Mid-2

→ CC

1) What is Virtualization and what are its benefits?

Ans Virtualization is a large umbrella of technologies & concepts that are meant to provide an abstract environment whether Virtual hardware or an operating System.

Benefits

1. Increased Security
2. Managed execution
3. portability.

2) What are the characteristics of virtualized environment?

Ans
- Guest
- Host
- Virtualization layer.

3) Discuss Classification or taxonomy of virtualization at different level?

Ans 1. Process level - Implemented on top of an existing OS.

2. System level - Implemented directly on hardware & donot a minimum requirement of existing OS.

4. Discuss the machine reference model of execution virtualization

Ans It defines the interface between levels of abstraction which hide implementation details.

5. what are hardware virtualization techniques?

Ans
1. full virtualization
2. para "
3. partial "
4. Hardware register assisted.

6. List and discuss different types of virtualization

Ans
1. Execution Environment
   - process level
   - system level
2. storage
3. Network

7. what are the benefits of virtualization in the context of cloud computing.

Ans
1. Increased Security
2. Managed execution
3. portability

8. what are the disadvantages of Virtualization.

Ans 1. performance degradation
2. Inefficiency and degraded user experience
3. Security holes & new threads.

9. what is Xen?

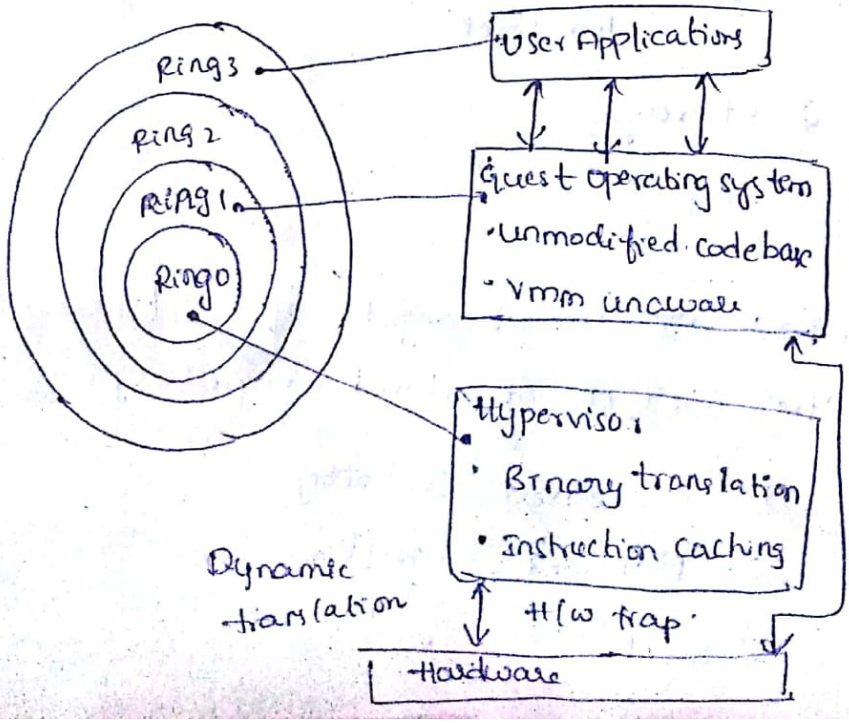
Ans It is an open-source initiative implementing a virtualization ~~platform~~ platform based on paravirtualization.

