SERVICES

Product Training – Course Program

Consulting ▸ Designing ▸ Implementing ▸ Operating ▸ **KEYMILE Akademy**

DZS™
KEYMILE

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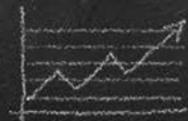
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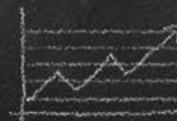**KEYMILE GmbH**

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Germany

Contact KEYMILE Training
E-mail: training@keymile.com
Phone: +49 511 6747-0

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Welcome

KEYMILE starts with an enhanced approach into the year 2019. There are various new options and a remarkably enlarged product portfolio being now a member of the *DASAN Zhone Solutions* (DZS) enterprise. And of course, KEYMILE's intention is still to assist you and provide solutions for progress in your business and to master all related challenges.

Alongside, the KEYMILE Akademy delivers training services to support you with comprehensive information about all supported product lines and the related technologies. The focus of our training courses is always on specific requirements of the products' utilization in your projects. Participants will obtain detail that brings them up to speed while performing commissioning, operation and maintenance.

At the KEYMILE Akademy we see hundreds of students every year who appreciate the experience of learning on one of our technology and product courses. One student recently commented, "Enjoyed the structured exercises. Helps drive home the theory", while another said "One of the best instructors I have come across. Teaches at a very understandable level."

So please take a few minutes to browse through the pages of this brochure. You should find all you need to know about our range of courses and how to apply.

If you have special course requirements we will be delighted to accommodate these. Please speak to your KEYMILE sales contact.

We really would be delighted to welcome you to one of our courses at the KEYMILE Akademy − where we will help you improving your professionality and expertise in the telecoms world.

Best regards, your KEYMILE Training Team

Contact KEYMILE Training

E-mail: training@keymile.com

Phone: +49 511 6747-0
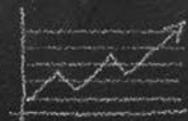
Overview

We are pleased to offer by request a full range of standard courses across the MileGate MSAN and MileGate GPON-OLT product lines, together with the Network Management System, UNEM.

The MileGate platforms are perfectly suited to the Broadband Services (BBS) sector. They provide highly flexible solutions for optical networks (active and passive) as well as copper networks.

If none of the Standard courses are suitable we will work with you to design a special course for your particular requirements. We can also provide basic technology courses on request. Get in touch with us using one of the contact details below to arrange a discussion.

English and German continue to be used as the standard languages in our courses. Nevertheless, our team of instructors regularly train students from many different countries, and we are usually able to deliver courses in the preferred language of the customer. Please make clear which language you would like the instructor to use for your dedicated course, and we will do our best to accommodate your needs.

It's always a pleasure to welcome students to our custom-built training centres in Hannover, Germany or Hertford, Great Britain.

As an alternative we will be pleased to deliver courses at your own premises.

Contact KEYMILE Training

E-mail: training@keymile.com

Phone: +49 511 6747-0

Course Index

MileGate MSAN Courses

Course Title	Days	Reference	Page
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MileGate MSAN Ethernet and DSL	1	A32A2551	14
MileGate MSAN TDM Essentials	1	37999508	15
MileGate MSAN Voice Gateways	1	A32A2548	16
MileGate MSAN SDH Applications	1	37999516	17
MileGate MSAN Circuit Emulation Services	1	37948008	18

MileGate GPON-OLT Courses

Course Title	Days	Reference	Page
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MileGate GPON-OLT Services Training	1	37995170	20
MileGate GPON-OLT CLI Configuration	1	37995189	21

UNEM Courses

Course Title	Days	Reference	Page
UNEM BP (Basic Package) Operations	2	A28A1733	22
UNEM Administration	1	A29A9675	23
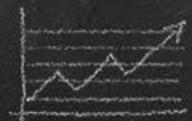
Technology Courses

Most of our product courses include a revision and overview of the relevant technologies.

However, we recognize that you may consider a dedicated technology course is more appropriate for your needs.

On request we will consider designing and delivering a pure technology course according to your request.

We are able to offer courses on the following topics:

- PCM (Pulse Code Modulation)
- PDH (Plesiochronous Digital Hierarchy)
- CAS (Channel Associated Signalling)
- ISDN (Integrated Services Digital Network)
- SDH (Synchronous Digital Hierarchy)
- DSL transmission and vectoring (Digital Subscriber Line)
- Ethernet and VLAN Switching (Virtual Local Area Network)
- IP Networking (Internet Protocol)
- Circuit Emulation

Please contact your KEYMILE sales representative to arrange a discussion − or contact us directly.

Courses At A Glance

The following diagrams show which courses should be attended before others. Please consider this when deciding on which courses to attend.

