



Last updated on Sep 19, 2023

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What skills and tools do you need for network virtualization?

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Be the first to add your personal experience

Network virtualization is the process of creating virtual networks that can run on top of physical infrastructure, such as servers, switches, and routers. It allows you to optimize network performance, security, and scalability, as well as reduce costs and complexity. But what skills and tools do you need to master network virtualization? In this article, we will cover some of the essential aspects of network virtualization, and how you can develop your expertise and proficiency in this field.

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1 Network virtualization concepts

To understand network virtualization, you need to familiarize yourself with some of the key concepts and terms that are used in this domain. For example, you should know what a virtual network is, how it differs from a physical network, and what are the benefits and challenges of using it. You should also learn about the different types of network virtualization, such as overlay networks, network slicing, network function virtualization (NFV), and software-defined networking (SDN). Each of these approaches has its own advantages and disadvantages, and requires different skills and tools to implement and manage.

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2 Network virtualization skills

To design, deploy, and troubleshoot network virtualization solutions, you need to have a solid foundation in computer networking, as well as some specific skills that are relevant to network virtualization. For example, you need to know how to configure and operate virtual machines (VMs), containers, hypervisors, and virtual switches. You also need to have a good grasp of network protocols, such as TCP/IP, Ethernet, VLAN, VXLAN, MPLS, GRE, and IPsec. Additionally, you need to be proficient in scripting languages, such as Python, PowerShell, or Bash, to automate network tasks and integrate network virtualization with other systems and applications.

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3 Network virtualization tools

In order to hone your network virtualization skills, you need to take advantage of the diverse tools available in the market, or even create your own if necessary. Commonly used tools for network virtualization include virtualization platforms like VMware, Hyper-V, KVM, or Docker that enable you to create and manage VMs and containers on physical servers. SDN controllers such as OpenDaylight, ONOS, or Cisco ACI allow you to program and control the behavior of network devices and services with software. NFV platforms like OpenStack, ETSI MANO, or Cloudify enable you to deploy and orchestrate network functions as software applications on virtualized infrastructure. Additionally, network testing and monitoring tools such as Wireshark, Iperf, or PingPlotter can be used to measure and analyze network performance and troubleshoot network issues.

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4 Network virtualization certification

To validate your network virtualization skills and knowledge, you can also pursue some of the certification programs that are offered by various vendors and organizations. For example, you can take the VMware Certified Professional - Network Virtualization (VCP-NV) exam, which covers the fundamentals of VMware NSX, a leading network virtualization platform. You can also take the Cisco Certified Network Professional - Data Center (CCNP-DC) exam, which covers the concepts and implementation of Cisco ACI, a prominent SDN solution. Alternatively, you can take the Linux Foundation Certified Engineer (LFCE) exam, which covers the skills and tools required to work with Linux-based network virtualization technologies.

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5 Network virtualization resources

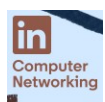
To keep up with the latest trends and developments in network virtualization, you can also access some of the resources that are available online, such as blogs, podcasts, webinars, courses, books, and forums. For example, you can read the blogs of network virtualization experts, such as Ivan Pepelnjak, Scott Lowe, or Ethan Banks. You can also listen to the podcasts of network virtualization communities, such as Packet Pushers, Software Gone Wild, or Network Collective. You can also watch the webinars of network virtualization vendors, such as VMware, Cisco, or Juniper. You can also enroll in the courses of network virtualization providers, such as Pluralsight, Udemy, or Coursera. You can also read the books of network virtualization authors, such as Chris Wahl, Bruce Davie, or Ben Piper. You can also join the forums of network virtualization groups, such as Reddit, Stack Overflow, or LinkedIn.

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6 Here's what else to consider

This is a space to share examples, stories, or insights that don't fit into any of the previous sections. What else would you like to add?

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