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Migrating from Fax Servers to the Cloud

How a Software-as-a-Service fax solution can reduce capital and operational expenses as well as practical information on how to make the switch.

Executive Summary

IT managers are faced with replacing fax servers when they have reached the end of life or no longer make sense due to a VoIP phone system upgrade. Ten or twelve years ago, many of those managers probably expected faxing to be a thing of the past by now. However, people's familiarity with faxing, and regulation compliance means that faxing continues to be a critical IT capability.

To avoid the capital expenditure and maintenance costs associated with server products, many IT departments are looking to outsource this non-core capability to the cloud, thus fax as a hosted service.

This white paper discusses the options available to organizations who have decided to rationalize their legacy fax architecture. It also provides a framework for migration from a fax server to an Internet fax solution.

Faxing

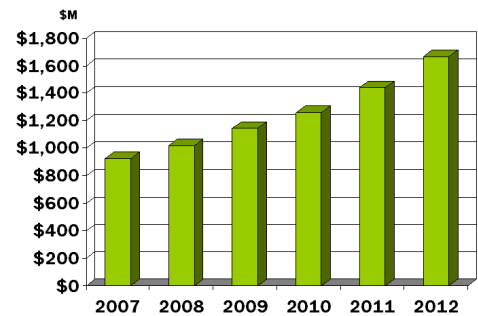
The perception of faxing as a "technology in decline" runs counter to the statistics. According to consultant Peter Davidson, there are 200 million fax machines sending over 100 billion faxes around the world. Gartner affirms that "businesses will continue to rely on facsimile for many of their most important business-to-business and business-to consumer communications."

The survival of fax is guaranteed by both the continued presence of paper-based workflows and perceived security risks of email. In addition, regulations such as the Health Insurance Portability and Accountability Act (HIPAA), the Gramm-Leach-Bliley Financial Services Modernization Act, and Sarbanes-Oxley make faxing sensitive documents the only choice for organizations with limited IT capabilities.

The challenge for IT managers is to integrate an ageing fax infrastructure into the modern workplace where documents are part of complex workflows and employees are increasingly working away from the office – all whilst reducing capital and operational expenses.

Hosted fax offers an ideal solution over traditional fax machines and fax servers for both production faxing and convenience faxing. It provides a solution with very little or no capital expenditure, little setup costs, and a much easier deployment than IP-based fax solutions.

Fax Services Market Compound Annual Growth Rate: 12.5%



Source: Davidson Consulting, 2008

Moving Fax to the Cloud

Most companies have years of legacy fax systems in place. Fax servers had been the solution of choice for medium and large organizations due in large part to their greater operational efficiency, and integration capability versus individual fax machines. Fax servers offered a technological upgrade to a critical function, providing desktop and production faxing in a somewhat centralized configuration. As these servers reach their end of life, IT managers are looking to outsource faxing to the cloud – as has been done successfully for other software applications such as sales force automation, human capital management, and marketing automation. Even the most critical systems such as email and intranets are now candidates for outsourcing.

Cost Savings	<ul style="list-style-type: none">▶ Reduce operational and capital expense.▶ Leverage existing Internet connection.▶ Pay only for needed capacity.▶ No fixed line costs, long distance costs, or server costs.
Resourcing	<ul style="list-style-type: none">▶ No hardware or desktop software.▶ Get up and running in weeks, not months.▶ Redirect resources to mission critical projects.
Reliability & Security	<ul style="list-style-type: none">▶ Service availability often higher than in-house.▶ Redundancy and backup at no extra cost.▶ Security often stronger than in-house.
Scalability	<ul style="list-style-type: none">▶ Unlimited scale on demand.
Integration	<ul style="list-style-type: none">▶ Easy integration through web services and middleware.
Mobility	<ul style="list-style-type: none">▶ Access from anywhere in the world.▶ Works on mobile devices like the BlackBerry®.▶ Local and toll free fax numbers.
Support	<ul style="list-style-type: none">▶ 24/7 customer support.▶ Service level agreement adherence.

The Benefits of Hosted Faxing

IT managers are finding that hosted fax and software-as-a-service (SaaS) solutions provide functionality, flexibility, and security comparable to in-house and can reduce cost, even when considering the total cost of ownership.

Cludonomics

Cost reduction is the main driver for moving IT systems to the cloud. For many IT departments, migration to hosted faxing has been win-win-win: Lower upfront costs, lower operational costs, and a redirection of resources towards higher ROI projects.

