

EUROPEAN NETWORKING PORTFOLIO (ENP)

(For the european networking junior engineer profile)

The introduction of a document describing personal competences helps in getting the most value of the individual's growth in knowledge and skills.

A major assumption is that the successfulness of entering into negotiation for a new job, undertaking a career switch or tackling a professional relocation (either forcefully or willingly) strongly depends on the value given to the individual's past experiences and on how well the individual can highlight the added value he/she can yield in the new working context.

The Portfolio is a database of all the documents that testify the individual's value and the potential contribution he/she can bring.

Therefore, preparing a portfolio requires searching and collecting all proofs of acquired personal, social and professional knowledge, as well as the evaluation of their potential value.

The European Networking Portfolio aim is to gather in a single document the complete picture of all knowledge and skills acquired by individuals in the field of ICT (Information and Communication Technology), with particular attention to the "data communications engineer" job area and to the E.C.N.L. certification, and to help individuals in planning their future careers.

The portfolio has moreover three skills recognition goals that can be achieved either separately or simultaneously:

- personal recognition: individuals become conscious of their own skills in order to better define their training and career projects.
- formal recognition: proven competences and knowledge are formally acknowledge by means of credits and titles
- professional recognition: an employer certifies to employees the competences shown during their work activities in view of a new job or career.

La realizzazione di un documento relativo alle competenze personali entra in un processo di progressiva valorizzazione dello sviluppo delle competenze della persona.

Si parte dall'ipotesi che un nuovo inserimento professionale o un passaggio di carriera o un trasferimento professionale desiderato o imposto, abbiano tante più possibilità di essere efficaci quanto più siano visibili e valorizzate le esperienze della persona candidata e quanto più questa sappia evidenziare al suo interlocutore il valore aggiunto che può dare nel contesto professionale in cui si inserisce.

Il portfolio delle competenze è una base di dati nella quale sono riuniti i documenti che testimoniano il valore della persona ed evidenziano il potenziale contributo che questa può dare. La realizzazione di un portfolio delle competenze implica dunque un lavoro di ricerca e di raccolta di documenti-testimonianza associato ad un lavoro di valutazione del loro valore potenziale come prova di acquisizioni personali, sociali e professionali.

L'obiettivo del portfolio europeo del Networking è sia di descrivere e raccogliere in un unico documento il quadro generale delle conoscenze e delle competenze acquisite dalla persona nell'ambito dell' I.C.T. (Information and Communication Technology), con particolare riferimento alla job area "data communications engineer" ed alla certificazione E.C.N.L., sia di impostare una programmazione della carriera.

Il portfolio ha inoltre tre obiettivi di riconoscimento delle competenze che possono essere raggiunti sia separatamente, sia simultaneamente:

- *riconoscimento personale: l'individuo si riconosce e si riappropria delle sue conoscenze allo scopo di orientarsi, stabilire un piano di formazione futura o un progetto d'azione.*
- *riconoscimento istituzionale: si riconoscono ad una persona le conoscenze e le abilità di cui ha dato prova facendogli ottenere dei crediti ed un titolo.*
- *riconoscimento professionale: un datore di lavoro riconosce ad una persona le competenze che dimostra in vista di un impiego o di una professione.*

What is the european portfolio of networking competences

The Portfolio of individual skills (competences) gathers information and documents in order to reconstruct and document the training, professional and personal profile of individuals, as well as acquired skills in the ICT area.

Its reliability is based upon the transparency of the documented information and on the certification of educational qualifications.

Briefly, it lists all educational qualifications (certifications, certificates of attendance, qualifications...), and describes experiences made both in the professional and extra-professional environment.

Who owns the portfolio?

Once compiled, the Portfolio is kept by the holder of the Portfolio itself and will be used through the years to collect information and documents related to educational and professional experiences, as well as other acquired certifications.

The owner of the Portfolio is not allowed to certify competences on his/her own.

The Portfolio is a record of the owner's both professional and training past experiences, as well as of his/her future educational and training plans.

Che cosa è il portfolio europeo delle competenze sul networking

Il Portfolio delle competenze consiste in una raccolta di informazioni e documenti ed è volto a ricostruire e documentare il percorso formativo, professionale e personale di una persona e le competenze acquisite nell'area ICT.

La sua attendibilità è basata sulla trasparenza delle informazioni documentate e sulla certificazione dei titoli di studio.

In sintesi raccoglie l'insieme dei titoli di studio posseduti (certificati, attestati di frequenza, attestati di qualifica,...), e descrive le esperienze realizzate dall'individuo in ambito professionale ed extra-professionale.

Di chi è il portfolio?

