**ERASMUS+ PROGRAMME 2014-2020
Mobility of Individuals – Mobility of VET learners**

IT-Networking (2 weeks)

Description and Goals

Experiencing professional training in Germany, thus getting to know its culture and regional differences and specialties paired with the latest developments in education and the labour market in the IT-Networking sector are the essence of this training programme.

The training experience comprehends a number of definitions, terms, technologies, and similar subjects that must be known by any IT-Network Assistance or Administrator. Because of the amount of theoretical input, almost every lesson will be followed by a practical session. This includes for instance the assembly and testing of UTP cables. Finally, the learners will perform a network project combining a lot of what they have learned and present their work to an audience.

This training can be extended to a 3 weeks course, which will strengthen and deepen the acquired knowledge.

All topics will be covered by professionals formerly or currently working in that field, respecting the latest trends in that industry and applying a hands-on approach.

Given the wide range of network types, the focus can be shifted according to the target group.

In addition to the technical content of the programme the learners will get the chance to improve their language and soft skills and experience Dresden through cultural visits and other free time activities.

Target group

VET Learners of public or private schools training in the field of IT-Networking who would like to expand their skill set by discovering relevant aspects and approaches of training in that field in Germany as well as German culture. The intensity and complexity of the Units can be varied according to the previous knowledge and qualification of the participants.

Learning outcomes

Professional Competences

Unit 1: Working with internet services, tools, protocols, and resource sharing

- Defining principles, types, basic concepts and technologies, and physical components of networks
- Performing a network trouble shooting
- Describing function of a server, protocol, IP addresses and its configuration, and port
- Explaining internet service provider and different types of servers
- Sharing of resources
- Managing folder and file access

General Information

Place

WBS TRAINING AG Dresden
(other places on request and availability)

Duration

2 weeks, lessons from
Monday – Friday 9.00 –
14.30 (longer hours are
possible on request)

Number of participants

14-20

Training Language

English (level A2 required)

Contact

For further information on the training programme and for support with the project application, please feel free to contact:

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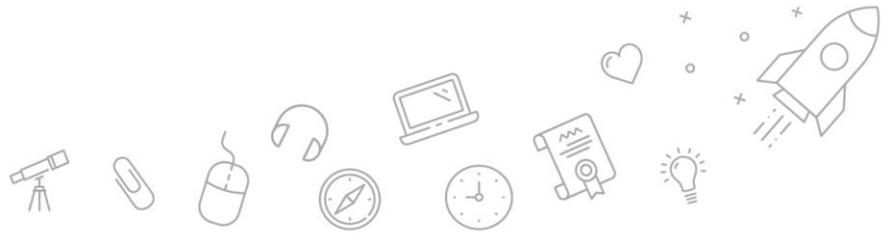
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Unit 2: Deploying and managing Windows Server 2012

- Giving an overview Windows Server 2012 and its management
- Installing Windows Server 2012
- Post-installation configuration of Windows Server 2012
- Giving an overview of Windows PowerShell

Unit 3: Working with topologies and ethernet standards, implementing local storage on server, working with VPN and clouds

- Giving an overview of different topologies
- Describing Backbone networks and Ethernet
- Explaining the access methods and PoE
- Overviewing of storage
- Managing disks and volumes
- Implementing storage spaces
- Describing functions of VPN basics, types and protocols
- Describing cloud computing and service models

Unit 4: Network security and configuration of IP routing

- Naming different types of threats, attacks, and viruses
- Describing protection against threats, attacks, and viruses
- Describing network authentication methods and data encryption
- Explaining routing concepts, static/dynamic routing, and software routing

Personal Competences

Unit 5: Giving a presentation on a professional topic

- Researching information on the internet using filters, comparing sources and filing it in folders on the hard drive
- Defining the issues of a complex professional task and their solutions
- Preparing a presentation about the project work in MS PowerPoint
- Presenting the work results in English using adequate terminology

Unit 6: Working in a team confidently and self-responsibly

- Setting work priorities and applying effective time management
- Sharing information with the team
- Listening to other team members' ideas and phrasing feedback adequately
- Assuming the own role and taking responsibility for own activities

Methods

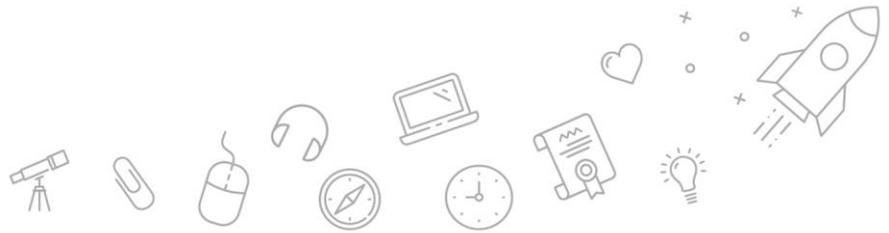
The practical training course uses a learner-centred approach. After an introductory lecture by the trainer, the learners will mainly work in pairs or groups to fulfil various tasks assigned to them by the trainer and their work group members in order to simulate real work situations.

