



Key Business and IT Drivers to Eliminate Your Internal Fax Infrastructure:

*Maximizing efficiencies by moving internal enterprise fax services
to an Infrastructure as a Service (IaaS) solution*

At A Glance

The Big Picture

IT Infrastructure Upgrades are Prompting Companies to Evaluate Enterprise Fax Services Solutions

For most IT infrastructures, maintaining an internal enterprise fax server represents a major investment in the software, hardware, and administrative resources required to guarantee 24/7 operations. For companies with a global presence, there are more regional and local costs that further add to the complexity of their IT landscape. Regularly scheduled communication infrastructure upgrades are costly and force many organizations to migrate their services to outsourced fax service providers, which eliminates the challenges of maintaining costly hardware, software, and telco infrastructure.

This white paper will provide key information for decision makers, both business and technology executives, about the challenges associated with maintaining an internal fax infrastructure vs. the numerous benefits associated with utilizing an IaaS cloud-based service strategy for their mission critical fax communications.

The Challenge

High Costs Maintaining Internal Fax Servers and Support

Recessive economies are forcing global enterprises to reconsider the ROI of their internal fax infrastructures. Studies conducted by Gartner, Robert Frances Group and Davidson Consulting show that companies using fax as a critical business messaging tool spend hundreds of thousands of dollars of annual IT budgets in managing system functionality, capacity planning and uptime to run their fax infrastructure.

According to these IT analysts and industry experts, many companies are running business critical fax applications on outdated equipment. In troubled economies, expenditures should be directed to drive new business and increase revenue, moving towards the trend of outsourcing networks, data services, enterprise applications, provisioning, help desk/support and other tasks. This is why considering a migration of internal fax operations to an IaaS cloud-based service is crucial, as it impacts budgets and streamlines operational efficiencies.

The Solution

Migrating to an IaaS Cloud Based Fax Service Results in Total Control and Lower Costs

An IaaS cloud-based fax service provides at a minimum, the same level of quality and control traditionally associated with an internally managed global fax infrastructure, but eliminates the higher costs associated with acquisition, implementation, deployment and management of fax servers and regional telecom providers. Because the IaaS cloud fax business model is traditionally based on a “pay-per page” transaction, costs are significantly reduced as the pricing structure is strictly based on paying for fax transmissions that are utilized. This structure eliminates high up front investments and capital expenditures (CAPEX) which are required for an enterprise solution, and removes costly ongoing maintenance and operational costs, since all infrastructure is hosted with a managed service like Retarus. A hosted solution enables costs to be spread over millions of transactions, and represents a significant cost reduction to clients. These economies of scale could never be achieved by a single company and the savings significantly benefit the client’s bottom line.

The Benefits

Increased Cost Saving, Scalability and Redistribution of Resources

A key benefit of an IaaS cloud-based fax service, is the unique detailed cross media transmission and tracking reporting, that allow IT organizations to move from a cost center model to one where resource distribution is based on fax usage. This enables an activity-based chargeback system, which provides greater levels of transparency inside organizations and for individual business units, allowing IT departments to optimize budgets and direct valuable resources to growth and revenue generating initiatives.

The Big Picture:

IaaS Cloud-Based Services and the Emerging Enterprise Fax Technology

The use of an IaaS cloud-based service is growing, and by 2016 this growth will increase to become the bulk of new IT spend. According to Gartner¹, 2016 will be a defining year for the cloud, as private clouds begin to give way to hybrid clouds, resulting in nearly half of large enterprises having hybrid IaaS cloud deployments by the end of 2017. As it relates to fax, the overall fax service industry will mimic this trend of cloud adoption and increase from \$1,365 million in 2013 to \$2,795 million in 2018, a 15.41% compound annual growth rate (CAGR), according to Davidson Consulting.²

Looking back over the last few decades, the introduction of a wide variety of proprietary technology platforms required that IT organizations enforce strict internal controls in an effort to maximize productivity, reduce issues, and downtime. Controlled deployment of fax communications fell under this policy.

