

VCP-VCF SUPPORT LAB TASKS · EXAM 2V0-15.25

Work task 1 to task 163 and you have broken and fixed a VCF 9.0 fleet

Exam 2V0-15.25, VMware Cloud Foundation 9.0 Support. Sections 1 to 4 of the blueprint have no testable objectives; all eleven objectives sit in Section 5, troubleshooting. Section A builds the method, B to G cover deployment, upgrade, workload domains, certificates, passwords, identity and licences, H to O cover compute, storage and networking, P to U cover VCF Operations, VCF Automation, the Supervisor and HCX, and V is timed drills. Almost every task asks you to create the fault first. The code at the right of each task is the objective it practises.

Dr Pranay Jha · drpranayjha.com

A. METHOD AND TOOLKIT

Before any fault: an order to work in, and the tool for each question.

- | | | |
|----|--|-----|
| 1. | Write a troubleshooting method in six steps: scope, when it started, what changed, which layer, evidence, fix. | 5.9 |
| 2. | List the tools VCF 9.0 gives you and the question each answers: VCF Operations, logs, networks, the workbench, Health and Diagnostics, SDDC Manager, vCenter, NSX. | 5.9 |
| 3. | Find where SDDC Manager keeps its logs, and which log covers domains, operations and lifecycle. | 5.3 |
| 4. | Find the logs for vCenter, ESX and NSX Manager, and how to reach each. | 5.6 |
| 5. | Write the support bundle options for each component. | 5.9 |
| 6. | Write when you would open a case with Broadcom, and what you gather first. | 5.9 |
| 7. | Set up a lab where you can break things safely, and record what you may not break at work. | 5.9 |

B. INITIAL DEPLOYMENT AND FLEET SCALING

Objective 5.1. Most failed deployments are a prerequisite somebody missed.

- | | | |
|-----|---|-----|
| 8. | Remove a reverse DNS record for one appliance and run installer validation. Read the error. | 5.1 |
| 9. | Set one host to a different NTP source and run validation. Read the error. | 5.1 |
| 10. | Set a VLAN or MTU wrongly in the deployment inputs and run validation. Read the error. | 5.1 |
| 11. | Use a password that breaks the complexity rules and record where the installer stops you. | 5.1 |
| 12. | Find the installer and bring-up logs, and the first error in a failed run. | 5.1 |
| 13. | Write how you retry a failed deployment step rather than starting again. | 5.1 |
| 14. | Write the prerequisites for adding a VCF instance to an existing fleet, and the faults that block it. | 5.1 |
| 15. | Write what must be cleaned up when an instance is removed from a fleet. | 5.1 |

C. UPGRADE TO 9.0 AND CONVERSION

Objective 5.2. Upgrading from VCF 5.x, and converting vSphere to VCF.

- | | | |
|-----|---|-----|
| 16. | Write the upgrade path from VCF 5.x to 9.0 and the order components are upgraded in. | 5.2 |
| 17. | Run an upgrade precheck and work through every failure it reports. | 5.2 |
| 18. | Write the faults that block an upgrade: incompatible versions, a missing bundle, failed hosts, expired passwords or certificates. | 5.2 |
| 19. | Find the lifecycle logs for a failed upgrade and the first error. | 5.2 |
| 20. | Write how to retry a failed upgrade task and when not to. | 5.2 |
| 21. | Write the prerequisites for converting an existing vSphere environment to VCF 9.0. | 5.2 |
| 22. | Run a conversion precheck in a lab against an environment that fails one prerequisite, and fix it. | 5.2 |
| 23. | Write what to check after a conversion to prove it worked. | 5.2 |

D. WORKLOAD DOMAINS

Objective 5.3. Create, add clusters, add and remove hosts, import.

- | | | |
|-----|---|-----|
| 24. | Commission a host with a wrong password and read the validation error. | 5.3 |
| 25. | Commission a host whose NTP or DNS is wrong and read the error. | 5.3 |
| 26. | Exhaust a network pool so a host cannot be added, read the error, and extend the pool. | 5.3 |
| 27. | Start a workload domain creation with a missing DNS record and find where it fails. | 5.3 |
| 28. | Find a failed task in SDDC Manager, read its subtasks, and retry it. | 5.3 |
| 29. | Add a cluster whose hosts do not match the image, and fix it. | 5.3 |
| 30. | Remove a host from a cluster, and record what blocks it when vSAN cannot evacuate the data. | 5.3 |
| 31. | Remove a cluster from a workload domain and record what must be empty first. | 5.3 |
| 32. | Run an import precheck against a vCenter that fails it, and fix each finding. | 5.3 |
| 33. | Write the most common reasons a vSphere import fails. | 5.3 |

E. CERTIFICATE MANAGEMENT

Objective 5.4. The four certificate sub-objectives, each broken and fixed.

