

White paper

Choosing a fax solution deployment model

The decision to choose an on-premises, cloud, hybrid or managed/hosted enterprise application is an important one. One size does not fit all. This white paper is designed to help you establish your criteria for evaluating deployment options for enterprise fax solutions. Easy-to-follow tables will help you build a criteria list of your organization's needs.

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Executive summary

There is a lot of talk in the marketplace about enterprise software deployment models: on-premises, cloud, hybrid or managed/hosted. This is true for enterprise fax solutions as well. One size does not fit all, and all models have different benefits. Your organization may be willing to put some applications in the cloud but require others be on-premises. Hybrid applications are gaining popularity, but must be evaluated against your business requirements.

OpenText recommends organizations find the right balance for their needs. Whether an on-premises, cloud, hybrid or managed services model fits your organization, OpenText offers market-leading solutions in the deployment that will help you achieve the best return on investment. This white paper is designed to help you evaluate your needs, develop the criteria for choosing a deployment model and then find the best deployment model for you. Using easy-to-follow tables, you can compare the characteristics of common software deployment models against your needs/preferences for the specific criteria. At the end, you will have a list that you can compare against various models and specific products to ensure your selection meets your organization's requirements.

It is important to note that it is unlikely that one model will be an exact fit to your overall requirements. All decisions are based on priority and tradeoffs. For instance, in software implementations, significant customization or configuration slows speed of deployment. So if you want a highly customized implementation AND you want it now, it is unlikely you will get both, your organization will need to choose the higher priority.

Business needs lead to deployment models

Many organizations are beginning to choose IT solutions based on their preferred method of deployment. Some organizations want all IT systems to reside on-premises. Others are beginning to outsource non-critical applications/functions while keeping business-critical systems on-premises. And more and more, organizations are seeking to outsource as many IT applications as possible. Hybrid solutions are an increasingly popular alternative, in which part of a software system resides on-premises with some components outsourced for efficiency.

When researching fax solutions, it is important to consider the method of deployment. There are four basic models for deploying fax solutions: on-premises, hybrid, managed/hosted and cloud (also called Software as a Service or SaaS). Your existing environment and your business requirements will determine which model is the best fit for your organization.

The type of fax deployment that is right for you can depend on many factors, including:

- IT standards and preferences.
- Fax volumes.
- How critical faxing is to your business.
- The urgency of your fax project.
- Laws and regulations regarding transmission of information.
- Data security and data sovereignty concerns.
- Organizational rules regarding capital and operating expenses.

Fax solution deployment models

On-premises

On-premises fax solutions—fax servers—require light-to-heavy IT management, depending on the particular solution and amount of faxing done by the organization. The on-premises model requires purchase and management of servers, software and requisite telephony infrastructure. The key strength of on-premises solutions is the ability to integrate with existing software applications and multi-function printers (MFPs). Advanced on-premises solutions support configurations for high availability, including virtualization and redundancy. One option with on-premises solutions is a fax appliance that includes the necessary hardware (server, network and telephone connections) and fax server software in an “all-in-one” plug-and-play configuration.

Hybrid

In hybrid deployments, a portion of the software resides at your site, on-premises, and a portion is provided as a service in the cloud. Where the division occurs can vary from vendor to vendor. The key strength of hybrid solutions is that the service portion typically includes the connection to the telephone network. It simplifies the environment and relieves your IT staff from having responsibility over one of the most complex and confusing aspects of deploying fax solutions. Because some of the software is residing on-premises, integration with MFPs and other software applications is typically similar to an on-premises solution.

Managed/Hosted

Managed fax solutions move deployment of a dedicated fax server from on-premises to a service provider’s data center. The software is the same and feature sets are similar to on-premises solutions. Some features, such as integrations, can be more complex to implement, but typically remain available. The strength of managed/hosted solutions is that the service provider manages the IT infrastructure in its data centers, while keeping your data isolated and protected.