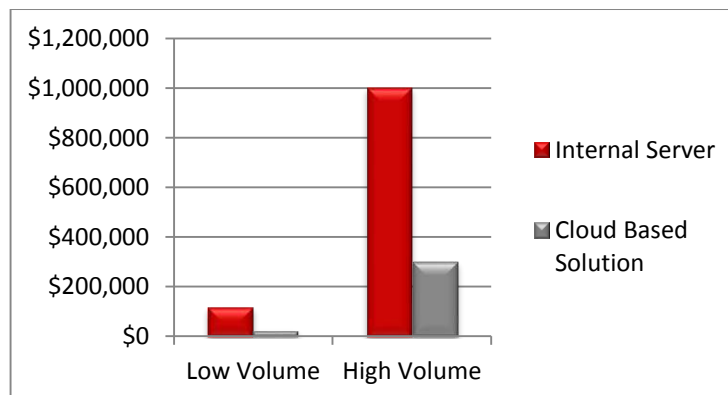
The recent economy has led many companies to re-evaluate their existing costly approaches of maintaining internal fax services, migrating to a less costly outsourced solution, namely **IaaS cloud-based fax services**. This is a growing trend across the board, as cloud-based solutions provide global fax services at a lower TCO and reside in a more scalable and secure environment.

Today, maintaining an internal fax infrastructure requires considerable capital expenditure (CAPEX) for implementation, maintenance, administration, support/help desk personnel, regional telecom and 24/7 redundant data systems. For global enterprises, there are additional costs for local telecom providers and other expenses that directly impact the overall cost of a worldwide fax service operation.

These high costs associated with maintaining an internal enterprise fax infrastructure have been key to companies reconsidering their fax investment. According to one multinational fax service provider, the cost to maintain an internal fax infrastructure equated to approximately \$0.37 per fax transmitted for one client. Due to their volume, the cost for transmitting hundreds of thousands of pages per month totaled millions of dollars per year.

Cloud fax vendors, like Retarus, provide consultative ROI assessments that demonstrate higher costs associated with on-premise services in a majority of cases. These assessments consider costs associated with telecommunications (PRIs, T1s, per minute costs, per line costs, taxes), capital costs (outlay, server and fax cards for primary and disaster recovery sites), support and maintenance costs (internal personnel, third party maintenance and support contracts), compliance costs (internal and external audits, local and international fines and penalties), and downtime costs (busy and lost fax costs, service unavailability impact, lost productivity costs, reporting and troubleshooting) which altogether give a detailed perspective on current spend compared to an enterprise cloud provider.

Overall Cost Comparison Internal Fax Servers vs. IaaS Cloud-Based Solution. 70% Cost Reduction



¹Source: Gartner, <http://www.gartner.com/newsroom/id/2613015>

² Source: Davidson Consulting, "Fax Service Markets, 2013-2018", February 2014.

The Challenge:

Maintaining a Global Enterprise Fax Infrastructure

For the past several decades, it has been cost effective for companies to install internal centralized fax servers rather than deploying numerous fax machines for each branch, office or department. The cost per page was **around \$3.00**, mainly distributed in labor costs associated with sending a fax manually. While maintaining an internal centralized fax service lowered the average cost per-page, companies also incurred into additional costs:

- Investments in fax servers and redundant backup systems
- Telecom costs and fees
- Scheduled capacity assessments
- Hidden costs such as shadow IT support and development
- Administration, help desk/support tasks
- Hardware and software upgrades
- Maintenance and service contracts

This IT infrastructure lowered the cost of sending one single fax page up to **93%** - from **\$3.00 to around \$0.20** per page on average. It is our experience that some executives and managers believe that they are paying pennies per fax, but this is not accurate, as in general, they have not factored in all operational costs mentioned above. Even though this represented a significant cost savings over manual fax, companies with high fax volume could still easily reach millions of dollars in spend to support their global fax infrastructure. In addition, for global companies with offices in different continents, maintaining an internal fax infrastructure represents the following additional and costly challenges:

Managing a Global Infrastructure

Each region has their own hardware, software, telecom, organizational infrastructures in addition to replacement policies, data center management, local telephony, contractual service requirements, and business continuity planning for redundancy. All of these tasks not only add considerable cost to an IT budget, but also increase the level of management complexity. One of the most critical tasks is to keep operations running seamlessly at all times, especially during server upgrades, and any other planned or unplanned downtime.