- | | | |
|-----|---|-----|
| 34. | Configure a certificate authority with a wrong credential, read the error, and correct it. | 5.4 |
| 35. | Configure a CA whose own certificate is not trusted, and fix the trust. | 5.4 |
| 36. | Generate a CSR and check its subject alternative names before it is signed. | 5.4 |
| 37. | Sign a certificate with a wrong or missing name and see what fails when it is installed. | 5.4 |
| 38. | Import an external certificate with the full chain, then again without the intermediate. Record the difference. | 5.4 |
| 39. | Let a lab certificate get close to expiry and confirm auto renewal acts. | 5.4 |
| 40. | Write what breaks when a vCenter or NSX certificate expires. | 5.4 |
| 41. | Find the certificate management task history and read a failed replacement. | 5.4 |

F. PASSWORDS AND IDENTITY

Objective 5.4. Password management and the Identity Broker.

- | | | |
|-----|--|-----|
| 42. | Change a managed password directly on the component and find the account out of sync. | 5.4 |
| 43. | Remediate the out-of-sync account. | 5.4 |
| 44. | Lock an account with failed sign-ins and unlock it. | 5.4 |
| 45. | Let a lab password expire and record what stops working. | 5.4 |
| 46. | Break the Identity Broker connection to the identity provider and diagnose it. | 5.4 |
| 47. | Remove a user from a mapped group and confirm the access change, then explain a user who still has access. | 5.4 |
| 48. | Create clock skew on an identity component and record the sign-in error. | 5.4 |

G. LICENCE MANAGEMENT

Objective 5.5. Assignment, entitlements and expiry.

- | | | |
|-----|--|-----|
| 49. | Assign a licence to the wrong component and read the result. | 5.5 |
| 50. | Try to assign more capacity than the licence entitles, and read the error. | 5.5 |
| 51. | Read the entitlement view and explain a component shown as unlicensed. | 5.5 |
| 52. | Write what the 9.0 documentation says happens when a VCF licence expires. | 5.5 |
| 53. | Write how you find which licence is about to expire and who is told. | 5.5 |
| 54. | Write the steps to replace an expired licence. | 5.5 |

H. ESX HOSTS AND VCENTER

Objective 5.6, part one. The layers everything else sits on.

- | | | |
|-----|---|-----|
| 55. | Disconnect a host from vCenter and reconnect it, recording the cause you created. | 5.6 |
| 56. | Make a host not responding by stopping its management agents, then restart them. | 5.6 |
| 57. | Fill a host scratch or log location and read the symptoms. | 5.6 |
| 58. | Break a host time setting and read what fails. | 5.6 |
| 59. | Stop a vCenter service and find which feature stopped working. | 5.6 |
| 60. | Read vCenter service health from its management interface and restart a failed service. | 5.6 |
| 61. | Write what to check when no one can sign in to vCenter. | 5.6 |
| 62. | Write how to tell a vCenter database or disk full problem from a service problem. | 5.6 |

I. VIRTUAL MACHINES AND CLUSTERS

Objective 5.6, part two.

- | | | |
|-----|---|-----|
| 63. | Make a virtual machine fail to power on through lack of reserved capacity, and fix it. | 5.6 |
| 64. | Make a virtual machine lose its network by disconnecting the adapter or port group, and fix it. | 5.6 |
| 65. | Create a slow virtual machine through a CPU limit, find it, and remove the limit. | 5.6 |
| 66. | Fail a vMotion on purpose, for example with a missing port group on the target, and read the error. | 5.6 |
| 67. | Make HA admission control block a power-on and explain it. | 5.6 |
| 68. | Make DRS fail to balance through an affinity rule, and find the rule. | 5.6 |
| 69. | Create an EVC mismatch when adding a host, and fix it. | 5.6 |
| 70. | Write how you find what changed on a cluster in the last day. | 5.6 |

J. VSAN

Objective 5.7, part one. Create each fault, then diagnose it.

- | | | |
|-----|--|-----|
| 71. | Break the vSAN network on one host and read the health result and partition. | 5.7 |
| 72. | Fail a device and watch the rebuild, recording the delay before it starts. | 5.7 |
| 73. | Fill vSAN close to full and read what stops working first. | 5.7 |
| 74. | Apply a policy the cluster cannot satisfy and read the compliance error. | 5.7 |
| 75. | Find an inaccessible object and explain why. | 5.7 |

- | | | |
|-----|--|-----|
| 76. | Read the resyncing objects view and explain why data is moving. | 5.7 |
| 77. | Run vSAN health checks and work through every failure. | 5.7 |
| 78. | Write the order you check a vSAN problem in: network, devices, capacity, policy. | 5.7 |

K. STRETCHED CLUSTERS

Objective 5.7, part two. VCF availability zones on vSAN.