10. Discuss Xen elements for virtualization?

Ans

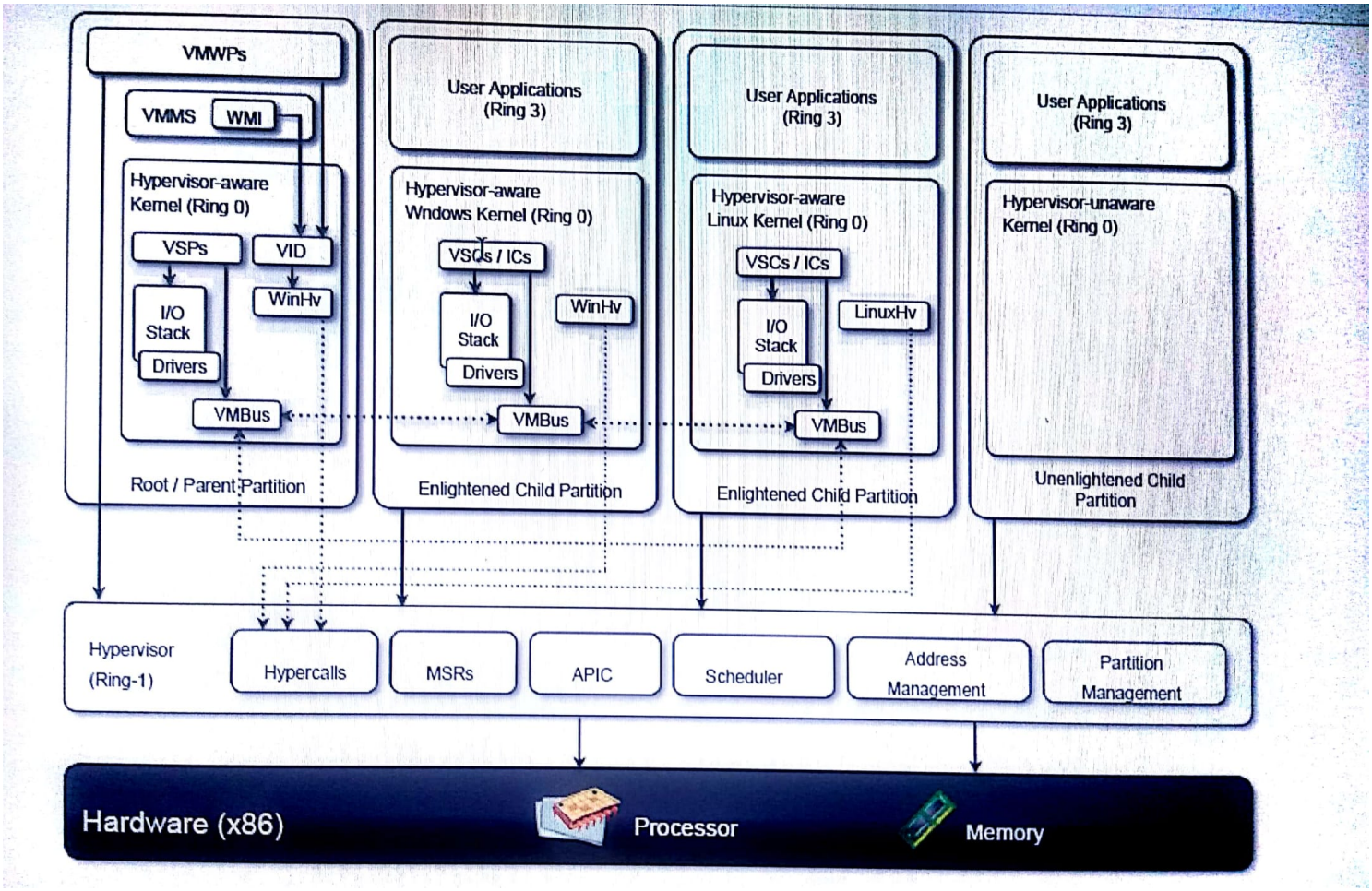
11. Discuss the reference model of full virtualization?

Ans



1Q Discuss the architecture of Hyper-V.

Ans



13. Discuss Hyper-V use in cloud computing.

Ans Hyper-V uses a hypervisor-based approach to hardware virtualization, which leverages several techniques to support a variety of guest operating system.

14. what does the acronym Xaas stand for?

Ans Xaas - everything as a service.

15. what are the fundamental components introduced in the cloud reference model?

Ans Cloud computing support:

→ Infrastructure

→ development platforms

→ application and services.

16. what does Infrastructure-as-a serivce refer to?

Ans Customers are provided with virtualized hardware & storage on top of which they can build their infrastructure.

17. which are the basic components of an Iaas-based solution of cloud computing?

Ans

18. Provide some examples of Iaas implementation

Ans Amazon, EC2 and S3, GOGrid etc.

19. What are the main characteristics of a Paas solution?

Ans Customers are provided with a platform for developing applications hosted in the cloud.

20. Describe the different categories of options available in a Paas market.

Ans Paas-I – provide runtime environment to develop application.

Paas-II – Some Scalability application development.

Paas-III – To develop distributed application

21. What does the acronym Saas mean?

Ans Saas – Software as a Service.

22. How does Saas relate to cloud computing

Ans. Software-as-a-service (Saas) is a software

delivery model that provides access to applications through the internet as a web-based-service.

