



SAN Experts Facility  
Europe

SANEF

SAN Experts Facility GmbH  
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# SAN Experts Facility

your strategic key alliance  
and High Performance Networking  
competence center



**Project overview for the SAN and  
High Speed Networking community**

[www.SANtrainingcenter.com](http://www.SANtrainingcenter.com)

# SAN Experts Facility - Contact Us

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# SANEF Mission

- ◆ **Promotion and encourage** the utilization and implementation of High Performance Networking technologies and new standards for local area network (LAN), metropolitan area network (MAN), wide area network (WAN), storage area networks (SAN), and network attached storage (NAS) in the EMEA regions.
- ◆ **Founding of a private held high tech „Campus** (Superluminal Networks Academy, AG)“ for 300-500 students/year
- ◆ **Founding of a private held „research & development** (Superluminal Research Institute, AG)“ institution for high performance technologies

# Why do we need High Performance Networking technologies ?

The **main factor driving** high speed networking technologies is the increase in **Internet and intranet traffic**. A number of factors contribute to the explosive growth in both Internet and intranet traffic:

- ◆ An increase in the number of network connections
- ◆ An increase in the connection speed of each end-station (e.g., 10 Mbps users moving to 100Mbps, analog 56k users moving to DSL and cable modems)
- ◆ An increase in the deployment of bandwidth-intensive applications such as high-quality video
- ◆ An increase in Web hosting and application hosting traffic

By extrapolating these trends, it is clear that the **bandwidth demands** of these applications will require an increase in bandwidth over the **next 12 to 18** months.

# Some Market researches

- ◆ Data Storage: the solution is a SAN, say Nick Allen from Gartner Group, Stamford, Connecticut.
- ◆ With a central consolidated SAN, IT-manager can handle up to seven time more data as with todays storage management architectures, explain IDC.
- ◆ A working SAN is a value add for user, say Jacques Daux, manufacturing manager at Airbus Industry.
- ◆ By the year 2002, IBM estimates that 70% of all medium and large-sized customers will implement SANs to better manage and share the volumes of data created as they transform themselves into e-businesses.
- ◆ EMF predict that the worldwide Fibre Channel market will be an astonishing US\$ 32bn by the year 2003, with least 30 % of that revenue emanating from Europe.
- ◆ Data grows up to 300% at year, say Norbert Deutsche, META Group Germany.

# High Speed Markets

Several of the below listed industries generate yearly **200%-300%** growing data that contain critical company information (Forester Research).

- ◆ **Entertainment industry** (film, video, broadcast, internet)
- ◆ **Prepress industry** (Computer to Plate)
- ◆ **Medical industry** (diagnostic imaging)
- ◆ **Geo Sciences industry** (Seismic Data Acquisition, interpretation and visualization)
- ◆ **Geo Spatial industry** (remote sensing, processing and visualization)
- ◆ **Designing and manufacturing** of complete space systems, aircraft, helicopters, satellites, missile systems, radars, power generation and transportation systems
- ◆ **Financial, banking, communication and government industry** (disaster recovery, backup, e-commerce, online banking)



# SAN resolve performance issues, but...

What is a SAN? An up to 1000 time faster LAN!

Storage Area Networks (SANs) and other high performance networking technologies offer the channel a **golden opportunity** for sales, consultancy and service revenue in the Visual Computing and Enterprise arena. For the foreseeable future, these solutions will require both consulting and face-to-face selling. But a **lack of knowledge** at the reseller level and the row over SAN standards is preventing VARs from reaping the full rewards, according to industry watchers. Capacity planning, **understanding the customer's real business needs** and how the current resources can be migrated to the future growth the customer can expect are just some of the issues that the reseller can add value to.

# How mature are high speed networking technologies ?

- ◆ Fibre Channel: 2Gbit/s
  - already ANSI standard approval in 1994 (ANSI T11X3.230-1994)
- ◆ GSN-ST: 6.4Gbit/s
  - ANSI approval standard in 1998 (ANSI T11 and T11.1)
  - Based on the 1980 ANSI approval standard HiPPI 800.
  - First demonstration at CERN October 13, 1998
- ◆ 10 Gigabit Ethernet: 10Gbit/s
  - IEEE standard approval expected in 2001, with a full ratification of this standard expected by the spring of 2002
- ◆ InfiniBand: 30Gbit/s
  - InfiniBand 1.0 final specification expected this year



# About Us



# Introduction to SANEF

The Lake Garda **SAN Experts Facility (SANEF)** is the only place in the **EMEA** regions offering the skill needs to put high performance networking technologies to work for your company. Designing, planning and specifying a corporate information architecture is a complex and often high profile project. Reseller can benefit in SAN market but have perhaps thought they didn't have the necessary expertise to compete in this market, especially against the big direct boys.

