

# **AT&T Training Center**

Information Communication Technology  
practical training provided by AT&T  
company as part of university tuition.

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## AT&T Training Center

AT&T Training center is education system developed by AT&T Global Network Services Czech Republic s.r.o and provided to university students as part of University tuition. AT&T training center provides specialized trainings in addition to CISCO CCNA and CCNP courses handled by university in present. AT&T training further extended student's theoretical knowledge and practical skills in particular information communication technology area.

At the training students get understanding of technologies used in real network environment and will be introduced to typical incidents troubleshooting as well as basic configuration of various assets. Practical examples are maintained in LAB environment on real assets as well as virtual devices. Training is focused on student's expertise skills extension allowing student to apply on technical position in IT company.

## Training exam

AT&T training is finished by final exam which is divided in to theory and practical part. Theory part consists of multiple test questions from firewall area educated during the classes. Practical exam is focused on multiple firewall vendor configuration and troubleshooting. Students are evaluated based on the exam results and are provided by written feedback per each firewall area. Student receives constructive feedback of strong areas and areas for improvement. Together with feedback student obtain AT&T certificate. Successful students are eligible to get tuition credits at his/her university in information system.

## Internship opportunity

Based on final exam results student can be nominated for AT&T internship program and AT&T can offer part time job for such students during summer holidays. Internship is not guaranteed and nomination fully depend on AT&T decision.

## Enrollment Process

Students may enroll on one of supported modules as optional tuition subject via university information system. Students are eligible to get credits for their study if successfully pass AT&T training center exam. Each semester AT&T open one or more modules in university system in order to allow students enroll on AT&T training. Student can enroll only on one module per semester. Modules are opened along with student's interest and AT&T resources availability per each semester. Supported modules are listed below in this document.

## Training schedule

- 7 classes per semester
- Tuition 7 hours a day plus breaks (8:00 – 16:00) – 49 hours in total.
- Estimated roster, final schedule to be advertised via University Information System.

### Security & Mobility Schedule Summer 2017

Date	FW technology	Mobility
23.02.2017 Thu	End of enrollment via University Information System	
27.02.2017 Mon	Initial qualification test, ~30mins. (written form, at University)	
03.03.2017 Fri	General Network Security	Fundamental Networking Skills
10.03.2017 Fri	Juniper Firewall Foundation	Networking and Operating Systems
17.03.2017 Fri	Juniper Firewall Advanced	GSM and UMTS
31.03.2017 Fri	ASA Cisco Firewall Foundation	4G LTE
07.04.2017 Fri	ASA Cisco Firewall Advanced	Metrocells, Location and Emergency Services
21.04.2017 Fri	Check Point Firewall Foundation	Mobility Network Management
28.04.2017 Fri	Check Point Firewall Advanced	Scripting and Automation
10.05.2017 Wed	Theory test and practical exam (approximately 4 hours)	

### SW development & IP Telephony Schedule Summer 2017

Date	SW Development	Mobility
23.02.2017 Thu	End of enrollment via University Information System	
27.02.2017 Mon	Initial qualification test, ~30mins. (written form, at University)	
02.03.2017 Thu	Development environment and project planning	Cisco Call Manager overview and configuration.
09.03.2017 Thu	International collaboration and project plan submission	Overview of voice network architecture
16.03.2017 Thu	Collaborative coding and project prototyping	Overview of dial plans architecture
30.03.2017 Thu	Project enhancement	Cisco GUI, CLI and Wireshark configuration
06.04.2017 Thu	Security and standards management	Troubleshooting basis practice
20.04.2017 Thu	Project final enhancements and preparation for end of lifecycle	Troubleshooting voice endpoints. (Phones and voice gateways)
27.04.2017 Thu	Project wrap-up and presentation	Call manager features and integration capabilities
09.05.2017 Tue	Theory test and practical exam (approximately 4 hours)	

## AT&T Training Center modules

### Mobility

Mobility Provisioning Center is intended for students possessing strong networking and Unix/Linux skills and are interested in mobility network management and provisioning. The course provides an overview of mobility networks and shows AT&T's implementation of mobility network in US. Course topics are intended to improve student's skills required for junior mobility engineer position.

**Fundamental networking and OS skills** - First part of the course is focused on networking skills that create foundation for understanding complex mobility network concepts. Main topics will be IP networking, legacy networks – ATM, Wireline, etc. and OS skills.

**GSM and UMTS technology** - Classes about second and third generation mobility networks will introduce topology of mobility networks in RAN and Core part, explain algorithms used for call handling and show how handling of emergency calls works.

**4G LTE** - Long Term Evolution training will introduce novelty techniques that are currently used for deployment of LTE networks. This part of course will also explain Metrocells and their functions.

**Mobility network management and automation** - Topic about network management and automation covers operation of OSS servers to handle configuration, software and monitoring of mobility equipment as well as usage of scripting tools to maintain large quantity of mobility nodes.

### Enrollment prerequisites

- General networking minimal on CCNA level, (TCP/IP, routing switching).
- Opened for students of 3rd up to 5th year of study.
- Will to learn new technology.
- Successfully passed qualification test.
- Based on qualification test limited group of eight students per module is selected.