MileGate MSAN Courses

MileGate MSAN Fundamentals (2 Days)

Ethernet over DSL/ Fibre (1 Day)

TDM Essentials (1 Day)

TDM Applications (1 Day)

Voice Gateways (1 Day)

SDH Applications (1 Day)

Circuit Emulation Services (1 Day)

MileGate GPON-OLT Courses

MileGate GPON-OLT Fundamentals (2 Days)

Services Training (1 Day)

CLI Configuration (1 Day)

UNEM Courses

UNEM Basic Package (2 Days)

UNEM Administration (1 Day)
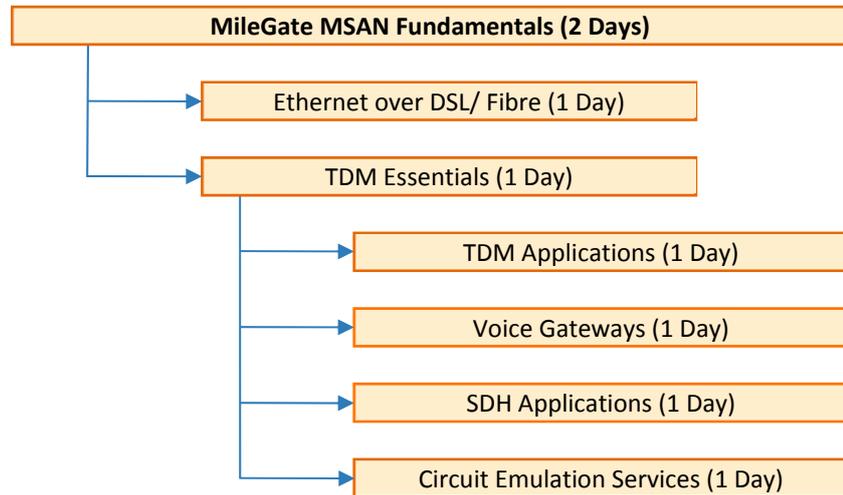
Course Finder

Please find *MileGate GPON-OLT* courses on pages 19 to 21.
Please find *UNEM* courses on pages 22 to 24.

Use this chart to identify the appropriate course for all current *MileGate* plug-in units.

| Plug-in Unit	MileGate Course	Function	Page
CEOP1	MileGate MSAN Circuit Emulation Services	Circuit Emulation 8 port + Transport 8 x E1	18
COGE3	MileGate MSAN Fundamentals	Control, 10 GbE	13
COGE4	MileGate MSAN Fundamentals	Control, 10/40 GbE	13
COGE6	MileGate MSAN Fundamentals	Control, 1 GbE	13
IPSM4	MileGate MSAN Voice Gateways	MEGACO Gateway	16
IPSS4	MileGate MSAN Voice Gateways	SIP Gateway	16
LOMI8	MileGate MSAN TDM Essentials	Transport 8 x E1	15
PCOM4	MileGate MSAN Voice Gateways	V5.x Gateway	16
STIM1	MileGate MSAN TDM Essentials	Transport 8 x SHDSL	15
SUAD5	MileGate MSAN Fundamentals	64 port ADSL2plus over POTS	13
SUE12	MileGate MSAN Ethernet and DSL	12 port 100/1000BaseT SFP, 10GbE Backplane	14
SUE13	MileGate MSAN Ethernet and DSL	24 port 1000Base-BX10 optical, CATV Overlay, 10GbE Backplane	14
SUE16	MileGate MSAN Ethernet and DSL	24 port 100/1000 cSFP Optical Ethernet, 10GbE Backplane	14
SUGP1	MileGate MSAN Ethernet and DSL	8 port GPON, 1:64 splitting factor, 1 or 10GbE Backplane	14
SUIQ1	MileGate MSAN TDM Essentials	16 port ISDN (2B1Q)	15
SUIT1	MileGate MSAN TDM Essentials	16 port ISDN (4B3T)	15
SUPM4/5	MileGate MSAN TDM Essentials	48/64 port PSTN	15
SUPC4/5	MileGate MSAN TDM Essentials	48/64 port PSTN with integrated Splitter	15
SUSE1	MileGate MSAN Ethernet and DSL	32 port SHDSL.bis (EFM)	14
SUV11	MileGate MSAN Ethernet and DSL	48 port VDSL2 over POTS, 10GbE Backplane	14
SUV31/32	MileGate MSAN Ethernet and DSL	96 Port VDSL2 over POTS/ISDN, Vectoring, 10 GbE	14
SUVM6	MileGate MSAN Ethernet and DSL	48 port VDSL2 over ISDN with MELT	14
SYN4M	MileGate MSAN SDH Applications	Transport 4 x STM-1/4 and 4 x 10/100/1000 Ethernet-over-SDH	17
VECT1	MileGate MSAN Ethernet and DSL	System Level Vectoring, up to 192 VDSL2 lines,	14

Use this chart to identify the appropriate course for *MileGate MSAN CPEs*.