Thus, the SANEF **recognizes and addresses the inefficiencies**. The principals are attorneys with **severals SAN and NAS vendors** with experience in the hardware and software industry.

# SANEF Management Team & Trainer

- ◆ Renato Guazzo      Director, Partner Program Manager
  - 15 years experience in distributing and marketing of IT Hw/Sw
  - Director of Operations at SINTESI - Solutions Engineering Group, a 100% Fibre Channel VAD company
- ◆ Hermann Strass      Industrial Consultant, PR Manager
  - More than 30 years of experience in computer, electronics, interface and peripheral technology
  - For more than 15 years involved in national and international standardisation of mass storage devices, systems and interfaces.
  - Technical Co-ordinator for VITA in Europe
  - Member of the IEEE Computer Society and an active member or chairman of national and international standardisation committees
  - Independent consultant and analyst for new technologies

# SANEF Management Team & Trainer

- ◆ Jarno Puff                      Industrial Consultant
  - 5 years experience in IT networking (Mac and NT)
  - Good experience in the Visual Computing Arena
  - SAN Industrial Consultant of SINTESI - Solutions Engineering Group, a 100% Fibre Channel VAD company
  
- ◆ Massimo Roldo                Industrial Consultant
  - 7 years experience in IT (Mac, NT, Linux, Unix)
  - Excellent knowledge in GIS, CAD and 3D
  - Unix and Linux System Administrator
  - SAN Industrial Consultant of SINTESI - Solutions Engineering Group, a 100% Fibre Channel VAD company

# SANEF - Who Are We ?

- ◆ SANEF is a community, like FCIA, SNIA, RAB to set up a **reference point and competence center** for new High Performance Networking technologies and standards in EMEA.
- ◆ SANEF represents a **new approach** to consulting/education and is based on the collective research, knowledge, and experience of the industry's leader
- ◆ The SANEF was organized to **promote** the high performance networking technologies
- ◆ This industry-wide effort is committed to providing customers with **open and interoperable** SAN and NAS solutions

# SANEF - Who Are We ?

- ◆ SANEF is committed to bring vendor-neutral SAN education to the IT industry europewide through **SAN Training Center**, a SANEF division
- ◆ The SANEF will open for computer manufacturers and equipment makers to participate under **equivalent conditions**
- ◆ **SANEF Academy** is the „Campus“ pilot project and is committed to provide high skilled new employees to vendors and the high performance networking community



# What we do - today

- ◆ Promotion of high performance networking technologies in Europe, Middle East and Africa (EMEA) through conferences, workshops, events and seminars
- ◆ Providing customers with open and interoperable SAN and NAS solutions through **MySAN**, a SANEF initiative
- ◆ Vendor-neutral **outsourcing programs** for education, consulting, concept, and design of high speed networks to the IT industry through **SAN Training Center**, a SANEF division
- ◆ Deployment, realisation and distribution of high speed networks through **SINTESI - Solutions Engineering Group**, a SANEF company ([www.sintesi-group.com](http://www.sintesi-group.com))

# What we will do tomorrow

- ◆ Establishing the world first High Performance Networking „Campus“ to provide IT companies with high skilled new employees (**Superluminal Networks Academy, AG**)
- ◆ Establishing a Research & Development institution for high performance Hw/Sw technologies (**Superluminal Research Institute, AG**)
- ◆ Open our services to the **Asia/Pacific** area

# Superluminal Networks Academy AG

- ◆ Campus for High Performance Networking technologies
- ◆ Private University for 300-500 students per year
  - Education programs will be funded by EU commission
- ◆ Technology Center for Startup companies
- ◆ Conferences, Meeting, Event, Seminar and Workshop Center for new technologies
- ◆ Use Laboratories of Superluminal Research

