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Choosing a fax solution deployment model

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Executive summary

Enterprise software is available in a wide range of 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 that others be on premises. Hybrid applications are gaining popularity but must be evaluated against business requirements.

OpenText recommends organizations find the right balance for their needs. Regardless of which services deployment fits your organization, OpenText offers market-leading solutions in the services that will help you achieve the best return on investment. This guide is designed to help you evaluate your needs, develop the criteria for choosing a deployment model, and then find the deployment model for you. Using easy-to-follow tables, you can compare the characteristics of common software deployment models against your needs and preferences. At the end, you will have a list that you can compare against various models and products to ensure you make a choice that 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. For example, 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 choosing 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 or functions while keeping business-critical systems on premises. Increasingly, organizations are seeking to outsource as many IT applications as possible. Hybrid solutions are becoming a 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 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 solution and amount of faxing. 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). Another possible strength of an on-premises model is the customer's ability to control and manage the fax ecosystem. Unlimited faxing without contracts may also exist. 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, and a portion is provided as a service in the cloud. Where this division occurs in the solution can vary from vendor to vendor.

The key strength of hybrid solutions is that the telephony service portion typically includes the connection to the telephone network. This simplifies the environment and relieves your IT staff from the responsibility of one of the most complex and confusing aspects of deploying fax solutions. Because some of the software resides 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 at your site. Faxes can be sent and receive by a variety of methods that fit your organization's security requirements and workflows. These options include internet browsers, mobile applications, multifunction printer applications, windows client, and integrations with third-party business applications, such as Microsoft® Teams®. Email is also available as an option, in which case, outbound faxes are sent to a specific formatted email address that contains the recipient's fax number. Inbound faxes arrive at the service provider and are routed to the specific recipient.

The strength of pure service solutions is that the service provider manages all the infrastructure. Your IT staff can manage users, configurations, and fax numbers via a browser-based interface provided by the service provider.

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.

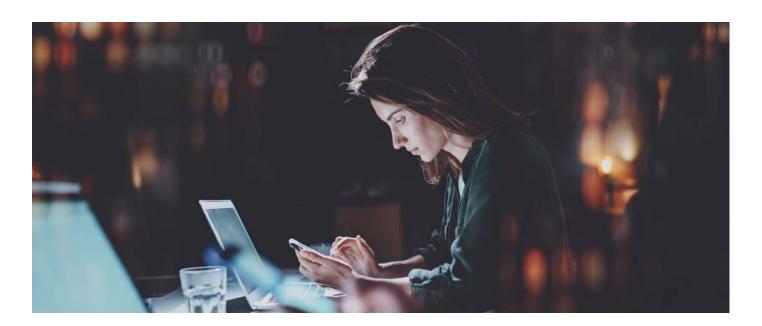| Deployment location	On premises	Hybrid	Managed	Cloud	My priorities/ Needs
Key characteristics					
Reduction in IT fax support	Measurable reduction in many costs associated with physical fax machines and paper faxes.	On-premises benefits, plus no telephony management.	IT management moves to vendor. 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, native interfaces, and connector applications for some MFPs.	
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 for the server and software, which must be configured for uptime. Yes for the telephony service when vendor provides.	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' or regions that hold your data.	

Reduction in IT fax support: All of these 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 require the least.

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

Software systems integration: All fax deployment models typically provide simple application integration via SMTP, which is the internet standard for email transmission. This means that if an application can send an email, it can fax. However, 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. The latter could also require additional software to be purchased to manage the failover and redundancy. Options typically exist for redundancy and failover, but you must manage installation and configuration. Managed and SaaS solutions offer high levels of service uptime that are 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. With 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 location	On premises	Hybrid	Managed	Cloud	My priorities/ Needs
Required solution components					
Fax server hardware	Yes	Yes	No	No	
Server hardware	Yes	Yes	No	No	
Telephony equipment	Yes	No	No	No	
Implementation					
Implementation timeline	• Typical enterprise software implementation • Must spend time connecting telephony	• Typical enterprise software implementation • No telephony deployment	Faster than most enterprise software implementations, but some up-front planning required	Simplest and fastest implementation	
Time to production	Weeks to months	Weeks to months	Weeks	Days to weeks	
Ease of implementation	• Requires significant work to make decisions on a range of options • Requires database server • Requires telephony connections • Appliances shorten implementation cycles	• Requires significant work to make decisions on a range of options • Requires database server	• Simple, because the vendor does all the work, but still requires significant customer participation to make decisions on a range of options	• Simplest implementation • Fewest decisions regarding configuration options	
Customization flexibility	• APIs and control over servers offer high level of customization	• APIs and control over servers offer high level of customization	• APIs and isolated server instances allow for a high level of customization	• APIs available. Customization is usually within a controlled framework	

Deployment and implementation characteristics

In addition to defining what needs to be purchased and where software runs, the selected 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.

