

# NETWORK SECURITY SPECIALIST



- ICA60205 Advanced Diploma of Information Technology (Network Security)
- Systems Security Certified Practitioner (SSCP®)
- Cisco Certified Security Professional (CCSP)
- MCSE – the 4 security specialisation subjects plus Exchange



Australian College of Information Technology

**CREATING WORLD CLASS I.T. PROFESSIONALS SINCE 1995**



## OVERVIEW

This Advanced Diploma of Information Technology (Network Security) is for anyone wishing to be assured of a successful career as an Information Technology Security Specialist. The program consists of powerful industry certification training modules as well as practical training on how to plan, implement and manage a secure information system infrastructure. These modules teach students the common body of knowledge within these highly in demand certifications and prepare students to take the respective international certification exams. The certifications taught are SSCP, CCSP and selected modules of the MCSE. The training is relevant, practical, and hands on. The program provides a foundation for further study towards CCNP, CCIE, or a university degree.

## VOCATIONAL OUTCOMES

- Network Administration
- Network Management
- Systems Integration
- Systems Administrator
- Systems Security Auditor
- Information System Security Specialist
- Network Security Analyst
- Network Security Specialist

## QUALIFICATIONS AND ACCREDITATIONS

The nationally recognized qualification covered in the course is:

- ICA60205 Advanced Diploma of Information Technology (Network Security)

The industry certifications taught in the course are:

- Systems Security Certified Practitioner (SSCP®)
- Cisco Certified Security Professional (CCSP)
- MCSE – the 4 security specialisation subjects plus Exchange

Note: Students can obtain the nationally recognized qualification without industry certification

## COURSE SUBJECT

The Advanced Diploma of Information Technology – Network Security Course contains 13 subjects. Each subject is designed as a self-standing professional course, covering a specific subject in detail. Each subject consists of a specified number of hours, which may include lectures, tutorials, practical exercises, assignments, and directed private study.

## RISK MANAGEMENT

Information security risk management forms the basis for an assessment of an organization's information security framework. With increasing electronic networking between organizations for a very wide range of applications, which impacts on most aspects of life in our society, there is a clear benefit in having a common set of reference documents for information security management. This enables mutual trust to be established between networked sites and trading partners and provides a basis for management of facilities between information users and service providers. Security for information systems is an essential requirement at organizational, national and international levels. This subject is ideal for students who are working toward or have already attained positions as Systems Administrators, IT Managers or Security Engineers. The subject teaches the risk management discipline from the perspective of Australian and international standards including HB 231:2004 Information security risk management guidelines.

## SYSTEMS SECURITY CERTIFIED PRACTITIONER (SSCP®) (CBK®)

The SSCP designation is frequently viewed as the first step on an information security career path. The SSCP credential offers an independent, objective and vendor neutral measure for information security tacticians to demonstrate their level of competence with the seven domains of the compendium of best practices for information security.

The subject covers:

- Access Controls
- Analysis and Monitoring
- Cryptography
- Malicious Code
- Networks and Telecommunications
- Risk, Response, and Recovery
- Security Operations and Administration



## CISCO CERTIFIED SECURITY PROFESSIONAL (CCSP)

The Cisco Certified Security Professional (CCSP) certification track will help improve your Cisco security skills so that you can have more opportunities for a better job or job security. Security experience has been the buzzword and it will continue to be because networks need security. The CCSP reach is beyond the popular certifications such as the CCNA/CCDA and CCNP/CCDP to provide you with a greater understanding of today's secure network, with insight into the Cisco secure world of internetworking. This subject teaches the CCSP CBK.

### The subject covers:

- Securing Cisco IOS Networks
- Cisco Secure PIX Firewall
- Secure Virtual Private Networks
- Secure Intrusion Detection
- Cisco SAFE Implementation

## PLANNING AND MAINTAINING A MICROSOFT WINDOWS SERVER NETWORK INFRASTRUCTURE

This subject will provide students with the knowledge and skills necessary to plan and maintain a Windows Server network infrastructure.