Implementing Robust Security and Compliance Processes and Guidelines

In the fax space, numerous service companies must comply with a series of federal regulations such as HIPAA and HITECH in the healthcare sector, Sarbanes-Oxley for publicly traded businesses, the Gramm-Leach-Bliley Act (GLBA) for financial services organizations and PCI DSS for credit card processing. Under these regulations, companies that manage sensitive corporate personnel and financial data must adhere to strict security guidelines to protect it. For example, in healthcare, hard-copy documents sitting unsecured on a fax machine, on a desk, or even digitally on the screen of a computer can be a violation as personal information could be exposed. Furthermore, documents stored on an unsecured server or in an unencrypted e-mail may also constitute significant regulatory risk. Any of these can result in a breach of confidentiality and unauthorized access to personal information potential leading to costly penalties, litigation, business relationship issues and corporate image.

As a global organization, Retarus has the knowledge and capability to provide services to organizations both domestically and internationally. Without the need to invest in additional infrastructure to support international compliance, companies can leverage Retarus to comply with local regulations around to globe. As a security-focused vendor, Retarus understands that companies under the HIPAA, HITECH, PCI DSS and other regulations require enhanced security features. To do so, Retarus meets or exceeds the requirements for security, backup, audit, access control and using state of the industry encryption and multilayered audit trails for compliance. Additionally, Retarus is the first messaging service provider to be awarded with the PCI DSS certification for data centers and communication services, further underscoring the ability to comply with the most stringiest data security and privacy requirements.

Implementing a Solid Business Continuity Plan

For global companies, especially those in the service space, it is critical to have a Business Continuity Plan in place that will provide guidelines for the ongoing continuity of mission-critical business functions across each business region in the event of a disaster. Companies must make a significant investment in regional data centers and geographically dispersed backup systems to ensure service uptime. These backup systems must provide instantaneous cutover with similar scalable performance levels equivalent to the primary systems to handle traffic volume spikes. All backup systems must be upgraded along with primary systems to ensure peak performance and compliance.

Recovering and Allocating Operating Costs

Most companies manage fax service infrastructures as a cost center. Consequently, IT departments absorb the entire expense associated with managing it. This in turn provides a challenge when reallocating fax service costs based on fax usage. Determining the cost of fax services on a department basis is more difficult for budget planning. Retarus solves this problem through our web portal (EAS) that allows users to separate fax traffic by cost centers. This granularity provides a simple, centralized solution not easily available with on-premise services.

Implementing Environmental Friendly Initiatives

The nature of the fax business relies heavily in paper usage. However, today environmentally responsible energy-related resources are now critical business directives. In addition to generating positive PR by going 'green', implementing policies to generate energy and save materials impact the bottom line when facing slower business cycles. As a result, companies are more conscious of paper usage, implemented recycling programs, but even more so, there is a trend to explore new ways to reduce overall electricity and power consumption. With a hosted service provider, organizations will reduce paper usage by digitizing inbound fax documents and reducing the need to print when sending a fax, eliminate the need for manual insertion of information received from paper faxes by assisting with workflow processes to automate manual processes via OCR technology, eliminate the need for physical storage of paper documents with document management routing of inbound faxes, and reduce electricity usage by removing necessary power supply to fax machines or servers in data centers.

Reporting Transparency

IaaS cloud-based fax services provide live reporting at a variety of levels; for each user, business unit or organization. This allows companies to monitor fax usage and allocate costs based on usage history. With this model costs can be distributed by departments providing effective cost recovery and control. In addition, having a centralized and robust reporting tool aids and simplifies troubleshooting. A service like Retarus' web reporting portal exceeds on-premise troubleshooting as cloud-based provides live, real-time monitoring allowing clients to take immediate actions or remedies as required. This centralized approach streamlines legal discovery, regulatory review and audit processes, as there is no longer reliance on personal filing systems. The service is always available, searchable down to smallest detail, and can provide an archive of the metadata for transmission and documents, ensuring simplified compliance with regulators, joint commissions, audits, and more.

Flexibility for Additional Services

Prior to IaaS cloud solutions, companies incurred extensive and costly IT planning and implementations which required lots time and management. With an IaaS cloud-based fax services model, it allows both internal and remote employees to reap the benefits of an outsource solution without incurring additional costs or lengthy delays to implement. IaaS cloud flexibility adjusts to companies business requirements and allows the platform to add or remove services at any time. This provides a more scalable solution that can be deployed in little time to meet fast paced, and evolving demands of enterprise clients without significant cost or manpower attached.