23. Give the name of some popular software as-a-Service Solutions.

Ans facebook and professional networking sites such as LinkedIn.

24. classify the various types of cloud?

Ans 1. public cloud
2. private cloud
3. Hybrid / heterogeneous cloud
4. community cloud.

25. Give an example of public cloud.

Ans Amazon EC2

26. which is the most common scenario for a private cloud?

Ans A very common critique to the use of cloud computing in its canonical implementation is the loss of control.

27. What kinds of needs are addressed by heterogeneous clouds.

Ans Hybrid clouds address scalability issues

by leveraging external resources for exceeding.

28. Describe the fundamental features of the economic & business model behind cloud computing.

Ans 1. Reducing the capital costs associated to the IT infrastructure.

2. Eliminating the depreciation & lifetime cost associated with IT capital assets.

3. Replacing software licensing with subscriptio

4. Cutting the maintenance & administrative costs of IT resources

29. How does cloud computing help to reduce the time to market for applications & to cut down capital expenses.

Ans

30. List some of the challenges of cloud computing?

Ans - The definition & formalization of cloud computing

- Interoperation blw different clouds.

- Security
- Scalability
- fault tolerance

31. Describe in a few words the main characteristics of Aneka.

Ans

32. what is the Aneka container & what is its use

Ans . Aneka container is installed on each node & constitutes the basic building blocks of middleware.

Use

A collection of interconnected containers constitutes the Aneka cloud.

33. which types of services are hosted inside the Aneka container?

Ans - Fabric services
- Foundation services
- Execution services.

34 Describe Aneka's resource-provisioning capabilities.

Ans Dynamic resource provisioning allows the integration & management of virtual resources leased from IaaS provides into the Aneka cloud.

35. Describe the storage architecture implemented in Aneka.

Ans

36. what is a programming model?

Ans A programming model identifies both the abstraction used by the developers & the runtime support for the execution of programs on top of Aneka.

37. List the programming model supported by Aneka?

Ans
- Task models.
- Thread model
- parameter sweep model
- MapReduce model.

38. which are the Components that compose the Aneka infrastructure?