Una volta compilato il portfolio rimane di proprietà della persona a cui è intestato e continuerà a raccogliere l'insieme di informazioni e documenti relativi alle esperienze formative e professionali che l'interessato realizzerà nel corso degli anni, nonché i progressivi riconoscimenti delle proprie competenze.

Il possessore del portfolio non è autorizzato a certificare competenze per proprio conto.

Il portfolio costituisce una memoria storica della formazione e delle esperienze professionali ed il progetto formativo futuro del possessore.

Who is the european portfolio useful for?

Moreover, companies can take advantage of the Portfolio in order to better define and evaluate their own training or recruitment strategies, as far as the professional profiles of ICT and Networking certification area are concerned.

In the future, the Portfolio is intended to be used even in the school and training context.

More precisely, the Portfolio can be used by students to record certifications obtained in vocational training courses, for example in the IFTS training courses.

In the scholastic context, on an experimental basis, the Portfolio can constitute a valid document in the switch between different areas within the educational system or different educational pathways.

The portfolio will be useful in avoiding unwanted repetition of subjects and topics already covered by courses outside the traditional academic system.

A chi è utile il portfolio europeo?

Il portfolio ha inoltre un valore di riferimento per le Aziende, le quali potranno meglio definire e valutare, in riferimento alle figure professionali dell'ICT e alla certificazione del networking, le proprie strategie formative o di reperimento del personale.

Il portfolio potrà essere utilizzato anche in ambito formativo e scolastico.

Nel caso specifico per gli studenti che stanno costruendo il proprio percorso formativo, il portfolio costituisce un documento per la registrazione dei crediti professionali acquisiti nei corsi di formazione, ad esempio nella formazione IFTS.

In ambito scolastico, a livello sperimentale, il portfolio potrà costituire documento valido nei passaggi (passerelle) fra diverse aree del sistema di istruzione o fra diversi percorsi formativi.

Il portfolio potrà evitare una ripetizione superflua degli apprendimenti effettuati al di fuori del sistema scolastico tradizionale.

Who is responsible for the portfolio certifications

The model of the Portfolio, that is the certification of collection and selection criteria for relevant information, will be experimented and validated during the carry-out phase of the ECNL certification training course.

Within the training activity, for example in Italy during the IFTS courses and in France in the CIBC, a referee will be held responsible for identification of both skills acquired during the training course and prior credits.

Formal certification of acquired credits will be awarded by proper regional boards, which will be identified by the institutions in agreement with social and entrepreneurial organisations.

The model of Portfolio is a booklet comprising four parts:

- Personal data and curriculum (this part can be integrated by the European CV format);
- "Biography" of Competences;
- Training project;
- Dossier.

Moreover, during future steps of this experimentation, an electronic model of Portfolio will be possibly defined.

Il referente che certifica il portfolio

Il modello di portfolio, ovvero la certificazione dei criteri di raccolta e selezione dei dati in esso raccolti, sarà sperimentato e validato in fase di attuazione dei corsi di formazione legati alla certificazione ECNL.

All'interno dell'attività di formazione, ad esempio per l'Italia nei corsi IFTS ed in Francia nei CIBC, sarà individuato il referente che potrà provvedere alla identificazione sia delle competenze acquisite in itinere, sia dei crediti presunti.

La certificazione formale di tali crediti e competenze sarà effettuata nell'ambito di apposite strutture regionali individuate d'intesa fra istituzioni, organizzazioni sociali ed imprenditoriali.

Il modello di portfolio è un libretto composto da quattro parti:

- *i dati personali e il curriculum (eventualmente integrato dal curriculum vitae europeo);*
- *la biografia delle competenze;*
- *il progetto formativo;*
- *il dossier.*

Nello sviluppo in itinere dell'esperienza del portfolio, si potrà pensare anche di definire uno strumento di tipo elettronico.

Personal data and curriculum

Personal data and curriculum vitae will be included in a document which describes concisely the educational and professional profile of the Portfolio holder.

It contains:

- Personal data;
- Educational qualifications (diplomas, certificates, vocational qualifications)

The biography of competences

The biography of competences is a document describing the owner's professional profile.

It also allows identification of those skills which are beyond the scope of the European Networking certification. It consists of an objective part (related to skills certified by qualifications, certificates, titles, etc.), which the holder compiles on his/her own, and of a second part, which is on the contrary related to uncertified skills.

The second part requires the support of a referee or board of experts who are in charge of assessing uncertified skills, by using the instruments for competence identification specifically design within the ECNL Leonardo project.

This process of competence surveying and identification yields a description of all competences possessed by the Portfolio holder.