The Solution:

IaaS cloud-Based Fax Services

IaaS cloud-based strategies leverage shared network resources which enable on-demand information services that can be rapidly provisioned with a high degree of flexibility and scalability. Additionally, utilizing shared resources and strategically placed data centers allows enterprise IaaS cloud services to provide the equivalent of an internal fax infrastructure without the associated CAPEX. As a result, there is a significant increase in companies revisiting IT internal fax strategies and migrating to an IaaS cloud-based service. Some of the major benefits associated with an IaaS cloud-based infrastructure include:

Simplified Infrastructure

Implementing an IaaS cloud-based fax strategy centralizes all contact for management, administrative, help desk/support, and reporting functions. A key benefit of this model is the availability of a robust reporting tool that allows monitoring of all global and individual communication at any time, eliminating the need for operational staff and freeing resources towards growing other mission critical areas.

Reduces Complexity of IT Landscapes

With an IaaS cloud-based strategy, IT organizations are no longer responsible for managing, maintaining, or upgrading existing platform and application standards. Its flexibility allows that any client utilizing SMTP or MFD's can easily integrate to an IaaS cloud-based fax service model allowing each department to choose the best solution to meet its needs.

Adherence to Local Compliance Laws and Robust Security

IaaS cloud-based fax service provide complete security auditing and reporting to ensure full compliance with all industry-specific regulatory requirements and models adhere to strict security policies that include:

- Annual or biannual site audits in compliance with client security guidelines
- SSAE 16 compliance audits with strict security standards
- HIPAA and HITECH compliance
- PCI DSS certified
- Secure message connectivity with point-to-point message encryption
- Background checks and screenings of employees

Business Continuity Plan. Guarantees 99.99% uptime 24/7 for all processes

Retarus' IaaS cloud-based fax service model utilizes multiple redundant data centers located around the globe to provide 24/7 service uptime, failover and redundancy in case a major disaster impacts the primary IT site. This eliminates the need to maintain costly data centers and redundant systems, while ensuring that there is no disruption of services during acts of nature. As a global company, Retarus' BCP is at the level of top Fortune 100 companies, guaranteeing running operations for our clients, with the same reliability as they would do with their internal systems. Service availability and uptime is governed by strict and custom service level agreements for each organization, designed to give the customer the utmost protection and highest level of quality including claims for credit. At 99.99%, that means organizations can expect less than **one hour** per year of unavailability. But, with no maintenance windows, scheduled downtime, customer affecting outages, and high availability data center design, Retarus is able to meet all availability benchmarks. Our Service Level Agreements are the best in the industry and back up our 99.99% of uptime.

What 99.99% Uptime Looks Like	Hours	Minutes	% Uptime
An Entire Week	168	10,080.00	100
An Entire Week	167.9832	10,079.00	99.99
Total Downtime / Week	0.0168	1	99.99
Total Downtime / Month	0.0672	4	99.99
Total Downtime / Year	0.8064	48	99.99

Full Disaster Recovery Plan. Hot-Hot Sites are More Cost Effective.

The Retarus infrastructure is designed to enable transmissions in progress to be completed, even if there is sudden downtime at a data center. This fast replication between hot sites becomes a much more attractive, cost-effective option, in addition to delivering multi-site availability. Database Replication not only provides rapid failover to the now single running site, but also the capability to return to the original data center when the disaster recovery test or disaster event is over. Retarus' business continuity and disaster recovery planning marries the operational structure and the technical backbone to maximize service uptime and ensure 99.99% business continuity.

Progression of Enterprise Fax Technology and Costs 1980 - Present

	Old Legacy Model	Transitional Model	Current/Future Models
Years	1980's - 2000	2000 - 2010	2010 - Present
Technology	Manual Fax Machines	Managed Fax Servers	IaaS Cloud-Based Enterprise Fax Services
Average Cost per/page	\$3.00	\$0.20	<\$0.10
Average Savings from previous Technologies	N/A	93%	55-75%

The Result:

Increased Cost Saving, Scalability and Redistribution of Resources

Implementing an outsourced IaaS cloud-based fax service eliminates investing, deployment and maintenance of a costly in-house fax infrastructure. When migrating to an IaaS cloud-based service, companies immediately eliminate all costs associated with acquiring, implementing, deploying, and managing fax servers, telecom lines, and administration/support personnel.

