

DATASHEET

FUJITSU Software openFT (z/OS) V12.1

MANAGED FILE TRANSFER

openFT (z/OS)

About 80 percent of the total amount of data exchanged within a company or between a company and its customers and business partners is transferred in the form of files. In E-Business the requirements placed on a company-wide file transfer solution (Enterprise File Transfer) become even more important: openness, automation, security, reliability, availability and performance. The Fujitsu openFT product family fulfils these requirements to the utmost and also provides a series of additional useful functions such as file administration for the local and remote system. Furthermore, openFT is very easy to install and administrate and can contribute significantly to the reduction of the TCO (Total Cost of Ownership).

openFT is a high-performance solution for complex, heterogeneous IT environments that can be used to fully automate the file transfer process. openFT is especially suited for companies and government agencies that require a totally reliable and secure provision of large quantities of business-critical data. The use scenarios of openFT extend beyond numerous areas of application in mobility and business critical computing. For many application integration projects, openFT represents a widely used and proven solution with solid benefits. openFT has proven its flexibility and reliability day in day out, even under extreme loads, in over 50,000 server installations.

openFT is part of the comprehensive openSEAS product offering.

openFT (z/OS) V12.1A

The current release V12.1 is enhanced with some features.

- **Security enhancements**
Mechanisms basing on the exchange of key files are shaped more effective. The minimum length of an AES key can be configured.
- **Globalization**
The global usage is strengthened by consequent support of international character sets as well in request data as with filenames.
- **Tools**
The tool ft_mget to transfer several files is available on z/OS, too. The tool ftping to check communication partner is available on z/OS, too.



FEATURES AND BENEFITS

MAIN FEATURES	BENEFITS
VISIBILITY <ul style="list-style-type: none"> ■ Fast and easy installation ■ Central administration of local and remote partner ■ File Management of local and remote partner ■ Virtualization and failover-cluster 	<ul style="list-style-type: none"> ■ Ready for processing immediate after installation ■ Single Point of Administration ■ Management of local and remote file systems ■ Advanced availability
MONITORING <ul style="list-style-type: none"> ■ Monitoring of operating states of the openFT instance ■ Logging of all requests ■ Request storing and management 	<ul style="list-style-type: none"> ■ Actual retrieving and presentation of metered values to benchmark the openFT processing ■ Audit compliant logging ■ Granted data delivery
SECURITY <ul style="list-style-type: none"> ■ Management of access rights via FTAC (requires openFT-AC(z/OS)) ■ Encryption of Metadata and file contents ■ Authentication by cryptographic means ■ File consistency 	<ul style="list-style-type: none"> ■ Independance of access rights of the OS ■ Security by transfer of encrypted data ■ Mutual check with cryptographic means if connected with the right partner instance ■ Protection from man-in-the-middle-attack
REPORTING AND AUDITING <ul style="list-style-type: none"> ■ Logging of all Requests ■ Central trap server to gather all traps of an openFT network 	<ul style="list-style-type: none"> ■ Audit compliant logging ■ Analysis of all traps of an openFT network on a single server
ADAPTABILITY <ul style="list-style-type: none"> ■ Support of different system platforms ■ Support of different protocols and networks ■ Code conversion of text files of different codes ■ Continuous scaling 	<ul style="list-style-type: none"> ■ Connectivity to different operating systems ■ Connectivity to different networks and communication via openFT, FTAM- or FTP-communication possible ■ Processing of files of different source and encoding ■ Assignment from low performance level up to high end server
PROVISIONING <ul style="list-style-type: none"> ■ Dynamic partner list ■ Dynamic changes of configuration 	<ul style="list-style-type: none"> ■ Immediate access to partners ■ Configuration is in effect immediately
AUTOMATION AND WORKFLOW <ul style="list-style-type: none"> ■ Start of follow up processing in local or remote system ■ Preparing and further treatment of transfer data by pre processing and post processing ■ Command execution in remote operating system 	<ul style="list-style-type: none"> ■ Possible reaction to finished transfer ■ Dynamic preparation of data at request time and direct further processing ■ Remote control of the partner system is possible
CHANGES SINCE PRECEDING VERSION V12.0 <ul style="list-style-type: none"> ■ Enhanced security of mechanisms on the basis of the exchange of key files ■ Consequent support of international character sets ■ Additional tools ft_mget and ftping 	<ul style="list-style-type: none"> ■ Partner authentication and data encryption are more efficient ■ Filenames and file data can be transferred and stored in national spelling ■ More comfort by availability of further tools

OFFERING

Visibility

- **Fast and easy installation**
openFT is very easy to install and can be used immediately after installation without any further modifications.
- **Central administration of local and remote partner**
A complete openFT network with the permitted administrators can be managed on a dedicated administration server. An administrator has only to authenticate on the admin server and can manage all openFT instances that are assigned to him.
Central Administration is independent of normal transfer processing.
- **File Management of local and remote partner**
The file systems on the local and the remote partners can be modified by the means of the File Management. You can remove, rename files or modify their access rights. File directories can be created, removed and renamed.
- **Virtualization and failover-cluster**
In openFT you can run several openFT instances on a computer at the same time, and each openFT instance has its own resources. There are interfaces available for creating, managing and deleting instances. This allows you to switch the functionality of openFT to a different computer where openFT is already installed when the original computer fails or when there is a resource bottleneck.

