



KONICA MINOLTA

TECHNOLOGY



Dispatcher Phoenix

Hosted In the Cloud



Dispatcher

Phoenix

White Paper

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Introduction

Cloud services are being embraced by organizations of all sizes. Many enterprise organizations are moving to the cloud to reduce the burden on IT and provide additional flexibility as well as scalability. As demand for cloud solutions is rapidly increasing as a result of organizations shifting from traditional on premise IT infrastructure to services deployed to the cloud, there are also new opportunities for small and medium sized businesses (SMB) to obtain the same benefits as their large enterprise counterparts.

This White Paper provides guidance and best practices for deploying the Dispatcher Phoenix on-premise application in Amazon Web Services (AWS), one of the leading cloud hosting providers in the world today. Information includes planning, deployment, hosting, and licensing considerations, as well as frequently asked questions that your customers may have.

Benefits to Hosting in the Cloud

With this White Paper, you can realize the following benefits of hosting Dispatcher Phoenix in the cloud:

- **Modernize via “Lift and Shift” Strategy**
As a cost-effective, balanced approach to cloud migration, many IT departments are adopting a “lift and shift” strategy, choosing to replicate their current infrastructure in the cloud with minimal changes required. Using this White Paper as an important guide, you can now help your customers modernize, improve performance, and protect their investments by deploying Dispatcher Phoenix in the cloud.
- **Save on Infrastructure Costs**
Businesses can run Dispatcher Phoenix on cloud infrastructure that is managed by 3rd party providers, such as AWS, reducing the expenses involved with maintaining on-premise IT infrastructure. In addition, organizations can take advantage of all of the benefits of cloud computing and the hosting service’s advanced features in a secure and reliable way over their existing private IT infrastructure.
- **Take Advantage of Advanced Features**
Our customers can leverage their cloud platform’s enhanced high availability, scalability, and reliability features to increase performance and security of their workflows.

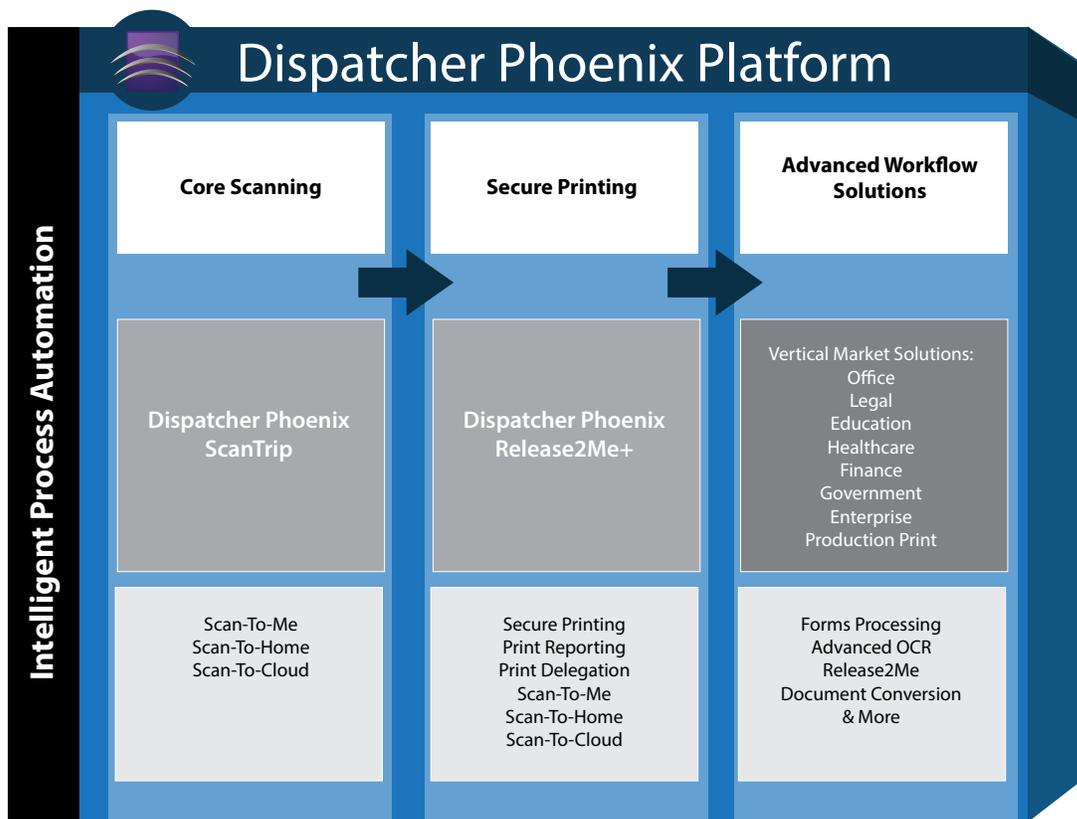
There are additional advantages to cloud computing. Instead of buying, owning, and maintaining physical data centers and servers, you can access more advanced technology services through platforms like AWS. Organizations of every type, size, and industry are using the cloud for a wide variety of use cases and will be able to garner additional benefits such as:

- **Swap capital expenses for variable expenses**
Pay your cloud platform only when you consume computing resources and pay only for what you consume.
- **Economies of scale**
Hundred of thousands of organizations aggregate their data to the cloud, allowing cloud providers to pass cost efficiencies down to their customers.
- **Eliminate guesswork**
With cloud computing, organizations can access as little or as much capacity as needed and scale up or down within minutes.
- **Maximize speed and agility**
New IT resources are at your fingertips with cloud computing, reducing the cost and time investment needed to develop and test new solutions.
- **Focus on innovation, not infrastructure**
Cloud computing enables organizations to focus on tasks that drive innovation, like customer engagement, rather than on their on-premise infrastructure.

The Dispatcher Phoenix Platform

The Dispatcher Phoenix Platform is made up of a family of easy-to-use yet powerful document workflow and secure printing solutions. Dispatcher Phoenix is an advanced workflow automation solution that enables organizations across vertical markets to streamline the time-consuming document processing tasks that negatively impact productivity and cost-efficiencies. The award-winning platform automates the repetitive tasks that interrupt employees' time, disrupting their workday and preventing them from focusing on their strategic business processes. By implementing this robust solution, organizations of any kind will gain the power to automate their strategic document processes, improving their business as a whole.

Organizations looking to enable secure follow-you printing and/or simple scanning workflows also use the power of Dispatcher Phoenix ScanTrip and Dispatcher Phoenix Release2Me+.



Konica Minolta MarketPlace Apps

The Konica Minolta MarketPlace offers free Dispatcher Phoenix applications that give you the flexibility to quickly and easily launch Dispatcher Phoenix at the MFP without needing to install the embedded application. Three apps are available on the Konica Minolta MarketPlace that correspond to each Dispatcher Phoenix license; Dispatcher Phoenix ScanTrip, Dispatcher Phoenix Release2Me+ and Dispatcher Phoenix. Each app supports all of your workflows, including customizable document processing, dynamic document indexing, folder browsing, and much more. In addition, the Dispatcher Phoenix apps enable customers hosting Dispatcher Phoenix in the cloud to reduce their dependency on a VPN for connectivity.

Visit the [Konica Minolta MarketPlace](#) to download and install your Dispatcher Phoenix app.

