eFax Corporate®

White Paper

eFax Corporate Sets the Standard for Reliable Cloud Fax Service

Why Fax Reliability Is Critical for Your Business

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The Consequences of Poor Fax Reliability

Imagine an email outage across your company. It's the nightmare scenario, right? Your entire staff is unable to send or receive email on your network. They can't communicate in real time with each other or with the outside world, except by phone. Operations slow to a crawl, clients become impatient, and marketing campaigns grind to a halt. Your company's reputation is at risk. And employees are all asking you—or begging, or even screaming at you—to fix the problem. Could things be any worse?

As counterintuitive as this might sound, in many industries, if it were your fax capability that went down for an extended period, the risk to your company could be even greater.

Why? Because many organizations need fax for confidential and mission-critical communications for which standard email is prohibited. Indeed, unlike with email, virtually all faxes sent over an enterprise network contain private financial or healthcare-related information. After all, nobody faxes a colleague about lunch.

In other words, without a smoothly running fax infrastructure, your organization could find itself cut off from the ability to send or receive many of your most important communications: contracts, mortgage applications, patient insurance information, prescriptions, legal documents, purchase orders, invoices, credit card payments, etc.

Fax is still mission-critical

Maintaining your company's fax capability should be a high priority. However, this may be a large task, particularly if you're still holding together a system of on-site fax machines and fax servers. But for many firms, especially in regulated industries, the documents sent or received over this aging analog technology still represent the business's lifeblood.

According to research reported in a 2018 *Vox* story, for example, 75% of all medical communication runs over fax.

Which means if a typical health provider were forced to go without fax capability for any length of time, that outage would represent their nightmare scenario, as prescriptions go unfilled and operations get canceled.

Meanwhile, critical orders for lab tests and insurance approvals have to be sent via postal (snail) mail, adding days of delay.

Yet be honest: How much thought and attention has your IT team put into your fax infrastructure lately? If yours is like most businesses, probably not much at all.

To give you an idea of why your team should prioritize your fax infrastructure's reliability, let's first review some current trends in business fax usage—which is still on the rise in 2018.

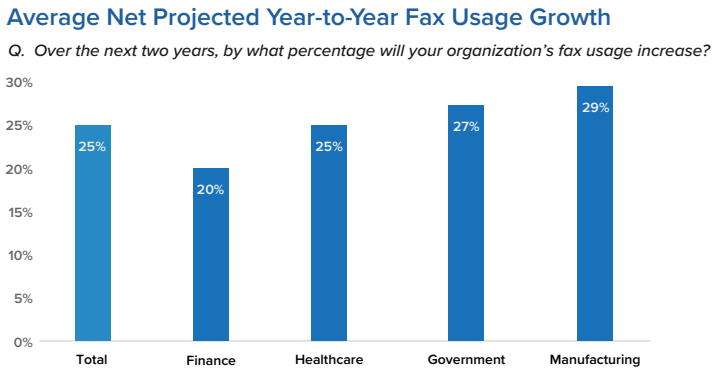
Then we'll discuss the reasons your legacy fax infrastructure isn't reliable enough to trust with your business's most important communications, even though your staff may be using fax to transmit such business-critical materials every day.

Finally, we'll discuss why cloud fax can give your team peace of mind when it comes to reliability, and we'll explain how eFax Corporate® is the world's leading provider of digital on-line cloud fax services.

Enterprise Fax Usage is Growing, Not Slowing

According to a 2017 study by the International Data Corporation (IDC), organizations across several industries forecast an increase in their fax usage—in some cases significantly—in the coming years.

IDC 2017 Projected Fax Usage Growth



As you can see from the chart above, IT professionals and executives in finance, healthcare, government, and manufacturing predicted in 2017 that their organizations would be increasing their fax usage by a minimum of 20% over the next two years.

And consider this: Even if your business is not in any of these industries, if your staff has to work with vendors or clients in financial services, manufacturing, or healthcare, you will likely need to maintain a robust and reliable fax infrastructure—because these companies you work with will continue to demand it.

Why is corporate fax usage on the rise?
If you're wondering why fax usage is still a thing in business today, even among modern, tech-savvy firms, IDC's research provides several interesting reasons.

