

Overview

MessagePlus/Open (MPO) is an enterprise messaging solution for business communication, provided by INTERCOPE GmbH, an independent and highly reputable software technology company serving corporates and financial institutions across the globe.

With MPO, your company will be able to share critical business information among customers, suppliers and other business partners. MPO has been designed for global enterprise wide deployments in large and multi-national organizations.

MPO manages incoming and outgoing communication traffic on a massively scalable basis. Outgoing faxes are sent directly from any MPO integrated application. Incoming faxes are automatically distributed to databases, mail addresses, applications or devices. Currently supported message types include fax, email and SMS.

It provides out-of-the-box integration with numerous enterprise applications such as email systems, IBM Content Manager and FileNet P8, SAP and more.

A Web client is included with the product for administrative tasks as well as to perform user functions.

MPO enables intelligent routing of messages and transaction-related information between a wide range of communication systems and business applications, without necessarily requiring modifications to existing strategic business applications.

The entire corporate message traffic is managed from one central database. The heart of MPO is RDBMS-based, leveraging the power and reliability of IBM DB2 or Oracle Database as its engine.

MPO is an open, standards-based technology that runs on IBM, Sun, Linux and Microsoft operating systems.

In medium and large-size enterprises today immense volumes of messages are often still handled on hundreds, even thousands of isolated fax machines and LAN fax solutions. MPO can offer complete integration of fax communication into any existing IT infrastructure.

The immediate effects of using this technology are dramatic cost reductions and less time wasted in messaging operations, combined with the highest levels of availability and reliability.



Highlights

Platform Independence

MPO can be installed on the server platform of your choice: Linux on System z, IBM AIX, Sun Solaris, Microsoft Windows and Linux as well as in virtualized environments.

Flexibility

MPO is built on a completely modular architecture, which allows different components of one logical system to run on different computers, under different operating systems.

Scalability

MPO scalability enables it to support the communications needs of a growing business.

Availability

MPO is designed for business-critical environments, and it's available 24 hours a day, 7 days a week.

Consolidation

MPO offers the ability to centralize and impose central control over all corporate messages traffic, with maximum cost savings.

Efficiency

MPO provides you with the ability to seamlessly integrate workflow and communications with your business applications.

Security

Highest levels of security and confidentiality are guaranteed by features such as data encryption, secured connections, data integrity protection and message delivery confirmations. MPO is completely audit-proof and compliant with data privacy and other legal regulations.

In a Nutshell

MPO is a universal, content-independent, and workflow-enabled communication platform for medium to large organizations.

MPO provides connectivity for business applications through a wide range of communication channels across the entire enterprise. MPO enables effective electronic exchange of business information with customers and business partners.

Furthermore, MPO can bridge the gap of traditionally incompatible in-house systems and formats and importantly, it does this without necessarily requiring modifications to integrated base applications.

On the network side, MPO currently supports transmission and reception of the following message types:

- Fax
- Email
- SMS

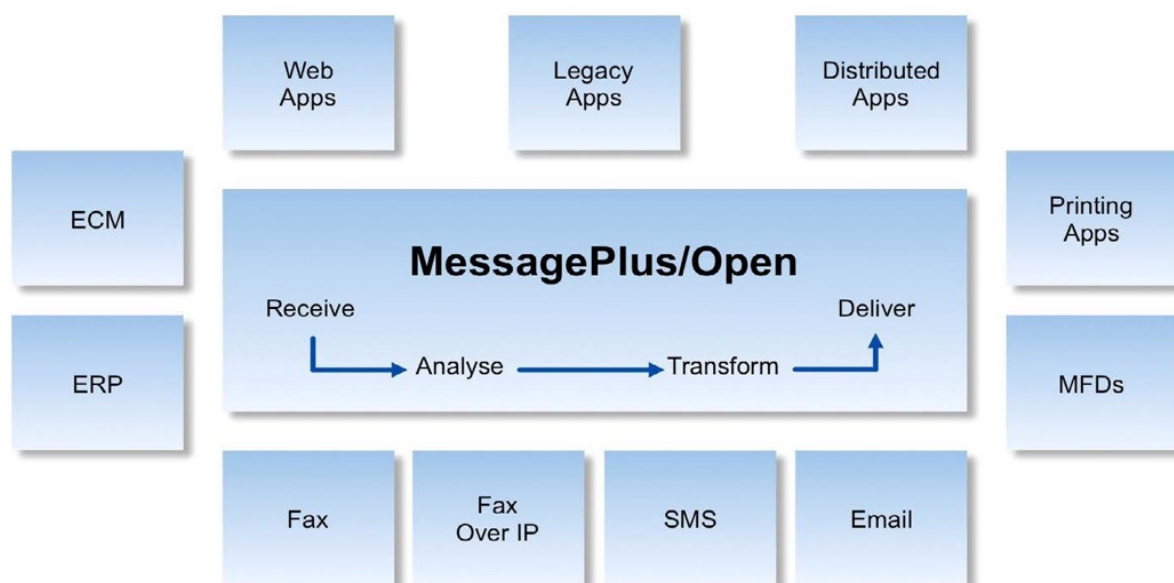
Outgoing faxes, email and SMS messages are directly sent from any application. Incoming messages can automatically be distributed to databases, mail addresses, Content Management folders, applications or devices.