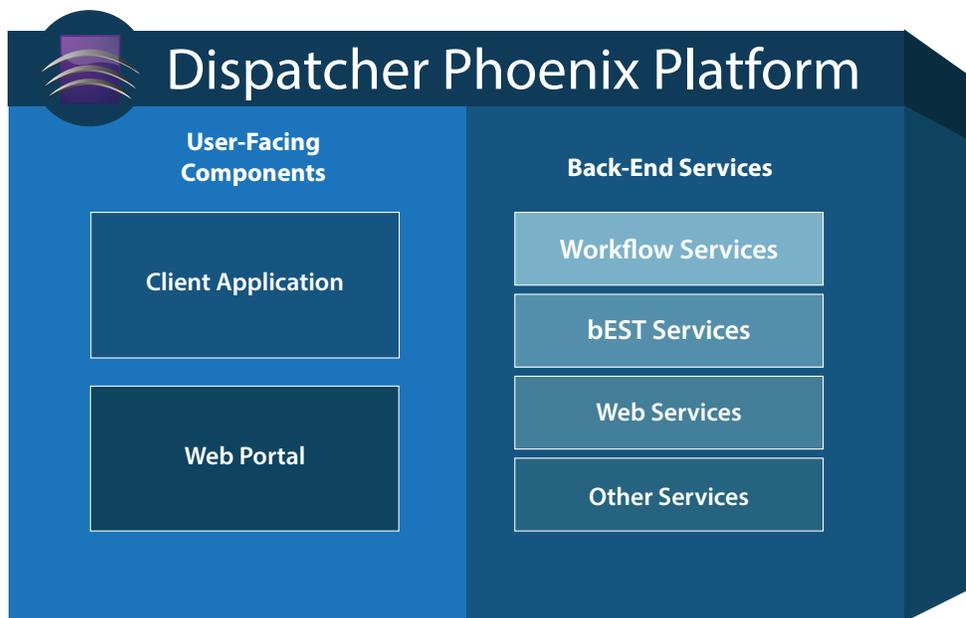
With its modular architecture, Dispatcher Phoenix is scalable to support organizational and strategic growth. By providing a wide collection of processing features, Dispatcher Phoenix users can create custom workflows that fit seamlessly into their everyday operations. With this process automation solution, organizations will save costs, maximize productivity, improve employee morale, eliminate human errors, and more!

The Building Blocks

The Dispatcher Phoenix platform can be broken down into two pieces; the user-facing application components and back-end services, both installed on the same server.

The user-facing application contains two components, the Client Application and the Web Portal. The Client Application provides an intuitive user experience for workflow creation and management. The Web Portal enables organizations to manage parts of their installation via Dispatcher Phoenix Web. The components of Dispatcher Phoenix Web include user management, device management, cloud account registration, authentication, reporting, analytics, and more.

Dispatcher Phoenix runs four types of services. These services work in conjunction with each other to provide seamless automation of your organization's document processing activities.



Workflow Services

The services responsible for running or scheduling the workflows.

Web Services

Web Services manage operations in Dispatcher Phoenix including authentication, user management, reporting and analytics, cloud account integration, and more.

bEST Services

These services are responsible for communicating with registered MFPs and other devices. The bEST Services also manage the user experience on the MFP Panel for scan or print workflows.

Other Services

There are a variety of other services, such as the Email or SMTP Service and Cluster Service included within Dispatcher Phoenix that may be running at any given time based upon the organization's unique automation and workflow needs.

Key Features



Complete Customizable Automation with an Easy-to-Use Workflow Builder

With Dispatcher Phoenix's Workflow Builder, users can create custom workflows to automate the processes they need. Dispatcher Phoenix's user-friendly, graphical Workflow Builder tool makes creating workflows both simple and fast with drag-and-drop technology.



Scheduling

Dispatcher Phoenix's Workflow Scheduler allows workflows to run automatically at a specific date/time, with no human interaction required. With this advanced scheduling capability, workflows will run only when they should. Additionally, processes can be scheduled to run at night, creating less traffic on the server while employees are at work.



Advanced OCR

Advanced OCR processing refines Optical Character Recognition (OCR) results and extracts metadata through the use of user-defined or auto-detected zones. With this advanced capability, files, such as invoices and other financial forms, can be automatically processed and routed based on the data within the document.



Forms Processing

Extracting and processing data from forms is simple, fast, and automatic with Dispatcher Phoenix's Forms Processing feature. To minimize the need for human intervention, Forms Processing allows you to organize and identify documents as well as process and extract unique identifiers from forms using relative zones and advanced pattern matching technology.



Advanced File Routing

Defined by the user, Dispatcher Phoenix workflows can be set up to automatically route documents according to metadata-based rules. Routing conditions can be easily created, using any metadata that is associated with documents in the workflow. With this feature, organizations can take advantage of intelligent file routing capabilities such as automatically routing files to different folders or popular cloud storage systems based on barcodes or other data inside the document.



