

Veeam Certified Engineer + Advanced: Architecture & Design v12 («VMCEPA»)

This course package deepens your technical knowledge of the backup and replication solution Veeam Availability Suite v12 and prepares you for the «Veeam Certified Architect». You will extend your knowledge in the area of design and optimization.

Duration: 5 days

Price: 5'450.–

Course documents: Original-Veeam-courseware

Content

Veeam Backup & Replication v12: Configure, Manage and Recover

1. **What can be protected?**
 - Review of Veeam Data Platform and introduction to the class scenario.
2. **Secure your backup server**
 - Describe strategies and tools to secure the Veeam backup server to avoid unauthorized access and data leaks.
3. **Application consistency with secure authentication**
 - Achieve application-consistent backups of virtual machines while maintaining operating system secure authentication.
4. **Protecting workloads**
 - Efficiently protect VMware and Hyper-V virtual machines based on well-defined SLAs through the creation of backup jobs.
5. **Deploying agents**
 - Identify the use of protection groups to automate the installation of Veeam Agents and protecting workloads with agent backup jobs.
6. **Protecting NAS**
 - List required components and features available to protect NAS solutions.
7. **Optimizing your backups**
 - Analyze features and settings that allow backup storage optimization, faster backups and data consistency.
8. **Immutability**
 - Describe backup data protection mechanisms to avoid premature deletion and unwanted modifications.
9. **Linux Hardened Repository**
 - Identify characteristics and deployment steps of Linux Hardened Repositories to achieve backup data immutability.
10. **Object storage repositories**
 - Describe use cases, advantages and considerations to implement object storage solutions as Veeam backup repositories.
11. **Backup infrastructure optimization**
 - List deployment options and additional settings to improve general backup solution performance.
12. **Replication**
 - Describe use cases, architectures and features of replication jobs and continuous data protection (CDP) policies.
13. **Backup copy jobs**
 - Ensure recoverability and adhere to the 3-2-1 Rule with backup copy jobs.
14. **Long-term retention**

- List different mechanisms for data archiving, including grandfather-father-son retention policies.
- 15. Scale-out Backup Repository™**
 - Describe architecture, placement policies, data tiers and management of Scale-out Backup Repositories (SOBRs).
- 16. Move and copy backups with VeeamMover**
 - Identify use cases for virtual machine and backup migrations with VeeamMover.
- 17. Recovery verification**
 - Create automated tests to ensure recoverability from backups and replicas.
- 18. Veeam Backup Enterprise Manager**
 - Describe the use cases for Veeam Backup Enterprise Manager.
- 19. Recovery scenario – Virtual machine failure**
 - Choose from different methods to recover a virtual machine from the backup.
- 20. Recovery scenario – Ransomware attack**
 - Securely restore a server after a ransomware incident with malware scanning of volumes directly from the backup and as part of the restore process.
- 21. Recovery scenario – Agent recovery**
 - Explore available options to restore data from agent backups.
- 22. Recovery scenario – Explorer recovery**
 - Use Veeam Explorers™ to recover application items directly from image-level backups.
- 23. Recovery scenario – Guest file recovery**
 - Restore guest operating system files directly from image-level backups and from diverse guest file systems.
- 24. Recovery scenario – Recovery from replica**
 - Describe virtual machine states available when recovering a virtual machine from its replica and mechanisms to avoid data loss and interdependent services recovery.
- 25. Recovery scenario – Instant NAS recovery**
 - List steps and considerations to instantly recover an entire file share from its backup.

Veeam Backup & Replication v11: Architecture and Design

- 1. Introduction**
 - Review the architecture principles
 - Explore what a successful architecture looks like
 - Review Veeam’s architecture methodology
- 2. Discovery**
 - Analyze the existing environment
 - Uncover relevant infrastructure metrics
 - Uncover assumptions and risks
 - Identify complexity in the environment
- 3. Conceptual design**
 - Review scenario and data from discovery phase
 - Identify logical groups of objects that will share resources based on requirements
 - Create a set of detailed tables of business and technical requirements, constraints, assumptions and risks
 - Review infrastructure data with each product component in mind
 - Create high level design and data flow
- 4. Logical design**
 - Match critical components and features of VBR with requirements
 - Create logical groupings
 - Determine location of components and relationship to logical grouping
 - Aggregate totals of component resources needed per logical grouping
 - Calculate component (storage, CPU, memory) quantity sizing
- 5. Physical/tangible design**
 - Convert the logical design into a physical design

- Physical hardware sizing
- Create a list of physical Veeam backup components

6. Implementation and Governance

- Review physical design and implantation plan
- Review Veeam deployment hardening
- Describe the architect's obligations to the implementation team
- Provide guidance on implementation specifics that relate to the design

7. Validation and Iteration

- Provide framework for how to test the design
- Further develop the design according to a modification scenario

Key Learnings

Veeam Backup & Replication v12: Configure, Manage and Recover

- Describing Veeam security concepts
- Given a scenario, configuring a backup job and a backup copy job
- Explaining network-attached storage (NAS) backups and configuration
- Describing Veeam's replication capabilities
- Determining appropriate use case for backups, replicas and/or continuous data protection
- Configuring backup infrastructure components, including proxy and repository servers
- Given a scenario, evaluating when and how to apply immutability settings
- Given a scenario, recovering data from backups

Veeam Backup & Repliaction v11: Architecture and Design

- Designing and architecting a Veeam solution in a real-world environment
- Describing best practices, reviewing an existing infrastructure and assessing business/project requirements
- Identifying relevant infrastructure metrics and performing component (storage, CPU, memory) quantity sizing
- Providing implementation and testing guidelines in line with designs
- Innovatively addressing design challenges and pain points, matching appropriate Veeam Backup & Replication features with requirements

Target audience

Senior Engineers and Architects responsible for creating architectures for Veeam environments.

Certification

After completing this course package, you will have the opportunity to take the «Veeam Certified Engineer (VMCE)» and «Veeam Certified Engineer Advanced (VMCA)» exams. Upon successful completion, you will receive the «Veeam Certified Architect» certificate.

Exam

The Veeam Certified Engineer (VMCE) costs CHF 162 and the Veeam Certified Engineer Advanced costs CHF 300 and can be taken optionally. If you book our courses, we will pay for the exam costs if you wish and order the exam voucher for you at the same time. Please contact us at +41 44 447 21 21 or info@digicomp.ch.

Repetition

In the case of a retake, the participant is responsible for the exam costs and ordering.

On the [Veeam portal](#) you will find more answers to your questions about the Veeam certification exam.

Additional information

Price information

When you book this course package, you benefit from an exclusive price advantage of CHF 400.– on the individually bookable modules. You arrange the dates to your liking.

Any questions?

We are happy to advise you on +41 44 447 21 21 or info@digicomp.ch. You can find detailed information about dates on www.digicomp.ch/courses-digital-transformation-technologies/cloud/veeam/course-package-veeam-certified-engineer-advanced-architecture-design-v12