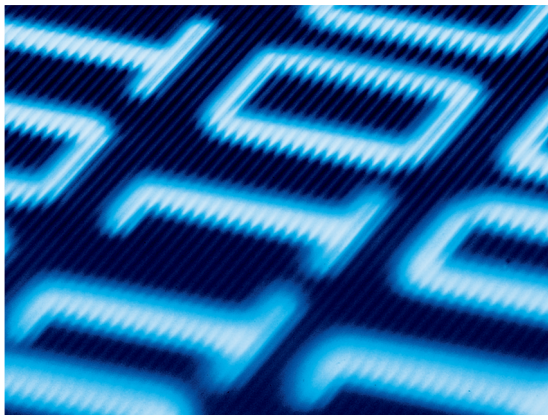

Let your machines talk

Nokia M2M Gateway 2.1 Corporate Edition

Nokia M2M Gateway is a middleware for establishing wireless machine-to-machine applications. It bridges the GSM network and the Internet by providing connection for two-way communication between applications located in the company intranet and within remote devices. Adaptable to a wide range of purposes and communiation methods, Nokia M2M Gateway is suited for most potential applications.

Open and flexible

As a part of the Nokia M2M Platform, Nokia M2M Gateway provides open interfaces to both the application server and the wireless network. It is based on open, widely accepted middleware and communication architecture (CORBA) and it supports standard GSM technology with a choice of wireless bearers. Open interfaces facilitate easy development, operation and maintenance of various M2M applications and services and also provide upgrade paths for future technologies without even a need for touching the application itself.

Companies can operate and manage their remote assets from their server applications using the Nokia M2M Gateway 2.1 Corporate Edition for connectivity. Wireless connectivity services (e.g. SMS-Center or GPRS network access) can be rented from the network operator, or companies can operate their own modem pool to provide access to the remote applications through a standard fixed network.

NOKIA

CONNECTING PEOPLE

Customer embedded application
with integrated
GSM Connectivity Terminal

Nokia M2M Gateway

Customer server application

Nokia M2M Gateway 2.1 Corporate Edition provides:

- Traffic optimization
- Configuration and management
- Wireless transport reliability
- Authentication and access control
- Traffic statistics collection and log service
- Two APIs for enhancing product functionality
- Interface to SMS-C for standard text messaging
- IP address allocation for terminals with GPRS
- Smart messaging for terminal installation
- Terminal management component
- Alarm support

Traffic optimization
Nokia M2M Gateway optimizes the air interface usage for message oriented (SMS, USSD) and packet switched (GPRS) connections and speeds up the operation of the Nokia M2M Platform.

Configuration and management
Nokia M2M Gateway configuration and management can be done at the host computer with a standard web-browser graphical user interface. Configuration data is stored in Nokia M2M Gateway's internal database.

Wireless transport reliability
Nokia M2M Gateway uses the dependable transmission and control protocol (TCP) for the Internet connectivity. Message acknowledge and retransmission facilitate reliable message delivery. Communication failure information will be sent to the originator.

Authentication and access control
Access from terminals can be restricted by access control. Nokia M2M Gateway includes the RADIUS authentication service for CSD/HSCSD/GPRS connectivity authentication.

Statistics collection and log service
Nokia M2M Gateway provides traffic statistics collecting and logging service for events.

Nokia M2M Gateway APIs
Nokia M2M Gateway has two application programming interfaces for enhancing the product functionality. These are Connection Provider API and Interoperable Object Reference Handler API.

IP address allocation for terminals with GPRS
Nokia M2M gateway 2.1 can be configured to use any IP address pool when GPRS is used as a data bearer. IP addresses can be allocated to the terminals dynamically.

Smart messaging for terminal installation
Nokia M2M Gateway 2.1 offers automatic installation service. This means setting the information of the Gateway to the terminal with a smart message. Smart messages can be controlled by server application.

Alarm support
Alarm information can be made available for external systems.

Terminal management component
Application developers can utilize these easy to use software components and frameworks to configure terminals and to change bearers from their applications. Also a reference user interface is provided.

Bearers for M2M communication
SMS
CSD
HSCSD
USSD
GPRS

Interface to SMS-C for standard text messaging
The Gateway provides an interface to SMS-C for standard SMS text messaging. This interface can be used, for example, in communications to service personnel.

SMS-Centers supported
Nokia SMS-C (CIMD 2.0 protocol)
Logica-Aldiscon SMS-C (SMPP 3.3 protocol)
CMG SMS-C (UCP 3.2-3.5 protocols)
Sema SMS-C (SMPP 3.3 or UCP 3.2-3.5 protocols)
Supported connection types to SMS-C are TCP/IP over modem or Internet LAN connection.

USSD-Centers supported
Nokia USSD-C (CIMD 2.0 protocol)

Minimum system requirements
Nokia M2M Gateway runs on Windows NT 4.0, Windows 2000, HP UNIX and Sun Solaris.

Windows NT/2000
Pentium III Processor, minimum 500 MHz
Min 512 MB RAM, Min 200 MB free hard disk space

HP UNIX
HP-UX 11
512 MB RAM
Min 300 MB of free hard disk space

Sun Solaris
Sun Solaris 7
512 MB RAM
Min 300 MB of free hard disk space

Java™ 2 Platform Standard Edition 1.3; CORBA Naming Service and Java™ implementation of CORBA 2.4 compliant ORB; CORBA Event Service (for alarm support); Modem pool (needed if CSD/HSCSD connection is used) and WWW-server software with JSP support for configuration purposes.

Specifications are subject to change without notice. The availability of particular products and services may vary by region. Some features are network dependent.

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