### Students will learn how to:

- Plan a TCP/IP physical and logical network
- Plan and troubleshoot a routing strategy.
- Plan a Dynamic Host Configuration Protocol (DHCP) strategy.
- Optimize and troubleshoot DHCP.
- Plan a Domain Name System (DNS) strategy.
- Optimize and troubleshoot DNS.
- Plan and optimize Windows Internet Naming Service (WINS).
- Plan, optimize, and troubleshoot IPsec network access.
- Troubleshoot network access

## PLANNING, IMPLEMENTING, AND MAINTAINING A MICROSOFT WINDOWS SERVER ACTIVE DIRECTORY INFRASTRUCTURE

This subject will provide students with the knowledge and skills to successfully plan, implement, and troubleshoot a Microsoft Windows Server Active Directory directory service infrastructure. The subject focuses on a Windows Server directory service environment, including forest and domain structure, Domain Name System (DNS), site topology and replication, organizational unit structure and delegation of administration, Group Policy, and user, group, and computer account strategies.

- Describe the logical and physical components of Active Directory.
- Create and configure a forest and domain structure by using an Active Directory infrastructure design.
- Plan and implement an organizational unit structure.
- Plan and implement Active Directory user, group, and computer accounts.
- Plan and implement a Group Policy strategy to centrally manage users and computers in an enterprise.
- Deploy, manage, and troubleshoot software that is deployed using Group Policy.
- Implement sites to manage and monitor Active Directory replication.
- Plan and implement the placement of domain controllers, global catalog servers, and DNS servers that are integrated with Active Directory.
- Plan and manage operations masters.
- Back up, restore, and maintain Active Directory.
- Plan and implement an Active Directory infrastructure that is based on a directory service design that an enterprise architect provides.

## DESIGNING SECURITY FOR MICROSOFT NETWORKS

Students will learn how to correlate client and server issues and resolve those issues. They will also learn how to monitor systems and create reports from the monitoring data.

### Students will learn how to:

- Use the Microsoft Exchange Server Management Pack for Microsoft Operations Manager (MOM) to monitor Exchange servers.
- Monitor and troubleshoot client performance and connectivity.
- Identify and resolve issues related to access of resources and messages.
- Monitor and troubleshoot mail flow.
- Monitor and troubleshoot Mailbox servers.
- Monitor and troubleshoot external and additional services.
- Identify trends in a messaging system.



## INTRODUCTION TO INSTALLING AND MANAGING MICROSOFT EXCHANGE SERVER

Students will learn how to configure and manage a messaging environment in accordance with technical requirements. Students will learn how to install Microsoft Exchange Server and manage routing, client access, and the backup and restore of databases. They will also learn how to manage addressing and recipient objects such as mailboxes, distribution groups, and contacts.

### Students will learn how to:

- Describe how Exchange Server and the Active Directory directory service work together
- Install Exchange Server
- Configure Mailbox server roles
- Manage recipient objects
- Manage e-mail and address lists
- Manage client access
- Manage Messaging Transport
- Manage availability, backup and recovery
- Maintain the message system

## MANAGING MESSAGING SECURITY USING MICROSOFT EXCHANGE SERVER

This subject will provide students with the knowledge and skills to manage messaging security and policies. Students will learn how to manage messaging and connection security. They will also learn how to manage spam, anti-virus, and content filtering. And finally they will learn how to install and configure a gateway server.

### Students will learn how to:

- Manage anti-spam and antivirus features
- Configure edge transport servers
- Implement messaging policies



## MONITORING AND TROUBLESHOOTING MICROSOFT EXCHANGE SERVER

Students will learn how to correlate client and server issues and resolve those issues. They will also learn how to monitor systems and create reports from the monitoring data.

### Students will learn how to:

- Use the Microsoft Exchange Server Management Pack for Microsoft Operations Manager (MOM) to monitor Exchange servers.
- Monitor and troubleshoot client performance and connectivity.
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- Monitor and troubleshoot external and additional services.
- Identify trends in a messaging system.

