

Academic Council Meeting No. and Date : 03 / February 14, 2022

Agenda Number : 7

Resolution Number : 13 / 5.3



**VidyaPrasarak Mandal's
B. N. Bandodkar College of
Science (Autonomous), Thane**



Certificate course in Virtualization

[With effect from Academic Year 2022-2023]

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Course Outcome

- Identify the need for Server Virtualization
- Describe the components and features of vSphere 6.7 and ESXi
- Describe how VMware's products help solve business and technical challenges with regard to Server Virtualization

Eligibility :

Passed 12th standard (HSC) of Maharashtra State Board / CBSE / ICSE board or equivalent.

Mode of Conduct :

Offline lectures / Online lectures

Structure of Programme

CourseCode	Course Title	No. of lectures	Credits
BNBCCVZ1T1	Certificate course in Virtualization	40	2

Syllabus

Course Code BNBCCVZ1T1	Course Title Certificate course in Virtualization	Credits 2	No. of lectures
Unit I :	<ul style="list-style-type: none"> Introducing VMware vSphere 6.7: Exploring VMware vSphere 6.7, Examining the Products in the vSphere Suite, Examining the Features in VMware vSphere, Licensing VMware vSphere, Why Choose vSphere? Planning and Installing VMware ESXi: VMware ESXi Architecture, Understanding the ESXi Hypervisor, Examining the ESXi Components, Planning a VMware vSphere Deployment, Choosing a Server Platform, Determining a Storage Architecture, Integrating with the Network Infrastructure, Deploying VMware ESXi, Installing VMware ESXi Interactively, Performing an Unattended Installation of VMware ESXi, Deploying VMware ESXi with vSphere Auto Deploy, Performing Post-installation Configuration, Reconfiguring the Management Network, Using the vSphere Host Client, Configuring Time Synchronization, Configuring Name Resolution, 		10
Unit II :	<ul style="list-style-type: none"> Installing and Configuring vCenter Server: Introducing vCenter Server, Centralizing User Authentication Using vCenter Single Sign-On, Understanding the Platform Services Controller, Using the vSphere Web Client for Administration, Providing an Extensible Framework, Choosing the Version of vCenter Server, Planning and Designing a vCenter Server Deployment, Sizing Hardware for vCenter Server, Planning for vCenter Server Availability, Running vCenter Server and Its Components as VMs, Installing vCenter Server and Its Components, Installing vCenter Server in an Enhanced Linked Mode Group, Exploring vCenter Server, The vSphere Web Client Home Screen Using the Navigator, Creating and Managing a vCenter Server Inventory, Understanding Inventory Views and Objects, Creating and Adding Inventory Objects, Exploring vCenter Server's Management Features, Understanding Basic Host Management, Examining Basic Host Configuration, Using Scheduled Tasks, Using the Events and Events Consoles in vCenter Server, Working with Host Profiles, Tags and Custom Attributes, Managing vCenter Server Settings, General vCenter Server Settings, Licensing, Message of the Day, Advanced Settings, Auto Deploy, vCenter HA, Key Management Servers, Storage Providers, vSphere Web Client Administration, Roles, Licensing, vCenter Solutions Manager, System Configuration, VMware Appliance Management Administration, Summary, Monitor, Access, Networking, Time, Services, Update, Administration, Syslog, Backup 		10
Unit III :	<ul style="list-style-type: none"> vSphere Update Manager and the vCenter Support Tools: vSphere Update Manager, vSphere Update Manager and the vCenter Server Appliance, Installing the Update Manager Download Service, The vSphere Update Manager Plug-in Contents, Reconfiguring the VUM or UMDS, Installation with the Update Manager Utility, Upgrading VUM from a Previous Version, Configuring vSphere Update Manager, Creating Baselines Routine Updates, Attaching and Detaching Baselines or Baseline Groups, Performing a Scan, Staging Patches, Remediating Hosts, Upgrading VMware Tools, Upgrading Host Extensions, Upgrading Hosts with vSphere Update Manager, Importing an ESXi Image and Creating the Host Upgrade Baseline, Upgrading a Host, Upgrading VM Hardware, Performing an Orchestrated Upgrade, Investigating Alternative Update Options, Using vSphere Update Manager PowerCLI, Upgrading and Patching without vSphere Update Manager, vSphere Auto Deploy, Deploying Hosts with Auto Deploy, vCenter Support Tools, ESXi Dump Collector, Other vCenter Support Tools. 		10

Books for Reference

1.	Mastering VMware vSphere 6.7 by Nick Marshall, Mike Brown, G Blair Fritz, Ryan Johnson Sybex, Wiley
2.	Mastering VMware vSphere 6.7 by Martin Gavanda, Andrea Mauro, Paolo Valsecchi, Karel Novak Packt

Pattern of Evaluation(8 Hours for examination, assessment and evaluation)

MCQ Test/ Online MCQ Test (Duration: 1 Hour)

Assessment and Evaluation of Case Study Reports submitted by participants (Topics for case study to be allotted by teachers in consultation with students)

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