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| **Minor Award Name** | Virtualisation Support |
| **Minor Award Code** | 6N1294 |
| **Level** | 6 |

**Suggested resources to support delivery:**

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| --- | --- | --- | --- | --- |
| **Theme/Topic** | **Type** | **Relevance** | **Author/Source** | **Web Link** |
| Kernel and Shared Level Virtualisation  | eBook | A chapter in this eBook describes various virtualisation techniques, including kernel level and shared level virtualisation.  | Author: Neil Smith | <http://www.virtuatopia.com/index.php/Xen_Virtualization_Essentials> |
| Virtual Environments | BooksOnline GuideOnline Article PowerPoint Presentation | “Virtualization for Dummies” describes how to manage, migrate and administer a virtualised environment. It also discusses security threats that exist due to virtualization. “Virtualization The Complete Cornerstone” also describes how to accomplish and manage virtual environments. “Managing storage for virtual environments: A complete guide” explores the tips and tools for virtual server storage management and provides hypervisor-specific management advice.This online article discusses VMware’s desktop and application virtualisation softwares.This presentation provides useful information and statistics on the importance of managing your virtual environment.  | Author: Bernard Golden and Published by: Wiley&SonsAuthor: Ivanka Menken and Published by Emereo Pty Ltd.Author: TechTargetAuthor: VMWareAuthor: Andi Mann | <http://www.amazon.com/Virtualization-For-Dummies-Bernard-Golden/dp/0470148314> <https://books.google.ie/books/about/Virtualization_The_Complete_Cornerstone.html?id=pUYKqC6OB0MC&redir_esc=y><http://searchvirtualstorage.techtarget.com/essentialguide/Managing-storage-for-virtual-environments-A-complete-guide> <http://www.vmware.com/products/desktop-virtualization><https://www.google.ie/url?sa=t&rct=j&q=&esrc=s&source=web&cd=7&cad=rja&uact=8&ved=0CD0QFjAGahUKEwj9xrqf0OjIAhXGtA8KHU3XDmo&url=http%3A%2F%2Fcdn.ttgtmedia.com%2FsearchDataCenter%2Fdownloads%2FMann_managing_Virt_env.ppt&usg=AFQjCNH_osPVGRg-ao5tpShd9cTDXgHuFw&bvm=bv.106130839,d.ZWU>  |
| Virtual Environment setup and installation  | Online TCO CalculatorWhite PaperOnline ArticleOnline Article Online ArticleOnline ArticleWhite Paper EBookOnline ArticleOnline Article Online Article  | VMware’s online Total Cost of Ownership calculator. The white paper from VMware describes what TCO is and how it can be reduced for a return on investment using VMware’s server as an example. TCO is explained in this online article. This VM Cost Calculation Guide is an online article that looks at the various costs that are associated with VM installation. This online article provides tips on deploying virtual desktops. The online article from VMware describes what a clone is, why one would be created as well as the difference between full and linked clones. “Planning and Managing Virtual Desktop Pools” discusses how virtual desktop pools make management easier if they are planned effectively. This article discusses high availability and fault tolerance with reference to VMware’s products. This white paper discusses high availability and fault tolerance. “Server Virtualization for Dummies” discusses server virtualization as well as understanding various virtual server modules. This article describes how to set up a virtualization serverGreg Shields discusses how virtual and physical environments differ. This article looks at how you can size server hardware for virtual machines.  | VMwareVMwareMargaret RouseStephen J. Bigelow David DavisVMWareMargaret JonesKeith KessingerStarTrendsAuthor: Lawrence C. Miller and Published by: Wiley&SonsPaul VeneziaGreg ShieldsEric Siebert | <http://www.vmware.com/go/tcocalculator/><https://www.vmware.com/pdf/TCO.pdf><http://searchdatacenter.techtarget.com/definition/TCO><http://searchservervirtualization.techtarget.com/feature/Computing-with-a-price-tag-VM-cost-calculation-guide><http://searchvirtualstorage.techtarget.com/feature/10-tips-for-deploying-virtual-desktops><https://www.vmware.com/support/ws55/doc/ws_clone_overview.html><http://searchvirtualdesktop.techtarget.com/feature/Planning-and-managing-virtual-desktop-pools><http://searchvmware.techtarget.com/feature/VMware-High-Availability-and-Fault-Tolerance-FAQ><http://stortrends.com/st_downloads/StorTrends_Whitepaper__VMware_Fault_Tolerance.pdf><http://book.itep.ru/depository/virtual/Servers_Virtualization_for_dummies.pdf> <http://www.pcworld.com/article/201408/how_to_build_a_virtualization_server.html> <http://searchservervirtualization.techtarget.com/tutorial/Virtual-environments-are-different-from-physical-environments><http://searchservervirtualization.techtarget.com/tip/Sizing-server-hardware-for-virtual-machines>  |
| Issues related to virtualisation | Online Article BookOnline ArticlesOnline ArticleOnline Article Online ArticleOnline ArticleEBookPublications | This article discusses the risks associated with virtualised environments. The book “Virtualization the Complete Cornerstone” describes the benefits of different virtualisation technologies and how they fit into the big picture of the data centre. Various articles exist online that discuss various advantages and disadvantages associated with virtualisation. Some of these are listed here. This article discusses security issues associated with virtualisation and how they can be overcome.Various risks associated with virtualisation are highlighted in this article. This article describes how virtualisation is used in cloud computing and highlights the security threats that exist as a result. The social and ethical issues of virtualisation with reference to the music sector is discussed in this article. The book “Ethical and Social Issues in the Information Age” dedicates an entire chapter to Virtualisation focusing on the “virtual reality” of virtualisation. The following publications provide deeper insights into the legal and ethical issues of virtualisation.  | Virtualization Special Interest GroupAuthor: Ivanka Menken and Published by Emereo Pty Ltd.Author: Paul EstcottAuthor: Patti Mc KennaAuthor: Sara AngelesMichael ThompsonLaurianne Mc LaughlinINFOSEC InstituteJanusz WielkiJoseph Migga KizzaR. L. TropeM. SpenserS. Baase | <https://www.pcisecuritystandards.org/documents/Virtualization_InfoSupp_v2.pdf><https://books.google.ie/books/about/Virtualization_The_Complete_Cornerstone.html?id=pUYKqC6OB0MC&redir_esc=y><http://techattitude.com/windows-tips-and-tricks/the-advantages-and-disadvantages-of-virtualisation-explained/><http://computer.howstuffworks.com/how-virtual-computing-works2.htm><http://www.businessnewsdaily.com/6014-pros-cons-virtualization.html><http://www.datacenterknowledge.com/archives/2015/03/09/virtualization-security-overcoming-risks/> <http://www.cio.com/article/2374086/infrastructure/top-ten-virtualization-risks-hiding-in-your-company.html> <http://resources.infosecinstitute.com/virtualization-security-cloud-computing/><http://rccs.southernct.edu/social-and-ethical-implications-of-virtualization-of-the-business-environment-in-the-music-sector/> <https://books.google.ie/books?id=1YtAAAAAQBAJ&printsec=frontcover&dq=Ethical+and+Social+Issues+in+the+Information+Age&hl=en&sa=X&ved=0CBwQ6AEwAGoVChMIhN_15uDoyAIVxqMOCh2KVwF0#v=onepage&q=Ethical%20and%20Social%20Issues%20in%20the%20Information%20Age&f=false> <http://ftp.documation.com/references/ABA10a/PDfs/3_1.pdf><http://www.sedsi.org/2009_Conference/proc/proc/p081010038.pdf><http://www.informit.com/articles/article.aspx?p=1153021> |

 **Useful Organisations:**

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| **Name** | **Contact Information** |
| VMware | <https://communities.vmware.com/community/vmtn/>  |
| VMware | <https://www.vmware.com/virtualization/overview.html>  |
| Xen Server | <http://xenserver.org/>  |
| Webopedia | <http://www.webopedia.com/TERM/V/virtualization.html>  |
| Virtualization Practice | <https://www.virtualizationpractice.com/>  |

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| **MOOCs (Massive Online Open Courses)** |
| Free access to online coursesSearch regularly for new courses and new start dates | https://www.mooc-list.com/ |