In this case, only the competences which can be ascribed to the "European Networking technician" professional profile and to the "data communications engineering" job area will be considered for validation. In conclusion, the biography of competences contains:

- the training pathway and the description of acquired competences (vocational qualifications, job certifications, records of service, extra-professional qualifications);
- the description of the professional profile of the Portfolio holder (description of each professional experience according to: position held, main activities, duration, grounds for suspension);
- the description of uncertified competences and professional skills emerging by an identification process supervised by a referee (for example: the balance of competences).

I dati personali ed il curriculum

I dati personali sono registrati in un documento che descrive in modo sintetico, il profilo scolastico e professionale.

Contiene:

- Il profilo anagrafico del titolare del Portfolio;
- I titoli di studio conseguiti e legalmente riconosciuti (diplomi, certificati, qualifiche professionali).

La biografia delle competenze

La biografia delle competenze è un documento che descrive il profilo lavorativo della persona.

Permette di rilevare le competenze che vanno anche al di là del percorso legato alla certificazione europea del networking.

È costituita da una parte oggettiva (relativa alle competenze certificate attraverso titoli, certificati, attestati, etc.) che il/la titolare compila in autocertificazione e da una parte di rilevazione delle competenze possedute ma non certificate da titoli, da effettuarsi con il supporto di un referente o di una commissione di esterni utilizzando appositi strumenti opportunamente predisposti nel progetto Leonardo ECNL per "l'identificazione delle competenze".

Tale percorso di rilevazione e identificazione delle competenze, produce una descrizione di tutte le competenze possedute.

Nel caso specifico, la validazione è riferibile solo a quelle legate al profilo professionale di "tecnico europeo del networking" e alla job area "data communications engineering".

In conclusione, la biografia delle competenze contiene:

- il percorso formativo e la descrizione delle competenze acquisite (attestazioni di formazione, certificati di lavoro, stati di servizio, attestati extra-professionali);
- la descrizione del percorso lavorativo e professionale del titolare del portfolio (tipologia delle esperienze professionali descritte attraverso: posizioni lavorative occupate, attività esercitate, periodo di svolgimento delle attività, motivo della cessazione);
- la descrizione delle competenze e delle risorse professionali non formalizzate rilevate attraverso un percorso guidato in collaborazione con un referente (ad esempio il "bilancio delle competenze").

The training project

The training project is a document which collects all contents standard and the description of all skills involved in the E.C.N.L. certification and in the related "European Networking technician" professional profile, which is part of the European "data communications engineering" job area.

It constitutes the holder's training project, thus connecting his/her professional past and future careers.

The description of the professional profile, in terms of both objectives and competences, gives the opportunity to set up a complete, long term training project.

Moreover, it will also allow the recording of acquired competences in the case of an early termination of the training program, as well as the formalization of the owner's improvements in the course of the training path itself.

In the description outline of the "European Networking technician" professional profile, certified educational credits and/or debts may be indicated, also on the basis of the contents of the "paper of competences", which the Portfolio is part of.

For young people who are still attending academic or training courses, the outline of educational credits and debts will help in defining the course of action for debt recovery or for switching between different educational streams.

In the course of the experimental stage, in the case the Portfolio has not been compiled yet, it will be issued at the end of the "European Networking technician" course or within the IFTS courses. If already in use, the Portfolio will be on the contrary updated or integrated.

The dossier

The "Dossier" The dossier is external to the Portfolio.

It consists of a folder containing the following paper documents:

- all educational qualifications and other documents listed in the personal booklet and in the "biography of competences" in paper format;
- all legal documents (countersigned by an institution and signed by a officer in charge) documenting and describing the owner's professional and training experiences and acquired skills.

Il progetto formativo

Il progetto formativo è un documento che raccoglie gli standard dei contenuti e la dichiarazione delle competenze relative alla certificazione E.C.N.L. e al corrispondente profilo professionale del corso di "tecnico europeo del networking", che ha come job area europea di riferimento quella indicata con il nome di "data communications engineering".

Esso costituisce il progetto di formazione dell'individuo che unisce il passato con il futuro professionale.

La descrizione del profilo professionale per obiettivi e per competenze consente di impostare un progetto formativo completo che possa durare negli anni.

Sarà inoltre possibile sia la registrazione delle competenze acquisite anche nel caso di uscite dal percorso formativo prima del suo termine, sia la formalizzazione dei progressi effettuati dal titolare del portfolio.

Nello schema di descrizione del profilo professionale di "tecnico europeo del networking" potranno essere indicati eventuali crediti e/o debiti formativi individuati e certificati, all'interno dei percorsi formativi, anche sulla base di quanto stabilito nel documento di "identificazione delle competenze" di cui il portfolio fa parte.

Per i giovani che sono ancora all'interno nel processo di istruzione e formazione, il quadro dei debiti e crediti formativi consente di definire le modalità di recupero o il passaggio (passerelle) fra sistemi formativi diversi.