# Superluminal Research Institute AG

- ◆ Research & Development of SAN Hw/Sw for Departments of Defence (DoD), Gouvernement and Scientific institutions
- ◆ Works close to CERN and Los Alamos National Laboratory
- ◆ Betatesting services for manufacturers
- ◆ Application and Hw Interoperability test center
- ◆ Linux oriented (will hold the Verona Linux User Group)

# Why SANEF ?

- ◆ Fibre Channel, GSN, 10GigE, InfiniBand are all highest bandwidth and low latency interconnect standards. This technologies are ideal wherever organizations require timely movement of large amounts of information including scientific and technical computing, HDTV, data mining, transaction processing, disaster recovery, video and film archiving, and storage management.
- ◆ How is possible to interconnect this standards?
- ◆ When use this standards?
- ◆ How implement this standards for my business growth ?
- ◆ To meet this requests a vendor-neutral organisation with good knowledge in all segments is required

## SANEF - your strategic key alliance

- ◆ The benefits for the IT market in adopting this kind of **open, innovative and industry-focused organisation** model are many. SANEF delivers a unique solution that benefits a wide range of industry participants from components vendors and system suppliers to storage and networking firms. Ultimately, **end user receive the greatest benefit** through the collective research, knowledge, and experience of the industry's leader



# SANEF certifications

- ◆ First Tivoli EMEA SANergy trainer
- ◆ JNI beta tester certification in process
- ◆ GSN-ST Educational Membership in process

## Actually by SINTESI registred domains

- ◆ Sintesi-group.com
- ◆ SANtrainingcenter.com/org/net
- ◆ SANshop.com/org/net
- ◆ SANindustry.com/org/net
- ◆ SANhotline.com/org/net
- ◆ SANportal.net
- ◆ SANcommunity.com/org/net
- ◆ MySAN.com
- ◆ Superluminalnetworks.com
- ◆ Superluminalresearch.org
- ◆ Infiniband-europe.com/org
- ◆ A-dsp.com
- ◆ Gfscommunity.org

# The SANEF Facility





# Where Are We

- ◆ SANEF main office is located at the Lake Garda within the beauty and tranquillity of Peschiera del Garda (red point on the map), Italy. This is a picturesque tourist resort and industrial centre at the far southern end of the Riviera degli Olivi, where the river Mincio runs into the plain. It was settled in prehistoric times and inhabited by the Romans who called it 'Arilica'. It then became an important fortress of the Republic of Venice, the 'Serenissima', from the first half of the sixteenth century.
- ◆ The office have an excellent geographicaly location because it is based between two international airports (Verona - Catullo: 25km and Brescia - Montechiari: 40km). The most important highway cross point of Italy is also Verona. Good train connection are also available
- ◆ Hotels, campings and restaurants are loacted around the training facility. A beach with swimming, jogging and sailing opportunities is only 300m far away.





# Where Are We ? detailed location



SANEF main office  
location (red point)

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Via G. Leopardi 16  
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Italy





# Location - Verona & Lake Garda

- ◆ This business will be operated at Peschiera d.G. (VR). This location is desirable because:
  - Verona is the central point of EMEA with good flight connections (UK to Italy and back: \$130)
  - Verona is very close to Milano, the place of the IT decision maker in Italy (70% of the IT business is in the north Italy)
  - Verona is the most important highway and train cross point in Italy
  - The rent is below market
  - The building is structurally compatible for our use
  - The land is cheap for wide areas
  - Possibility of expansion in the area
  - The climaty close to the Lake is excellent
  - The location is convenient for our freight companies, suppliers, clients and employees

# SANEF - details

## ◆ Smoking/Dress Code

- Smoking is not permitted in the building. During breaks, students may smoke outside. Casual dress is acceptable while attending classes at the Center.
- Coffee, tea, & hot chocolate, soft drinks, juices, milk & snacks are available through vending machines. There are some cafe and restaurants available for breakfast, lunch and dinner. The food is excellent, and so are the prices! Alcoholic beverages are not permitted on the premises.

## ◆ Equipment

- SAN components and servers are placed on mobile tables, so students are able to build the own tailored SAN in the middle of the practical room, or components can be easy moved to the presentation room for product training. Some LCD/DLP color projectors and whiteboards are available for presentations and training.