An essential element of the training is the project work, which the learners will carry out in groups, and which requires and improves skills such as autonomous work planning and team work. During the lessons the trainer as well as the learners will use different tools of visualization such as PowerPoint, pinboard, whiteboard and flipchart.

Other methods used in the training course will be:

Project Funding

The costs for this training programme can be fully or partially (depending on the number of participants) covered by project funding from the Erasmus+ programme (Key Action 1: Mobility). Please contact your National Agency for information on funding details.



- Brainstorming and mind mapping
- Interviews with classmates or clients/customers – field study
- Observing and describing
- Group discussions
- Presentation and demonstration

Assessment and Certification

In order to obtain reliable statements on whether all learning outcomes have successfully been achieved, a final assessment will be carried out. For this purpose, during the second week of their practical training, the learners will be assigned a practice-oriented task. This task will resemble a typical project work of the training field according to working life requirements. For the performance of this task, the learners will have to use their newly acquired knowledge, skills and competences. The participants will work in groups of 3 to 5 learners to complete their project work and will be supervised by their trainer. The actual assessment will take place on the last training day: The learners will give a presentation about their work, justifying the working progress and results.

To assess the work results, the trainer will work with standardised assessment sheets, which cover assessment criteria such as:

- Effective teamwork
- Correctness of work results
- Structure of the presentation as well as the quality and creativity of visualization

Upon successful completion of the mobility, the learners will receive a certificate by WBS TRAINING, supplemented by the description of learning outcomes according to the European Credit System for Vocational Education and Training (ECVET) principles. ECVET facilitates the transfer and recognition of learning outcomes acquired in another country and supports transparency of qualifications. WBS TRAINING also supports the sending organization in issuing the Europass mobility.

Cultural Programme

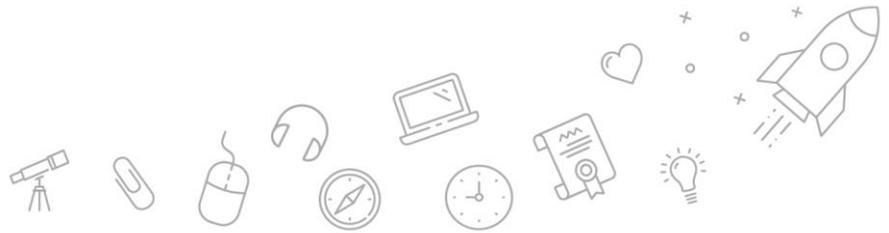
Dresden offers a wide variety of cultural, free time and physical activities. With plenty of museums, such as the famous *Historic Green Vault*, the *Old Masters Picture Gallery*, the *Technical Museum*, or the *German Museum of Hygiene*, everyone's taste can be met. Parks and gardens with the option to relax, to work out or to play a ball game, picturesque viewpoints, and many other places of interest just wait to be discovered. Not to forget the city Dresden itself: More than 800 years old, the city looks back to a long and exciting history. The lively *New Town* as well as the *Old Town* with its historical buildings – mostly reconstructed and renewed after the World War II – and the river *Elbe* are definitely worth seeing!

We will provide you an overview about all the things in and around Dresden and help you to decide, what to do. Depending on entrance fees, extra costs for transport, and/or different costs for services, additional expenses may arise.

Accommodation and Subsistence

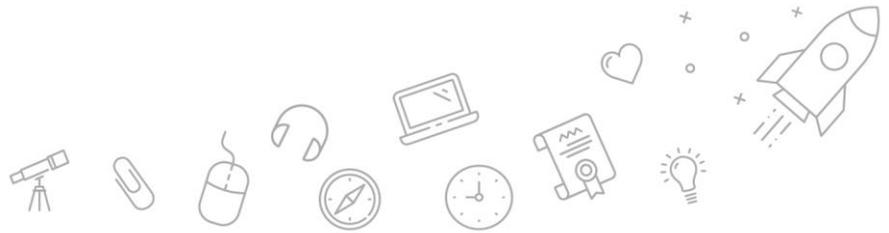
Accommodation, subsistence, public transport tickets and cultural programme can be organised according to your wishes.