Ans

39. Discuss the logical organization of an Aneka cloud?

Ans

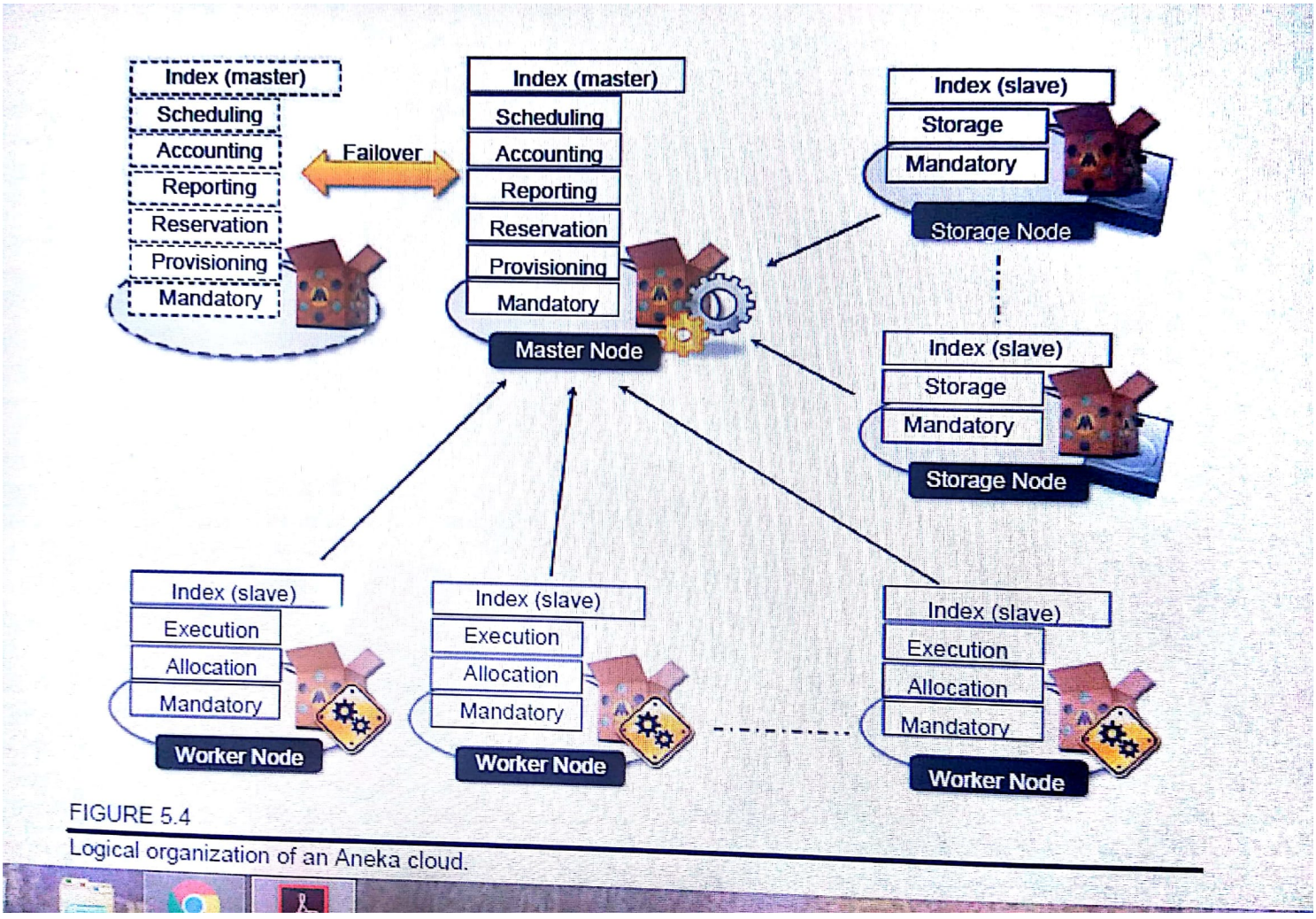


FIGURE 5.4

Logical organization of an Aneka cloud.

40. which services are hosted in a worker node?

Any
- index service
- Heartbeat service
- Logging "
- allocation "
- monitoring "
- execution "