Using a competitive pricing model based on the number of fax messages transmitted, a cloud-based fax solution reduces the total cost of transmitting a fax page by as much as **90%**, compared to an in-house managed fax strategy. On average, **all costs** for transmitting an enterprise-managed fax page range from **\$0.20-\$0.25**, in comparison to **less than \$0.10** per page for those businesses that utilize an IaaS cloud-based solution. Cloud-based services operate on a 'pay per page' model; where a company will only pay for the fax services that are utilized. The cost savings for high-volume fax enterprises potentially represents hundreds of thousands of dollars per year.

Analyzing the Total Cost of Ownership

Cost reduction has been a key driver in moving fax operations to the cloud. Organizations utilizing an IaaS cloud-based fax service versus an enterprise managed fax system not only reduce their total cost of ownership (TCO), but simplify the total lifecycle of the faxing process.

How Retarus Can Help:

Enterprise Fax Services: Up and Running in Less Than 48 Hours

IT professionals know that maintaining a fax infrastructure is expensive – and they're being pushed to do more with less every day. As development, integration, operational and personnel costs continue to rise, outdated equipment and legacy systems are becoming a growing burden to many organizations. For companies looking to dramatically reduce total cost of ownership, technology analysts recommend consolidating IT infrastructures by replacing fax servers with an IaaS cloud-fax services. Advantages include high reliability, no capacity constraints and greater flexibility when migrating to voice over IP services.

To date, Retarus' solutions, products and services are used by over 4,700 companies worldwide of all sizes and in various industries. Bayer, BMW, DHL, Honda, Allianz, B/S/H, Sony, Santander, and many other renowned companies around the world depend on Retarus for their daily business critical communication needs. Many leading IT companies such as Fujitsu, ATT, IBM, and HP outsource their fax, needs of their clients to Retarus.

With **Retarus' Fax Services for Desktops**, you can send faxes natively from Exchange environments, Lotus Notes, MS Office or additional Windows applications - without operating a proprietary fax server. Incoming faxes can be sent to any email account, integrated into existing workflow systems, delivered to your SharePoint server or sent to your archiving infrastructure. Gartner named Retarus as "Cool Vendor in Imaging and Print Services" for the Retarus Faxolution for Exchange Cloud Fax service.

With **Retarus IaaS Cloud Fax** you obtain unlimited fax capacity without additional investment in hardware, software, maintenance, licenses or fax lines.

To have a deeper conversation with us, please contact:

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Internal Fax Servers Vs.

laaS cloud-Based Solutions

	Fax Servers	laaS cloud-Based Solutions
Administration	Administration performed from fax server or client workstation	Internet-based administration
Capital Investment	Server hardware, software, telecom services	None
Data Security	Level of security dependent on several key areas throughout organization	Comprehensive information security with technical and administrative controls to protect customer data and maintain regulatory compliance
Disaster Recovery	Often, no disaster recovery capability	Dispersed and redundant data centers for business continuity
Green Technology	No	Yes
IT Knowledge/Support	Resources required 24 x 7	Little to no internal resources required
Ongoing IT Investment	Hardware, client/ server software upgrades; monthly hardware/software maintenance fees	None
Ongoing Telecom Investment	Monthly T1/E1 line fees, DID numbers, taxes, and surcharges.	Low monthly fee for DIDs only
Physical Security	Dependent on physical security controls deployed throughout the enterprise	Hardened data centers with advanced security and access controls
Planning & Implementation	Weeks to months	A few hours
Reliability	Often, no redundancy or effective monitoring. Adding redundancy and monitoring can more than double the initial capital investment	High availability, geographic redundancy, and 24 x7 worldwide network operations center monitoring
Reporting	Capabilities vary	Web based portal with live monitoring, detailed historic, and searchable reporting capabilities
Scalability	Restricted based on existing hardware and telecom configuration	On-demand scalability for capacity peaks or corporate growth
Total Cost of Ownership	High - CAPEX, maintenance, telecom, personnel, compliance, administration, certifications, etc. -	Low - normally less than half the cost of a fax server infrastructure