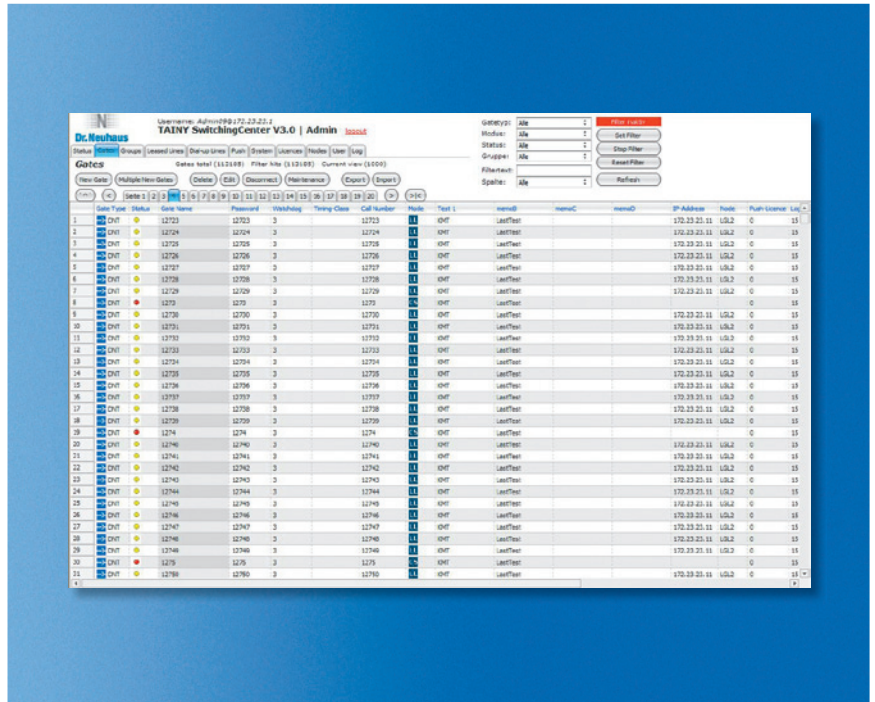


Benefits:

- Use of the Internet for M2M applications
- Support of protocol standards and investment protection
- Highest scalability and performance
- Uniform management of connections (GPRS, WLAN, LAN)
- Flexible, easy system integration into the control center
- Easy operation
- Trusted technology

Key Features:

- IP-Telemetrie compliant (DIN 43863-4)
- Supports TSC protocol
- Redundancy and load balancing
- Modular software architecture
- MySQL databases for configuration and log data
- Dial-up, leased-line and push modes
- Visualization of device status
- Heartbeat and watchdog functionality
- Extensive logging
- Group management of connections
- Role-based operation concept, web clients



The TAINY SwitchingCenter (TSC) from Dr. Neuhaus Telekommunikation provides a solid technological basis for cost-efficient, innovative M2M applications in a wide variety of different industries and for many different applications. Solutions profit from the enormous advantages of modern Internet technology, including cost efficiency, reliability, flexibility and investment security in the technological infrastructure.

The TAINY SwitchingCenter offers protocol functionality for bi-directional M2M communications via GPRS or via IP networks. Processes are able to exchange data with one another or with a control center, without requiring fixed IP addresses or a Virtual Private Network (VPN) provided by a third-party service supplier.

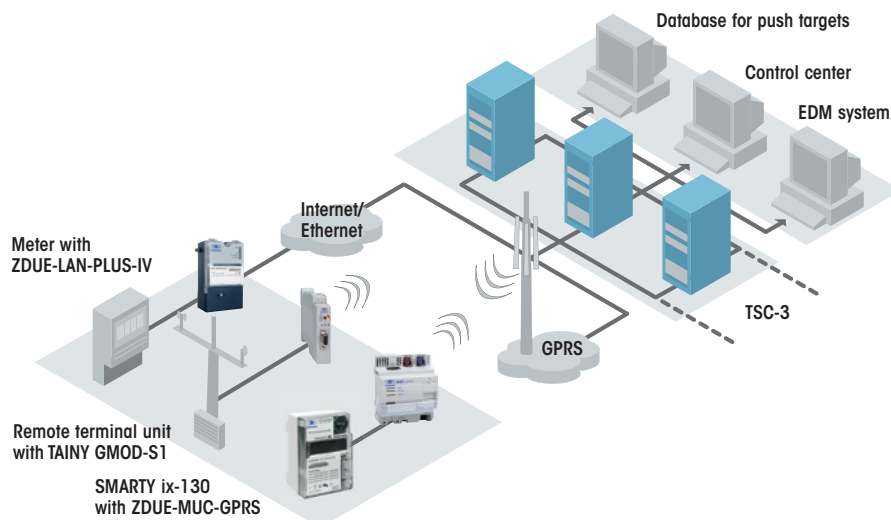
Another considerable improvement of the TAINY SwitchingCenter v3 is the completely revamped modular architecture: Software can be distributed over several computers, and is therefore reliably redundant and highly scalable. A symmetrical distribution of the workload is guaranteed due to load balancing.



System Components

- TAINY SwitchingCenter
- Databases for configuration and log data
- Nodes
- Web server

Topology



Technical data

FUNCTIONALITY

Communication with terminal device	Based on IP-Telemetry protocol (DIN 43863-4) or based on TSC protocol; push mode; leased lines; dial-up connections; number of connections depends on license
Communication with control center	Via TAINY ComPortClient (up to 255 connections), controlled via AT commands using the virtual call numbers stored; via IPT client (IPT-SDK)
User privilege administration	Different user privileges can be allocated to each user account: connection query, connection editing, connection termination
Group administration of terminal devices	Serves to group the connections; manager privileges can be limited to groups

USER INTERFACE

Administration	TAINY SwitchingCenter admin interface (web client), incl. input of license key, set-up and administration of groups, user accounts and their privileges
Management and operation	TAINY SwitchingCenter operator, viewer and auditor interfaces (web client), incl. set-up and configuration of connections; set-up of leased lines; viewing of status of leased lines, dial-up and push connections

SYSTEM ENVIRONMENT

Operating system	Windows Server 2003 SP1 or SP2, Windows XP Professional SP2 or SP3
Hardware for main database	PC-compatible CPU (Core2Quad or equivalent) with at least 2.66 GHz; RAM at least 4 GB; hard disk at least 10 GB available storage space; Ethernet connection at 1 Gbit/s
Hardware for other components	PC-compatible CPU (Core2Duo or equivalent) with at least 2 GHz; RAM at least 1 GB; hard disk at least 10 GB available storage space; Ethernet connection at 1 Gbit/s
Compatible terminal devices	Include: ZDUE-MUC-GPRS, ZDUE-MUC-DC, TAINY GMOD-S1/S2, TAINY LMOD-S1, ZDUE-GPRS-PLUS-IV, ZDUE-LAN-PLUS-IV and other devices from different manufacturers

MISCELLANEOUS

Scope of Delivery	CD with TAINY SwitchingCenter (node, database, web server, instruction manual), ComPortClient and instruction manual; separate CD with license key
Order numbers	TAINY SwitchingCenter v3 Base, part no.: 317708; licenses for: TAINY SwitchingCenter v3 Node, part no.: 317715; TAINY SwitchingCenter v3 Push Target, part no.: 317739; TAINY SwitchingCenter v3 Admin, part no.: 317746; TAINY ComPortClient, part no.: 317722; TAINY SwitchingCenter v3 Gate: 317716; TAINY SwitchingCenter v3 Operator, part no.: 317753

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