Server security architecture 7.5 credits A7006E

Server säkerhetsarkitektur

Course syllabus admitted: Autumn 2018 Sp 1 - Autumn 2018 Sp 1

DECISION DATE
2018-06-15

Server security architecture 7.5 credits A7006E

Server säkerhetsarkitektur

Second cycle, A7006E

Education level	Grade scale	Subject	Subject group (SCB)
Second cycle	U G VG	Systemvetenskap	Informatics/Computer and Systems Sciences

Main field of study

Information Security

Entry requirements

The course assumes basic knowledge of Computer Science or Systems Science, 60 ECTS: D0004N Database Systems I, D0005N Database Systems II, D0006N Objectoriented Analysis and Design, D0007N Objectoriented programming, D0019N Software Development with Java, D0020N Information Systems Development, I0005N IT-Design and Systems Thinking, D0006N Design of IT or equal courses.

Selection

The selection is based on 30-285 credits

Examiner

Ali Ismail Awad

Course Aim

This course will have some material on various servers, such as Microsoft Servers and Linux Servers. Various type of techniques will be covered such as Virtualization, Web, and Database Servers.

After this course the student will be able to:

1. Explain and summarise the fundamental concepts, standards, importance, function and scope of server security architectures.
2. Analyse and design server security architecture features and functionality.
3. Given a scenario, design a server security architecture strategy.
4. Perform a review of today's state-of-the-art products in the area of server security architecture.
5. Perform a review of the academic trends and knowledge in the area of server security architecture.
6. Analyse server security architecture requirements towards an organisational security policy.

Contents

This course covers the basic concepts, standards, purpose and implementation of server security architectures. This course will give a narrow but in-depth focus, on server security architectures. From a practical standpoint, the current state of the art is covered, which will assist the students to analyze and design security solutions. Various scenarios will be covered, and a methodology will help students apply the proper security solutions. The future trends, from an academic and theoretical standpoint are covered, which will help the students understand what new functionality will be coming out, in the future. There is also a short introduction, covering how to perform research, in order to find the current state of the art solutions and future trends. This course will cover how to design and analyze server security architecture requirements towards an organization's security policy.

Realization

Each course occasion´s language and form is stated and appear on the course page on Luleå University of Technology's website.

During the course, students will work on individual tasks and group tasks.   For group work, students will collaborate with each other using a variety of collaboration tools.   Course material will cover the fundamental concepts, standards, importance, function and scope of server security architectures.   Students will need to apply a security methodology, when designing a solution to a given security scenario.   In order for students to design an appropriate security solution, students will first need to perform some research, in order to find the available security solutions. Students will learn about information security policy, in order to understand the role of server security architecture in the organizational IT-infrastructure.

Lectures will cover current and future server security architectures, analysis and design, a security methodology, research techniques, and how to integrate architecture into an organization's security policy.

Teaching is in English and on Internet for distance students or at campus for the students living here. IT support: Learning management system (Canvas), e-mail and phone.

Canvas Learning Management System is used for delivering course material, information and submissions. Knowledge is shared and created within the course through virtual meetings with teachers and other students for discussions, supervision, teamwork and seminars. For student on campus there will be meetings on campus.

Examination

If there is a decision on special educational support, in accordance with the Guideline Student's rights and obligations at Luleå University of Technology, an adapted or alternative form of examination can be provided.

Aims 1-6, Individual tasks and group tasks, 6 hp (U, G, or VG)

Aims 1-6, Written examination, 1.5 hp (U, G, or VG)

In order for a student to obtain VG for the whole course, the VG grade must be accomplished in both individual tasks and in group tasks, as well as in the written examination. For the G grade, student should achieve G in the individual tasks and group tasks, and in the written examination.

Remarks

Technical requirements: Access to PC, microphone, webcam, a permission to install software, and Internet connection of minimum 0,5 Mbps.

Overlap

The course A7006E is equal to A7011E

Literature. Valid from Autumn 2018 Sp 1

Computer Security: Principles and Practice (4th Global Edition)
William Stallings and Lawrie Brown

LULEÅ
TEKNISKA
UNIVERSITET

Hardcover: 800 pages
Language: English
Publisher: Pearson Education Limited (Jan 18, 2018)
ISBN-10: 1292220619
ISBN-13: 9781292220611

Course offered by

Department of Computer Science, Electrical and Space Engineering

Items/credits

Number	Type	Credits	Grade
0003	Individual tasks and group tasks	6	TG U G VG
0004	Written exam	1.5	TG U G VG

Study guidance

Study guidance for the course is to be found in our learning platform Canvas before the course starts. Students applying for single subject courses get more information in the Welcome letter. You will find the learning platform via My LTU.

Last revised

by Jonny Johansson, HUL SRT 2018-06-15

Syllabus established

by Jonny Johansson, HUL SRT 2013-02-13

LULEÅ
TEKNISKA
UNIVERSITET