## Firewall Technologies Practice

FW technologies practice module is intended for students possessing CCNA up to CCNP networking skills and are interested in the networking security area. The course provides an overview of firewall technologies (ASA, Check Point, Juniper) commonly used in customer environment.

**Check Point Firewall technology** – Course contains elementary as well as advanced techniques which are used to troubleshoot common issues arising in real firewall environment. Check Point training is designed for students willing to obtain security skills required from junior security engineers. Course partially cover topics of CCSA and CCSE certifications accepted widely across the globe.

**Cisco ASA Firewall technology** - Specific security course focused on Cisco ASA firewall management and implementation. Participants are following labs moderated by a mentor, starting with easy CCNA security level activities, up to CCNP security level implementation of ASA firewall with the latest OS. The course provide opportunity to students to practice Cisco ASA Firewall technology on junior security engineer level.

**Juniper Firewall technology** - Juniper topic covers configuration, operation, and implementation of SRX Series Services Gateways in a typical network environment. Training contains practical examples of Juniper technology management and provides fundamental Juniper SRX knowledge and skills useful for security engineers operating across large networks designed with multiple technologies.

### Students get hands on experiences in following areas:

- Cisco ASA, Check Point, Juniper SRX security technologies overview and features, history, fundamental information.
- Overview of network attacks and protection.
- Configuration and usage of syslog, routing, anti-spoofing, access control lists, various NAT protocols over multiple security platforms.
- Troubleshooting using capturing, packet tracer and other multiplatform tools.
- IPsec VPNs configuration. Traffic optimization and acceleration. Backup, upgrade, recovery.
- High availability overview and configuration using firewall clustering.

### Enrollment prerequisites

- General networking minimal on CCNA level, (TCP/IP, routing switching).
- Opened for students of 3<sup>rd</sup> up to 5<sup>th</sup> year of study.
- Will to learn new technology.
- Successfully passed qualification test.
- Based on qualification test limited group of eight students per module is selected.

## Global Software Development

This module is intended for students with general experience of front-end and back-end programming languages, and will focus on how they are applied in an international environment. Working with AT&T Brno's software development team, students will be guided through all aspects of creating and deploying a professional open-source project with one of the biggest companies in the world. With challenges ranging from architecture design to international collaboration, having first-hand experience will give students the confidence and CV strength to take on junior programmer roles around the globe. Students excelling in this course will be prime candidates for positions in leading IT companies, especially AT&T.

**Full-stack project** – with seasoned developers as their guides, students will design, code and deploy a full-stack project worthy of an international audience. This will stretch each student's creativity and ingenuity as they are presented with competitive targets and complex tasks.

**Multi-language solutions** – students will be supported in whatever solutions they choose; Java, Python, Visual Basic, PHP, HTML5, CSS3, JavaScript, NodeJS, AngularJS, MongoDB, SQL as well as BASH scripting and more ...

**Project lifecycle** – throughout the course, students will encounter the challenges present at each stage of the project lifecycle. They will learn a variety of counter-strategies and be shown how to apply them effectively to their own project.

**International collaboration** – here students will gain valuable experience by collaborating with sources across multiple geolocations: from efficient team-coding to using telepresence to draw upon experts across the globe, having an international mind-set will make students well-prepared to join multinational companies.

### Enrollment prerequisites

- Confident with core programming theory.
- Experience of some front-end technologies e.g. HTML5, CSS3, JavaScript, Java GUI.
- Experience of some back-end technologies e.g. Java, PHP, Visual Basic, any database technology.
- Basic Linux skills (navigation, basic CLI commands).
- Advantages: familiar with some frameworks, IDEs and repository systems.
- Opened for students of 3<sup>rd</sup> up to 5<sup>th</sup> year of study.
- Will to learn new technology.
- Successfully passed qualification test.
- Based on qualification test limited group of eight students per module is selected.

## **Cisco IP Telephony**

IP telephony is the corner stone of Cisco's Unified Communications and Collaboration portfolio. It is suitable for students with basic understanding of Cisco routing and switching concepts and would like to explore the world of Enterprise Voice, Video and Contact Centers over IP world.

The training is only focused on Cisco products the leading vendor of Unified communications and after successful completion of the module students will have enough knowledge to pursue their a career as a Junior Engineer

### **IP telephony Classes are focused mainly on hands on experiences in following areas:**

- Cisco Call Manager, Unity, IM and Presence servers overview and configuration.
- Overview of voice network architecture.
- Overview of dial plans architecture
- Configuration and usage Cisco GUI, CLI and Wireshark.
- Troubleshooting using real time monitoring tools and historical traces.
- Troubleshooting voice endpoints. (Phones and voice gateways)
- Call manager features and integration capabilities.

### **Enrollment prerequisites**

- General networking minimal on CCNA level, (TCP/IP, routing switching).
- Opened for students of 3<sup>rd</sup> up to 5<sup>th</sup> year of study.
- Will to learn new technology.
- Successfully passed qualification test.
- Based on qualification test limited group of eight students per module is selected.