Various graphical formats (e.g. PDF, PS) and application specific formats (e.g. Microsoft Word, PowerPoint or Excel) are supported.

Application integration is provided for virtually any application within the existing and future IT infrastructure of any organization, in particular for:

- All major E-Mail Systems
- Enterprise Content Management such as IBM Content Manager and FileNet P8
- Output Management
- Input Management
- Enterprise Resource Planning (SAP certified)
- Legacy Applications
- IBM WebSphere MQ
- File Integration
- Database Integration

Overview of the MPO communication and connectivity features





Communication Channels

Real-Time Fax over IP

In MPO, real-time Fax over IP is implemented by exploiting the Dialogic Brooktrout SR140 API.

This API is a pure software-based solution. No fax boards are required, only an Ethernet connection from the server running the MPO fax line class to the IP network through which fax calls are to be routed.

The SR140 API provides a mature implementation of the standards recommended by the Internet Engineering Task Force (IETF) such as the

- Session Initiation Protocol (SIP) (RFC 3261),
- the Session Description Protocol (SDP) (RFC 2327),
- H.323,
- the MGCP (Media-Gateway-Control- Protocol)

and the standards of the International Telecommunication Union (ITU) such as

- T.38 and
- T.30.

Based on this technology, MPO is compatible with any T.38– T.30 gateway that meets these standards.

Traditional fax protocols are ongoing supported. For details please contact Intercope.

Email (Extended SMTP)

The email integration of MPO reflects customer requirements, which cannot (easily) be implemented via the standard email systems.

A typical application example is a customer who generates thousands of account statements each day using a mainframe batch process. Traditionally those statements have been printed, enveloped and sent as letters.

This laborious process could be accelerated, secured and significant cost savings could be achieved by integrating the batch process with MPO, allowing many of the recipients to automatically receive the statements as email messages.

No new software development is required and no new communication link to an email system has to be administered and monitored.

Furthermore, the whole scope of formatting facilities offered by MPO is transparently available for email recipients.

Messages can be personalized, and perfect graphical images can be generated from pure text messages. For email recipients, these images can be delivered as e.g. PDF or HTML attachments instead of the usual TIFF format mandated by fax.

And of course, mixed recipient groups with fax and email destinations are fully supported.

Thus, wherever messages are generated by applications instead of individual email users, the email functionality of MPO provides an easy and comprehensive solution for message formatting and delivery.

MPO can also offer value-added services for the processing of incoming email. Email messages are frequently received in personal mailboxes, although they should really be part of a business transaction, which is handled in an ERP, Content Management or workflow system.

The content analysis capabilities of MPO allow such messages to be categorized with regard to their business content, and to deliver them to the back-office system under the right categories or index classes, which normally is not feasible using a pure e-mail system.

No special hardware is needed for email connectivity. The SMTP gateway connects to any standard SMTP MTA (Message Transfer Agent), which realizes the message transmission via the Internet or Intranet.

