

openUTM-Client Version 5.3 Client/Server Communication

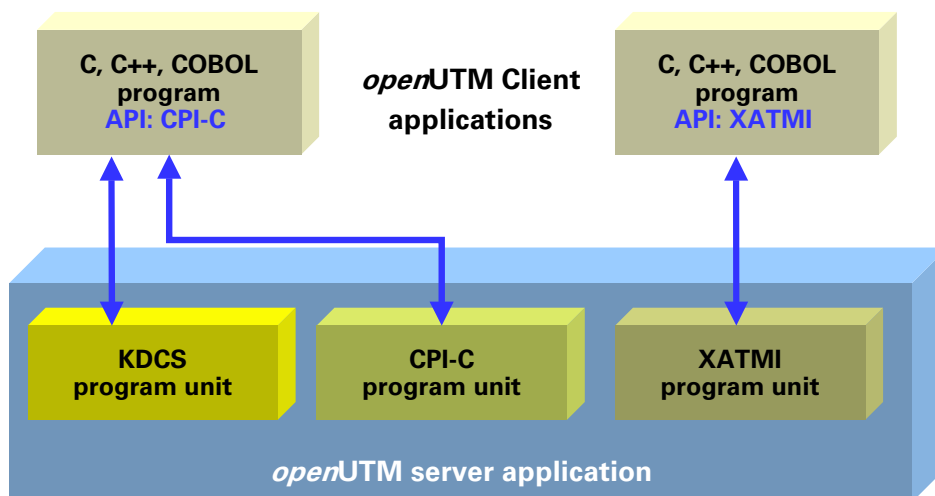
openUTM-Client enables a presentation application in Unix systems, Linux, Windows to communicate with a server application running under openUTM.

Presentation, i.e. the displaying of the openUTM application includes:

- secure access to the openUTM application
- presentation of the data and functions of an openUTM application
- ability to input data and control the openUTM application

Standard interfaces (CPI-C, TX, XATMI, as well as C++ classes and ActiveX-Controls) enable the client application to be programmed.

Client/Server Interface Connections:



openUTM-Client has two carrier systems:

- UPIC for client/server communication
- OpenCPIC for client/server and peer-to-peer communication

The two carrier systems provide a different pool of functions and interfaces.

Interfaces

openUTM and openUTM-Client offer the CPI-C, TX and XATMI program interfaces for communication. These interfaces were defined by X/Open.

These interfaces can be used for uniform programming in both the client and the server. openUTM also offers the facility for programming in the server with KDCS and in the client with CPI-C.

The interfaces can be used in a C/C++ environment and a COBOL environment.

In a C environment, development tools such as VisualBasic and VisualC can be used to generate graphical interfaces for openUTM applications. In a C++ environment can be programmed object-oriented with VisualC++. Therefore C++ classes are ready to use.

Data can also be processed in PC office applications such as MS-Word and MS-Excel via the Windows DNA (ActiveX/OLE) or DDE interfaces.

In the MS Windows environment an ActiveX control (OCX) simplifies the integration of Microsoft BackOffice products into openUTM applications.

Encryption of access and user data

Clients often access openUTM applications via open networks. This means there is a risk of unauthorized persons eavesdropping on the line and, for example, discovering passwords for openUTM user IDs or sensitive user data. To prevent this happening, openUTM and openUTM-Client, UPIC carrier system, support the encryption of passwords and user data for client connections.

For encryption, openUTM uses a combination of the DES/AES and the RSA method, named after its creators Rivest, Shamir and Adleman. The DES/AES key is generated by the UPIC client, while the RSA key pair (public key and private key) is generated by the server. The RSA keys can be changed in openUTM through administration. It is also possible to store the public key locally in advance for the UPIC client. When a connection is established, the received public key is verified against the stored public key.

If using the Siemens product TranSON the encryption via SSL is alternatively available.

Security and restart

openUTM's security and restart functions are supported.

With UPIC, PCs and workstations are incorporated into the openUTM access security strategy, together with their graphical environment. After a malfunction, applications can be restarted at the point which the transaction had last reached.

A UPIC client offers the option of passing a transaction context to the openUTM server as a backup. In the event of a restart, openUTM then makes the saved context available to the client again. The context information can be useful to the client during a restart for optimizing its operations.

Logical synchronization with the global server transactions is possible for the UPIC client. In the event of a restart, the status of the last transaction can be requested using a separate service request (transaction code).