Plug-in Unit	Course	Function	Page
LineRunner DTM	TDM Data Applications/ TDM Applications	UMUX/XMC20 CPE for E1 and modular X.21, V.xx	15
LineRunner DTR	Ethernet and DSL	MileGate CPE for 4 x SHDSL.bis	14
LineRunner DTU	TDM Data Applications/ TDM Applications	UMUX/XMC20 CPE for E1 and X.21, V.xx	15
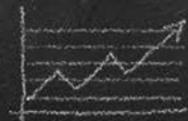
Dedicated and Customised Courses

The KEYMILE Akademy offers Dedicated and Customised Courses.
Dedicated courses are just for your company. You decide where the course takes place, what the course content is, and how many participants will attend. You can even specify if there is to be an end-of-course test, or any other special arrangements.

Customised Course Content

If you would like to specify or customise the content of your dedicated course, we will discuss with you how we can best modify the Standard course content in order to suit your particular needs.

Location

Courses can be delivered either at the KEYMILE Training Centre in Hannover Germany, Hertford Great Britain, or your own premises.

Language

The standard languages of the spoken word used by our instructors are German and English. Please contact us for your specific requirements.

Slides and Course Notes are prepared in English. For an agreed cost we will consider translating the courseware into another language.

Making an Enquiry

For all dedicated and customised courses enquiries:
Firstly, contact your own KEYMILE Account Team with your requirements.
If you are unsure who to speak with, contact us and we will put you in touch with a member of your sales account team.

After discussions, we will put together a course proposal, based on your specific requirements. This will include details of the course content, pricing and dates.

Contact KEYMILE Training

E-mail: training@keymile.com

Phone: +49 511 6747-234, Fax: +49 511 6747-141

Course Descriptions

Detailed Course Descriptions now follow for all available courses in the following product families:

- MileGate MSAN = VLAN Bridging according to TR101 (COGE3/4/6)
- MileGate GPON-OLT = VLAN Bridging based on GPON technology
- UNEM

Please note carefully the specific pre-requisites for students intending to participate in the course. Also note the general comments regarding pre-requisites below.

Pre-requisites for Participants

It is important that all those attending a KEYMILE course make the most of their time with us. Most courses are intensive and without suitable preparation a participant may find it difficult to obtain the maximum benefit from the training.

Sensible preparation for course attendance would include reading articles (both printed and on-line) that discuss the technologies used in the products to be studied on the course. Contact the Training Administrator if you need advice on suggested reading.

Some courses define a pre-requisite as successful attendance on another product course. Where possible this should be adhered to. However, this would not be required for a participant who has recent extensive working experience of the product.

The course descriptions above have detailed specific pre-requisites for attendance. However, the following points give a general indication of what is expected. Participants who come without the required knowledge and experience will NOT be refused admission to the course. However, in such a case KEYMILE will not respond to claims that a participant received inadequate benefit from course attendance.

- Basic telecommunication knowledge in the Telecommunications Access area
- Experienced with using PCs and Microsoft Windows.
- Conversational and Technical competence in use of the language in which the course is to be taught, both spoken and written.
- In some cases, the successful completion of another KEYMILE course. See individual course descriptions for details.

Course Descriptions

MileGate MSAN Fundamentals

Duration: 2 days

Training ID: A31A1785

Overview:

The MileGate 2510 platform is a Multi-Service Access Node (MSAN) with extensive application options covering functionality in Gigabit Ethernet switching and transmission, DSLAM services, Fibre-To-The-Home and Voice over IP, as well as PDH/SDH transmission and an extensive range of voice and data interfaces. It is therefore essential to gain the knowledge of its features, functions and capabilities, and learn the skills required to carry out commissioning and in-service maintenance in order to successfully implement into a live network.

This course provides all the necessary information and practical training required by commissioning and maintenance teams in order that they can most effectively support the common functions of the MileGate MSAN platform.

It covers aspects of installation, power, redundancy, shelf and backplane traffic capacities. Protocols and technologies are introduced briefly, being explained in connection to their relevance to the operation of the platform.

After completing the course participants will have the fundamental knowledge and confidence to install, commission, and maintain the MileGate in a managed network.

KEY Topics:

- NGN Network Architecture - Tech Overview
- MileGate 2510 Subrack – Hardware and Features
- Overview of Interface Units and Applications
- Basics of Network Element Management using the MCST local craft terminal
- Configuration Principles
- Platform Commissioning
- COGE3/4/6 Unit Features (Control and GbE Network)
- Practical Work
- Related Fault-finding and Trouble-shooting
- Product User Guides
- One of the key Data units in the MileGate MSAN portfolio will also be covered in detail (ask for more details)

Pre-requisites:

- Basic Windows knowledge / PC skills
- Basic knowledge of Telephony and Data and IP communications
- Some knowledge of NGN and PDH/SDH technologies would be an advantage

MileGate MSAN Ethernet and DSL

Duration: 1 day

Training ID: A32A2551

Overview:

This course continues on from the MileGate MSAN Fundamentals course, and focuses on the platform's additional capabilities in delivering Ethernet to the customer.