In fase sperimentale, qualora il portfolio non sia stato redatto, questo potrà essere rilasciato al termine del percorso di formazione previsto dal corso di formazione di "tecnico europeo del networking", o all'interno degli IFTS.

Se già in uso il portfolio potrà essere aggiornato od integrato.

Il dossier

Il Dossier è esterno al portfolio.

È costituito da un raccoglitore di documenti cartacei che contiene:

- la raccolta del formato cartaceo dei titoli di studio e di altri tipi di documentazione dichiarati nel libretto formativo e nella biografia delle competenze;
- la raccolta di tutti i materiali ufficiali (contrassegnati da un ente e firmati da un responsabile), che documentano e descrivono le esperienze vissute e le competenze acquisite dalla persona.

European Networking Portfolio of

First Name / *Nome* _____

Second Name / *Cognome* _____

Personal booklet



PERSONAL INFORMATION

Last name / *Cognome* _____

First name / *Nome* _____

Date and place of birth
Data e luogo di nascita _____

Nationality / *Nazionalità* _____

Fiscal number / *Codice fiscale* _____

Date of issue _____

Signature _____

Trattamento dati personali. LEGGE 675/96 - Tutela rispetto al trattamento dei dati personali, informativa di cui all'art. 10. I dati personali indicati nella presente scheda saranno oggetto di trattamenti informatici o manuali come dall'art. 1, comma 2, lettera B, per finalità connesse all'invio di informazioni relative al progetto. Il trattamento dei dati verrà effettuato in modo da garantire la sicurezza e la riservatezza attraverso la registrazione nella nostra banca dati informatica. E' esclusa ogni forma di diffusione dei presenti dati a terzi. Il conferimento dei dati è facoltativo. I diritti dell'interessato inerenti al trattamento dei dati personali sono quelli previsti dall'art. 13 della citata legge. Per ulteriore comunicazione inerente la legge 675/96, inclusa l'informativa di cui all'art.13, si rimanda al sito web ELEA.

Il sottoscritto dichiara che Le informazioni su indicate corrispondono a verità e consente il trattamento, la comunicazione e la diffusione dei dati che lo riguardano, nei limiti indicati dall'informativa

I declare that included information is truthful and allow treatment, communication and diffusion of personal information according to the law in force.

Data _____

Firma _____

Personal booklet

ACADEMIC QUALIFICATIONS

ELEMENTARY CERTIFICATE / *LICENZA ELEMENTARE* year _____

MIDDLE SCHOOL DIPLOMA / *LICENZA MEDIA INFERIORE* year _____

HIGH SCHOOL DIPLOMA / *DIPLOMA MEDIA SUPERIORE* year _____ grade _____

Attended high school / *Tipo di scuola:* _____

1st level degree certificate / *Diploma universitario - Laurea 1° livello* year _____ grade _____

Faculty - Degree / *Facoltà - Disciplina di diploma:* _____

2nd level degree certificate / *Laurea 2° livello* year _____ grade _____

Faculty - Degree / *Facoltà - Disciplina di diploma:* _____

A. Networking and data communications (Official assessment)

A.1.1 Networking and data communications basics			Score		
Final assessment			<input type="checkbox"/>	Inadequate	
Year	Course type	Awarded by (Stamp and signs)	<input type="checkbox"/>	Elementary	
.....	<input type="checkbox"/>	Intermediate	
<input type="checkbox"/>					Advanced
Detailed skills assessments					
1. Insufficient 2. Sufficient Other (note):					
Activities Area			1	2	
1. know basic concepts on signals and safety rules for electrical devices					
2. understand the principles of data transmission and classify electronic transmission devices					
3. understand basic principles of logic, as well as the underlying principles of digital hardware					
In detail the student demonstrated the following competencies:					
<input type="checkbox"/> - distinguish various types of signals and noise			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - use proper measuring instruments			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - measure noise intensity, also with respect to the signal intensity			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - ensure safety of electrical devices and users who operate them			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - use numeric systems and perform conversion from/to different systems			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - distinguish circuits and gates, apply elementary logic concepts			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - represent simple procedures using flowcharts			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - Using the algorithms to solve events sequences			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - use technical specifications and manuals (datasheets, specifications of components and devices)			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - digital to analog and analog to digital converters work and understand the main aspects of related specifications			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - identify the main characteristics of a communication system			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - identify interface circuit and understand data communication standards			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - distinguish connection devices according to transmission techniques and channel type			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - identify channel bandwidth according to the transmission technique and class of the device			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - identify main types and basic principles of satellite transmission			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - the PSTN works			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - identify advantages and drawbacks of the various network architectures			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - transmission standards have been defined			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - correctly associate transmission devices with transmission lines			<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> - telephone and data transmission networks have evolved over time			<input type="checkbox"/>	<input type="checkbox"/>	

