

# UC & Collaboration Solutions



Business Applications and Solutions for  
Unified IP Telephony

# IP Fax Server Solution



CommSouth



Fax Server

**Fax Over IP (FoIP)** solution supported by CommSouth, is a true software ONLY plug & play IP fax server. Fax Server can send and receive faxes from anywhere like **email, web or any smartphone!**

**IP Fax Server** is based on the world leading Dialogic® Brooktrout® SR140 fax software technology. Fax server manages incoming and outgoing faxes with a very simple and efficient interface, allowing everyone in an organization to have a virtual fax box on their PC desktop.

Fax Server can scale from 2 to 120 simultaneous channels and is available as a virtual appliance solution (preinstalled software on a virtual machine). The solution can be easily managed through its intuitive web portal. Leveraging its configuration simplicity and scalability, Fax Server is suitable for any organization, multi-tenant large enterprise or carrier offers.

**Inbox / Outbox**

Auto Refresh: 1 min Fax Box Phone Numbers: All Fax (catch all included)

Search:  Advanced Search

Received 1 to 10 items of 211 Fax found

Fax ID	Date	Time	Sender	Recipient	Pages	Read	Options
213	19/07/2011	11:43:00	0123456789	99999	1	🔦	📧 ✖ 🔄
212	18/07/2011	17:23:00	0123456789	99999	2	🔦	📧 ✖ 🔄
211	18/07/2011	16:42:00	0123456789	99999	2	🔦	📧 ✖ 🔄
210	18/07/2011	16:40:00	0123456789	99999	2	🔦	📧 ✖ 🔄
209	18/07/2011	16:29:00	0123456789	99999	2	🔦	📧 ✖ 🔄
208	18/07/2011	16:25:00	0123456789	99999	2	🔦	📧 ✖ 🔄
207	18/07/2011	16:21:00	0123456789	99999	2	🔦	📧 ✖ 🔄
206	18/07/2011	16:19:00	0123456789	99999	2	🔦	📧 ✖ 🔄
205	18/07/2011	14:06:00	0123456789	99999	1	🔦	📧 ✖ 🔄
204	18/07/2011	14:04:00	0123456789	99999	1	🔦	📧 ✖ 🗑️ Delete

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## Why Deploy a Fax Server

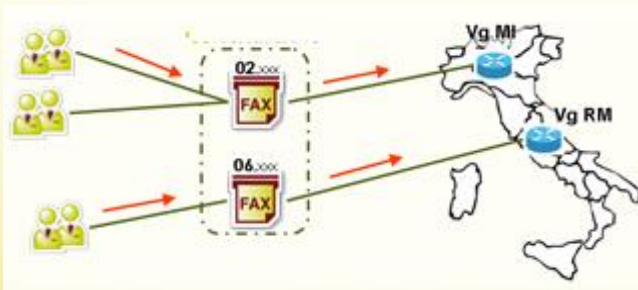
The IP Fax solution supported by CommSouth, enables businesses to leverage their existing equipment to implement proven and tested Fax over IP (FoIP) servers in their networks.

The main advantages of a fax server like TerraFaxPro are:

- **Reduce maintenance and management costs** by substituting multiple fax machines with a single unit, completely integrated with the existing IP infrastructure.
- **Reduce operating costs** by eliminating analog fax lines, lowering long-distance fax bills with least-cost-routing, and allowing excellent economy of scale with VoIP gateways and centralized fax servers.
- **Increase efficiency** with smart process flows for creating, receiving, routing, reviewing, and approving documents.
- **Lower labour costs** by automating manual tasks such as sending, receiving and digitalization of fax documents such as purchase orders, etc.
- **Comply effectively with business requirements** by providing electronic document storage and management, automated delivery, receipt confirmation, and security.

## How it works

Fax Server manages incoming and outgoing faxes with a very simple and reliable interface, allowing everyone in a company to have a virtual fax box on their desktop; anyone can send and receive faxes from anywhere using a standard email client, a web browser and even a smartphone supporting emails!



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The system allows defining multiple fax boxes (virtual fax), each one with a dedicated phone number, typically used with DDI (direct dial inward). Users can be assigned to one or more fax box or multiple users can be assigned to one fax box; thus Fax Server can be adapted to any organization and structure. E.g. outgoing faxes can be sent through different voice gateways or proxies depending on the used fax box.

Administrators can assign multiple users to a give fax box and give different permission levels such as send, read, email to fax, notification, etc

The screenshot shows a web interface for managing "Faxbox Users". It includes a table with columns for "Faxbox User", "In", and "Out" status, and a "User email" field. There are also icons for adding users and managing permissions.