The course covers an introduction to the technologies, then looks at the features of the relevant plug-in units, and how to carry out configuration, monitoring and testing functions.

Topics covered in detail include VDSL2, G.SHDSL and Optical Ethernet.

The course is designed for engineers and planners who have an interest in the scope and capabilities of the MileGate MSAN platform in carrying Ethernet services to the customer over various copper and optical technologies, and wish to gain the skills to successfully carry out commissioning and maintenance.

KEY Topics:

- Introduction to VDSL2
- SUVx Unit Features (VDSL2)
- SUVx Configuration, Monitoring and Testing
- Introduction to Ethernet Access
- SUExy Unit Features (Optical and Electrical Ethernet)
- SUExy Configuration, Monitoring and Testing
- Introduction to G.SHDSL
- SUSE1 Unit Features (G.SHDSL)
- SUSE1 Configuration, Monitoring and Testing
- LineRunner DTR CPE Unit Features (G.SHDSL)
- LineRunner DTR Configuration, Monitoring and Testing
- Practical Work
- Related Fault-finding and Trouble-shooting

Pre-requisites:

- Successful completion of MileGate MSAN Fundamentals course

MileGate MSAN TDM Essentials

Duration: 1 day

Training ID: 37999508

Overview:

This course provides an introduction to the essential parts of the MileGate MSAN TDM functionality. It includes an overview of TDM, PCM and CAS principles.

The course continues with an introduction to a number of TDM-based units which support these technologies, LOMI8, SUPM4/5, SUPC4/5 and SUIQ1, SUIT1 units. Also covered are the STIM1 unit and its associated desktop device LineRunner DTM.

This course will provide students with a comprehensive practical introduction to working with these units - including areas of commissioning, monitoring, testing and fault-finding within the TDM areas. This includes using MCST to create cross-connections and also how to design and apply synchronisation.

It is designed for all those who require a technical introduction to TDM on the MileGate MSAN. This includes Installation and Commissioning engineers, Operations and Maintenance staff, Support engineers and Planners.

KEY Topics:

- Introduction to Time Division Multiplexing (TDM) and Channel Associated Signalling (CAS)
- LOMI8 Unit (2 Mbps, G.703/G.704)
- TDM Cross-connections
- TDM Synchronisation
- Introduction to Pulse Code Modulation (G.711)
- SUPM4/5, SUPC4/5 FXS Units (POTS, PCM G.711)
- Introduction to TDM SHDSL
- STIM1 Unit (SHDSL, G.991.2) and associated desktop unit LineRunner DTM
- SUIQ1, SUIT1 Unit (ISDN Basic Rate, ETSI TS 102 080)
- Practical Work
- Related Fault-finding and Trouble-shooting

Pre-requisites:

- Successful completion of MileGate MSAN Fundamentals Course
- A basic knowledge of PDH

MileGate MSAN Voice Gateways

Duration: 1 day

Training ID: A32A2548

Overview:

This course builds on the topics covered during the MileGate MSAN TDM Essentials course. It focuses on the TDM-based and NGN Packet-based Voice gateway functionality supported on the MileGate MSAN platform.

The common signalling protocols of V5.x, MEGACO (also known as H.248) and SIP are introduced together with the relevant TDM and VoIP-based network architectures.

The MileGate MSAN units supporting these protocols are introduced: PCOMx, IPSMx and IPSSx, together with an overview of the associated subscriber interface units.

The course is designed for planners and engineers and has a high element of practical work using MCST.

KEY Topics:

- V5.x Protocols
- PCOMx Unit Features (V5.x)
- PCOMx Configuration, Monitoring and Testing
- H.248/MEGACO and SIP Protocols
- MileGate MSAN in Telephony NGN (using MEGACO)
- MileGate MSAN in Multimedia NGN (using SIP)
- IPSSx Unit Features (SIP)
- IPSSx Configuration, Monitoring and Testing
- IPSMx Unit Features (MEGACO)
- IPSMx Configuration, Monitoring and Testing
- Practical Work
- Related Fault-finding and Trouble-shooting

Pre-requisites:

- Successful completion of MileGate MSAN Fundamentals course
- Successful completion of MileGate MSAN TDM Essentials course

MileGate MSAN SDH Applications

Duration: 1 day

Training ID: 37999516

Overview:

This course builds on the topics covered during the MileGate MSAN TDM Essentials course. It focuses on the SDH transmission functions supported on the MileGate MSAN platform, including Ethernet over SDH, synchronisation over SDH

The MileGate MSAN unit supporting SDH is introduced: SYN4M.