A. Networking and data communications (Official assessment)

A.3.1 WAN technology			Score	
Final assessment			<input type="checkbox"/>	Inadeguate
Year	Course type	Awarded by (Stamp and signs)	<input type="checkbox"/>	Elementary
.....	<input type="checkbox"/>	Intermediate
			<input type="checkbox"/>	Advanced
Detailed skills assessments				
1. Insufficient 2. Sufficient Other (note):				
Activities Area			1	2
1. know standards and architectures in the WAN networks field				
2. be able to identify and use WAN data transmission means				
3. be able to describe WAN technologies				
4. be able to design a WAN networks				
The student demonstrated the following competencies:				
<input type="checkbox"/> - describe about the several WANs architectures			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - know WANs standards			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - describe WAN technologies			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - identifie services and applications			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - recognize the different protocols used about each WAN			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - know the PDUs for each protocol			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - use network analyzer			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - describe internet multimedia architecture and protocols			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - know operation of bridging and routing technologies			<input type="checkbox"/>	<input type="checkbox"/>



A. Networking and data communications (Official assessment)

A.4.1 Internetworking			Score	
Final assessment			<input type="checkbox"/>	Inadeguate
Year	Course type	Awarded by (Stamp and signs)	<input type="checkbox"/>	Elementary
.....	<input type="checkbox"/>	Intermediate
			<input type="checkbox"/>	Advanced
Detailed skills assessments				
1. Insufficient 2. Sufficient Other (note):				
Activities Area			1	2
1. be able to perform service administration in a LAN/WAN environments				
2. know and be able to manage networks addressing and protocols				
3. be able to perform network monitoring and troubleshooting				
The student demonstrated the following competencies:				
<input type="checkbox"/> - describe how bridging and routing fits in the OSI model			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - describe different types of bridge and their operation mode			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - describe the router functions			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - compare routing with bridging and switching			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - explain the importance of addressing			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - distinguish between routed and routing protocols			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - outline the characteristics of routing protocols			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - evaluate and compare different routing protocols			<input type="checkbox"/>	<input type="checkbox"/>

A. Networking and data communications (Official assessment)

A.5.1 Wireless inter-networking			Score	
Final assessment			<input type="checkbox"/>	Inadequate
Year	Course type	Awarded by (Stamp and signs)	<input type="checkbox"/>	Elementary
.....	<input type="checkbox"/>	Intermediate
			<input type="checkbox"/>	Advanced
Detailed skills assessments				
1. Insufficient 2. Sufficient Other (note):				
Activities Area			1	2
1. understand the architectural and operating principles of wireless networking, particularly in a SOHO* environment. (*)Small Office Home Office (SOHO)				
2. know wireless network architectures				
3. know the protocols for wireless networking				
The student demonstrated the following competencies:				
<input type="checkbox"/> - Explain how the wireless networks have evolved in time			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Explain how the various component of a wireless network interact			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To monitor performances of a wireless network			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To detect collisions on a radio channel			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To handle the use of mobile devices			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To integrate wired and wireless LANs			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To identify the fields of application and the main components of a wireless LAN such as a 802.11 LAN			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Telecommunication services over a WiFi network operate			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To identify and define the main components of the GSM network GSM telecommunication services work			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To identify and define the main components of the GPRS network GPRS telecommunication services work			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To compare the GSM and GPRS networks			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Wireless LAN architectures			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To know the 802.11 project and Bluetooth standards			<input type="checkbox"/>	<input type="checkbox"/>
Methods for automatic configuration of mobile IP addresses				



B. Network operating system (Official assessment)

B.1.1 Wireless inter-networking			Score	
Final assessment			<input type="checkbox"/>	Inadeguate
Year	Course type	Awarded by (Stamp and signs)	<input type="checkbox"/>	Elementary
.....	<input type="checkbox"/>	Intermediate
			<input type="checkbox"/>	Advanced
Detailed skills assessments				
1. Insufficient 2. Sufficient Other (note):				
Activities Area			1	2
1. acquire basic knowledge on operating systems				
2. be able to use, configure and maintain the operating system				
The student demonstrated the following competencies:				
<input type="checkbox"/> - Know basic knowledge on operating systems			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Know how the operating systems manages memory and other system resources			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Know how device drivers are configured and how they interface with the kernel			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Know how the file system is managed			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To manage multimedia processes			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - To handle security issues			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Do the log in and the log off			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Navigate the environment file system			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Manipulate text files			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Create files and directories			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Change permissions of files and directories			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Identify and modify initialization files			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Use basic network CLI commands			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Use commands to search directories and files			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Systems Administration in a Networked Environment			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Add user accounts and grant access permissions to groups			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Administer users and groups			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Administer file resources and monitor access to it			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Administer printer resources			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Manage data storage			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Manage back up and restore files and folders			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Create and configure Internet zones			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Configure Internet client and server side services			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Maintain and troubleshoot Internet services;			<input type="checkbox"/>	<input type="checkbox"/>