OpenCPIC clients can set the transaction brackets themselves via the TX interface. This ensures the global backup of all client/server communications.

UPIC carrier system

UPIC is a lean, easily deployable and very powerful carrier system. With UPIC, the initiative for communication always lies with the openUTM client program. The UPIC protocol is used as the transaction protocol.

Multi-conversation and multi-threading of openUTM-Client UPIC applications permits better use of hardware facilities. Multi-threading is offered on Windows and Unix based systems with POSIX threads, so that a number of simultaneous conversations are possible here too.

UPIC offers calls which allow a time-driven, non-blocking conversation with the server application.

The transfer of format names from server to client is important for users who have previously worked with terminals and would like to migrate to PCs. The server programs do not have to be modified for the migration to UPIC PC clients.

The installation and configuration of UPIC is simple thanks to use of the socket interface RFC1006 and a side information file.

The ASCII-EBCDIC conversion can be adapted by the customer.

OpenCPIC carrier system

OpenCPIC is a powerful and more complex client carrier system used mainly for communication with openUTM server applications. OpenCPIC applications can also communicate with one another or with other CPI-C applications.

Clients implemented with OpenCPIC, acting as transaction coordinators, can determine the beginning and end of the global transactions and be integrated into the global transaction sequence (2-Phase-Commit).

In the case of OpenCPIC, the initiator of communication is not defined, it may be either of the two communication partners.

OSI TP is used as the transaction protocol, thereby also permitting communication with all applications on alien systems that also use OSI TP as the communication protocol.

To program communication, the interfaces of X/Open: XATMI, CPI-C and TX, can be used. TX is used to control the transaction.

openUTM Client and MS Windows Terminal Server

By using both openUTM and the Microsoft Windows Terminal Server, the user gains the following benefits:

- An openUTM client application can be centrally installed and managed.
- The openUTM client applications can access openUTM server applications locally as well as remotely.
- Thanks to the openUTM interoperability, it can be used in heterogeneous environments.
- "Thin clients" can be employed in an openUTM environment.

openUTM client applications can be installed on a computer functioning as the Microsoft Windows Terminal Server. From all client types supported by Microsoft Terminal Server an access to openUTM server applications is given. The Microsoft Windows Terminal Server lets many users access an openUTM client application simultaneously without any special multi-user programming.

New functions in V5.3

- support for the IPV6 protocol
An IPv6 address can be specified directly at the UPIC interface. The connection is then established over the IPv6 protocol.
- 64-bit support
In this current version, openUTM-Client (Unix systems) also runs on 64-bit Solaris and 64-bit Linux (Itanium).
- Special characters in partner names
The special character '#' is now permitted in the partner_LU_Name.

Product structure

In the context of openUTM server applications in the BS2000 the usage rights of openUTM clients have to get for the number of users communicating with the server at the same time.

openUTM Client licenses may be obtained for 1 user each for developing/testing/runtime or for runtime only. Licenses are available separately for the UPIC carrier system or for both carrier systems.

In the context of openUTM server applications on Unix systems/Linux/Windows the openUTM Enterprise Edition package already includes openUTM Client licenses.

The documentation is laid down in user manuals, available on the openUTM product DVD or in the web. It is also possible to order individual manuals in printed form under <http://fsc-manualshop.com/>.

The software is supplied on the openUTM collection DVD, purchased with the usage rights for development.

If encryption is used, the "Crypt" usage right can be ordered together with the openUTM-Crypt product DVD.