For example, 25% of the businesses surveyed say they believe faxing reduces their risk of violating data-privacy regulations such as HIPAA, GLBA, and SOX, as well as industry standards like PCI-DSS.

Moreover, 28% of respondents say their firms use fax because it provides easy document tracking and it alerts the sender to the success or failure or a transmission.

Also, one-third of businesses say they transmit sensitive data by fax because they fear security breaches with other communication methods, especially email.

A serious (but sort of funny) business fax anecdote
Speaking of email's security risks, remember the Sony Pictures email hack a few years ago that led to the resignation or termination of top executives?

As a headline in *The Wrap* explained at the time, "Panicked Hollywood Avoids Email, Returns to Faxes." The email breach so unnerved the industry that companies started firing up their old fax machines.

Why all of this underscores the importance of fax.
As you might have noticed, these data points describing why enterprises continue to opt for fax—security, compliance, the ability to track transmissions—all point to the fact that business faxes are often extremely important and contain extremely sensitive material.

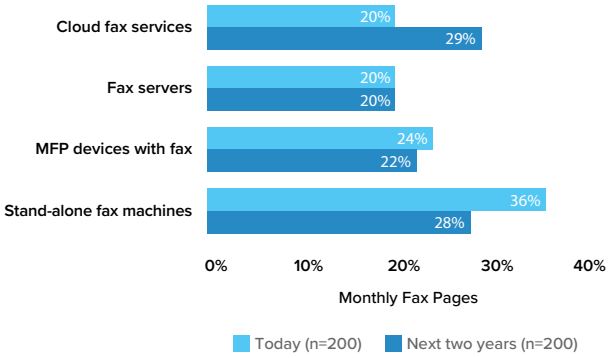
Which brings us to the major theme of this paper: Your business needs more than just fax capability—it needs *highly reliable* fax capability. With that in mind, let's quickly walk through some of the reasons most traditional fax infrastructures don't measure up.

How Traditional Fax Technology Fails

The IDC survey also found that 60% of companies that fax still use traditional fax machines or multifunction printers (MFPs) with fax/scan capability. Another 20% of IT pros say they manage on-premises fax servers, which, although more advanced than a fax machine, are still a legacy on-site fax infrastructure that require on-site hardware and software to maintain.

Current and Future Fax Volume by Technology

Q. What is the mix of fax volume by method today? What do you expect it to be in two years?



Source: IDC's Fax Survey, February 2017

The trend is clearly moving to the cloud because the survey also projects that while only 20% of those businesses use a cloud-based fax service, this trend is expected to change in the next two years. Cloud fax services will pull slightly ahead of fax machines and surpass fax servers by a large margin to become the dominant form of corporate faxing.

This is a promising outlook because most traditional business-fax infrastructures are not reliable enough for critical communications. Legacy fax equipment can fail in many ways. Here's a partial list how:

1. Fax machine fails
Fax machines are notorious for paper jams, paper-feeding errors, and toner or ink cartridges that run out with no warning.

2. Fax-line fails
Desktop fax machines and fax-enabled multifunction printers rely on analog telephone lines connected to the public telephone network over which faxes are transmitted. Today's telecom carriers are under-investing in their legacy wireline networks, which have consequently become less reliable in some areas. For example, in parts

of California phone lines frequently fail whenever it rains as a result of poor maintenance over the years.

3. Fax over VoIP fails

Many businesses discover only after migrating their phone network to Voice over Internet Protocol (VoIP) that the fax machines no longer work, or work intermittently. VoIP introduces a number of impairments, such as packet loss, delay, and jitter, any of which can be difficult to troubleshoot but will disrupt fax transmissions. For example, just 1% packet loss can cause a fax transmission to disconnect in midstream. And the longer the faxed document, the more likely it is to fail.

4. Fax server fails

In-house fax servers are known for locking up and needing rebooting—which takes time from IT staff and leaves the company temporarily without fax capability. This can happen if the server buffers become overloaded, can't handle the demands of a high-volume fax environment, or for a number of other reasons.

- **Note:** Some legacy fax server software cannot be virtualized, which means that the fax server is likely to be your last piece of standalone hardware to manage, along with the requisite full-height telco line cards that can run into the many thousands of dollars for each board. And you'd better stock a spare (at double the cost), or you will be dead in the water when the card fails.