Costs of implementing a conventional fax solution include hardware costs, implementation costs, operational costs, and the opportunity cost of devoting resources to maintenance. Internet fax eliminates much of the hardware and implementation costs and virtually eliminates the risk of a failed installation since the application is already up and running and has been successfully deployed in peer organizations.

A Hosted Fax solution can also lower operational expense compared to a conventional deployment. The customer pays only for usage, which is often less than the cost of fixed phone lines, server maintenance, server upgrades, and long-distance fees. The service provider can offer the service for a fraction of the cost of a stand alone deployment because of the economies of scale it realizes when thousands of customers share the multi-tenant hosted application. Further, those economies of scale afford it with the ability to run their applications on top-of-the-line, well supported equipment and software, and thus provide customers with greater reliability and security than can be achieved in-house.

Hosted Faxing vs. Fax Servers – Cost savings considerations:

- ▶ Fixed phone lines
- ▶ Long distance charges
- ▶ Servers
- ▶ Software support & upgrades
- ▶ Electricity

Security & Reliability

One of the frequently stated objections to a SaaS deployment is that security and control of the application is given up. The fact is, most security breaches originate from inside an organization and most SaaS providers have implemented robust security safeguards and redundancies that would be expensive to match. A concern with hosted fax is securing the portion of the transmission that occurs over the Internet. This is addressed by securing email to and from the fax service with PGP or TLS and accessing the online interface via HTTPS.

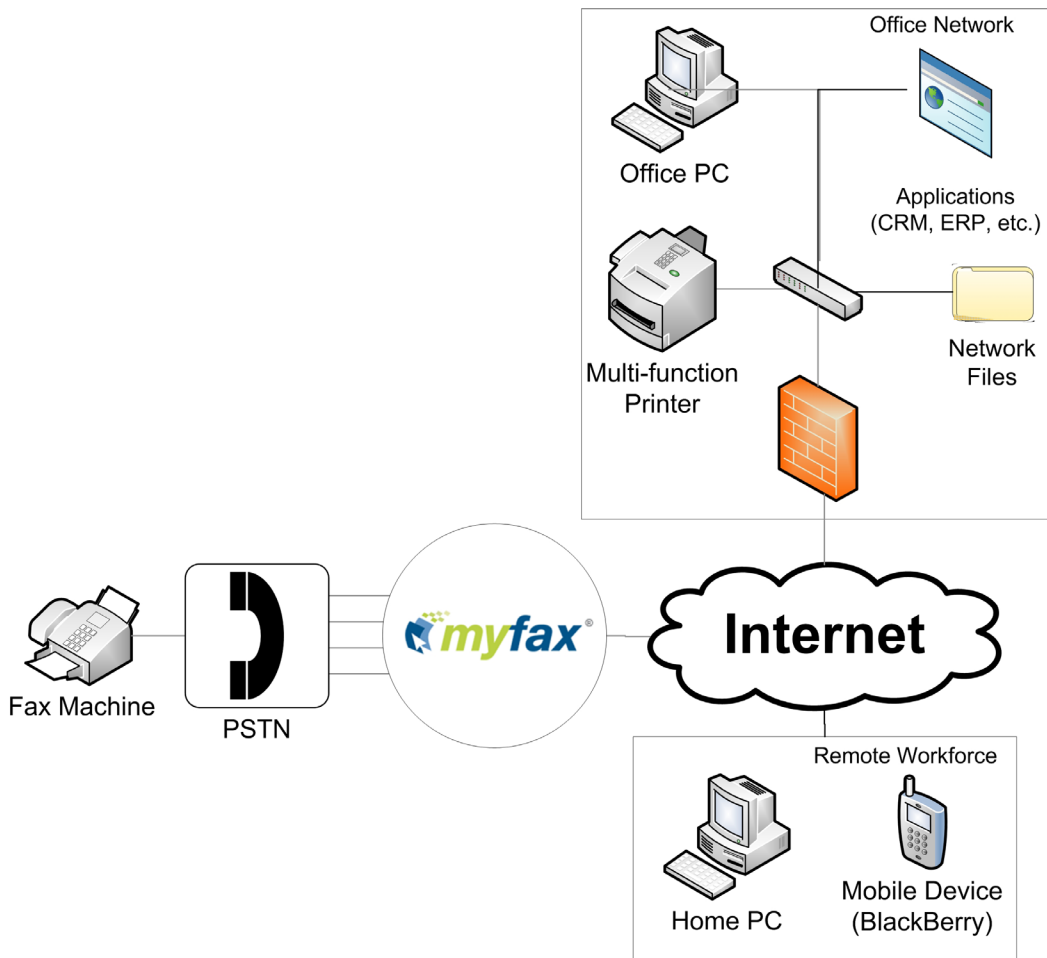
In terms of availability, SaaS applications can provide (and will often guarantee) uptime that is comparable or even better than that of legacy fax servers. With a few rare exceptions, when SaaS providers have unplanned outages, they last a few minutes. When a fax server goes down, it can be down for days or weeks. In fact, providers will often guarantee an uptime service level agreement (SLA) in their purchase agreements.