41. Discuss the private deployment of Aneka clouds.

Ans

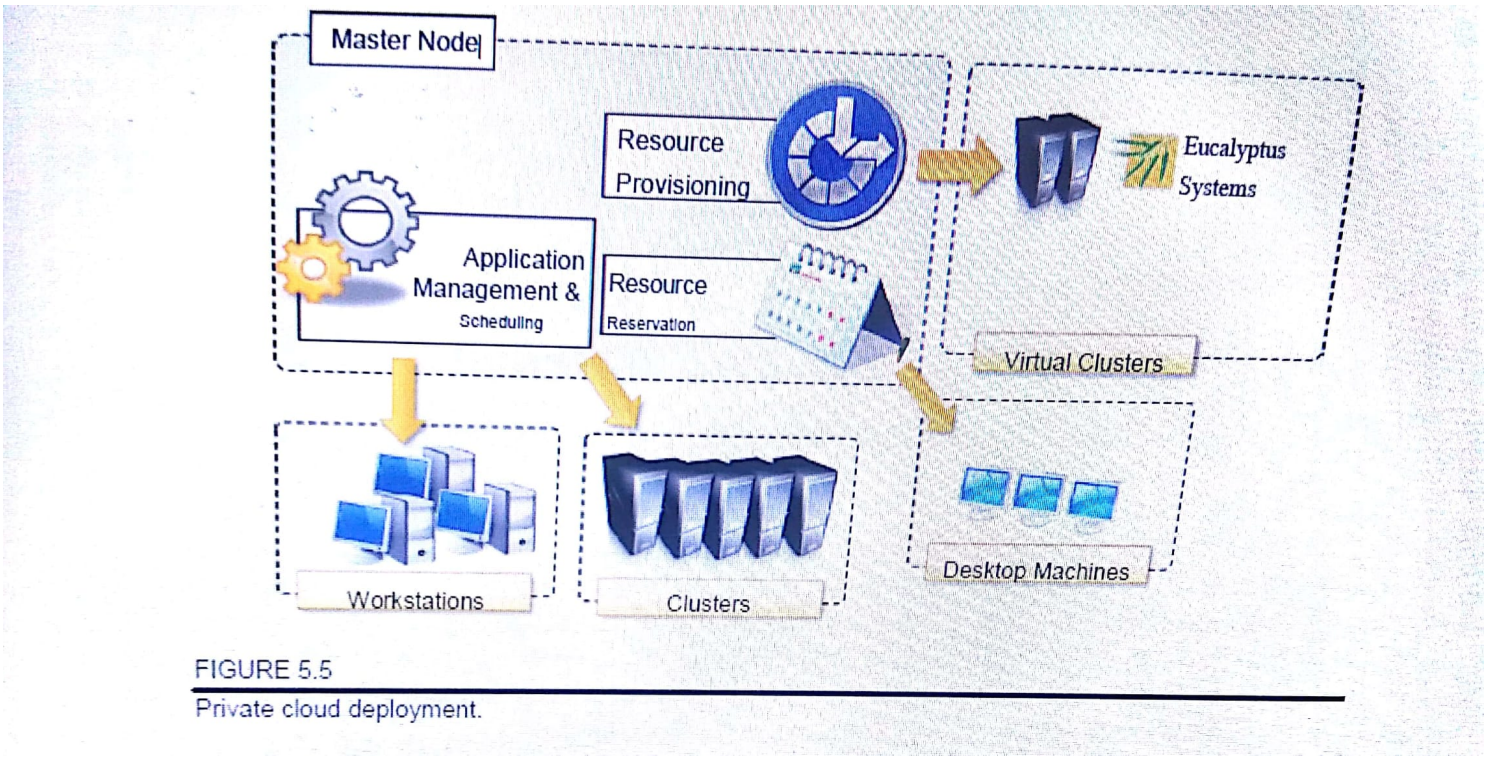


FIGURE 5.5

Private cloud deployment.

42. Discuss the public deployment of Aneka clouds.

Any

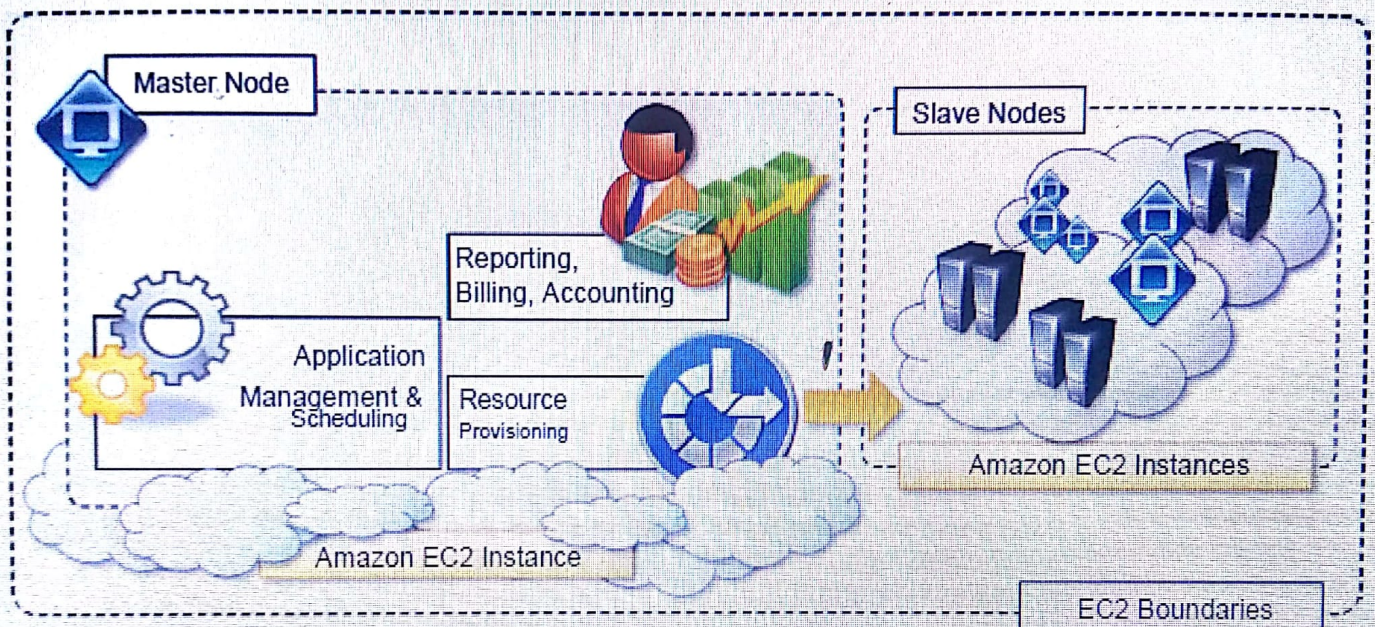


FIGURE 5.6

Public Aneka cloud deployment.