolated environment for a high-performance computing workload.	
SEG-02 — Create a view policy that restricts access to a specific view to only clients coming from a designated VIP pool.	
SEG-03 — Implement a multi-tenant environment where two different departments are completely isolated from each other's data.	
SEG-04 — Apply a user-level QoS policy to prioritize the IO of a specific user over other users on the same view.	
SEG-05 — Use a combination of tenants, VIP pools, and view policies to create a tiered storage service with different performance levels.	

FAQ's

Please note, this exam is still in development. ALL DETAILS ARE SUBJECT TO CHANGE.

Q: Where are the exams available?

A: Exams are available to attempt in person at VAST Forward
After the conference an online, proctored option will be available.

Q: Who can attempt a VAST Data Certification exam?

A: All exams are available to VAST Data customers, partners, employees.

Q: Can I attempt the exam again if I fail?

A: Yes. Please note there may be a waiting period required as well as an additional cost.

Q: What resources can I use while attempting the exam?

A: None. You may not bring anything with you to an exam attempt. Other than the computer you are using to attempt the exam, no other electronic devices, papers, books references may be near your testing area.