Service

A hosted service is after all about providing a service, and that includes all of the value added components normally included in support contracts that come with licensed software. Automatic and painless upgrades, 24/7 customer support, and professional services to help configure, customize and integrate with existing systems.

Hosted Fax Deployment

A hosted fax service creates a gateway between the Internet and the public telephone network. It is often described as Fax-to-email although in reality faxes can be sent and received in more ways than just email. An Internet fax can be sent by email, from a web interface, from a multi-function printer/copier, and even from a document workflow application. Hosted fax services can support the sending of virtually any image or document file type, and received faxes can be formatted as either TIFF or PDF files.



Faxing over IP (FoIP)

When a company upgrades its traditional PBX to VoIP, it often ends up keeping analog phone lines in place to support fax machines and MFPs with fax capability. After a VoIP deployment, IT managers often look for ways to rid themselves of those remaining analog lines and replace fax servers rather than integrate them into the new PBX. Faxes cannot be transmitted reliably over VoIP since it is not designed to carry a fax signal. VoIP works well for voice because a voice signal can be compressed and a human listener will barely notice any pops and pauses caused by congestion and latency in the IP network. A fax machine, however, is not as forgiving and will lose sync if there is distortion in the signal. To address this shortcoming of VoIP, the T.38 FoIP protocol was put forward. T.38 addresses network issues by using UDP and sending the same packet two or three times as a sort of pro-active error correction mechanism.

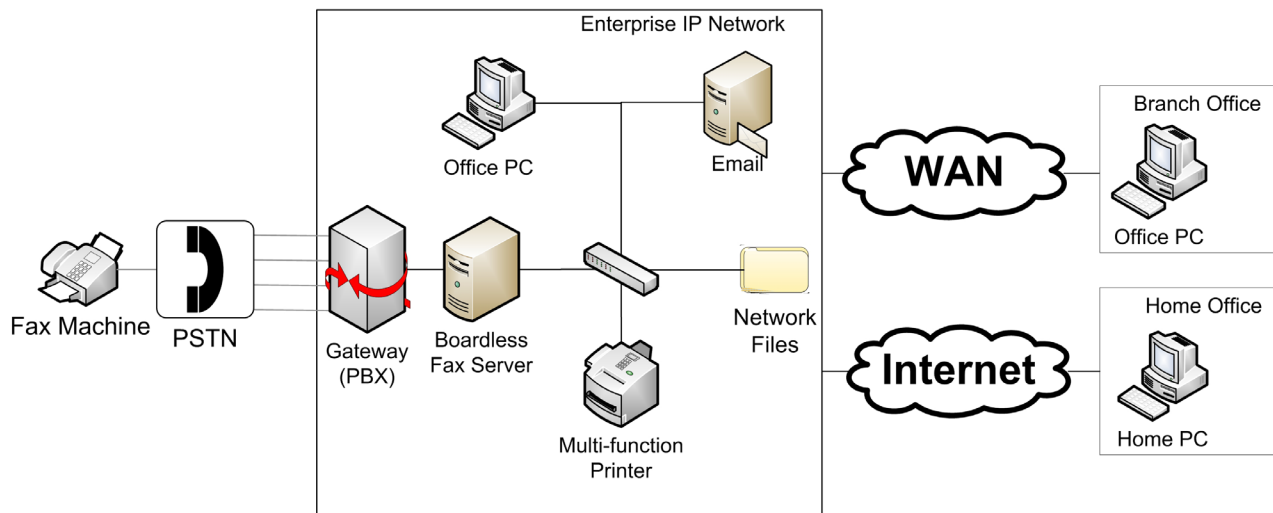


Figure 2 - FoIP Deployment

FoIP sounds like an elegant solution but in real life often fails to deliver in terms of cost savings or performance. FoIP is still susceptible to problems caused by network latency, it isn't always compatible with the Error Correction Mode coming in from analog fax machines, and can be very onerous to configure and troubleshoot.