Monitoring

- **Monitoring of operating states of the openFT instance**
Thanks to collection and displaying metered values an administrator is able to evaluate critically the operating state of an openFT instance and to control it. The monitoring can be configured for special needs.
- **Logging of all requests**
The log file contains comprehensive information about all the access checks and file transfers performed so that an audit can be performed as required.
- **Request storage and administration**
Requests can still be accepted even if a partner system is not available when the request is issued. Also they are accepted if openFT is not available locally. These requests are stored and automatically processed once the network or partner system becomes available.
Thanks to request storage, the transfer can be initiated at any time desired, for example to reduce transmission costs (time control). It is also possible to specify a time at which the request is to be deleted or the transfer is to be aborted (cancel timer). Finally, the order in which requests are processed can be altered using priority control.

Security

In addition to the protection functions of the local system, openFT also offers enhanced access protection for file transfer and hence increased security.

- **File Transfer Access Control (FTAC)**
With this integrated add-on module, openFT also offers comprehensive and individually adjustable protection functions. Thus, openFT works with an access authorization that is independent of the operating system. The rights associated with this access authorization can be set on a highly differentiated basis. Furthermore, the user can precisely restrict and set the authorizations of the remote partner systems with respect to file transfers. The access rights can be restricted to specified tasks for each individual partner so that particular functions are no

longer allowed (e.g. follow-up processing or file management functions).

- **Encryption**
The description data for file transfer and file management requests are encrypted with the RSA/AES algorithm. This prevents unauthorized reading of sensitive data at network level such as user IDs or passwords. The contents of the files transferred can be encrypted using the same procedure. This functionality is subject to export restrictions. Due to protocol restrictions, it is possible to exchange data encrypted by openFT only with openFT partners or FTP partners if openFT initiates the connection and FTP server supports encryption.
- **File consistency**
It is possible to specify that the data transferred as a result of a file transfer request be checked for integrity to avoid a man-in-the-middle-attack.
- **Authentication**
openFT instances can mutually check with cryptographic means that they are connected with the right partner instance. It is thus possible to securely identify both the partner of a request and the own system in the partner system. Prerequisite for the authentication is the exchange of public keys. If the public key of a partner system is available in an openFT instance, then all connections with this partner system are processed with authentication. Due to protocol restrictions FTAM and FTP partners cannot use authentication.
- **Logging**
The log file contains comprehensive information on all access checks and file transfers performed so that an audit can be performed as required.

Reporting and Auditing

- **Logging of all requests**
The log file contains comprehensive information on all access checks and file transfers performed so that an audit can be performed as required.
- **Central trap server to capture all traps of an openFT-network**
You may configure a dedicated trap server to send to all generated traps. An administrator has to authenticate on this server and can manage all traps related to him.

Adaptability

openFT supports a wide range of system platforms and protocols while maintaining a uniform interface.

- **System platforms**
Computers from different manufacturers running different operating systems can be connected with openFT. For example, openFT is available for all Windows platforms (Windows Vista, Windows 7, Windows 8, Windows 8.1, Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2), numerous Unix platforms (including Solaris and Linux), as well as all BS2000 and z/OS systems.
- **Protocols and Networks**
openFT can also be used in a network in which computers with different protocols communicate with each other. openFT supports networks and network protocols such as TCP/IP, ISO, NEA, X.21/X.25, and ISDN resp.
- **Data formats**

openFT can process and transfer files with different characteristics (depending on the file type and operating system in which the files were created).

- **Encoding of character data**

openFT is able to handle and transfer text files with various encodings. openFT supports the conversion of encoding of standard Unicode variants (UTF-8, UTF-16, UTF-E), standard 8-bit character sets (ISO8859nn, EDF04nn) and any user defined 8-bit character set.

- **FTAM support**

The full integration of the FTAM protocol (file transfer based on the ISO 8571 protocol) by means of the openFT-FTAM add-on product means that the communications options are extended to some important systems. The add-on module openFT-FTAM is integrated into the openFT product. It must be ordered separately as a license.

- **FTP support**

The communications options are extended to practically all major systems by the integration of the ftp protocol by means of the openFT-FTP add-on product. The add-on module openFT-FTP is integrated into the openFT product. It must be licensed separately too. For secure connection to FTP partners SSL/TLS interface is supported on outgoing connections.

Provisioning

- **Dynamic partner list**

Thanks to partner list remote instances are accessible immediately. The partners can be configured in different properties in order satisfy security features or set the tracing.

- **Dynamic changes of configuration**

Any change of configuration will be active immediate. Current working processes are not affected

Automation and Workflow

openFT offers the following functions and features for integration into business processes or applications:

- **Follow-up processing**

It is possible to attach a request for follow-up processing in the local or remote system to a file transfer request. If the transferred file is a job, for instance, it can be started by means of the follow-up processing. Further examples of use comprise printing out transferred files and automatic updating of databases.

