COMP 7014 OPTIMISING NETWORKS

Legacy Code 301067

Coordinator Ante Prodan (https://directory.westernsydney.edu.au/search/name/Ante Prodan/)

Student Contribution Band

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Restrictions

Students must be enrolled in the online program Master of Advanced Networking or any other postgraduate Western Sydney University program where this subject can be taken as an unspecified elective and where there are sufficient credit points available in the study program.

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Knowledge and understanding
2. 1. Explain troubleshooting and meeting the network requirement in a converged network environment.
3. 2. Describe how VoIP is implemented.
4. 3. Assess troubleshooting technologies and queue types used in IP QoS.
5. 4. Identify different troubleshooting methodologies to support traffic management.
6. 5. Identify the range of techniques in use to deliver a resilient routed, switched network infrastructure.
7. 6. Explain support and troubleshoot a wireless infrastructure and its impact on QoS and scalable networks.
8. Cognitive skills
9. 7. Research, investigate and troubleshoot.
10. 8. Use direct feedback after Cisco, Netlab and Packet Tracer assessments to evaluate your own learning.
11. 9. Integrate knowledge from other sources to gain a deeper understanding of the subject and provide context to the Cisco view.
12. Key skills
13. 10. Communicate accurately and reliably, in a structured and coherent fashion, recognising purpose and audience.
14. 11. Work effectively with others in a distance setting where the collaboration is undertaken via computer-mediated communication.
15. 12. Work effectively with others in a lab setting via moderated ALE on Netlab+.
16. 13. Use appropriate numerical and mathematical skills to analyse data.
17. 14. Find and select information for a specific purpose, including via the Web, Cisco SDM or a Router/Switch CLI.
18. 15. Organise time, study methods and resources to suit the circumstances.
19. 16. Use independent resources to undertake academic research in Advanced Networking.
20. Practical and/or professional skills
21. 17. Configure routers, implementing complex routed scenarios through online lab sessions.
22. 18. Use specialist software tools.
23. 19. Reflect on first-hand experience of configuring and managing network equipment (through attendance at the day school or alternative learning experience).
24. 20. Plan and organise work appropriately when working in a group (online lab sessions).

Subject Content

1. Planning maintenance for complex networks
2. Troubleshooting processes for complex enterprise networks
3. Using maintenance and troubleshooting tools and applications
4. Maintaining and Troubleshooting Campus Switched Solutions
5. Maintaining and Troubleshooting Routing Solutions
6. Troubleshooting Addressing Services
7. Troubleshooting Converged Networks
8. Troubleshooting Network Performance Issue
9. Maintaining and Troubleshooting Network Security Implementations

10. Troubleshooting Complex Enterprise Networks

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task
TMA - Cisco activities; Discussion paper; Problem solving	800 words	16	Y	Individual
TMA - Cisco activities; Critical review; Problem solving	1000 words	17	Y	Individual
TMA - Cisco activities: Cisco final exam (not for accreditation); Individual Reflection on Group case study	Cisco activities: Cisco final exam (not for accreditation) - 1000 words; Individual Reflection on Group case study - 150 words	17	Y	Individual
Final examination	3 hours	50	Y	Individual