Cloud

The cloud model is a pure service deployment model, no fax software, hardware or telephony is required to reside at your site. Faxes are sent and received via email. Outbound faxes are sent to a specially formatted email address that contains the recipient’s fax number and inbound faxes arrive at the service provider and routed into the specified recipient’s email inbox or to an FTP folder in production fax environments. The strength of pure service solutions is that the service provider manages all of the infrastructure. Your IT staff can manage users, configurations and fax numbers via a browser-based interface from the service provider. Because no fax software resides at your site, integration with MFPs and other software applications is typically achieved via SMTP (email) or web service APIs.



General characteristics

The following chart describes high-level characteristics of fax solutions in each deployment model. While all of these solutions share multiple advantages over traditional fax machines and multifunction printers (MFPs) with fax boards, each has a unique set of values. When looking for a fax solution, it is important to analyze the value of each characteristic and capability to your organization. Use this chart to see how each solution matches your highest priorities (see below the chart for additional information about each characteristic).

Deployment location	On-premises	Hybrid	Managed	Cloud	My priorities/Needs
Key characteristics					
Reduction in IT fax support	Measurable reduction in many costs associated with physical fax machines and paper faxes	On-premises benefits plus no telephony management	IT management moves to vendor. Management is individualized and has monthly fee.	IT management moves to vendor. Cloud solutions are managed as a whole, reducing fees.	
CapEx vs. OpEx	CapEx	CapEx for server software and OpEx for telephony	OpEx	OpEx	
MFP integration	SMTP and native interfaces for some MFPs	SMTP and native interfaces for some MFPs	SMTP and native interfaces for some MFPs	SMTP interfaces	
Software application integration	SMTP supported Pre-packaged integrations APIs available	SMTP supported Pre-packaged integrations APIs available	SMTP supported Pre-packaged integrations APIs available	SMTP supported Pre-packaged integrations APIs available	
System uptime service level agreement	No, server and software must be configured for uptime and managed by your IT department	No, server and software must be configured for uptime and Yes, vendor can provide telephony service	Yes, vendor can provide service level and uptime promises in contract	Yes, vendor can provide service level and uptime promises in contract	
Transparency of data sovereignty/ownership	You can put your servers in your locations	You can put your servers in your locations	With some vendors, you can choose the data centers that hold your data	With some vendors, you can choose the data centers that hold your data	

Reduction in IT fax support: All of the fax software deployment models reduce the IT support burden when compared to traditional fax machines and MFPs with fax boards, but some will reduce IT participation even further. On-premises solutions require the most IT support while SaaS solutions reduce IT fax support the most.

CapEx vs. OpEx: Some deployment options involve purchasing software licenses that are typically categorized as capital expenses (CapEx). Some organizations prefer operating expenses (OpEx), which typically means you pay for use rather than buying hardware and licensing software. Your company’s policies and procurement processes will determine your preference.

MFP integration: Your answer here depends on how deeply integrated you want fax to be with your MFPs. SaaS solutions typically work via SMTP, which most MFPs support natively. It involves scanning a document and sending it via a specially formatted email. Some on-premises solutions support a native MFP interface. These integrations will put a fax button on the menus of the MFP and include the ability for the user to log in to the fax system and set some faxing options at the MFP.

Software systems integration: All fax deployment models typically provide simple application integration via SMTP, which is the internet standard for email transmission. This means if an application can send an email, it can fax. But some enterprises desire deeper integrations with specific software applications. Solutions using any of the deployment models will offer some sort of API and integration capability.

System uptime service level agreement: When you run fax software on-premises, your IT department must deploy and configure it for high levels of uptime. Options typically exist for redundancy and failover but you must manage installation and configuration. Managed and SaaS solutions offer high levels of service uptime, managed by your vendor, not your IT department.