The course is designed for planners and engineers and has a high element of practical work using MCST.

KEY Topics:

- Revision of SDH multiplexing principles and practice
- SYN4M Unit (STM-1, STM-4, EoS)
- SYN4M Configuration, Monitoring and Testing
- SDH synchronisation
- Ethernet over SDH principles
- Management Channels
- Practical Work
- Related Fault-finding and Trouble-shooting

Pre-requisites:

- Successful completion of MileGate MSAN Fundamentals course
- Successful completion of MileGate MSAN TDM Essentials course

MileGate MSAN Circuit Emulation Services

Duration: 1 day

Training ID: 37948008

Overview:

This course focuses on the technology of Circuit Emulation Services over Packet (CESoP), and its implementation on the MileGate MSAN platform.

The course provides a comprehensive introduction to the protocols, standards and vital considerations in designing a CES network.

The MileGate MSAN unit which supports this technology, CEOP1, is introduced. Students will be given practical and comprehensive instruction on working with this unit – including all areas of commissioning, monitoring, testing and fault- finding using MCST.

This course is designed for engineers and planners who have an interest in the scope and capabilities of the CES function of the MileGate MSAN platform, and wish to gain the skills to successfully commission and maintain it.

KEY Topics:

- Introduction to CESoP
- The Challenges of Packet Loss, Latency and Jitter
- Synchronisation over a PSN using Adaptive Clock Recovery
- CESoP Applications
- CEOP1 Unit features (CESoP)
- CEOP1 Configuration
  - Initial Setup
  - Pseudo-wire commissioning
  - Monitoring and Maintenance
- Practical Work
- Related Fault-finding and Trouble-shooting

Pre-requisites:

- Successful completion of MileGate MSAN Fundamentals course
- Successful completion of MileGate MSAN TDM Essentials course
- Some background knowledge or experience with CES would be an advantage

MileGate GPON-OLT Fundamentals

Duration: 2 days

Training ID: 37995197

Overview:

The MileGate GPON-OLT family provides extensive application options covering functionality in Gigabit Ethernet switching and transmission, Fibre-To-The-Home and Voice over IP. It is therefore essential to gain the knowledge of its features, functions and capabilities, and learn the skills required to carry out commissioning and in-service maintenance in order to successfully implement into a live network.

This course provides all the necessary information and practical training required by commissioning and maintenance teams in order that they can most effectively support the common functions of the MileGate GPON-OLT platform.

It covers aspects of installation, power, redundancy, shelf and backplane traffic capacities. Protocols and technologies are introduced briefly, being explained in connection to their relevance to the operation of the platform.

After completing the course participants will have the fundamental knowledge and confidence to install, commission, and maintain the MileGate GPON-OLT in a managed network.

KEY Topics:

- GPON Network Architecture – Tech. Overview
- MileGate GPON-OLT Subracks – Hardware and Features
- Overview of Interface Units and Applications
- Control/Switching Unit Features (Control and GbE Network)
- GPON Unit Features and Utilization
- Initial Configuration via CLI
- Installation of the INAS Server and GUI Client
- Basics of Network Element Management
- Configuration Principles
- Platform Commissioning
- Practical Work
- Related Fault-finding and Trouble-shooting
- Product User Guides

Pre-requisites:

- Basic Windows knowledge / PC skills
- Basic knowledge of Telephony and Data and IP communications
- Some knowledge of general database operation would be an advantage
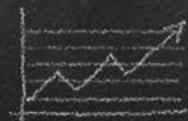
MileGate GPON-OLT Services Training

Duration: 1 day

Training ID: 37995170

Overview:

This course continues on from the MileGate GPON-OLT Fundamentals course, and focuses on the platform's additional capabilities in delivering Services to the customer.

The course covers an introduction to the relevant protocols and then looks at the configuration for desired services to the customer in detail. Remote ONT configuration is an additional topic.

The course is designed for engineers and planners who have an interest in the scope and capabilities of the MileGate GPON-OLT platform in carrying Ethernet services to the customer, and wish to gain the skills to successfully carry out commissioning and maintenance.

KEY Topics:

- INAS Configuration in detail
- Configuration of Multiple Services with regard to GPON instances
- Configuration of ONT Management Channel
- Remote Configuration of ONTs
- Practical Work
- Related Fault-finding and Trouble-shooting

Pre-requisites:

- Successful completion of MileGate GPON-OLT Fundamentals course

MileGate GPON-OLT CLI Configuration

Duration: 1 day

Training ID: 37995189

Overview:

This course builds on the topics covered during the MileGate GPON-OLT Fundamentals course. It focuses on the CLI configuration supported on the MileGate GPON-OLT platform.

The course is designed for engineers and has a high element of practical work using CLI.