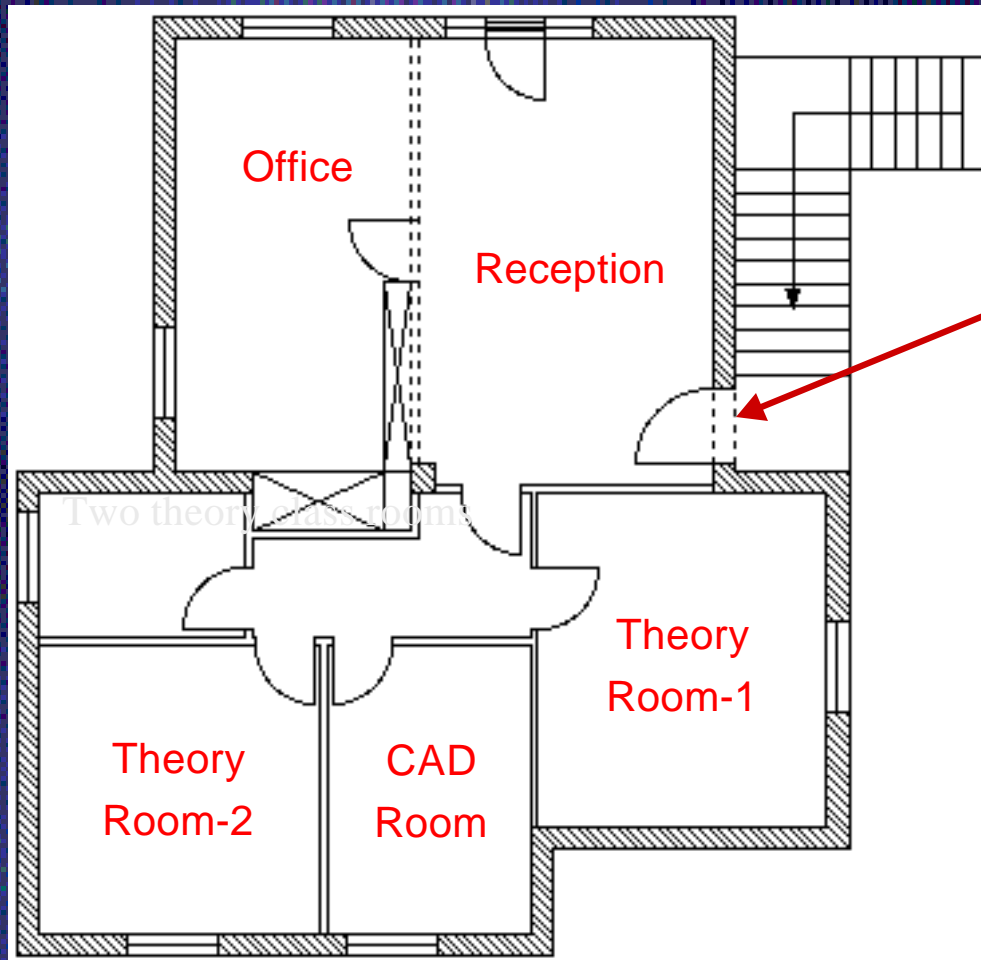
# SANEF - details

## ◆ Rooms

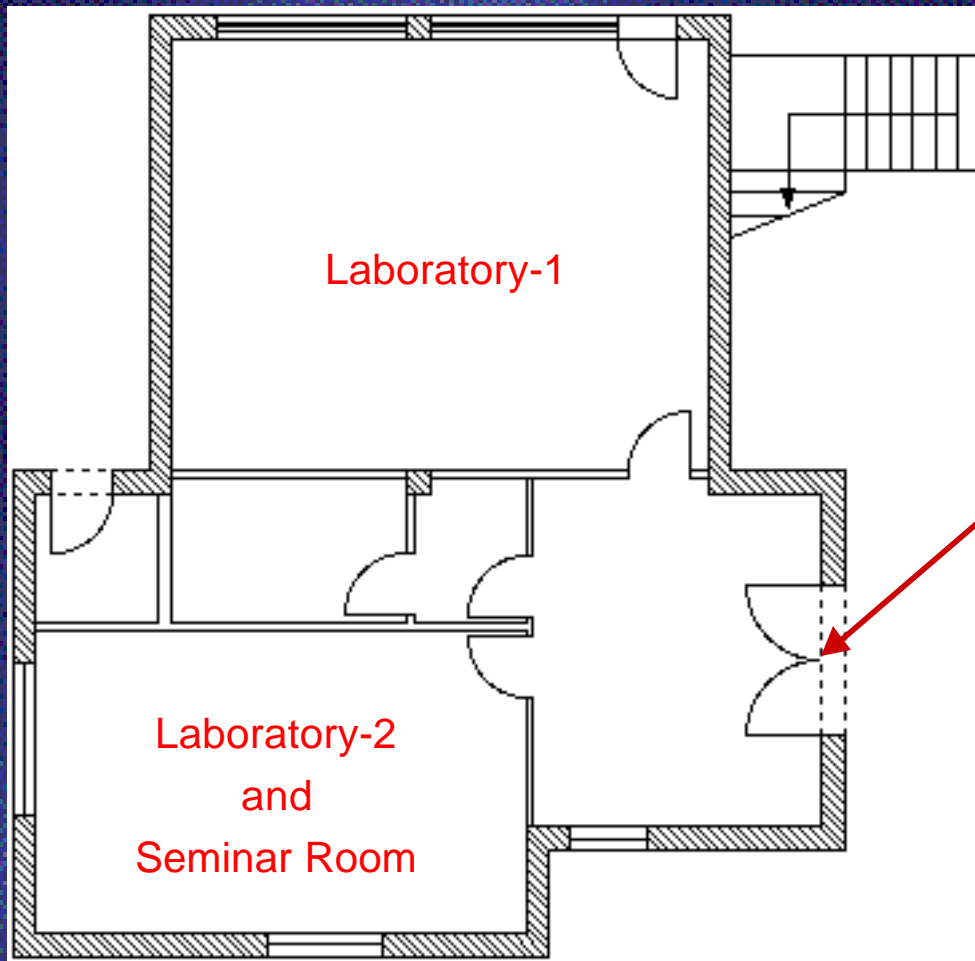
- The training facility is based on a villa with two theory class rooms (15sqm/18sqm), one practical class room (40sqm) and one practical/seminar room (24sqm). Each room can be filled with up to 5-15 students. A reception and office are also available for meetings, consulting and other business activities.



# SANEF Theory rooms location



# SANEF Laboratories location

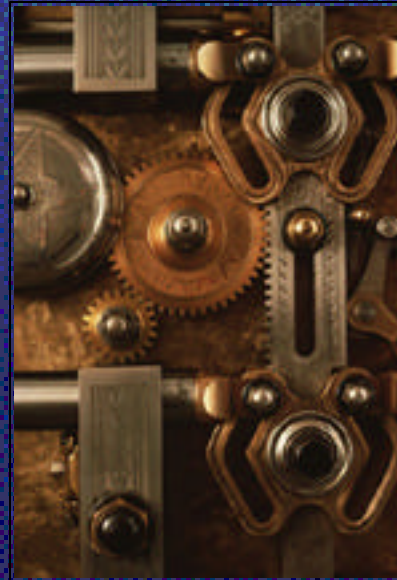


# SANEF - Lab equipment

- ◆ Server: Solaris, AIX, Irix, HP-UX, Tru64
- ◆ Server: Linux Intel and Alpha
- ◆ Server: Windows NT and 2000
- ◆ Storage: JBOD, RAID, Tape Libraries
- ◆ Network: Hub, Switches, HBA, Cable, Connectors
- ◆ Software: Management, file and volume sharing
  
- ◆ Presentation: LCD color projector, whiteboards, DVD and VCR player
  
- ◆ P.S. All equipment will be covered by an insurance!



# Activities and Services



# What the Activities Involve

The SANEF organisation has some main activities:

- ◆ **Promotion** of High Performance Networking technologies and standards in the EMEA regions through meetings, conferences, seminars and workshops
- ◆ Promotion of the **Scheduled Transfer** specification (ST)
- ◆ Help SANEF partner to **deploy** the right marketing activities and customer targets
- ◆ **Pre-sales support** for key sales engagements across EMEA
- ◆ **Verify** interoperability and performance in a multi-vendor and multi-technology environment with equipment available in the Lab
- ◆ **Beta Testing** with detailed feedbacks
- ◆ Vendor-neutral **product evaluations**

