13.2.5 Practice Questions

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Score: 100% Passing Score: 80%

Question 1: ✔ Correct

Anaconda is an installation program that's used by Fedora, RHEL, and other distributions.

Which of the following does Anaconda perform? (Select THREE.)

- [x] Creates a file system.
- [ ] Modifies the PXE boot configuration.
- [ ] Creates LDAP user and group accounts.
- [ ] Deploys container images that include the entire virtual environment.
- [ ] Provides paravirtualization host services.
- [x] Identifies the computer's hardware.
- [x] Provides a user interface with guided installation steps.

Explanation

Anaconda is an installation program that's used by Fedora, Red Hat Enterprise Linux, and other distributions. It identifies the computer's hardware, creates a file system, and provides a user interface that guides the installation process. Anaconda installations can be scripted with kickstart for unattended installations.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_anaconda.question.fex

Question 2: ✔ Correct

When using templates to deploy virtual machines, one challenge is that all VMs will have the same settings, such as hostname, security identifiers, and even the same IP address.

Which of the following allow a VM to be provisioned with unique settings and configurations?

- OVF template
- container images
- OVA template
- ➡ bootstrapping

Explanation

Bootstrapping is the automated process of provisioning a virtual machine with unique settings and configurations. Bootstrapping customizes a virtual machine during installation (or, more specifically, when the virtual machine first boots) without requiring user input.

A container image is used to create multiple similar containers when copied, each running the same applications.

An OVF and OVA template will not provide unique settings when provisioning a VM.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_bootstrapping.question.fex

Question 3: ✔ Correct

The /etc/cloud/cloud.cfg file controls the cloud-init modules that are run. The modules represent configuration stages.

Which of the following are the three configuration stages used by Cloud-init? (Select THREE.)

- [x] init stage
- [ ] anaconda stage
- [x] config stage
- [ ] development stage
- [ ] distribution stage
- [ ] kickstart stage
- [x] final stage

Explanation

Cloud-init has three configuration stages: the init stage, the config stage, and the final stage.

Kickstart is bootstrapping technology independent of cloud-init.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_cloud_init.question.fex

Question 4: ✔ Correct

Which of the following templates, which use the JSON file format, can be copied and used to create multiple containers, that run the same applications?

- YAML
- OVF
- ➡ Container image
- OVA

Explanation

A container image can also be saved as a template, which can be copied and used to create multiple containers that run the same applications. The Open Container Initiative, or OCI, has published standards for container images. A popular container engine, Docker, has also published a standard. Both the OCI and Docker standards rely on the JSON file format.

OVF and OVA are not used for this purpose.

YAML is a superset of JSON, but in this scenario, the template is using the JSON file format.

References

13.2.1 Virtual Machine Concepts: Part 1

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_container.question.fex

Question 5: ✔ Correct

Mary, a system administrator, would like to deploy virtual machines, storage, and networking in a cloud environment. Which of the following file formats would allow Mary to modularize these items as a template? (Select TWO).

- [x] YAML
- [ ] XSD
- [ ] XML
- [x] JSON
- [ ] XSL

Explanation

JSON and YAML are both used by cloud providers to encapsulate virtual machines, storage, and networking into templates. This provides a way to quickly instantiate a set of cloud resources using a template.

XML, XSD, and XSL are not used to deploy templates as described.

References

13.2.1 Virtual Machine Concepts: Part 1

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_json_yaml.question.fex

Question 6: ✔ Correct

Which of the following can be used to script Anaconda and provide unattended installations using a single file?

- Thick provisioning
- Thin provisioning
- Kickstart
- Cloud-init

Explanation

Kickstart provides a way to script an Anaconda installation using a single answer file. A kickstart file is a simple text file that contains keywords arranged in sections.

Thick and thin provisioning determine how space is allocated when creating a virtual disk.

Cloud-init is different bootstrapping technology that is independent of kickstart.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_kickstart.question.fex

Question 7: ✔ Correct

Which of the following is an open-source application programming interface (API) that's used for creating, monitoring, migrating, starting, and stopping virtual machines?

- libvirt
- vmm
- **virsh**
- OVF

Explanation

libvirt is an open-source application programming interface (API) that's used for creating, monitoring, migrating, starting, and stopping virtual machines.

virsh is a command line tool for controlling virtualization.

vmm is a popular graphical tool for managing virtual machines on a Linux host.

OVF stands for open virtualization format. The term OVF is used for both the packaging standard and a virtual machine package stored in an OVF package. An OVF package consists of a directory that contains virtual machine files created with the OVF format. Virtual machine templates can be exchanged as OVF packages.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_libvirt.question.fex

Question 8: ✔ Correct

Which of the following describe an OVA (open virtual appliance or application) file?