Transparency of data sovereignty/ownership: Data sovereignty holds that enterprise information is subject to the laws of the country where it physically resides—laws that may define who has access to, and even ownership of, that information. If you have an on-premises solution, you have complete control over the location of servers where you store fax data. When using service providers, you may have the option to pick the data center where you want your data stored, but can only choose from the vendor’s existing data center locations.

Deployment and implementation characteristics

In addition to defining what needs to be purchased and where software runs, the deployment model impacts the amount of time and effort needed to implement a solution. This chart describes both the components you’ll need for each deployment model and the implementation characteristics.

Deployment location	On-premises	Hybrid	Managed	Cloud	My priorities/Needs
Required solution components					
Reduction in IT fax support	Yes	Yes	No	No	
CapEx vs. OpEx	Yes	Yes	No	No	
MFP integration	Yes	No	No	No	
Implementation					
Implementation timeline	<ul style="list-style-type: none"> • Typical enterprise software implementation • Must spend time connecting telephony 	<ul style="list-style-type: none"> • Typical enterprise software implementation • No telephony deployment 	<ul style="list-style-type: none"> • Faster than most enterprise software implementations, but some up-front planning required 	<ul style="list-style-type: none"> • Simplest and fastest implementation 	
Time to production	Weeks to months	Weeks to months	Weeks	Days ¹ to weeks ²	
Ease of implementation	<ul style="list-style-type: none"> • Requires significant work to make decisions on a range of options • Requires database server • Requires telephony connections • Appliances shorten implementation cycles 	<ul style="list-style-type: none"> • Requires significant work to make decisions on a range of options • Requires database server 	<ul style="list-style-type: none"> • Simple, because the vendor does all the work, but still requires significant customer participation to make decisions on a range of options 	<ul style="list-style-type: none"> • Simplest implementation • Fewest decisions regarding configuration options 	
Customization flexibility	<ul style="list-style-type: none"> • APIs and control over servers offer high level of customization 	<ul style="list-style-type: none"> • APIs and control over servers offer high level of customization 	<ul style="list-style-type: none"> • APIs and isolated server instances allow for a high level of customization 	<ul style="list-style-type: none"> • Customization is usually within a controlled framework 	

¹ If SaaS vendor provides phone numbers ². If transferring existing numbers from current phone provider

Fax server software: On-premises solutions require installation, configuration and management of the fax server software, which implies the need to have database software as well as a server on which to run these items. Solutions that live in the cloud usually do not require any software be installed at the customer site. However, it may be necessary to install small software components to support integrations between on-premises applications and cloud-based fax services/solutions.

Server hardware: Customers will need one or more servers to support on-premises and hybrid solutions. No server hardware is required for managed and SaaS solutions.

Telephony Equipment: Some deployment models require integration to your telephone system; others replace the need for telephone equipment with cloud-based transmission.

Deployment timeline: Some solutions take longer to deploy than others. Cloud solutions tend to take the least amount of time. On-premises software solutions are typically the most customizable and configurable and hence take the most time to deploy.

Time to production: The various deployment models will differ in how long it takes to go from vendor selection to live implementation. If you are porting phone numbers, even the fastest deployment models will take 30 to 60 days to have the numbers ported. This isn't a function of the model, but of the telephone company's procedures for porting numbers.

Ease of deployment: On-premises solutions are more complex to deploy because you will typically customize the deployment to match your specific needs. Cloud services tend to offer fewer options, but are more likely to be ready to use as soon as accounts are set up.

Customization flexibility: Some fax solutions provide more customizable deployments than others. It is important to determine early in your selection process how much customization you need. This may include custom integrations to existing applications, custom automated workflow using BPM systems and customization of the product or implementation characteristics.