## RECOVERING MESSAGING SERVERS AND DATABASES USING MICROSOFT EXCHANGE SERVER

Students will learn how to perform full and dial-tone recoveries of a mailbox server, as well as repair a mailbox database. They will also learn how to perform a full recovery of Client Access servers, Hub Transport servers, Unified Messaging servers, and Edge Transport servers

### Students will learn how to:

- Recover messaging databases
- Prepare for and recover from Mailbox server failures
- Prepare for and recover from non-Mailbox server failures

## ELECTRONIC COMMUNICATIONS MANAGEMENT

This subject is ideal for students who are working toward or have already attained positions as Systems Administrators, IT Managers or Security Engineers. The subject covers implementing policy for internal and external electronic communication to enable effective communication processes while meeting legal and ethical requirements.

### Students will learn how to:

- Develop a strategy for internal and external communications in accordance with organisational requirements
- Establish a process to ensure security of email systems in accordance with electronic communications policies
- Configure systems and establish processes to allow Internet use in accordance with organizational requirements
- Build a culture of effective electronic communication that meets legal and ethical requirements and business needs
- Evaluate the effectiveness of the electronic communications policies and procedures against expected outcomes to ensure they are meeting the needs of customers and staff, organisational aims, objectives and standards



# ADVANCED DIPLOMA OF IT NETWORK SECURITY

**Microsoft**  
**IT Academy Program**



## IMPLEMENTING MICROSOFT INTERNET SECURITY AND ACCELERATION SERVER

This subject will provide students with the knowledge and skills to deploy and manage Microsoft Internet Security and Acceleration (ISA) Server as part of a larger security infrastructure. The subject introduces security concepts unique to ISA Server and provides best practices for their implementation. This subject includes information on both the Standard Edition and Enterprise Edition of ISA Server.

### Students will learn how to:

- Describe the functionality provided by ISA Server, and explain valid deployment scenarios for ISA Server.
- Install and maintain ISA Server, and install and configure ISA Server clients.
- Configure secure access to Internet resources for internal network clients using ISA Server.
- Configure ISA Server as a firewall between the Internet and the internal network.
- Configure secure access to internal network resources for Internet clients who are using Web and server publishing rules.
- Configure ISA Server to provide secure access to Exchange Server for servers and clients located on the Internet.
- Implement application and Web filters on ISA Server.
- Implement a virtual private network for remote clients and remote networks using ISA Server.
- Implement Web proxy caching on ISA Server.
- Monitor server performance, security, and usage on ISA Server.
- Plan an ISA Server Enterprise Edition deployment and install ISA Server Enterprise Edition.
- Implement ISA Server Enterprise Edition in a back-to-back firewall scenario.
- Implement ISA Server Enterprise Edition in a site-to-site VPN scenario.

## NETWORK SECURITY WAR GAMES

In this subject students are required to build a secure network and defend it from attacks from other students and the course instructors. Working in teams students are required to both secure their own networks and attempt to penetrate the defences of other teams' networks. The focus is towards team work and the practical implementation of the technologies, methodologies, and principles taught in the preceding subjects.

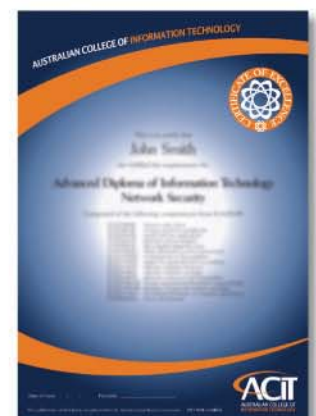
### The subject covers:

Ethical hacking  
Security auditing  
Incident prevention  
Incident response and mitigation  
Incident reporting

## INTERNATIONAL STUDENTS PREREQUISITES

- IELTS LEVEL 6.5 (if English is not your first language).
- Australian year 12 or equivalent. Eg. G.C.E. A LEVEL
- Certificate III In Information Technology
- Certificate IV in Information Technology (Networking)
- Diploma of Information Technology (Networking)

Disclaimer: Offer of course Subjects is subject to student number viability. Information in course summaries is subject to change prior to commencement of course Subjects. This document, together with the pre-enrolment information and course Subject outlines form the full and complete description of this course.





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