- Provides a template that can be imported into a VM guest OS providing a deployed application.
- Encapsulates the entire type-1 hypervisor environment into a single file.
- ➡ Provides a single file that archives all the files that make up an OVF using TAR.
- It is the container that holds a type-1 hypervisor.

Explanation

An OVA is a template that provides a single file that archives all the files that make up an OVF using TAR. Using an OVA makes it convenient to transfer a single file to another hypervisor, where the template can be used to create a new virtual machine.

OVA templates are not imported into a VM guest.

OVA templates do not encapsulate the entire type-1 hypervisor.

OVA templates are not a container that holds a type-1 hypervisor.

References

13.2.1 Virtual Machine Concepts: Part 1

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_ova.question.fex

Question 9: ✔ Correct

Anna, a system administrator, created a new virtual machine that she would like to provision on additional hypervisors.

Which of the following will provide a VM template that is open and can be used by hypervisors from different vendors?

- XEN
- .vmdk
- .vmx
- ➡ OVF

Explanation

OVF stands for Open Virtualization Format and provides an open standard to package virtual machine files for use on other systems as a template for creating a virtual machine.

.vmx is a hypervisor file format.

.vmdk is a hypervisor file that represents a disk drive.

XEN is a Type 1 hypervisor.

References

13.2.1 Virtual Machine Concepts: Part 1

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_ovf.question.fex

Question 10: ✔ Correct

Your company is deploying ten new virtual machines. You have planned the disk space for anticipated future growth. However, the hypervisor currently doesn't have enough disk space for the all the disks that need to be allocated.

You have placed an order for additional storage that will be added to the hypervisor. You must have all ten servers operational before your order will arrive. You determine that overbooking the storage space will work in the short term.

Which of the following storage provisioning options should be selected?

- Thin provisioning
- Non-persistent
- Thick provisioning
- Persistent

Explanation

A thin provisioned virtual disk consumes only the space that it needs initially, and then grows according to demand. The benefits of thin provisioning are that the disk is provisioned quickly and storage space is saved.

Thick provisioning will not work because there is not sufficient space to allocate for all virtual disks.

Persistent and non-persistent are disk modes that determine what happens when the virtual machine is shut down.

References

13.1.2 Cloud and Virtualization Overview: Part 2

13.1.4 Linux Cloud and Virtualization Facts

13.2.2 Virtual Machine Concepts: Part 2

13.2.3 Creating a Virtual Machine

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_provision.question.fex

Question 11: ✔ Correct

Which of the following command line tools are used to control virtualization by using arguments such as list, start, and shutdown?

- vmx
- ➡ virsh
- vmm
- libvirt

Explanation

virsh is a command line tool for controlling virtualization. The virsh tool has many arguments that are, essentially, commands in and of themselves. For example, **virsh list** displays the virtual machines running on the hypervisor, **virsh start** starts a virtual machine, and **virsh shutdown** cleanly shuts down a virtual machine.

libvirt is an open-source application programming interface (API) that's used for creating, monitoring, migrating, starting, and stopping virtual machines.

vmm is a popular graphical tool for managing virtual machines on a Linux host.

vmx is a virtual machine file.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_virsh.question.fex

Question 12: ✔ Correct

Which of the following tools provides a graphical interface for managing virtual machines on a Linux host?

- vhdx
- virtsh
- libvirt
- vmm

Explanation

Virtual Machine Manager (vmm) is a popular graphical tool for managing virtual machines on a Linux host. It's also known as virt-manager since the graphical interface can be started using the virt-manager command. It also comes with command line tools like virt-install, which is used to provision operating sytems into VMs; virt-clone, which clones existing VMs; and virt-convert, which converts OVF VMs to run with libvert.

libvirt is an open-source application programming interface (API) that's used for creating, monitoring, migrating, starting, and stopping virtual machines.

virsh is a command line tool for controlling virtualization.

vhdx is a virtual disk file used by hypervisors.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_vmm.question.fex

Question 13: ✔ Correct

Which of the following are three popular toolsets Linux-based hypervisors use to manage virtual machines? (Select THREE).

- [x] libvirt
- [ ] vnc
- [x] virsh
- [ ] sdk
- [ ] vhd
- [x] vmm
- [ ] vmdk

Explanation

libvirt, virsh, and vmm are three popular toolsets Linux-based hypervisors use to manage virtual machines.

vmdk is a virtual disk file used by VMware. sdk is a software developers kit. vnc provides remote access. vhd is a virtual disk format.

References

13.2.2 Virtual Machine Concepts: Part 2

13.2.4 Virtual Machine Facts

q_virt_mach_lp5_vm_tools.question.fex