B. Network operating system (Official assessment)

B.1.2 UNIX/LINUX			Score	
Final assessment			<input type="checkbox"/>	Inadequate
Year	Course type	Awarded by (Stamp and signs)	<input type="checkbox"/>	Elementary
.....	<input type="checkbox"/>	Intermediate
			<input type="checkbox"/>	Advanced
Detailed skills assessments				
1. Insufficient 2. Sufficient Other (note):				
Activities Area			1	2
1. acquire basic knowledge on operating systems				
2. be able to use, configure and maintain the UNIX/LINUX operating system (study case)				
The student demonstrated the following competencies:				
<input type="checkbox"/> - To install the LINUX operating system and configure services for both client and servers			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Upgrade the system and tackle scalability issues			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Administer network resources and optimize performances			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Find upgrades and documentation			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Prepare documentation on the network in a efficace and efficient way			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Properly diagnose and solve network problems			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Identify critical points and manage network security			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Do the log in and the log out of UNIX and CDE systems			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Navigate the environment file system			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Manipulate text files			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Create files and directories			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Change permissions of files and directories			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Use the vi text editor			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Identify and modify initialization files			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Employ shell features to streamline command execution			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Use basic network commands			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Use commands to search directories and files			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Systems Administration in a Networked Environment			<input type="checkbox"/>	<input type="checkbox"/>



B. Network operating system (Official assessment)

B.1.3 WINDOWS NT/2000			Score	
Final assessment			<input type="checkbox"/>	Inadeguate
Year	Course type	Awarded by (Stamp and signs)	<input type="checkbox"/>	Elementary
.....	<input type="checkbox"/>	Intermediate
			<input type="checkbox"/>	Advanced
Detailed skills assessments				
1. Insufficient 2. Sufficient Other (note):				
Activities Area			1	2
1. acquire basic knowledge on operating systems				
2. be able to use, configure and maintain the Microsoft Windows NT/2000 operating system (case study)				
The student demonstrated the following competencies:				
<input type="checkbox"/> - Install the Windows 2000 operating system and configure services for both client and servers			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Upgrade the system and tackle scalability issues			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Administer network resources and optimize performances			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Find upgrades and documentation			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Prepare documentation on the network in a efficace and efficient way			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Properly diagnose and solve network problems			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Identify critical points and manage network security			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Add user accounts and grant access permissions to groups			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Administer users and groups, file resources, printer resources			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Manage data storage			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Monitor access to resources			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Audit access to resources			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Back up and restore files and folders			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Create zones and configure zones			<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Configure and manage DNS			<input type="checkbox"/>	<input type="checkbox"/>

C. Corporate network implementation (Official assessment)

B.1.1 Structured cabling and LAN/WAN enterprise project			Score
Final assessment			<input type="checkbox"/> Inadequate <input type="checkbox"/> Elementary <input type="checkbox"/> Intermediate <input type="checkbox"/> Advanced
Year	Course type	Awarded by (Stamp and signs)	
Detailed skills assessments			
1. Insufficient 2. Sufficient Other (note):			
The student demonstrated the following competencies:		1	2
<input type="checkbox"/> - Use appropriately the different elements of a corporate network, according to international standards		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Design structured cabling for a standard LAN network		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Design an EN50173 (generic cabling) compliant LAN cabling		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Design an ANSI/EIA/TIA 568-A compliant optic fibre LAN cabling		<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> - Perform tests on existing LAN cabling according to the IEEE, ANSI/EIA/TIA and ISO/IEC standards..		<input type="checkbox"/>	<input type="checkbox"/>

Education (initial and continuous training)

CERTIFICATES

Course outline (duration, ...)	Attended institute	Certificate awarded (yes/no)	Year granted	Referee authentication (signature and stamp)

N°	Office held (1, 2, ...)	Working activities	Period (from ... to)	Referee authentication (signature and stamp)
1				
2				
3				
4				
5				

Note: please identify the type of job (subordinate employment, stage, self-employed, worker, ...)

● *Biography of competences*

Description of skills and professional resources¹

Skill	Acquisition modality	Assessment modality	Autentication (signature and stamp)

Description of acquired competences and knowledge

Knowledge	Technical skill	Tranversal skill	Autentication (signature and stamp)

¹ Professional skills identified by means of a "guided" process, i.e. the "identification of competences" for the ICT area of interest.



