Certification Overview
Hyperconverged solutions simplify IT operations while reducing operational costs. The VxRail Appliance allows businesses to start small when integrating into their datacenters and grown seamlessly. Individuals (internals or partners) supporting VxRail customers are required to understand and follow the implementation services in addition to understanding the extended VxRail environment. Individuals will use the certification to validate their knowledge to support implementation activities.

Certification Requirements
To complete the requirements for this certification you must:

1. Achieve one of the following Associate level certifications*
   - Associate – Converged Systems and Hybrid Cloud Version 1.0
   - Associate – Converged Systems and Hybrid Cloud Version 2.0
   - Associate – Cloud Infrastructure and Services Version 3.0

2. Pass the following Specialist exam on or after December 20, 2019:
   - **DES-6321 Specialist – Implementation Engineer, VxRail Appliance Exam**

Note: These details reflect certification requirements as of December 20, 2019.

The Proven Professional Program periodically updates certification requirements. *Please check the Proven Professional CertTracker website regularly for the latest information and for other options to meet the Associate level requirement.

Dell Technologies Partners: Achieving a certification validates capability; however, it does not imply authorization to deliver services. Services Delivery Competencies provide partners with the ability to deliver services under their own brand or co-deliver with Dell Technologies. Tiered partners are eligible to obtain services delivery competencies upon completing the specific requirements outlined in the enablement matrix. Only partners that have met these requirements should be delivering their own services in lieu of Dell Technologies Services.
DES-6321 Specialist – Implementation Engineer, VxRail Appliance Exam
Exam Description

Overview
This exam is a qualifying exam for the Specialist – Implementation Engineer, VxRail Appliance (DCS-IE) track.

This exam focuses on the overall product and hardware and software requirements to implement a VxRail cluster. This includes a CI/HCI benefits, hardware installation, environment validation, software implementation, product scale-out options, REST API, and common issues and troubleshooting of events.

Dell Technologies provides free practice tests to assess your knowledge in preparation for the exam. Practice tests allow you to become familiar with the topics and question types you will find on the proctored exam. Your results on a practice test offer one indication of how prepared you are for the proctored exam and can highlight topics on which you need to study and train further. A passing score on the practice test does not guarantee a passing score on the certification exam.

Products
Products likely to be referred to on this exam include but are not limited to:
- Dell EMC VxRail Appliance 4.7
- Dell EMC PowerEdge Servers
- VMware vSphere 6.7
- VMware vSAN 6.7
- VMware vCenter 6.7

Exam Topics
Topics likely to be covered on this exam include:

**Introduction to VxRail (10%)**
- Describe VxRail use cases, architecture, models, and software stack
- Describe VxRail management, licensing, and data protection options

**VxRail Pre-deployment Tasks and Validation (15%)**
- Describe VxRail pre-installation requirements and use of the Pre-Engagement Questionnaire (PEQ)
- Describe ToR network requirements and settings
- Validate the network environment manually and with the Network Validation Tool

**VxRail Hardware Installation (10%)**
- Describe VxRail system racking and cabling procedures
- Describe system power up/down and setting management VLAN procedures
VxRail System Initialization (18%)
- Describe considerations for deploying Embedded and External vCenter configurations
- Explain differences in the VxRail implementation procedures for various configuration options
- Perform a VxRail initialization using the VxRail First Run Wizard
- List the requirements and considerations for VxRail deployments with Dell SmartFabric Services switches

VxRail Post-deployment Procedures (18%)
- Configure support account, SRS, and perform software upgrades
- Explain the vSAN configuration settings and configure required vSAN settings post deployment
- Perform post-installation validation of the VxRail Cluster
- Generate a VxRail As-Built Configuration report

VxRail Cluster Expansion and Stretched Clusters (12%)
- Describe VxRail appliance scale-out best practices and the cluster expansion process
- Describe the VxRail Stretched Cluster architecture, features, and requirements

VxRail Troubleshooting (12%)
- Describe VxRail troubleshooting procedures
- Perform VxRail log collections
- Perform VxRail RASR factory image upgrade and reset procedures

VxRail Appliance REST API (5%)
- Identify REST API functionality available in VxRail and use VxRail API to perform tasks

The percentages after each topic above reflects the approximate distribution of the total question set across the exam.

Recommended Training
The following curriculum is recommended for candidates preparing to take this exam.

Please complete one of the following courses

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Note: These exam description details reflect contents as of **December 20, 2019**.

The Proven Professional Program periodically updates exams to reflect technical currency and relevance. Please check the Proven Professional website regularly for the latest information.

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