Faxbox User	In	Out	User email	Send	Read	Notify
admin	<input type="checkbox"/>	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mark	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	mark.steel@midasolutions.com	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
SmithJ	<input type="checkbox"/>	<input checked="" type="checkbox"/>	john.smith@midasolutions.com	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Each user can access the application through its simple and intuitive web interface. After login, the user can manage his/her own profile, read and send fax documents from the web interface.

**Fax Server** delivers fax over IP capabilities, according to the T.38 standard protocol. It is based on leading FoIP technology Dialogic SR140 Fax Software and supports **H.323** or **SIP** signaling protocols and can scale from **2 to 120 simultaneous fax channels** per server. Fax Server supports also **G.711 pass through** and also **T.38 fall back to pass through**; therefore it can be deployed also in environments where T.38 is not fully supported

# IP Fax Server Solution



## Fax Server main features:

### Incoming faxes:

- Fax is received **directly into the user's fax box**, based on called number (DNIS)
- The incoming fax can be automatically **sent via email** (PDF attachment) to all users of the fax box
- **No need to install** hardware or software clients on users PCs
- **Caller information** (i.e., CLI) is attached in a clear format to the forwarded email
- **Received faxes** can be accessed through the **user's mailbox or email client** (unified messaging) or through the **Web portal**. The web interface provides interesting solutions such as a simple preview on received and sent faxes, "google like" search options, etc

### Outgoing faxes:

- **Wide range of supported formats:** Adobe PDF, Microsoft Word, Excel, PowerPoint, Postscript TIFF, plain text, etc.
- Fax documents **can be sent via the standard email client** with proper formatting and attachment of fax documents with support for all file formats mentioned above.
- Fax documents **can be sent via the Web portal** with a very easy interface for file upload, making faxes accessible everywhere subject to the proper authentication procedures.
- **Quick Send** page, send a fax in few steps
- **Centralized directory** allows quick and easy sending of faxes. Contacts can also be grouped into lists so that multiple destination faxes can be easily managed (Fax broadcasting).
- Faxes can be **scheduled** at a given time of the day.
- **Fax delivery result notification** is provided via email to the sender.
- **Fax covers** can be used optionally or automatically.

# IP Fax Server Solution

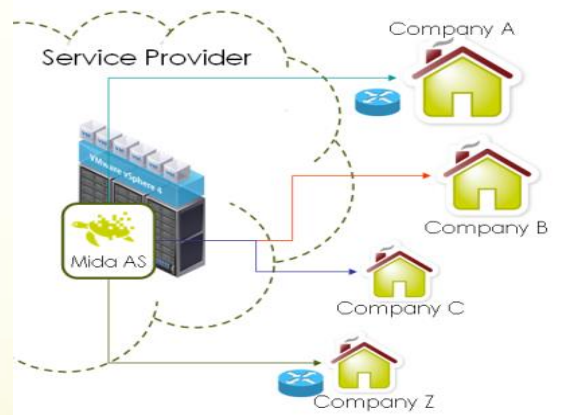


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- Each fax box can point at the default proxy/gateway or it can have a specific proxy address, thus allowing an easy implementation of **user based routing** for outgoing faxes
- Each fax box can use specific data such as TSI, tag line, etc.

## Administration Web console:

- The web interface allows **configuration and administration of all system parameters** (i.e., speed, paper format, company name, etc.).
- **In/out fax queue status can be displayed** allowing access to sent, archived, and received faxes.
- **Activity and detailed logs** provide the system administrator with activity traces, including fax send attempts from the Web interface.
- **Company contacts and distribution lists** can be imported using regular CSV files.
- User management and administration for special needs allows **conformance to company policies**. Optionally the system can authenticate users through LDAP v3 by means of its Active Directory authentication option
- A **multi-tenant option** also exists, providing the possibility to serve multiple organization through a single centralized application server.

A screenshot of the 'Active Directory Configuration' web console. It features three main sections: 'LDAP Configuration' with fields for Base DN, Authentication username, Password, Host 1, and Port 1; 'Authentication Test' with fields for Username and Password; and 'Import Users' with an 'Additional Query Options' field. Each section includes a corresponding 'Test' or 'Get User List' button.



# IP Fax Server Solution



## Available Platforms and Packages

Different packaging versions are available, in order to fill all customer needs.

The application is available as a virtual appliance (VMware) solution:

- up to 120 channels
- available as VMware® virtual machine
- supports vSphere 4.x/5.x advanced features such as vMotion, High Availability (HA) and in case Fault Tolerance (FT)

## Benefits of the Solution

Fax Server is available on virtual appliance. The appliance approach provides many advantages:

### Fast deployment and easy maintenance

- No need to install operating systems and software, no need to run a setup
- Seamless integration in a company's existing infrastructure, supporting the standard virtualization infrastructures commonly used in modern IT solutions
- A new virtual machine can be activated in few minutes
- Deployment time and effort greatly reduced

### Plug-and-Play Solution

- Turnkey solution
- Pre-Installed software applications, enabling multiple channels is just a license key upgrade
- Installed like any other networking device, when the device is switched on, it works immediately. Network and application parameters are configured using a simple and user friendly web interface (below the system control panel example)

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## **Dialogic SR140 Enabling Technology**

**Dialogic SR140** is a software-only solution that leverages the field-proven Dialogic® Brooktrout® fax protocol to deliver the same high levels of performance, reliability, and scalability as Dialogic® Brooktrout® TR1034 Fax Boards.