The description start from the European Networking Junior Engineer profile identification.

This professional profile is referred to the European job area.

I.C.T. European job area (www.career-space.com, www.cedefop.eu.int/, www.traininville.gr/)

1. Integration and Test Engineering	2. ICT Marketing Management	3. Multimedia Design
4. System Specialist	5. Software and Applications Development	6. IT Business Consultancy
7. Communications Network Design	8. Data Communications Engineering	9. Product Design
10. Software Architecture and Design	11. DSP (Digital Signal Processing) Applications Design	12. Digital Designer
13. Radio Frequency (R.F.) Engineering	14. Technical Support	15. ICT Project Management
16. Research and Technology Development	17. ICT Management	18. ICT Sales Management

[1]: [Career Space is sponsored by BT, Cisco Systems, IBM Europe, Intel, Microsoft Europe, Nokia, Nortel Networks, Philips Semiconductors, Siemens AG, Telefónica S.A., Thales, and EICTA, the European Information, Communications and Consumer Electronics Industry Technology Association and by the European Commission and CEDEFOP.

Project management and co-ordination is provided by ICEL, International Co-operation Europe Limited.

It is supported by CEN/ISSS, the European standardisation body for the information society, EUREL, the Convention of National Societies of Electrical Engineers of Europe, e-skills NTO, the UK national training organisation for ICT, and over twenty universities and technical institutions across Europe.]

Job area description (data communications engineering)

The European Computer Networking License (ECNL) and the annex vocational training course are related to the following job area description (equivalent to the European Data Communication Engineering).

Data communications engineer tasks:
the Data communications Engineer specifies, designs, implements, tests, supports and maintains the hub/switch/router devices and network management systems used to implement data communications networks.

Moreover, he/she designs complete networking systems for connecting end terminal equipment such as PCs to Local and Wide Area Networks.

The European Networking Engineer works with customers to determine requirements for equipment and services (such as Mobility, IP Telephony, Video

La certificazione europea del networking (ECNL) e l'annesso corso di formazione professionale corrisponde alla seguente descrizione di job area (che è equivalente alla job area europea del Data Communication Engineering) Attività del Data Communications Engineer:

il Data Communications Engineer specifica, progetta, implementa, esegue i test, supporta e mantiene gli hub/switches/router e sistemi di gestione del network utilizzati per implementare la trasmissione dati.

Inoltre progetta interi sistemi di networking per collegare terminali come i PC a LAN o WAN.

Il Data Communications Engineer lavora con il cliente per determinare i requisiti delle apparecchiature e servizi (come mobilità, Telefonia su IP, Video conferenza, Fax su IP, sicurezza); sviluppa architetture

Conferencing, IP Fax and Security); develops network architectures to satisfy such requirements; simulates and analyses architectural solutions; makes decisions to build or buy the necessary equipment; and designs, develops, tests, and integrates new products to fill gaps in existing product lines.

Data Communications Engineer knowledge and skills:

this professional profile requires knowledge of current network protocols, devices and components, of software engineering and of emerging theory and practice.

Business and project management skills are essential in order to be able to design cost effective technical solutions to meet exponentially growing traffic requirements.

This is a technical career for people who wish to exploit technology to create innovative architectures to support information transmission and management systems.

Data Communications Engineer capabilities: Good learning capabilities, creativity, a great predisposition for changes, a desire for lifetime learning and technical challenge, and to apply knowledge to create practical solutions, are fundamental prerequisites for people who wish to enter I.C.T. as a career.

Furthermore, to extensively leverage team work, team building and team working skills are needed in order to effectively manage or collaborate within a team.

Time management and leadership are also important characteristics to ensure convergence of each team component's efforts towards the common goal and a timely compliance with delivery terms, especially during the final phases of product development, which are the most critical since integration of contributions of the various engineers involved in the project is required.

Finally, communicative and relational skills are required for effective customer relationships management.

The role

The European Networking Engineer who acquires the ECNL certification, specifies, designs, implements, tests, integrates, supports and maintains switches and network management systems used to implement data communications networks.

He/she designs complete networking systems for

network che soddisfino i requisiti; simula ed analizza soluzioni architettoniche; decide di costruire o comprare le apparecchiature necessarie e progetta, sviluppa, esegue test, integra nuovi prodotti per colmare i vuoti nelle linee di produzione.

Conoscenze richieste al Data Communication Engineer:

la figura professionale descritta deve conoscere gli attuali protocolli, le apparecchiature e componenti network, il software engineering, le emergenti teorie e prassi.

Deve inoltre avere conoscenze di business e project management per progettare soluzioni economicamente convenienti per le richieste di traffico in crescita esponenziale.