5. Power failures or natural disasters

Finally, your on-site fax hardware is always at risk from natural disasters—a storm results in a power outage in your company's neighborhood, or a flood in your building, etc. If such a calamity strikes your offices, without a cloud fax service to fall back on your staff could find itself without a fax capability for an extended time.

The missing ingredients: redundancy, resiliency, survivability

There is a common thread among all of these failure points of traditional fax infrastructures: In each of the hypotheticals just discussed, the enterprise will be at elevated risk if its fax process lacks the necessary redundancy and resiliency to survive whatever adverse events may come your way.

When a fax machine in a particular office goes down, or a fax server crashes, or a telecom carrier experiences network problems, or a natural disaster strikes your city—whatever the issue—if the company has no backup plan for its fax capability, or no failover strategy, the employees will find themselves unable to fax until the problems are resolved.

Which is why the answer to most of the reliability problems of legacy fax infrastructure is *multiple layers of redundancy*. And that is where the basic architecture of a good cloud-fax service gets it right, and comes at no extra cost.

Cloud Fax to the Rescue

There are many reasons that a well-designed cloud fax service is superior to in-house products. For starters, it's more robust, survivable and secure. It also gives employees the means to fax from anywhere, not just when they are behind a desk.

In addition, it is more cost-effective; you pay for only the fax capacity you need, and no longer need to maintain on-premises hardware or software. It's also easier on the IT team, as all maintenance issues become the provider's responsibility.

But for our purposes here, we'll discuss just one reason cloud fax is the only viable solution for today's enterprise: It offers the most *reliable* fax infrastructure available (assuming you choose the right provider).

The right cloud fax solution can give your company…

- *No VoIP Concerns* – cloud fax is not affected by your on-premises VoIP system because such faxes are sent and received as email attachments, or via direct HTTPS connections to a secure web portal. There is no interaction with local VoIP networks or services.

- *Virtually unlimited capacity* to ensure your staff always has the ability to transmit faxes at any time, instead of having staff wait for a busy fax line to become free.
- *Multiple data centers*, in geographically distinct locations, to process your faxes (in case one center has an outage or other problems).
- *Multiple layers of protection for the cloud servers* at its data centers—such as redundant power and cooling backed up by on-site generators, as well as redundant communications facilities to keep the servers up and running 24/7.

The right enterprise-caliber cloud fax company will offer these and other fail-safe measures, backed up in writing by a Service Level Agreement (SLA) to ensure your company always has the ability to send and receive business faxes without issues and without delay.

Not All Cloud Fax Solutions Are Created Equal

Of course, not all cloud fax providers' offerings are going to be up to your standards. The solutions many offer are no more worthy of your company's trust than the legacy fax equipment you're looking to sunset.

Many firms today call themselves "cloud fax providers," but this does not necessarily mean they can offer your organization anything approaching the levels of reliability and resilience you need for your business faxing requirements.

Here are a few questions you should ask any cloud fax vendor you are considering doing business with—before you entrust your mission-critical business communications to their networks.

1. Is your company certified to meet relevant regulatory standards, such as HIPAA?

Even if your company isn't regulated by data-privacy laws, this is a valuable question to ask in terms of reliability; to earn certification from any of these regulatory bodies for its cloud fax service, a vendor will have to demonstrate a high level of competence and reliability with its customer data.

2. Tell us about the physical infrastructure you've built to process our cloud faxes.

Here you're looking for multiple data centers, ideally in different geographical regions (in case one region suffers a disaster), as well as redundancies built into everything from the network connections to the physical servers they use to process your faxes.

3. If there were a natural disaster at your facility, would we still have fax capability? If so, how?

Remember, a cloud fax provider isn't worthy of your business if they haven't built an infrastructure that offers more resilience than your own. So you want a vendor who has developed a failover plan in which, if a given fax line, telecom carrier, or data center in its network experiences a problem, your fax will be routed to another such line or data center—ideally without your even knowing.

Ask tough questions of the cloud fax vendors you interview and you'll quickly discover that the field of true enterprise-caliber cloud fax providers is small.

eFax Corporate – Unmatched Network Reliability

Which online fax service dominates that small field? eFax Corporate, the leader in enterprise cloud faxing for more than 20 years, is the service most trusted by heavily regulated businesses, from SMBs to the Fortune 500.