Third-Party Connectors

Automatically distribute processed documents to a variety of cloud storage systems, including Box, Google Drive, Dropbox, OneDrive, OneDrive for Business, SharePoint, OnBase, Laserfiche, and more! Also, you can automatically send files via Email and Windows FAX.



Secure Print Release

Hold print jobs in a queue until release at the MFP by an authenticated user with Release2Me, our secure print release option. Since users only print out the documents they need, Release2Me helps companies secure their printouts and reduce their overall printing costs. With Release2Me Print Reporting, businesses gain insight into their print infrastructure as managers or administrators can create customizable reports in Dispatcher Phoenix Web. In addition, Release2Me provides advanced control over managing the print queue using Print Delegation. Personnel can share or delegate print jobs to ensure teams have the information they need available to them at the MFP.



Credentials

Secure your third-party credentials through Dispatcher Phoenix's web-based centralized management system, Dispatcher Phoenix Web.



Targeted Benefits

Dispatcher Phoenix enables organizations across vertical markets to streamline their workflows with market-specific functionality. Optional packages are available for the following markets.

Office. Streamline and automate common document processing tasks, including: collecting files from a wide variety of sources, creating automated workflows for converting files to PDF and Microsoft Office formats, renaming files, splitting files, annotating documents, extracting data from files, and more.

Legal. Speed up and simplify legal document processing with automated Bates stamping, redaction, connectors to legal document management systems and more.

Finance. Capture, process and distribute financial documents with automated file conversion, advanced OCR and more.

Education. Advanced features for educators include an automated bubble sheet grading solution, a web-based bubble sheet generator tool and more.

Government. Helps state and federal agencies manage documents with greater security and accessibility. Includes Dispatcher Phoenix's Copy Defender functionality to secure printed documents along with support for CAC/PIV authentication and Scan-to-Me/ Scan-to-Home capabilities.

Healthcare. Automates healthcare workflows for processing, sharing, and securing patient information, including a direct connector to Hyland's OnBase®, a secure prescription print solution, and scan-to-EHR capabilities via the HL7 Connector and CDA Generator.

ECM. Manage unstructured content with powerful batch scanning and indexing capabilities. Features a Desktop workstation that connects to any high-speed, TWAIN-based scanner, along with web-based batch indexing, document verification and batch reporting tools.

Customizable Workflow Automation Hosted in the Cloud

Using Dispatcher Phoenix, organizations of all sizes can benefit from enterprise features and functions such as failover, load balancing and high availability. In addition, when Dispatcher Phoenix is installed in the cloud, organizations will benefit from the enhanced built-in functions of their cloud provider. In general, when managing a solution in the cloud, organizations receive the following benefits:



Enhanced Scalability

Infrastructure and functionality can be added or removed easily.



High Availability

With advanced support for failover and redundancies, organizations gain additional flexibility.