Implementation of the MyFax Internet Fax Service

Deploying Hosted Fax across an entire organization is relatively simple when compared to the deployment of a fax server. A simple deployment with no integration into existing systems or porting of phone numbers can be done literally in one day. A more complex deployment with hundreds of users and where production faxing is migrated can take from 1 to 4 weeks. Deployments are quick because:

- i) MyFax carries a large inventory of pre-tested fax numbers (direct inward dial numbers),
- ii) the software is already up and running and,
- iii) because most integrations can be done with existing open-source middleware that has already been deployed and tested to dozens of organizations.

The whole deployment process is handled by MyFax Project Managers who guide clients through the deployment and training. The following is a list of typical deployment tasks:

Desktop Faxing

- ▶ Number assignment.
- ▶ User access control.
- ▶ User permissions (ex, send only, receive only).
- ▶ Port existing fax numbers.
- ▶ Customized cover pages.
- ▶ Cover page restrictions (i.e. force use of a cover page).
- ▶ User and administrator training.

Automation, Office Integration and Fax Routing

- ▶ Automate account provisioning (ex, based on Active Directory).
- ▶ Fax from multi-function printer.
- ▶ Drop inbound faxes into a file system.
- ▶ Automatically print inbound faxes.
- ▶ Update fax print driver.

Production Faxing

- ▶ Automated sending of faxes from ERP, accounting and other systems.
- ▶ Customized integration using middle ware or web services.

Provisioning, Permissions, and Number Assignment

The provisioning of users can be done one-by-one or by uploading a CSV file containing user information. The service allows administrators to set numerous permissions and user settings including the ability to send and receive faxes, forcing use of an approved cover page, fax storage settings, etc. Obtaining local and toll free numbers for inbound faxing is usually instantaneous since MyFax has on hand a large inventory of pre-tested numbers. In contrast, bringing in new lines and numbers for fax servers can take several months.

Number Porting

In the United States, Canada, Europe and many other countries around the world, local phone numbers can be ported from one carrier to another. Usually, existing fax numbers can be ported to MyFax. This ensures uninterrupted service during the transition from fax servers to MyFax. However, numbers can only be ported if the carriers MyFax does business with offer coverage in the area code. Porting a number involves some paperwork and can take several weeks.

Automated User Provisioning

It is possible using middleware, to automate the provisioning of new users and modification of existing users based on a directory service such as Microsoft® Active Directory. This greatly reduces administrative maintenance and is especially useful for organizations with large numbers of temporary workers or high employee turnover.