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

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 implementation: Deploying on-premises solutions is more complex because you will typically customize the deployment to match your specific needs. Cloud services tend to offer fewer options but are often ready to use as soon as accounts are set up.

Customization flexibility: Some fax solutions provide more customizable deployments than others. 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 Can be none	Varies by vendor Can be none	Varies by vendor Can be none	Yes	
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 on-premises and hybrid solutions may require adding hardware, such as servers and telephony equipment. Furthermore, additional hardware may be required for high availability and disaster recovery needs.

Software: For on-premises and hybrid offerings, adding hardware means purchasing additional software licenses. And additional hardware may be required for High Availability and Disaster recovery needs.

Users: Scaling your solution may require an additional fee per user. Cloud fax services are typically the only deployment model that may incur a per-user fee. But there are also pricing models in which the user count is unlimited, and the pricing is based on the page volume generate by the users.

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, either unexpected or planned. 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 overbuy maximum traffic and capacity in order to avoid busy signals or traffic congestion in the event of a spike.

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 for 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 type using on-site 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 not required for hybrid and cloud deployments but is often available to connect to the provider's cloud network. Managed services must have a VPN 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-base 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 viewing or removing incoming faxes—a violation of law in some industries and jurisdictions.

- Paper faxes routed to the wrong person or left sitting on a fax machine and never delivered.

- One or more pages of a fax being picked up with another fax and getting lost.

- Time-sensitive faxes not delivered to the recipient promptly.

- Manual number dialing leading to misdialed numbers and delivery to unintended recipients.

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 associate agreement (BAA) agreeing to the liability. If HIPAA applies to your organization, will your fax solution or cloud service provider sign a BAA?[3]

Data sovereignty/ownership: Where do you want your data located?

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3 Software vendors are not able to HIPAA-certify software, only an individual implementation can be certified

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.

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 store sent 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 the solution 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

Fax solutions offer a wide range of integration types and methods. Another key element for selecting one is determining which software applications and hardware devices you would like to send and receive faxes through.

Integration	Cloud	My priorities/ Needs
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		
OpenText Capture		
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 are unique in the market. No matter the size of your organization or your volume of fax traffic, OpenText has a solution for you.

On-premises solution

- OpenText™ Fax is our flagship on-premises fax solution for large enterprises and mid-sized companies with strong integration requirements and high fax traffic. The market-leading network fax server solution is ideal for

organizations seeking a long-term, strategic fax solution with the IT resources to support more complex deployments. OpenText Fax automates time-intensive, manual, paper-driven processes by integrating them into your business applications and systems.

Managed/Hosted solution

- **OpenText™ Fax** Private Cloud (Managed Services) is a managed, hosted fax service that offers all the robust features, individual configuration, and integration of OpenText Fax. It frees up 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 OpenText Fax—the most trusted fax server for secure information exchange—with OpenText experts to implement, manage, and monitor your implementation. Your dedicated OpenText Fax 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™ Fax Cloud Connect** is a cloud service that eliminates the need for fax channels and telephone lines for OpenText Fax (RightFax) and OpenText Fax Express (RightFax Express) implementations. OpenText Fax or OpenText Fax Express with OpenText Fax Cloud Connect is a hybrid fax solution with outsourced telephony. This is the perfect option for organizations that need the enterprise-class capabilities of OpenText Fax or the SMB features of OpenText Fax Express but want to remove the complexity of integrating their telephone network with their fax server software.

- **OpenText™ Core Fax** is a SaaS cloud solution that can be tailored to meet the needs of businesses of all sizes. With OpenText Core Fax, employees can easily and securely fax from their workstations, email, business applications, mobile devices, or multi-function printers (MFPs), integrating with and streamlining workflows across the entire organization.

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

OpenText offers a wide range of fax solutions to meet your organization's needs. OpenText can provide you with expert advice and help you select the right solution for you. Our experts will take the time to understand your current environment, requirements, and needs. You can also reach out to the extensive network of partners selling OpenText products.

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