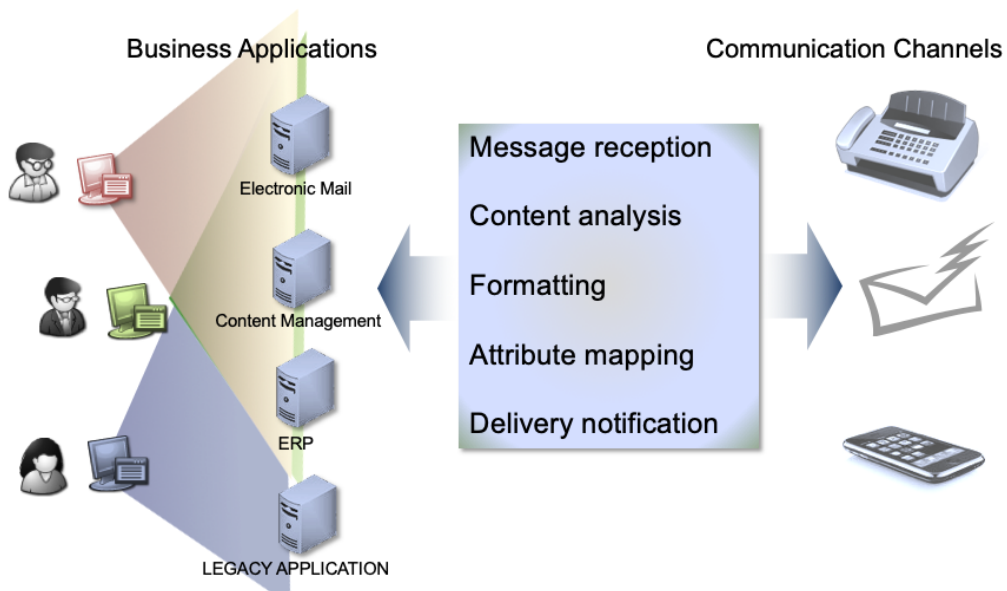
Important SMTP extensions supported are:

- Transport Layer Security (TLS)
- Delivery Status Notification (DSN)
- SMTP Auth

SMS

Any MPO integrated application can send and receive SMS messages the same way faxes and email messages are sent and received. For small volumes MPO supports a SMS modem device.

For larger volumes MPO connects to a SMSC (Short Message Service Centre) through TCP/IP and supports all standard protocols such as e.g. CIMD2 or UCP.





Application Integration

Content Manager

The MPO integration with IBM Content Manager allows received faxes and email messages to be automatically stored in specific item groups and workbaskets of CM. Outgoing documents can be directed to MPO using the workflow functions of CM workstation. Similar functions are available for IBM FileNet P8.

Email

MPO integrates with all email systems through the standard protocol ESMTP. This integration allows any email user or any application processing email to send and receive faxes and SMS messages just like email.

File Integration

Transmission orders (messages) can be easily generated from applications by writing them to a file in a specific directory. Transmission reports (confirmation of delivery) can be received by applications by reading a file in a specific directory.

The same process is used and available for applications to receive Reception Reports (received messages and meta data).

All data exchanged through the file integration can be encoded in XML syntax in a very flexible way.

MQ Integration

Transmission orders can be easily generated from applications by writing them to a MQ queue.

Transmission reports can be received by applications by reading a MQ queue. The same process is used and available for applications to receive Reception Reports (received messages and meta data).

All data exchanged through the MQ integration can be encoded in XML syntax in a very flexible way.

Printing Systems

An emulation of a standard HP network printer allows various printing systems to send outgoing messages to MPO. The control information such as e.g. a fax or SMS number can then be included in the PCL data stream.

Transmission notifications for print jobs can be forwarded to any connected system such as e.g. email addresses, or MQ destinations.

RDBMS Interface

Outgoing messages (transmission orders) can be simply generated from applications by writing them to an RDBMS table.

Transmission and reception reports can be received by applications by reading these from a table within an RDBMS.

All data exchanged through the database integration can be encoded in XML syntax in a very flexible way

Supported databases include IBM DB2, Oracle Database and Microsoft SQL Server.

SAP

The standard SAP integration is based on ESMTP. However, the legacy SAP RFC architecture is still working with MPO.

Outgoing faxes are received from the SAP application. Various formats and multiple attachments are supported. Transmission reports and incoming faxes are sent to any SAP application. The module can connect to several SAP systems and clients.

The integration is SAP certified.

Webservice Interface

A message creation web service is provided in order to expand the possibilities to send faxes and receive status information in SOA oriented environments including a broad set of optional parameters. The results of such a transmission order can be obtained by a "GetStatus" operation.

All data exchanged through the database integration can be encoded in XML syntax in a very flexible way.

A small icon representing system management, consisting of a central square with three lines extending downwards to three smaller squares.

System Management

Monitoring

MPO has one central control process, the monitor module, which starts, stops and controls the software modules in a MessagePlus/ Open domain. The monitor module receives live heart-beat signals from each individual program. If a module should fail, it is automatically restarted.

An alert is forwarded to the monitor module for every exceptional event and stored in the central database, as is all data on system usage and other statistical information.

This data is accessed using MPO utilities. These include the line monitor as well as an alert viewer. These utilities provide administrators with a comprehensive user interface by which the entire system can be monitored.

You are alerted automatically should any event occur which might require your attention, like line failure or critical disk space.