# SANEF Services

The SANEF organisation offer some services in EMEA in **four languages** (italian, german, spanish and english):

- ◆ **Outsourcing** programs to provide education, technical training, and support for Business Partners across EMEA
- ◆ **Product presentation**
- ◆ Vendor-neutral **project comparisons** and analysis
- ◆ Work with visiting customers on **testing SAN configurations** for interoperability, proof-of-concepts with equipment available in the Lab
- ◆ **Translating Service** for white paper, press releases and datasheets in italian and german languages
- ◆ Provide **customer consulting, education and training** services with equipment available in the Lab
- ◆ **Speaker** on key seminars, briefings, events and conferences

# Objectives of SANEF

The SANEF organisation has five main objectives:

- ◆ Get **experience** with High Performance Networks technologies
- ◆ Get **Lab equipment** (Hw/Sw) on loan from the major players
- ◆ Get **Test and Measurement equipment** for verifying operability
- ◆ Get close **partnerships** with Universities and research institutions
  
- ◆ SANEF Academy will provide IT students with High Performance Networking courses through private funds (Sponsoring Membership)

# SANEF Partner



# Actually SANEF Partner

- ◆ ATTO Technologies [www.attotech.com](http://www.attotech.com) (Michelle Seifert)
  - ◆ Adva Optical (SAN Ltd.) [www.san.com](http://www.san.com) (Edgar Gränzer)
  - ◆ Genroco [www.genroco.com](http://www.genroco.com) (Alberto Guglielmi)
  - ◆ Hall-Mark [www.pcd.it](http://www.pcd.it) (Mario Sodano)
  - ◆ High Velocity Systems [www.fasthub.com](http://www.fasthub.com) (Margery Murphy)
  - ◆ Inrange Technologies [www.inrange.de](http://www.inrange.de) (Peter Weil)
  - ◆ JNI [www.jni.com](http://www.jni.com) (Dietmar Schnabel)
  - ◆ McDATA [www.mcddata.com](http://www.mcddata.com) (Georg Bartz)
  - ◆ SINTESI - SEG [www.sintesi-group.com](http://www.sintesi-group.com) (Renato Guazzo)
  - ◆ Tivoli [www.tivoli.com](http://www.tivoli.com) (Ivo Dellagiacoma)
- 
- ◆ Begin relationship with CERN for High Performance Networking technologies [www.cern.ch/hsi/](http://www.cern.ch/hsi/)
  - ◆ SANEF actually are in touch with all Fibre Channel vendors



# SANEF Partner Levels

- ◆ Premier Industry Partner
  - Open Source Organisations
  - Server Vendors
  - Enterprise Storage Vendors
  - European and world wide distributors
- ◆ Gold Level Partner
  - Associations
  - Education organisations

# SANEF Partner Levels

- ◆ Silver Level Partner
  - Hub, Switch Vendors
  - HBA Vendors
  - Software Vendors
  - Storage Vendors
  - Bridges
  - Cabel & Connector Vendors
- ◆ Participating Partner
  - Application Vendors
  - Third party manufacturer

# Conditions for Participation

- ◆ The SANEF management attends that equipment to be tested in the SANEF Lab is as good in a working condition as can be expected from well tested Beta equipment and software
- ◆ It is expected that equipment tested in the SANEF Lab environment will stay for a reasonable time in the Lab for compatibility tests with other vendors and technologies products
- ◆ Computer systems and equipment not available at SANEF Lab should be made available to the Lab by the concerned manufacturer
- ◆ Test results can be kept confidential or made available in the SANEF Web entrees as wished by the concerned manufacturer(s)
- ◆ Participating in the Lab can be by an appointment for test activities
- ◆ There will be no charges for participation

# How to become a Member

- ◆ Companies wishing to join the SANEF Organisation should complete the membership agreement and return to the SANEF office. Upon receipt of loaned products and the necessary documents mentioned above, the membership application process will be initiated.
- ◆ There will be no charges for participation
- ◆ Sponsoring Membership
  - The SANEF Organisation has receive many requests from industry members to join as a Sponsoring Member. At this time three Sponsoring Member positions are available
  - Sponsoring Memberships help SANEF Academy to provide some IT students with a one year High Performance Networking Technologies theoretical and hands-on courses. This students will be potential new high skilled employees

# SANEF

help to you build new  
business opportunities