**openUTM-Client is part of
the comprehensive
openSEAS product suite**

Technical Data													
Technical requirements for hardware	<p>All systems based on Intel technology, e.g. laptops, PCs, PRIMERGY systems SPARC systems, e.g. PRIMEPOWER systems more Unix systems: IBM RS/6000, BULL DPX/20, HP Serie 9000 (UPIC only); more platforms on request CPU at least 250 MHz, main memory at least 32 MB Memory requirements: Main memory: depending on application Hard disk storage requirements for installation under/opt/lib/upic:</p> <table border="0"> <tr> <td>Solaris 32/64 bit:</td> <td>appr. 35 MB</td> </tr> <tr> <td>Linux x86 32 bit:</td> <td>appr. 4 MB</td> </tr> <tr> <td>Linux-Itanium 64 bit:</td> <td>appr. 8 MB</td> </tr> <tr> <td>HP-UX 32 bit:</td> <td>appr. 25 MB</td> </tr> <tr> <td>AIX 32 bit:</td> <td>appr. 14 MB</td> </tr> <tr> <td>Windows 32 bit:</td> <td>appr. 1,5 through 10 MB depending on components selected.</td> </tr> </table>	Solaris 32/64 bit:	appr. 35 MB	Linux x86 32 bit:	appr. 4 MB	Linux-Itanium 64 bit:	appr. 8 MB	HP-UX 32 bit:	appr. 25 MB	AIX 32 bit:	appr. 14 MB	Windows 32 bit:	appr. 1,5 through 10 MB depending on components selected.
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Technical requirements for software	<p>For Unix-systems on x86 based hardware (32 bit):</p> <ul style="list-style-type: none"> - Linux SLES 9 - Linux RHEL 4 <p>SPARC hardware (32/64 bit):</p> <ul style="list-style-type: none"> - as of Solaris Version 9 <p>IBM POWER- and PowerPC-based hardware (pSeries resp. RS/6000) and Bull (Escala):</p> <ul style="list-style-type: none"> - AIX as of V5.3 <p>HP (PA-RISC hardware 32 bit):</p> <ul style="list-style-type: none"> - HP-UX as of V11i <p>Itanium (64 bit):</p> <ul style="list-style-type: none"> - Linux-Itanium as of SLES 9 - Linux-Itanium as of RHEL 4 <p>For connections over LAN/WAN:</p> <ul style="list-style-type: none"> - CMX-G/GK as of V6.0B and appropriate software for the connections (LAN/WAN/...). <p>Supplied with the product for communication over TCP/IP:</p> <ul style="list-style-type: none"> - PCMX (Unix systems) V 6.0A60 - PCMX (Windows) V5.0 <p>For use without CMX no additional components required.</p> <p>For Windows systems</p> <ul style="list-style-type: none"> - Windows 2003 / XP - MS Visual C++ as of V6.0 - Visual Basic as of V6.0 - PCMX as of V5.0A <p>For client/server communication:</p> <ul style="list-style-type: none"> - openUTM (BS2000/OSD) as of V5.1 required for changing the password - openUTM (BS2000/OSD) as of V5.2 required for higher encryption level - openUTM (BS2000/OSD) as of V5.3 required for the password lpv6 protokol - openUTM Enterprise Edition (Unix Systeme/Windows) ab V5.1 required for changing the password - openUTM Enterprise Edition (Unix Systeme/Windows) as of V5. 2 required for higher encryption level - openUTM Enterprise Edition (Unix Systeme/Windows) as of V5. 3required for the password lpv6 protokol <p>For use of the UPIC control on Windows XP, Windows Server 2003:</p> <ul style="list-style-type: none"> - every available COM/DCOM clients that can be incorporated in the UPIC control, or every tool that can be used to develop COM/DCOM clients. <p>For communication over OSI TP for carrier system OpenCPIC OSS is contained.</p>												
Mode of usage	Dialog; Peer-to-Peer (OpenCPIC only)												
Implementation language	C												
User interface	German, English												
Installation	By the user according to the instructions in the release notice.												
Documentation	<p>on produkt DVD, online in the web and in printed form:</p> <ul style="list-style-type: none"> - Client/Server Communication with openUTM carrier system UPIC - Client/Server Communication with openUTM carrier system OpenCPIC (V4.0) 												

	<p>Documentation of X/OPEN interfaces:</p> <ul style="list-style-type: none"> - XATMI - Description by X/Open - CPI-C - Description by X/Open - TX - Description by X/Open <p>Manuals (English and German) for users and system administrators, in printed form via http://fsc-manualshop.com/ or as PDF files; also available on the Internet via http://www.fujitsu-siemens.com/openseas</p>
Demands on the user	Unix system/Windows knowledge and if necessary knowledge of the partner system; knowledge of the KDCS/CPI-C/TX/XATMI interfaces.
Training	Courses are held in the Technical Training Academy von Fujitsu Siemens Computers under the currently valid conditions. For further information see http://training.fsc-mediaserver.com/elearningmedia/tectrac/
Conditions	This software product is supplied to the customer under the conditions for the use of software products against instalments or a single payment
Warranty	Class: A Delivery format: Machine language
Ordering and delivery	This software product may be obtained from your local Fujitsu Siemens Computers regional office.