Scalability characteristics

Deployment location	On-premises	Hybrid	Managed	Cloud	My priorities/Needs
Cost to scale					
Hardware	Yes	Yes	Not applicable	Not applicable	
Software	Yes	Yes	No	No	
Users	Varies by vendor	Varies by vendor	Varies by vendor	Yes	
	Can be none	Can be none	Can be none		
Page volume	Maybe, may need to add hardware and software	Yes	Yes	Yes	
Other					
Ability to manage traffic spikes	Must correctly size implementation to handle traffic spikes	Cloud telephony handles all traffic spikes	Cloud telephony handles all traffic spikes	Cloud telephony handles all traffic spikes	

Cost to scale: Deployment models grow in cost as you scale the capacity of your fax solution. On-premises solution costs come from adding hardware and software, but have lower per-page costs than cloud solutions, which don't require additional hardware or software but typically charge per user and/or per fax number and per page of fax.

Hardware: Scaling your solution may require adding hardware such as servers and telephony equipment. This applies only to on-premises and hybrid deployments where hardware may be required to expand physical rack server space and connect to on-site telephony.

Software: For on-premises and hybrid offerings, adding hardware means purchasing additional software licenses.

Users: Scaling your solution may require an additional fee per user. Cloud fax services is typically the only deployment model that may incur a per-user fee.

Page volume: If the solution charges you a per page rate, all increases in page volume result in additional costs.

Ability to manage traffic spikes: You may have short periods of time with unusually high traffic and these can be unexpected or planned. Some organizations may send high volumes at the same time each month or have higher traffic in certain seasons. Solutions that outsource the telephony portion of a fax solution tend to handle planned and unplanned traffic spikes better than on-premises solutions, which require you to purchase hardware and software for maximum traffic and capacity to avoid busy signals or traffic congestion, causing fax failures or delays.

Telephony characteristics

Telephone infrastructure or telephony management can be one of the most complex portions of a fax solution implementation. Understanding your existing telephony system and maintaining your ability to manage telephony for your fax needs is vital to choosing the right solution.

Deployment location	On-premises	Hybrid	Managed	Cloud	My priorities/Needs
Telephony for fax managed by	Customer	Vendor	Vendor	Vendor	
Telephony service level agreement	No	Yes	Yes	Yes	
Telephony equipment needed?	Yes	No	No	No	
VPN required?	No	No, but typically available if desired for greater security	Yes, so the managed solution appears to be on your network	No, but typically available if desired for greater security	

Telephony for fax managed by: An on-premises deployment is the only deployment which uses onsite telephony, which is often the most complex part of an implementation. The telephony is managed by the vendor for all other deployment types.

Telephony service level agreement: On-premises deployments use on-site telephony and telephony providers, both traditional and Voice over IP, do not offer SLAs for fax traffic. In hybrid, managed and cloud deployments, the telephony is provided by the vendor who will typically provide an SLA for fax traffic.

Telephony equipment needed? Since on-premises deployments use on-site telephony, equipment is required for successful fax transmissions. Hybrid, managed and cloud deployments avoid this.

VPN required? Since all hardware, software and telephony connections are on-site for an on-premises deployment, no VPN is required. It is also not required for hybrid and cloud deployments but is often available to connect to the provider’s cloud network. It is required for managed services for a secure connection to your network.

Pricing models

The various deployment models have different pricing options. If your organization prefers OpEx to CapEx, you will benefit most from the hosted and cloud solutions.

Deployment location	On-premises	Hybrid	Managed	Cloud	My priorities/Needs
Capital expense					
Fax server software	Yes	Yes	No	No	
Fax server boards or "soft" boards	Yes	Optional (you can keep some on-site telephony if you choose)	No	No	
Operating expense					
Monthly hosting fee	No	No	Yes	No	
Per-user charges	No	No for users Yes for phone numbers	No for users Yes for phone numbers	Yes for users Phone numbers are typically included in user charges	
Volume-based charges (per fax page)	No	Yes	Yes	Yes	
License support and maintenance	Yes	Yes on server software	No	No	

Fax server software: Does the solution require purchase of a software license?