KEY Topics:

- Revision of the functional structures of the MileGate GPON-OLT models
- Introduction to the CLI and differences between models
- Initial Configuration
- Backhaul Configuration
- User Services Configuration
- Management Channels
- Practical Work (based on MileGate 3510/3300 CLI)
- Related Fault-finding and Trouble-shooting

Pre-requisites:

- Successful completion of MileGate GPON-OLT Fundamentals course

UNEM Basic Package Operations

Duration: 2 days

Training ID: A28A1733

Overview:

UNEM is the Network Management System for the MileGate, UMUX and XMC20 nodes, together with other 3rd party devices. UNEM has a sophisticated architecture with multiple topology and application options. It is therefore essential to gain the knowledge of its features, functions and capabilities, and learn the skills required to commission and use it for ongoing management of a large live network.

This course provides all the necessary information required by the Operators in the Network Management team in order that they can most effectively manage the network using the UNEM NMS.

It covers aspects of building a database of NEs through creation and discovery, configuration of NEs, and performance management. The course covers all areas of fault detection and fault resolution techniques. Construction of the hierarchical network map design (Network Browser) is covered including the use of sections and foreign objects.

After completing the course students will have an understanding of the UNEM architecture and the interaction of its various components, and a working knowledge of the UNEM NMS applications.

KEY Topics:

- UNEM Architecture and Components
- Distributed Management Concept
- Windows Client operation
- NEM Desktop
- NEM Configurator layout
- Element Agents and Polling
- NE Discovery and Creation
- NEM Brower and Map creation
- Symbols and Section Management
- Synchronisation Maps
- Fault Management
- Configuration Management
- Performance Management
- ESW and other Network Tasks
- Inventory Reports

Pre-requisites:

- Successful completion of either MileGate, UMUX or XMC20 Fundamentals Courses
- Experience of NMS systems is an advantage

UNEM Administration

Duration: 1 day

Training ID: A29A9675

Overview:

KEYMILE's Network Management System, UNEM, has a sophisticated architecture and a good understanding of its underlying processes and functions is vital to the smooth operation of this management platform.

This course provides the knowledge required by a system administrator of both the LINUX operating system, and the UNEM application software. Students will be introduced to a number of script files and other process-checking techniques that can be used for many "behind the scenes" tasks supporting the UNEM operational environment. They will be taught how to add new users, check Log files and perform other maintenance tasks. They will learn how to maintain the UNEM database, how to backup the database, and then how to restore the database.

This course is suitable for system administrators, engineers and all those who are involved in supporting the UNEM platform on behalf of the UNEM Operators.

KEY Topics:

- Hardware installation, set-up and upgrade procedures
- Operating System Software installation and set-up
- NEM Administration Tool
- UNIX/LINUX commands required for administrative tasks for UNEM
- UNEM commands
- UNEM Software installation and set-up
- Creation of new user accounts
- Definitions of UNEM User and Privileges
- Log and Trace files
- Database Backup and Restore procedures
- Running reports
- Viewing historical records

Pre-requisites:

- Experience of general System Administration is essential
- Successful completion of the UNEM Operators course would be an advantage

Payment
Course Fees

The Training Administrator will advise you of the standard schedule of course fees. These apply to places on Open Schedule courses.

The costs of Dedicated courses are determined by your KEYMILE Account Team. Customer documentation will be made available on request.

Standard Fees are reviewed on an annual basis. However, KEYMILE reserve the right to make amendments more frequently. Existing customers will be advised in advance of any impending changes in rates. Course fees will not be subject to change once a booking has been confirmed with a Purchase Order.

Payment Terms

Payment should be received by KEYMILE no later than 10 working days before the start of the course.

Cancellations

Cancellation of course places can be made up to 15 working days before the course starts, without penalty.

For late cancellations, KEYMILE reserves the right to invoice the following:

- 50% of fee: Where the booking is cancelled between 1 and 2 weeks from the start date of the course
- 100% of fee: Where the booking is cancelled less than 1 week from the start date of the course

KEYMILE reserves the right to cancel any training with a full refund of the training fee.

- Up to 3 weeks before the scheduled start of the training (without any obligation to give reasons)

Training Documentation

Training documentation is usually supplied for each course. It comprises a copy of the slides used by the trainer, together with some additional notes. The documentation may be provided as a set of PDF files or printed, alternatively.

Documentation is always available in the English. Alternative languages may be made available e.g. German on request.

The contents of any particular course may vary from the course description contained in this brochure and on the website. On special request to the trainer and agreement of the participants it may be possible to vary the balance of topics and activities from the standard plan. However, the training notes will not be altered.
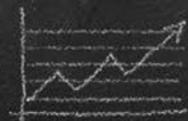
About Instructors and Training Centre

Instructors

Courses are prepared and delivered by KEYMILE's own experienced engineers and training specialists.