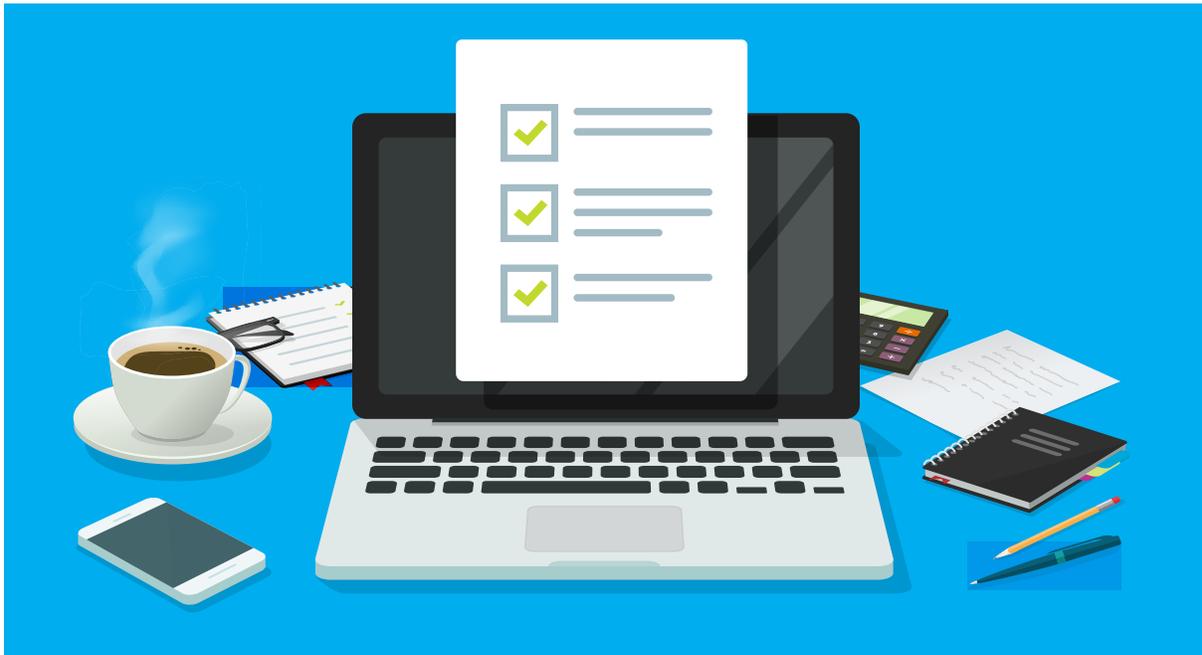
Advanced Reliability

Optimize system throughput and network traffic.

Planning & Considerations

To properly plan for a cloud deployment of Dispatcher Phoenix, you must first:

- 1 Identify your customer's goals.**
How will they use Dispatcher Phoenix? What additional features will they use in the future? How many devices do they use?
- 2 Identify their HA requirements.**
Do they have a defined HA policy that indicates Recovery Time Objective (RTO) and Recovery Point Objective (RPO)?
- 3 Understand the proper architecture for the deployment.**
Once you understand how your customer will be using Dispatcher Phoenix and what features they need to use, then you can determine the proper architecture for the deployment.



Hosting Requirements

Hosting Dispatcher Phoenix in a cloud environment requires that the environment provide the following minimum requirements:



Virtual machine with adequate resources to support the workflow(s) that will be running on the virtual machine (VM).



Method of connection to the public internet.



Method of connection to the customer environment.

In addition to these minimum requirements, it is also recommended that hosted Dispatcher Phoenix environments utilize redundancy options of the hosting service provider. The native functions of the cloud platform, such as the Auto-Scaling groups functionality in AWS, can be used to implement redundancy.

Deployment

Default Ports for Installation

Dispatcher Phoenix uses the following ports:

- bEST: 50808, 50809 (SSL)
- Email: 143 (IMAP), 993 (IMAPS)
- FTP: 21, 990 (SSL)
- KMBS MFP: 59158, 59159 (SSL)
- Printer (LPR): 515
- Printer (RAW): 9100
- SMTP: 25, 465 (SSL), 587 (STARTTLS)
- SSH (SFTP Out): 22
- SEC Workflow Worker Process: Needs Outbound access based on configured workflow (e.g., 53, 80, 443, 25, 445, 465, 587)
- Add-In Manager: Outbound 80 (HTTP), 443 (HTTPS)
- High Availability Set Up:
 - 4369 - Used by Heartbeat to define what each server's port is
 - 9000-9115 - Heartbeat negotiation range (range of servers' configurable ports)

Installation Dependencies

Dispatcher Phoenix installs the following dependencies:

- Microsoft Windows Imaging Component (WIC)
- Windows PowerShell 2.0
- Microsoft Visual C++ 2010 Redistributable x86
- Microsoft Visual C++ 2010 Redistributable x64
- Microsoft Visual C++ 2013 Redistributable x86
- Microsoft Visual C++ 2013 Redistributable x64
- Microsoft Visual C++ 2015-2019 Redistributable x86
- Microsoft Visual C++ 2015-2019 Redistributable x64
- Microsoft .NET 4.8 Redistributable



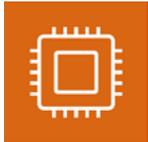
Please note that the following recommendations are based on AWS configurations and terminology. Other cloud platforms, such as Microsoft Azure and Google Cloud, may be used in a similar manner; however, instructions and set up may differ between providers.