- | | | |
|-----|--|-----|
| 79. | Cut the witness off in a lab and read what still works. | 5.7 |
| 80. | Write the latency and bandwidth limits between sites and to the witness, from the documentation. | 5.7 |
| 81. | Fail one site in a lab and record what restarts and where. | 5.7 |
| 82. | Apply a policy without site mirroring to a VM in a stretched cluster and record the risk. | 5.7 |
| 83. | Write what breaks when the networks are not present in both zones. | 5.7 |
| 84. | Write the checks before adding hosts to a stretched cluster. | 5.7 |

L. SUPPLEMENTAL STORAGE

Objective 5.7, part three. iSCSI, NFS and Fibre Channel.

- | | | |
|-----|---|-----|
| 85. | Break iSCSI port binding or a target address, read the error, and fix it. | 5.7 |
| 86. | Remove a host from an NFS export permission and read the mount error. | 5.7 |
| 87. | Write how an FC zoning or masking error shows up on the host. | 5.7 |
| 88. | Write the difference between all paths down and permanent device loss. | 5.7 |
| 89. | Read the storage paths for a device and find a dead path. | 5.7 |
| 90. | Write what to collect for the storage team when a datastore disappears. | 5.7 |

M. DISTRIBUTED SWITCHES AND NSX CONFIGURATION

Objective 5.8, part one.

- | | | |
|-----|---|-----|
| 91. | Mismatch the MTU on one host and prove it with vmkping. | 5.8 |
| 92. | Put an uplink on the wrong VLAN and find it. | 5.8 |
| 93. | Read the distributed switch health check and fix a finding. | 5.8 |
| 94. | Find a host transport node with a failed status and read why. | 5.8 |
| 95. | Break tunnel endpoint reachability and read the tunnel status. | 5.8 |
| 96. | Find the NSX Manager cluster status and a node that is down. | 5.8 |
| 97. | Write the order you check NSX in: manager, transport nodes, tunnels, edges. | 5.8 |

N. NSX ROUTING AND GATEWAYS

Objective 5.8, part two.

- | | | |
|------|--|-----|
| 98. | Take a BGP neighbour down and diagnose it from the Tier-0. | 5.8 |
| 99. | Remove route advertisement on a Tier-1 and find why a segment is unreachable from outside. | 5.8 |
| 100. | Use Traceflow to find where a packet is dropped. | 5.8 |
| 101. | Fail an edge node and record what moves and how long it takes. | 5.8 |

- | | | |
|------|---|-----|
| 102. | Read the routing table on an edge from the CLI. | 5.8 |
| 103. | Write the checks when two virtual machines on different segments cannot reach each other. | 5.8 |
| 104. | Write how a stateful service affects a Tier-0 failover. | 5.8 |

O. NSX SERVICES AND VPCS

Objective 5.8, part three.

- | | | |
|------|--|-----|
| 105. | Break DHCP on a segment and find why a virtual machine gets no address. | 5.8 |
| 106. | Break a NAT rule and find it with Traceflow. | 5.8 |
| 107. | Write the checks when a VPN tunnel will not come up. | 5.8 |
| 108. | Block traffic with a distributed firewall rule, then find the rule from the symptom. | 5.8 |
| 109. | Exhaust a VPC external IP block and read the error a consumer sees. | 5.8 |
| 110. | Make a VPC public subnet unreachable from outside and trace why. | 5.8 |
| 111. | Write how transit gateway connectivity affects what a VPC can reach. | 5.8 |

P. VCF OPERATIONS CONFIGURATION

Objective 5.9, part one: when the monitoring itself is broken.

- | | | |
|------|---|-----|
| 112. | Stop a collector and find the objects with no data. | 5.9 |
| 113. | Break an adapter credential and read the collection error. | 5.9 |
| 114. | Read VCF Operations cluster status and a node that is down. | 5.9 |
| 115. | Break log forwarding from a host and find the gap in VCF Operations for logs. | 5.9 |
| 116. | Break flow collection for VCF Operations for networks and find the gap. | 5.9 |
| 117. | Use VCF Operations for networks to find why two virtual machines cannot talk. | 5.9 |
| 118. | Use VCF Operations for logs to find the first error before an incident. | 5.9 |
| 119. | Use VCF Operations to find a VCF component in a bad state. | 5.9 |

Q. TROUBLESHOOTING WITH VCF OPERATIONS

Objective 5.9, part two: the workbench, log bundles, and building your own views.