Fax server board or "soft" boards: Does the solution require purchase of hardware fax boards or software licenses for connecting to your telephone equipment?

Monthly hosting fee: Does the service contract include fixed monthly fees to run the fax solution?

Per-user charges: Does the service contract include any fixed monthly per-user or per phone number charges?

Volume-based charges: Does the service charge for fax volume? Note that charges are typically per fax page, not per fax.

License support and maintenance: Does the solution require paying ongoing maintenance fees?

Security characteristics

Software-based fax solutions are designed to remove some risks associated with paper-based faxing, such as:

- Unintended recipients will view or remove incoming faxes—a violation of law in some industries and jurisdictions.
- A paper fax will be routed to the wrong person or left sitting on a fax machine and never delivered.
- One or more pages of a fax will be picked up with another fax and be lost.
- Time-sensitive faxes will not be delivered to the recipient in a promptly.
- Manual number dialing will result in a misdialed number and delivery to an unintended recipient.

However, you should consider some additional security characteristics when choosing a deployment model or vendor:

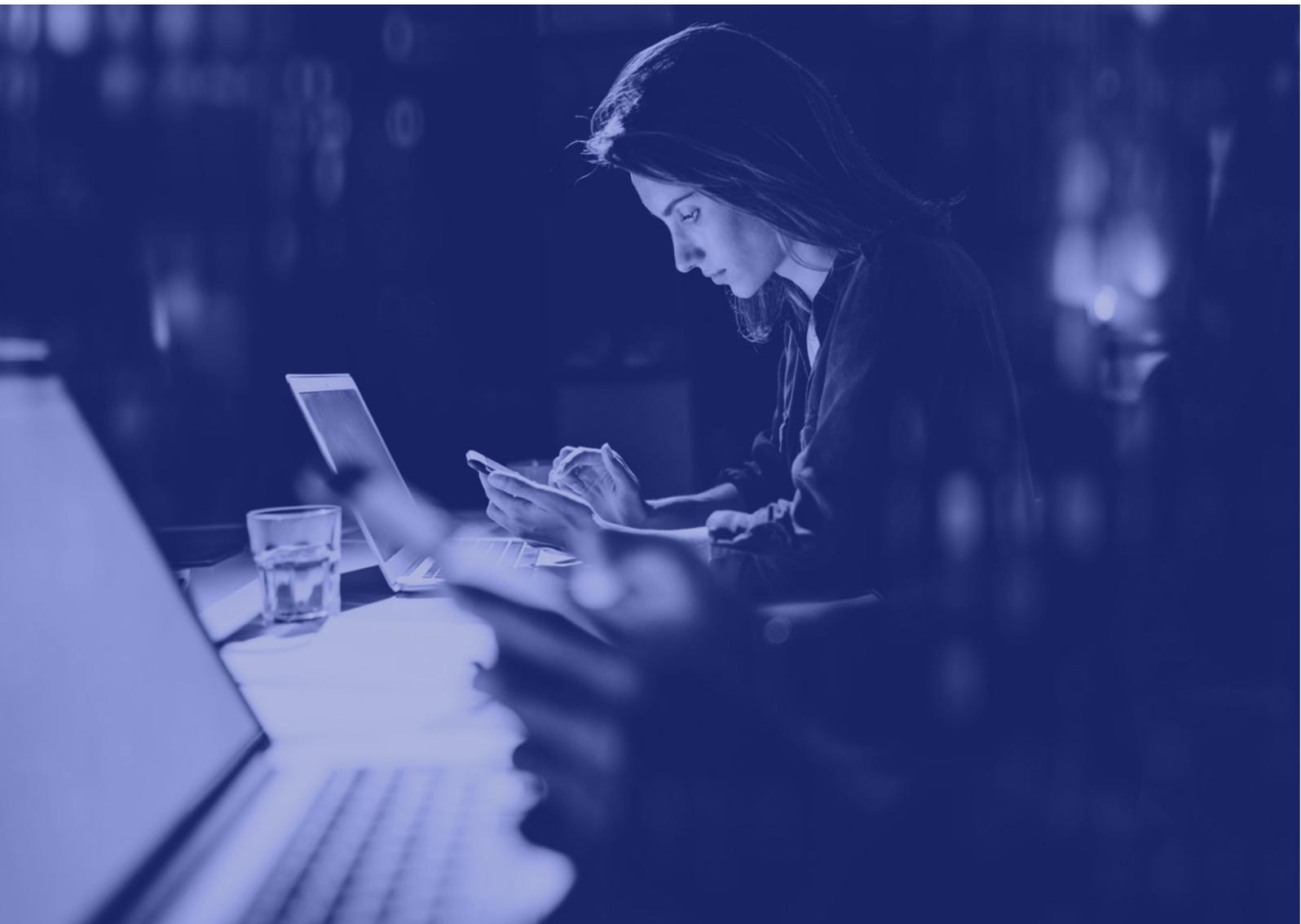
Security processes: The solution you are looking at should allow you to comply with applicable privacy and security laws or standards.