There are several reasons that the eFax Corporate portfolio of cloud fax solutions can offer far greater reliability than any other business-class provider in the industry:

- **We've built a robust redundant network.** eFax Corporate has invested millions of dollars over many years building one of the most sophisticated and resilient global cloud fax networks in existence.
- **We've been cloud fax pioneers for decades.** eFax Corporate has been perfecting cloud fax solutions for over 22 years to help our thousands of enterprise clients fax securely and reliably.

- **We're backed by a billion-dollar market leader.** eFax Corporate has the support and backing of our parent company, publicly traded cloud leader j2 Global. As a public corporation with over a billion dollars in annual revenue, j2 offers a level of transparency not available from most other cloud fax services that tend to be mostly small operators with limited visibility into their financial health and viability.

The eFax Corporate Multi-Layered Network Architecture

One key trait that distinguishes eFax Corporate from other cloud fax companies—even the good ones—is that we offer a level of redundancy that no one else can provide. In fact, we've built redundancies into our redundancies.

With the eFax Corporate multi-layered network architecture, for example, we've built physical and geographic redundancies into every aspect of our platform:

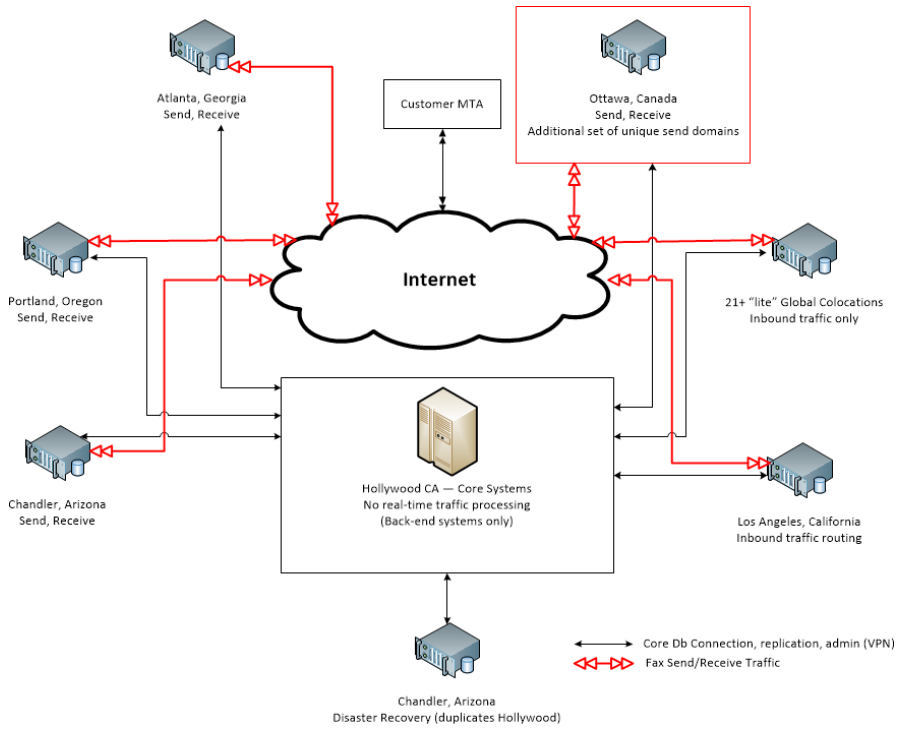
Redundancy #1: Our network for U.S. customers is spread across four North American main data centers.
If one data center has a problem, our customers' faxes are immediately rerouted through the other centers. Even if we lose two centers simultaneously—an extremely unlikely event—we have sufficient capacity to continue processing customer faxes with no discernable service degradation.

Redundancy #2: Carrier redundancy at each location.
If one of our telecommunication carriers has trouble with its network, we can immediately shift traffic to another carrier to transport those customer faxes.

Redundancy #3: Highest-Rated Data Centers
eFax Corporate uses only Tier 3- and Tier 4-rated data centers for our colocations—which means servers in those facilities are supported by redundant cooling and redundant power feeds, UPS systems, and backup generators to ensure continuous server availability, as well as controlled access and other fail-safe measures to ensure security and continuity of cloud faxing capability for our customers.