Please see financial offer for further details of the included services.

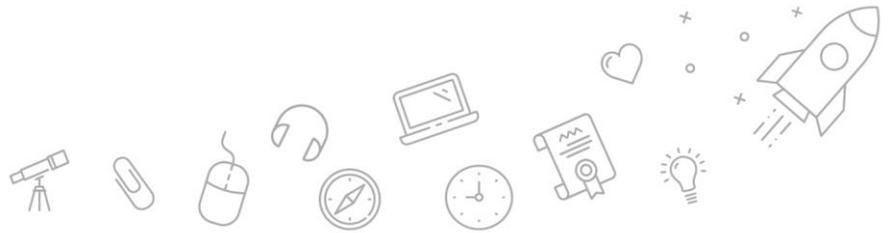


Programme proposal "IT-Networking"

Date	Programme
Sunday, Day 1	Welcome at Dresden Airport/Main Station Arrival at Hostel XXX
Monday, Day 2	<p>09:00 – 09:30 Introduction</p> <ul style="list-style-type: none"> - Presentation of the host organisation - Clarification of organisational issues - Introduction of the project and the tasks for the following weeks - Introduction to the training course - Meeting your trainer <p>09:30 – 14:30 Training: Network fundamentals</p> <ul style="list-style-type: none"> - The Principles of networking - Types of networks - Basic networking concepts and technologies - The Physical components of a network - Troubleshoot a network <p>Practice:</p> <ul style="list-style-type: none"> - Cabling
Tuesday, Day 3	<p>09:00 – 14:30 Training: Internet services – tools – protocols</p> <ul style="list-style-type: none"> - What is a server? - What is a Protocol? - Common Network Protocols - What is an IP Address? - IP Address Configuration - Port - Ping command switches - What is an Internet Service Provider? - DNS Server - Proxy Server - Firewall Server <p>Practice:</p> <ul style="list-style-type: none"> - Installing operating systems (using virtualization software)
Wednesday, Day 4	<p>09:00 – 14:30 Training: Resource sharing</p> <ul style="list-style-type: none"> - Sharing resources - Folder and file access <p>Practice:</p> <ul style="list-style-type: none"> - Installing and configuring operating systems in the network (using virtualization software) - Sharing data - Securing the data using permissions
Thursday, Day 5	<p>09:00 – 14:30 Training: Deploying and managing Windows Server 2012</p> <ul style="list-style-type: none"> - Windows Server 2012 overview - Overview of Windows Server 2012 Management - Installing Windows Server 2012 - Post-installation configuration of Windows Server 2012



	<ul style="list-style-type: none">- Introduction to Windows PowerShell Practice: <ul style="list-style-type: none">- Windows Server 2012 installation
Friday, Day 6	09:00 – 14:30 Training: Topologies and Ethernet standards <ul style="list-style-type: none">- Simple physical topologies- Bus, ring, star, and mesh topologies- Logical topology/hybrid topologies- Backbone networks- Ethernet- Access methods- PoE
Saturday, Day 7	Weekend at the disposal of the group, we will be happy to suggest cultural and other free time activities and to help organise a suitable programme.
Sunday, Day 8	
Monday, Day 9	09:00 – 14:30 Training: Implementing local storage on server <ul style="list-style-type: none">- Overview of storage- Managing disks and volumes- Implementing storage spaces Practice: <ul style="list-style-type: none">- Configuring RAID storage
Tuesday, Day 10	09:00 – 14:30 Training: VPN and CLOUD computing <ul style="list-style-type: none">- What is a VPN?- Why VPN?- VPN types and protocols- What is cloud computing?- Service models
Wednesday, Day 11	09:00 – 14:30 Training: Network security <ul style="list-style-type: none">- Network threats- Unauthorized access- Data theft- Security attacks- Viruses- Local security- Network authentication methods- Data encryption
Thursday, Day 12	09:00 – 14:30 Training: Configuring IP routing <ul style="list-style-type: none">- Routing concepts- Static/dynamic routing- Software routing Practice: <ul style="list-style-type: none">- Installing and configuring software router using Windows Server 2012



Friday, Day 13	09:00 – 12:30 12:30 – 14:30	Training: Installing and configuring networks final project Presentations, assessments, and farewell <ul style="list-style-type: none">- Giving final presentations about the individual project work- Assessment of the newly acquired knowledge- Evaluation of the project and handing out certificates
Saturday, Day 14	Departure	

Training programme/Description of practical training units

Last update: 29.09.2017