Your requirement, on the other hand, may not be for proprietary tools, but a central point of control should monitor everything running in your network.

This technology is also available:

MPO Simple Network Management (SNMP) interface

MPO has a SNMP subagent with a worldwide registered Management Information Base (MIB).

These components are used to integrate MPO into your standard System Management Application.

All the functions of the above-mentioned monitor module thus become available to your central network management:

- Receive MPO alerts as standard SNMP traps
- Access to a broad range of information by reading SNMP
- Variables

You can actively control MPO by writing SNMP variables.

Architecture

Operating Systems

MPO is a completely open system in the sense that all system facilities can be integrated with and used by external applications. The second important aspect of “openness” is that MPO completely integrates into the existing and evolving IT infrastructure of any organization. Whatever the customer’s choice for a mission critical enterprise wide communication solution, MPO will integrate.

MPO is available under the following operating system environments:

- Linux for System z
- Linux
- IBM AIX
- SUN Solaris
- Microsoft Windows

High Availability

In various companies, MPO operates as a “mission critical application” where even temporary system failures cannot be accepted. In such environments permanent availability must be guaranteed, 24 hours a day, 365 days a year.

This is why MPO supports standard high availability solutions as well as internal high availability mechanisms and the system can be deployed in an active-active configuration.

Virtualization

MPO can be installed and run in virtual machines provided by platforms such as VMware.

Object Storage

The entire core data of MPO is stored in Relational Database Management Systems (RDBMS) tables. Currently supported databases include DB2 and Oracle Database. For another RDBMS please contact Intercope.

Depending on the implementation of a specific RDBMS this will provide operational advantages like:

- High availability data stores
- On-line backup facilities
- Disaster recovery

The RDBMS also gives highly flexible access to the data required under various selection criteria and overcomes the limitations of any proprietary file-based solution.

Optionally all messages stored in the database can be secured by a hashtag to guarantee data integrity.

Distributed Components

MPO is built on a completely modular architecture, which allows different components of one logical system to run on different computers under different operating systems. Typical examples are:

Typical examples are:

- Database server and formatting services on a high availability UNIX
- Cluster
- Network interfaces under Windows
- Database server and formatting services on z/Linux
- SAP integration on AIX
- Rendering modules on Windows

Components can also be distributed globally, e.g.:

- Central database services in New York
- Integration modules in New York, Paris, Berlin, Sydney
- Network interfaces in New York, Paris, Berlin, Sydney

Multiple domains can coexist in one network with distributed components and domains also combined in any constellation. This architecture can be customized to perfection and adapted to any corporate network and organizational requirements, no matter how individual they may be.

MPO guarantees unlimited scalability with regard to processing power, formatting capabilities, throughput and the number of communication ports that may be required.

Directory Synchronization

MPO user profiles and address books can be synchronized with external directories through LDAP or other protocols.

Web Client

The client interface of MPO is based on Java Server Page technology (JSP). It can be used from any standard Web browser like Microsoft Edge, Internet Explorer or Mozilla Firefox.

The Web client includes operational as well as administrative functions. Comprehensive document journals (including a complete history log) are provided e.g. for messages which require manual operation.

In addition, all system components can be configured and monitored centrally even if they operate as satellites in remote locations.

Security

Highest levels of security and confidentiality are guaranteed by features such as data encryption, secured connections, data integrity protection and message delivery confirmations. MPO is completely audit-proof and compliant with data privacy and other legal regulations.

To meet highest security standards MPO provides extended security support in several areas:

- Data integrity is ensured by signing program code and configuration information.
- Message data integrity is optionally ensured by hashing algorithms.
- Unauthorized access to content data can be optionally prevented by data encryption.
- Encryption keys can be provided with Public Key Infrastructures (asymmetric encryption) or as secret-key cryptography (symmetric encryption).
- Multi-factor authentication, time-based one-time passwords and queries to remote directories such as Active Directory are supported.
- The MPO Configuration Change Management optionally forces authorization of changes by two or more persons.
- All data exchanged between distributed MPO modules is encrypted by default.

- All connections between distributed MPO modules and databases, e-mail systems, FoIP components and other devices and applications can be secured with e.g. by SSL/TLS.

High Quality Support



INTERCOPE provides a round-the-clock help desk contactable via email or telephone for its mission critical products.

A team of highly qualified and dedicated engineers provide first class service and problem solution within committed response times. This well-received support function has been in place for over 35 years

Intercope maintains close relationships with its corporate customers.

MPO is continuously enhanced to comply with the latest software standards and IT technologies as well as customer requirements.

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