In addition, our public data center/colocations are independently audited to meet SSAE-16 Type II and SOC-2 industry standards for operations and security.

Redundancy #4: All systems at each location employ hardware redundancies.
Our data center architectures are all based on N+1 redundancy design, meaning all key components (support systems, hardware, network) have at least one independent backup. The servers themselves in each data center have sufficient redundancy to back each other up in case one should suffer an outage. In fact, all of our colocations leverage redundant network infrastructure, such as multiple diverse routers, switches, and servers.



Additional methods eFax Corporate employs to ensure cloud fax reliability for our enterprise customers:

- We offer a written Service Level Agreement (SLA) with verified network availability and fax delivery metrics that guarantees our service performance.
- We employ proprietary, automatic traffic-routing algorithms that seek out the optimal network connections and automatically fail over to alternate networks for close to 100% fax delivery.
- Geographic diversity in our multiple-data-center network spread across North America offers a level of resiliency that is superior to standard binary disaster-recovery architectures.
- No single point of failure for outbound fax traffic, such that if connectivity is lost in one location we automatically reroute traffic elsewhere to ensure that your faxes get where they are going.
- The eFax Corporate network routes faxes through direct connections whenever possible, enabling us to enhance transmission reliability by sending our customer data over private, quality-controlled networks, and limiting fax exposure to the public Internet.
- We offer 24/7/365 monitoring of customer data with a team of trained experts in our Network Operations Center (NOC), as well as live, award-winning customer support based in the U.S. and Canada.
- We employ the cloud fax industry's best error-correction processes, enabling us to more quickly identify the issue causing a fax-completion error, and in most cases resolve the problem without a delay in service or the customer even realizing there was an issue at all.
- As you can see from the preceding diagram, the eFax Corporate network infrastructure consists of multiple, geographically diverse facilities and represents many years and millions of dollars of investment in capital equipment, training, and ongoing maintenance and support.

This is a network no other enterprise cloud fax provider can offer.

The Cloud Fax Service of Choice for the Highest-Regulated Businesses

As we've stated, there are many reasons that businesses in the most heavily regulated industries, as well as enterprises that regularly send and receive mission-critical communications via fax, choose eFax Corporate as their provider. Data security, compliance, fax APIs, flexible payment plans, and our unmatched industry expertise are just some of these reasons.

But one of the reasons we hear most often from enterprises that sign on with eFax Corporate as their cloud fax partner is reliability. These businesses simply can't afford to entrust their all-important fax transmissions to any company other than the leader in enterprise cloud faxing. You shouldn't, either.

The eFax Corporate Checklist

- ✔ Our solutions are trusted by many of the world's leading businesses in the most heavily regulated industries.
- ✔ We provide service to nearly half of the Fortune 500 companies worldwide.
- ✔ We service nearly 40% of the ALM Top 200 law firms—all of which send highly sensitive information by fax.
- ✔ eFax Corporate is undergoing the most rigorous compliance certification process—the HITRUST Common Security Framework for HIPAA Compliance.
- ✔ We sign HIPAA Business Associate Agreements (BAAs).
- ✔ Faxes in transit and at rest are secured with the strongest encryption standards—TLS 1.2 and AES 256-bit, recommended by the National Institute for Standards and Technology (NIST).
- ✔ eFax Corporate is fully compliant with the payment card industry's PCI-DSS v.3.2 2018 encryption requirements.
- ✔ j2 Global owns multiple patents on cloud and fax technology.
- ✔ j2 Global has invested millions of dollars to build a secure, compliant, and redundant global fax network.
- ✔ eFax Corporate's fax network reaches 49 countries.
- ✔ eFax Corporate operates a geographically diverse global network comprising redundant data centers and Tier 3- and Tier 4-rated colocations.
- ✔ SLA for service availability and rapid fax delivery.
- ✔ Live customer support teams in the U.S. and Canada.
- ✔ A fully staffed Network Operations Center monitors our network 24/7/365.

eFax Corporate®

About eFax Corporate

eFax Corporate is the world's leading online fax solution, with more than 11 million customers worldwide. eFax lets users receive, review, edit, sign, send, and store faxes by email or through a web interface. eFax offers plans for individual users and provides corporate solutions.

To learn more about outsourcing to a cloud fax model with eFax Corporate, visit us at:
enterprise.efax.com.au

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