They come with excellent background knowledge of the KEYMILE products as well as field experience in installation, commissioning and maintenance.

Training Centres

Our Training Centre in Hannover is purpose-built. The classroom is designed to be an ideal environment for learning, with the layout suitable for class discussions. Target equipment for practical work is housed in the classroom, together with workstations for participants to use for configuration activities.

The instructors use high quality visuals to present concepts and product information to the class.

Comfortable break-out areas are provided for participants to relax and enjoy a drink during break times. Lunch is provided for participants at no extra charge.

Hanover, Germany

Our German Training Centre is located at the KEYMILE Offices in the vibrant provincial capital city of Hanover.

Leaving KEYMILE behind for the day, you can take a short tram journey into the heart of this surprising modern city set amongst reminders of its glorious past. Statues and fountains vie for attention with the icecream street vendors. The Opera and the Music Hall invite you to an evening of pure entertainment.

Take time to walk along the wide streets and discover what makes this metropolis, at the heart of Lower Saxony, an exciting and alluring magnet for visitors, before settling down in one of the city's fine restaurants to an evening of unrivalled German hospitality.

Hanover – a city of warmth, welcome and a few surprises. One visit will not be enough!

Hertford, United Kingdom

Our UK Training Centre is located at the KEYMILE Offices in the historic county town of Hertford.

As you leave the classroom, there is a mouth-watering menu of possibilities for your evening ahead.
The un-paralleled cosmopolitan capital of London is a short train ride away. In less than 40 minutes you will find yourself in a pulsating mix of cultures, where all your senses come alive.
From the casual street art of Covent Garden to the latest blockbuster West End musicals, a myriad of possibilities waits for you.

Back in Hertford, there is more to explore at this meeting place of four rivers, a traditional English market town steeped in history. A Royal Borough for more than 1,000 years, it was here that the last witch in England was condemned to death in 1751.
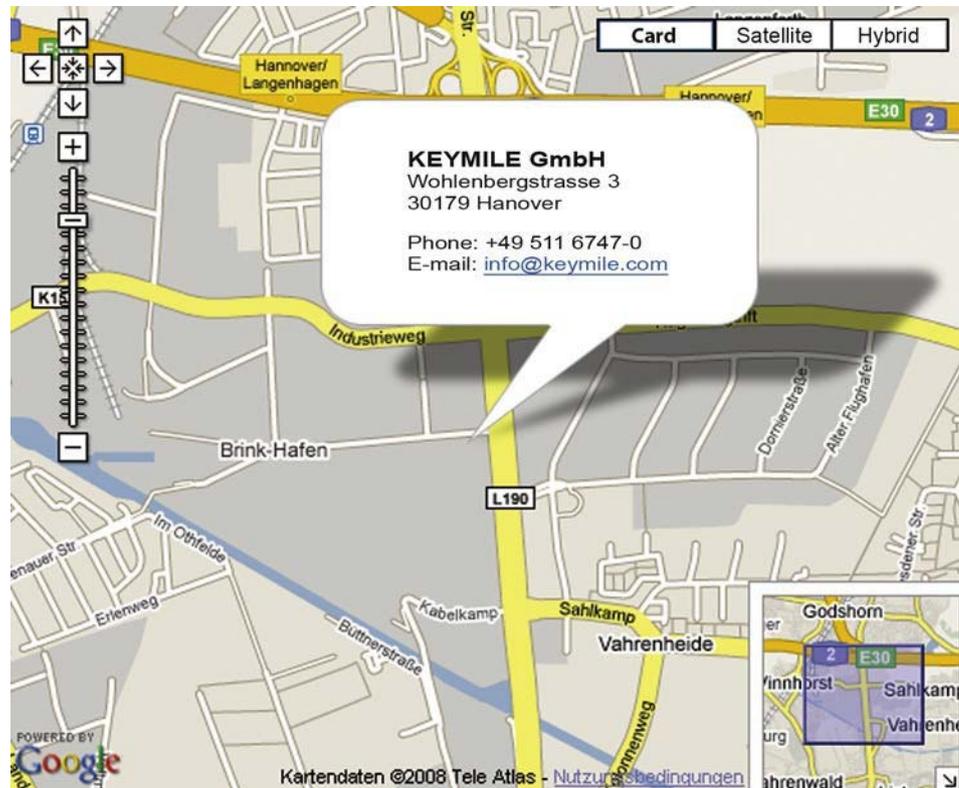
Today, as you stroll through the ancient streets you will happen upon hidden jewels of fascinating architecture, unusual shops, wonderful cafes and restaurants to suit every taste.