Dialogic delivers time-tested industry-leading fax technology worldwide, offering the same high performance on both its board-based and software-only FoIP products. Brooktrout FoIP products leverage the existing Dialogic® Brooktrout® T.30 Stack, **which has been used successfully for more than two decades**, and is now combined with Dialogic's first-to-market V.34 T.38 implementation, allowing fax data transmission up to 33.6 kpbs.

## **Available Platforms and Packages**

**The licensing scheme is based on the number of channels** (simultaneous incoming and outgoing calls) that are needed in the system.

The licensing scheme fits well with real customer needs, providing a flexible solution that only looks at the number of fax channels while **allowing unlimited users and unlimited phones/fax numbers**.

Additional available options are also available such as multi-tenant module and the Active Directory/LDAPv3 authentication option. Please contact CommSouth for further details.

The virtual appliance is a ready to deploy model





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## Software Platform

The solution is based on kernel Linux (v. 2.6.18). The application is currently available on VMware ESXi 4.x or 5.x as virtual appliance OVF/OVA or KVM.

If the solution is to be installed on third party Hardware make sure that the device is compatible with VMware ESXi 4.x or 5.x. Please Contact CommSouth for further information.

The virtual machine has an internal PostgreSQL database. It's also possible to use an external cluster or a virtual machine with Microsoft SQL Server 2008 or 2005, directly connected to virtual machine

## IP Interoperability

Fax Server is compatible with FoIP over T.38 and supports SIP and H.323 signaling protocols. It has been proven to work with the following technologies: **Cisco, Avaya, Alcatel, Nortel, Mitel, 3Com, Aastra, Siemens, Linksys, Multi-Tech, Quintum, ShoreTel, AudioCodes, Patton, Acme Packets** and with multiple SIP trunking providers.

Fax Server does support native configurations with multiple voice gateways for outbound traffic (e.g. different caller ids depending on the site). Please CommSouth support for further information on its multi-site support.

Proper clock synchronization on the voice gateway impacts on the fax transmission quality (no frame sleep shall occur). Proper QoS parameters shall be set up for fax traffic.

Fax Server can also be deployed on traditional (TDM) networks by just connecting the product with one of the supported voice gateways; please contact CommSouth for further details.

Fax Server is based on Dialogic SR140 and therefore the SR140 compatibility list provides further IP PBX and Voice gateways that should be supported. Please contact CommSouth support in case you have an IP PBX not listed here or if you need further information on supported releases.

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## Email Server Integration

Fax Server can be integrated with any email server that supports the following standard protocols:

SMTP, POP3 (also SSL) and IMAP (also SSL). Therefore Fax Server can interwork with Microsoft Exchange email server and Lotus Domino using standard protocols.

## Technical Specifications

- H.323 (rel.4)
- SIP (RFC 3261)
- ITU T.38, ITU T.30 Group 3
- G.711 and T.38 fallback pass through
- V.17, V.29, V.33ter, V.21 and V.33 compliant with auto-fallback
- Up to 33.6 kbps with auto fallback transmission rate
- ECM error correction supported. Please note that the retransmission rate on FoIP solutions might be higher than on traditional TDM solutions.
- Image compression MH, MR, MMR
- A4, A3 and B4 compatible

For more information, please contact  
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Chennai. India – 600 040.

Email: [info@commsouth.com](mailto:info@commsouth.com)

URL: [www.commsouth.com](http://www.commsouth.com)

## Printer Integration

Fax Server can automatically print received faxes. The solution supports Linux kernel v.2.6.18 and printers compatible with CUPS driver v1.3.7. The network printer must be accessible by the fax server. It's also possible to assign a printer to each fax box.

The application web portal supports the following web browsers:

- Internet Explorer 7 or later
- Chrome 5 or later
- Firefox 3 or later
- Safari 3 or later

The server supports the following file formats: .bmp, .doc, .docx, .gif, .jpeg, .jpg, .pdf, .pps/.ppt, .ppsx/.pptx, .ps, .rtf, .tiff, .txt, .xls, and .xlsx

## Optional Modules

Server can be extended with additional optional modules providing functionalities such as:

- Integration with directory systems such as Active Directory/LDAPv3 for user authentication
- Integration with document management systems
- Multi-site support for outbound traffic