Audit of fax transactions/usage: Some organizations, industries and jurisdictions have deeper, more intensive audit requirements.

Third-party audit of vendor infrastructure: If the solution includes a provider's data center, is it SAS70 or SOC2 compliant? PCI-DSS?

Privacy agreements: HIPAA requires that business associates who come in contact with protected health information (PHI) be held liable for breaches and need to sign a business associates agreement (BAA) agreeing to the liability. If HIPAA applies to your organization, will your fax solution or cloud service provider sign a BAA? (Software vendors are not able to HIPAA-certify software, only an individual implementation can be certified).

Data sovereignty/ownership: Where do you want your data located? Is the location of storage important to you?



Common digital fax solution features

A complete list of possible fax software/service features would be very long. Here are some suggested features to consider when evaluating a fax solution.

Features	My priorities/Needs
Desktop faxing: Can users fax from a computer desktop or via email? Can they see their faxing history?	
Production faxing: Can the fax solution integrate with software so that faxes can be generated and sent by software?	
Fax archiving: Is there a method for creating a searchable archive of sent and received faxes?	
Monitors and alerts: Will the system alert you when you have a new fax or when your fax successfully	
SMS notification: Will you receive SMS notifications that faxes have been received or delivered?	
Send/receive PDF documents : Can you convert a PDF to an outbound fax or an inbound fax to a PDF?	
Send searchable PDF documents: Do you need to create searchable versions of inbound faxes? Do you need to store faxes with searchable content so you can quickly find faxes based on keywords, invoice numbers or other strings of text?	
Inbound fax searching: Can you convert inbound faxes to searchable PDF documents?	
Bar code routing: Can you establish bar codes that will tie multiple faxes together and allow you to route inbound faxes?	
OCR routing: Is there a way to scan the first page of an inbound fax for recognizable strings and use a routing table to deliver faxes to appropriate users by first/best match?	
XML generation: Can the system generate XML metadata about each fax and pass that information to other systems?	
Print-to-fax: Is there a print driver for faxing that allows you to fax any document you can print?	
Compliance filter: Is it possible to scan documents before they are sent to ensure content is in compliance? Can rules be created that force outbound faxes to go through a manual review before being sent?	
Automatic printing: Does it provide automatic printing of received faxes?	
Delegation: Can you designate someone who can send faxes on your behalf? (Similar to Delegates in Microsoft® Outlook®)	
Auto reply: Can an administrator create a customized reply that is automatically sent to any sender when a fax is received?	
Single sign-on: Can you configure your fax solution to rely on the user's Microsoft® Windows® network credentials to automatically sign on?	
Smart fax distribution: Can faxes be systematically distributed to individuals within user Groups for efficient processing, for example, round-robin distribution?	
Bandwidth control: Can an administrator restrict the number of pages or faxes sent by a user within a specific time period?	
Secure delivery of non-fax documents: Is there an option for securely delivering sensitive documents in their original format that includes the ability to verify receipt?	