A visit to Hertford will leave you with memories that beckon you to return one day soon!
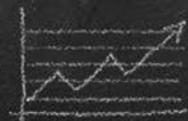
Route Description

Hannover, Germany

Travel by car

Coming from Hamburg on motorway A7: At interchange "Hannover Nord" leave A7 and follow motorway A352 in direction of Dortmund. Leave A352 at exit "Hannover-Flughafen" (Airport) and follow B522 toward "Hannover-Zentrum" (city). After app. 3 km turn right into "Wohlenbergstraße".

Coming from Berlin or Dortmund on motorway A2: Leave the motorway at exit "Hannover/Langenhagen" in the direction of "Hannover-Zentrum" (city). After app. 800 m turn right into "Wohlenbergstraße".

Coming from Kassel on motorway A7: At motorway intersection "Hannover-Ost" follow A2 towards Dortmund. Leave the motorway at exit "Hannover/ Langenhagen" in the direction of "Hannover-Zentrum" (city). After app. 800 m turn right into "Wohlenbergstraße".

After app. 150 m turn left for the KEYMILE premises.

Travel by plane

Take a taxi at Langenhagen airport (distance app. 7 km). Or take the S-Bahn to Hanover Central Station, then take the tram line 1, direction "Langenhagen", stop "Alter Flughafen".
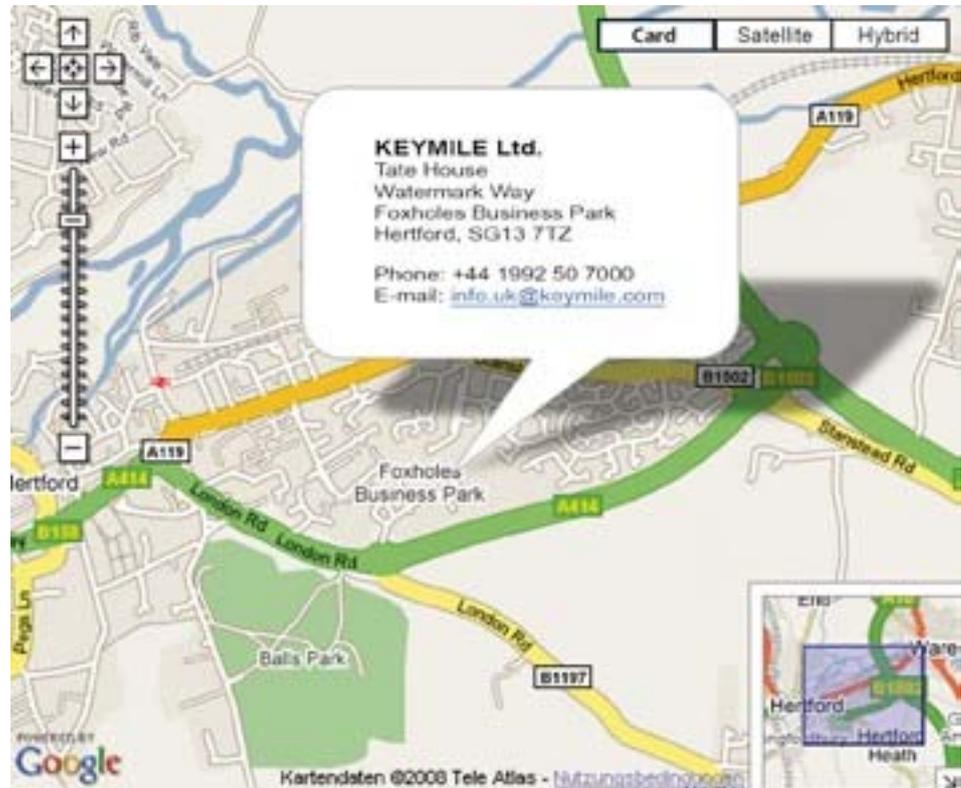
Travel by tram

Take line 1 towards "Langenhagen" and exit at tram stop "Alter Flughafen".

Hertford, UK

From M25

Leave M25 at junction 25 following signs for A10 to Hertford.
Exit A10 at Hertford taking the second exit at the roundabout to Hertford (A414). At the next roundabout turn right into Foxholes Business Park, past the Mercedes garage on your left. Continue into the business park going straight across the two mini roundabouts. KEYMILE is directly in front of you.

From A1M

Exit A1M at junction 4 following signs for Hertford (A414). Travelling into Hertford continue straight across all roundabouts until you see a multi-storey car park on your left and a large church on your right. At the next roundabout turn right up the hill, still on the A414. Turn left at the next roundabout past the Mercedes garage into Foxholes Business Park. Continue into the business park going straight across the two mini roundabouts. KEYMILE is directly in front of you.

By Rail

From London, Liverpool Street to Hertford East, approximately 50 minutes, with trains running every half hour. From London Moorgate, via Finsbury Park to Hertford North, approximately 40 minutes, with trains running every half hour.

KEYMILE is a short taxi journey from either of Hertford's two Railway Stations.