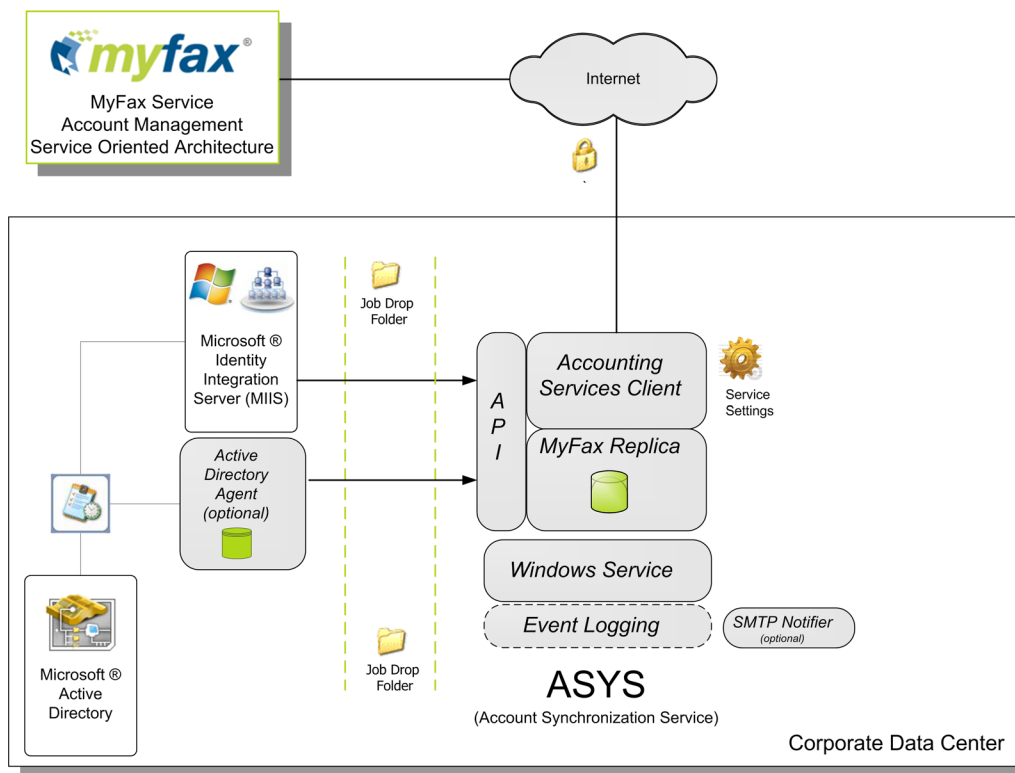


Figure 3 - Automated User Provisioning

Fax Routing

There are several options for integrating MyFax into office document workflows. Most users choose to send and receive faxes by email or through the web-interface. It is also possible to fax from a networked multi-function printer if the printer is Internet fax aware. Using middleware, faxes can be routed to a network file share and/or can be automatically printed on a specified network printer. Faxing can also be done directly from certain applications using a print driver.

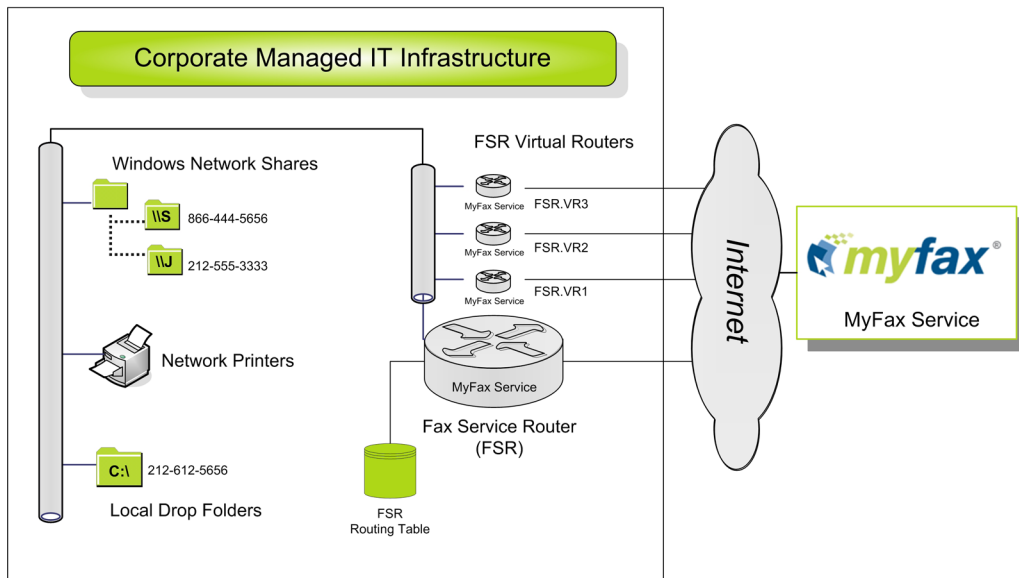


Figure 4 - Fax Routing

Production Faxing

Automated faxing from CRM, ERP, or billing software can be accomplished by either a simple reprogramming to send faxes via MyFax, (many popular enterprise software packages are Hosted Fax aware) or by printing to the MyFax print driver.

Customized Integrations

For integrations that cannot be handled by the existing middleware, nearly all aspects of MyFax can be controlled using a XML web services. It is possible through the web-service to send, receive faxes, and generate reporting data.

Training

Using an Internet Fax, especially via email, is very simple and requires little training. Separate training is offered to users and administrators.

Making the Switch

The switch to MyFax is seamless. Inbound faxing will begin automatically once the numbers have been ported. Outbound faxing can begin immediately once users have been trained to use the new service. Fax servers can be left in place after the deployment to handle any outbound production faxing that may have been overlooked during implementation.

Conclusion

As many enterprise software applications have moved to the cloud, so has faxing. A hosted fax service provides a cost effective alternative to fax servers, allowing IT managers to redirect resources away from server maintenance and chasing down lost faxes to mission critical projects.

About MyFax

MyFax is the fastest growing Internet fax service used by individuals, small, medium, and large businesses to send and receive faxes using existing email accounts or the web. MyFax offers services in North America and Europe, including the United Kingdom, to industries recognized among the fastest growing adopters of internet fax including finance, insurance, real estate, healthcare, transportation and government. More than 15,000 new customers subscribe to MyFax each month. Additional information is available at www.myfax.com and www.myfax.uk.com.

Toll-free: 1-866-657-9885 | 613 733-0000 | Email: sales@myfax.com

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