Common digital fax solution integrations

Another key element in choosing a fax solution is determining with what software applications and hardware devices you would like to send and receive faxes. Fax solutions offer a wide range of integration types and methods. Which integrations does your company need?

Integration	My priorities/Needs	Products I have
Enterprise resource planning ERP Customer		
Relationship management CRM document management system		
Email system		
Typical office applications		
Electronic medical record system		
Microsoft® Active Directory® (for setting up users)		
Cloud services (Microsoft® Office 365®, Google™ apps, etc.)		
SMTP integrations with MFP devices		
Device-specific MFP integration		
Document capture solutions (Nuance eCopy)		
Integration models		
Drop directory, specially formatted documents dropped in a specific directory are automatically faxed		
Software API		
Web Services API		
Command line utilities		
SMTP		

OpenText solutions in these deployment models

OpenText, the leading provider of fax solutions worldwide, offers fax solutions for each deployment option with capabilities that only OpenText provides. No matter the size of your organization or your volume of fax traffic, OpenText has a solution for you.

On-premises solutions

- OpenText™ RightFax™ is the OpenText flagship on-premises fax solution for large enterprises and mid-sized companies with strong integration requirements and high fax traffic. RightFax is ideal for organizations seeking a long-term, strategic fax solution with the IT resources to support more complex deployments. RightFax, the market-leading network fax server solution, automates time-intensive manual, paper-driven processes by integrating them into your business applications and systems.
- OpenText™ RightFax™ Express is a fax solution built specifically for small to medium-sized businesses and departments of larger enterprises, available as an appliance, software or hybrid deployment. RightFax Express is ideal for customers seeking a small IT footprint and simple deployment model. The appliance option is designed to provide employees of SMBs with electronic faxing from the desktop, via an all-in-one, plug-and-play, hardware-based fax solution.



Managed/Hosted solutions

- OpenText™ RightFax™ Managed Services is a managed, hosted fax service that offers all the robust features, individual configuration and integration of RightFax. OpenText RightFax Managed Services frees up your internal assets to focus on core business objectives, eliminate on-premises fax server complexity, and fill gaps in internal expertise. It combines the technology of RightFax—the most trusted fax server for secure information exchange—with the experts at OpenText to implement, manage, and monitor your RightFax implementation. Your dedicated OpenText RightFax server instance runs in OpenText data centers and ensures you retain full ownership and control over your data and where it resides.

Hybrid solutions

- OpenText™ RightFax™ Connect is a cloud service that eliminates the need for fax channels and telephone lines for RightFax and RightFax Express implementations. RightFax or RightFax Express with RightFax Connect is a hybrid fax solution with outsourced telephony. This is the perfect option for organizations that need the enterprise-class capabilities of RightFax or the SMB features of RightFax Express and want to remove the complexity of integrating their telephone network with their fax server software.

Fax as a Service solutions

- OpenText™ Fax2Mail™ and OpenText™ Production Messaging are enterprise cloud fax services for organizations seeking a rapid and cost-effective deployment. OpenText cloud fax services eliminates the cost, complexity and hardware and software associated with supporting fax machines, servers and telephony.

Conclusion: We'll work with you to find the right deployment solution

OpenText offers a wide range of fax solutions to meet the needs of your organization. Let us help you choose the best solution. OpenText can provide you with expert advice and guidance regarding your solutions. Our experts will take the time to understand your current environment, requirements and needs. You can also reach out to any one of the extensive network of partners that sells OpenText products to help you choose the right solution.

About OpenText

OpenText, The Information Company™, enables organizations to gain insight through market leading information management solutions, on-premises or in the cloud. For more information about OpenText (NASDAQ: OTEX, TSX: OTEX) visit: opentext.com.

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