- | | | |
|------|---|-----|
| 120. | Open the troubleshooting workbench for a slow virtual machine and read its findings. | 5.9 |
| 121. | Use the workbench to find a change that happened just before an incident. | 5.9 |
| 122. | Generate a log bundle for a component from VCF Operations. | 5.9 |
| 123. | Upload a log bundle to a support case with Log Assist, or record each step if you have no case. | 5.9 |
| 124. | Create a dashboard that shows the health of one problem area. | 5.9 |
| 125. | Create a report that proves an issue is fixed. | 5.9 |
| 126. | Create an alert that would have caught an issue earlier. | 5.9 |
| 127. | Write which of the three you would build first in a live incident. | 5.9 |

R. IDENTITY BROKER AND VCF AUTOMATION

Objective 5.10, part one. The heading names the Identity Broker; most sub-objectives are VCF Automation.

- | | | |
|------|---|------|
| 128. | Break the Identity Broker certificate trust or redirect and diagnose the sign-in failure. | 5.10 |
|------|---|------|

- | | | |
|------|---|------|
| 129. | Map a group to the wrong role and explain the access a user reports. | 5.10 |
| 130. | Read VCF Automation health and find a service that is down. | 5.10 |
| 131. | Break VCF Automation connectivity to vCenter or NSX and read the error. | 5.10 |
| 132. | Write where VCF Automation logs are and how to collect them. | 5.10 |
| 133. | Write the checks when the provider portal will not load. | 5.10 |

S. SUPERVISOR

Objective 5.10, part two.

- | | | |
|------|---|------|
| 134. | Enable a Supervisor with a wrong network setting and read where it stops. | 5.10 |
| 135. | Read Supervisor configuration status and its conditions. | 5.10 |
| 136. | Break the load balancer path and record what a consumer sees. | 5.10 |
| 137. | Fill a namespace quota and read the error when a VKS cluster is requested. | 5.10 |
| 138. | Remove a VM class or storage policy from a namespace and request a cluster that needs it. | 5.10 |
| 139. | Write the checks when a VKS cluster stays in provisioning. | 5.10 |

T. PROVIDER MANAGEMENT AND ORGANIZATIONS

Objective 5.10, part three. VPC, regions, content libraries, regional networks, storage classes, VM classes, organizations.

- | | | |
|------|---|------|
| 140. | Create a region missing a Supervisor and read the error. | 5.10 |
| 141. | Break a regional network and find why tenants cannot deploy. | 5.10 |
| 142. | Remove a content library item a catalog item depends on and read the failure. | 5.10 |
| 143. | Remove a storage class from an organization and request a workload that needs it. | 5.10 |
| 144. | Remove a VM class and request a workload that needs it. | 5.10 |
| 145. | Give a VM Apps organization a request only All Apps can serve, and explain the error. | 5.10 |
| 146. | Exhaust an organization quota and read what the tenant sees. | 5.10 |
| 147. | Write the checks when a tenant says nothing in the catalog deploys. | 5.10 |

U. HCX AND WORKLOAD MOBILITY

Objective 5.11. Configuration first, then migrations.

- | | | |
|------|---|------|
| 148. | Write the HCX components: manager, interconnect, WAN optimisation, network extension. | 5.11 |
| 149. | Break site pairing, for example with a certificate or DNS error, and fix it. | 5.11 |
| 150. | Write the ports and network profiles a service mesh needs. | 5.11 |
| 151. | Read service mesh and tunnel status and explain a tunnel that is down. | 5.11 |
| 152. | Write the migration types and when each fails: bulk, vMotion, replication-assisted vMotion, cold. | 5.11 |
| 153. | Fail a migration on purpose, for example with too little target capacity, and read the error. | 5.11 |
| 154. | Find a migration stuck in progress and read its events. | 5.11 |
| 155. | Write the checks when an extended network stops passing traffic. | 5.11 |

V. AGAINST THE CLOCK

Do this section twice in the last week, with faults somebody else created.

- | | | |
|-------------|--|------|
| 156. | A host shows not responding. Find the cause. 10 minutes. | 5.6 |
| 157. | A virtual machine will not power on. Find the cause. 10 minutes. | 5.6 |
| 158. | A vSAN object is inaccessible. Find the cause. 15 minutes. | 5.7 |
| 159. | Two virtual machines cannot reach each other. Find where the packet stops. 15 minutes. | 5.8 |
| 160. | A certificate replacement failed. Find why. 10 minutes. | 5.4 |
| 161. | A workload domain task failed. Find the subtask and the log line. 15 minutes. | 5.3 |
| 162. | A tenant cannot deploy. Find the missing piece. 15 minutes. | 5.10 |
| 163. | An HCX migration is stuck. Find the cause. 15 minutes. | 5.11 |