Questa è una carriera tecnica per persone che vogliono sfruttare la tecnologia per creare architetture innovative in sostegno dei sistemi di trasmissione dati e gestionali.

Capacità richieste al Data Communication Engineer:

capacità comportamentali per intraprendere la carriera di Data Communications Engineer sono la capacità e rapidità d'apprendimento, la propensione al cambiamento, la creatività, l'interesse per la sfida tecnologica e la capacità di saper applicare il proprio sapere nella creazione di soluzioni pratiche.

Occorrono inoltre capacità di team building e team working per creare e gestire team efficaci e per collaborare efficacemente in ambito di team.

Occorrono anche conoscenze e capacità di time management, leadership in particolare per far sì che all'interno del team vengano orientati gli sforzi di tutti nella corretta direzione e vengano rispettate le scadenze di consegna al cliente, soprattutto nelle fasi finali dello sviluppo di un prodotto che sono le più critiche perché viene integrato il lavoro di più engineers. Infine occorrono capacità comunicative e relazionali specifiche per gestire efficacemente la relazione con il cliente.

Il ruolo

Il tecnico europeo del networking specifica, progetta, implementa, esegue i test, supporta e mantiene gli switch e sistemi di gestione del network utilizzati per implementare i network di trasmissione dati.

Egli Progetta interi sistemi di networking per collegare terminali come i PS a LAN o WAN.

connecting end terminal equipment such as PCs to Local and Wide Area Networks.

The European Networking Engineer works with customers to determine requirements for equipment and services (such as Mobility, IP Telephony, Video Conferencing, IP Fax, and Security); develops network architectures to satisfy the requirements; simulates and analyses architectural solutions; makes decisions to build or buy the necessary equipment; and designs, develops, tests, and integrates new products to fill gaps in existing product lines.

They can be involved in circuit development and debugging, FPGA design and CAD using a range of software tools. Note: Some competences and objectives of The European Networking Engineer, could be common to other training courses professional profiles.

Il tecnico europeo del networking lavora con il cliente per determinare i requisiti delle apparecchiature e servizi (come mobilità, Telefonia su IP, Video conferenza, Fax su IP, sicurezza); sviluppa architetture network che soddisfino i requisiti; simula ed analizza soluzioni architettoniche; decide di costruire o comprare le apparecchiature necessarie e progetta, sviluppa, esegue test, integra nuovi prodotti per colmare i vuoti nelle linee di produzione. Possono essere coinvolti nello sviluppo e debugging di un circuito, nello sviluppo FPGA e CAD utilizzando una varietà di strumenti software.

Nota: alcune competenze ed obiettivi del tecnico europeo del networking potranno essere comuni a più profili professionali.

EUROPEAN CURRICULUM VITAE FORMAT

Attachment C. V. (from, www.cedefop.eu.int/transparency
www.europa.eu.int/comm/education/index_it.html
www.eurescv-search.com)

PERSONAL INFORMATION

Name [Last, first and middle names]
Address [Street number, street or place, postcode, city, country]
Phone number
Fax number
E-mail

Nationality

Date of birth [Day, month, year]

PROFESSIONAL CAREER

Period (from - to) [List separately each position held, starting from the most recent one]
Name and address of employer
Company type and field of action
Employment type
Main activities and responsibilities

EDUCATION AND TRAINING

Period (from - to) [List separately each course successfully attended,
starting from the most recent one]

Name and type of attended school/course
Major areas of study
Earned qualification
National classification level (if relevant)

ATTACHMENTS

[If necessary, enumerate the attachments to the C.V.]

PERSONAL SKILLS

Acquired but not necessarily certified

MOTHER TONGUE [Specify the mother-tongue]

LANGUAGE SKILLS [Specify the language]

Writing [Specify the level: excellent, good, elementary]

Reading [Specify the level: excellent, good, elementary]

Speaking [Specify the level: excellent, good, elementary]

RELATIONAL / TEAMWORK SKILLS [Describe acquired skills and specify how they have been acquired.]

Ability in working with other people,
in a multicultural environment;
communicative and team working skills.

ORGANIZATION SKILLS [Describe acquired skills and specify how they have been acquired.]

Ability in coordinating and managing
teams, projects, budgets,
in a work environment as well as
at home or in volunteering activities.

TECHNICAL SKILLS [Describe acquired skills and specify how they have been acquired.]

Ability in using computers, machinery,
specific tools, etc..

ART SKILLS [Describe acquired skills and specify how they have been acquired.]

Music, writing, drawing, etc...

OTHER SKILLS [Describe acquired skills and specify how they have been acquired.]

Skills different than those
previously listed.

DRIVING LICENCES

FURTHER INFORMATION [Insert here any other relevant information, such as references, etc...]

Earned qualification

National classification level (if relevant)