- **Pre- and post-processing**

Operating system commands that process or dynamically create the data before transmission can be started when sending or receiving a file. This means, for instance, that it is easy to access databases and transfer results, perform conversions and integrate customer-specific security tools. With post-processing, the data transferred can be processed further in a similar manner on the receiving end in programs or scripts. In order to perform pre- and post-processing in the partner system, the partner must use an openFT version that supports pre- and post-processing.

- **Remote command execution**

With openFT for z/OS, it is possible to run z/OS commands or programs from a local Windows, Unix and BS2000/OSD system resp. with openFT and thus integrate them in scripts and/or procedures. The SYSPRINT, SYSTSPRT output of the commands or programs are mapped onto stdout, stderr, and SYSLST, SYSOUT resp. and can be easily further processed and put out using Windows, Unix and/or BS2000/OSD tools. The same functionality is vice versa available initiated in z/OS for remote command execution in Unix, Windows, and BS2000/OSD systems mapping stdout, stderr, and/or SYSLST, SYSOUT onto STDOUT, STDERR and/or put out into a file. The resulting remote functionality is also completely secured through the FTAC protection functions and the encryption feature.

- **Integration in job scheduling**

openFT functionality is usable as well in batch mode as in dialogue mode (TSO). Pre-, post- and follow-up processing are

running as jobs the settings of which can be individually customized.

Changes since the preceding version V12.0

- **Security enhancements**

Mechanisms basing on the exchange of key files are shaped more effective. The minimum length of an AES key can be configured.

- **Globalization**

The global usage is strengthened by consequent support of international character sets as well in request data as with filenames.

- **Tools**

The availability of further tools (ft_mget to transfer several files and ftping to check communication partner) increases comfort.

TECHNICAL DETAILS

TECHNICAL REQUIREMENTS HARDWARE	
z/OS server	Minimum system configuration
Memory request (static)	The supplied openFT files occupy on an IBM disk of type 3390-2: openFT appr. 1420 Tracks openFT-AC appr. 6 Tracks openFT-CR appr. 6 Tracks openFT-FTP appr. 6 Tracks The disk storage space required for the request description file SYSRQF is 36 MB for default values, the options file SYSOPF requires 8 kB. The size of the logging file and possible trace files is variable
Memory request (dynamic)	openFT V12.1 requires an address space of at least 11 MB at runtime. Additional 265 KB by each request and additional 355 KB by each process/task.
TECHNICAL REQUIREMENTS SOFTWARE	
openFT for z/OS	z/OS as of version V2.1 SMP/E for installing openFT ACF/VTAM and TCP/IP resp. for z/OS for openFT internal function with SNA links
use of specific functions	openFT-AC V12.1 for using the extended access protection FTAC (File Transfer Access Control) openFT-CR V12.1 for data encryption (free of charge, country-specific laws may restrict availability) openFT-FTP V12.1 for using ftp protocol ACF/NCP for link via SNA TCP/IP für z/OS as of version 3 release 2 for links via a TCP/IP network ISPF and ISPF/PDF for supporting the user and/or the administrator commands with ISPF panels RACF as of version 1.8 or a compatible product for checking the access authorization of the openFT users NetView or a compatible network management system for administration via console IBM program product SMF for the accounting of file transfer jobs
USER INTERFACE	
Language	English
INSTALLATION	
Installation	By the customer on the basis of the release notice.
DOCUMENTATION	
Manuals	Manuals (English and German) for users and system administrators as PDF files; also available on the Internet via http://manuals.ts.fujitsu.com/index.php?id=9864-9871-12166
DEMANDS ON THE USER	
Demands on the user	z/OS knowledge and if necessary knowledge of the partner system
TRAINING	
Training	Courses are held in the Technical Training Academy of Fujitsu under the currently valid conditions.
CONDITIONS	
Condition	This software product is supplied to the customer under the conditions for the use of software products against instalments or a single payment

ORDERING AND DELIVERY

Delivery

This software product may be obtained from your local Fujitsu regional office

FUJITSU PLATFORM SOLUTIONS

In addition to FUJITSU Software openFT, FUJITSU provides a range of platform solutions. They combine reliable FUJITSU products with the best in services, know-how and worldwide partnerships.

Dynamic Infrastructures

With the FUJITSU Dynamic Infrastructures approach, FUJITSU offers a full portfolio of IT products, solutions and services, ranging from clients to datacenter solutions, Managed Infrastructure and Infrastructure-as-a-Service. How much you benefit from FUJITSU technologies and services depends on the level of cooperation you choose. This takes IT flexibility and efficiency to the next level.

Computing Products

www.fujitsu.com/global/services/computing/

Software

www.fujitsu.com/software/

MORE INFORMATION

Learn more about FUJITSU Software openFT, please contact your FUJITSU sales representative or FUJITSU Business partner, or visit our website.

<http://www.fujitsu.com/ts/openFT>

FUJITSU GREEN POLICY INNOVATION

FUJITSU Green Policy Innovation is our worldwide project for reducing burdens on the environment. Using our global know-how, we aim to resolve issues of environmental energy efficiency through IT. Please find further information at

<http://www.fujitsu.com/global/about/environment>



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