Key Considerations



EC2 (Elastic Compute Cloud) INSTANCE

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the AWS cloud. We recommend properly sized Compute Optimized EC2 instances to guarantee optimum performance.



MEMORY

For this type of configuration, Dispatcher Phoenix requires a minimum of 16GB of RAM. Considerations for the types of workflows should dictate the final memory amount.



EBS (Elastic Block Storage)

A minimum of 250GB of storage is recommended.



Hosting Configuration

The following is an example of a hosted configuration utilizing AWS. This configuration assumes manual configuration of all environment resources and manual installation of the Dispatcher Phoenix application on a virtual machine in that environment.

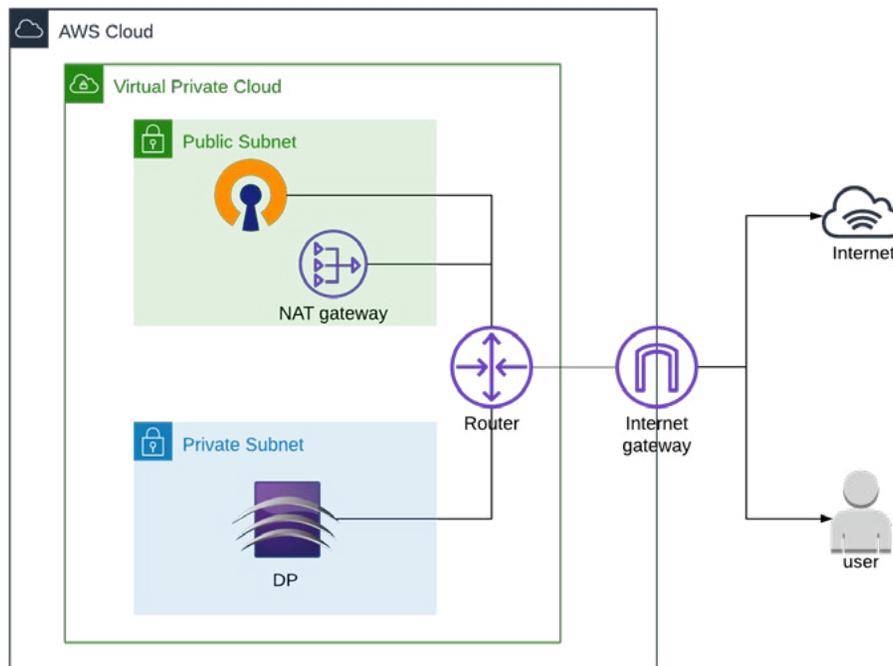


Diagram details will vary based on VPN type and configuration.

Requirements

The following AWS resources will require configuration to run Dispatcher Phoenix in the cloud. The configuration of these items is based upon the customer's environment and will differ as a result:

- Single-Region Virtual Private Cloud (VPC)
 - Public/Private Subnets
 - Network Address Translation (NAT) Gateway (required for public internet communication from the private subnets)
 - AWS Virtual Private Network (VPN) Services
 - Elastic Internet Protocol (IP) (at least one required for VPN)
 - Note: In order to utilize Elastic IP with Auto-Scaling groups (to provide higher availability) a script is required.
 - Internet Gateway
 - Security Groups
 - VPN Security Group
 - Inbound Rules:
 - Hypertext Transport Protocol Secure (HTTPS)
 - Remote Desktop Protocol (RDP) Port
 - SSH
 - VPN Admin Port
 - VPN Connection Port
 - Outbound Rules:
 - All Traffic
 - Dispatcher Phoenix Security Group
 - Inbound Rules
 - Dispatcher Phoenix Web Port
 - RDP Port
 - Outbound Rules
 - Hypertext Transfer Protocol (HTTP)
 - Hypertext Transfer Protocol Secure (HTTPS)
 - EC2 Instances
 - Dispatcher Phoenix instance - c5.2xlarge (Server 2019)
 - OPTIONAL - Third Party VPN instance (such as OpenVPN)

Virtual Machine Requirements

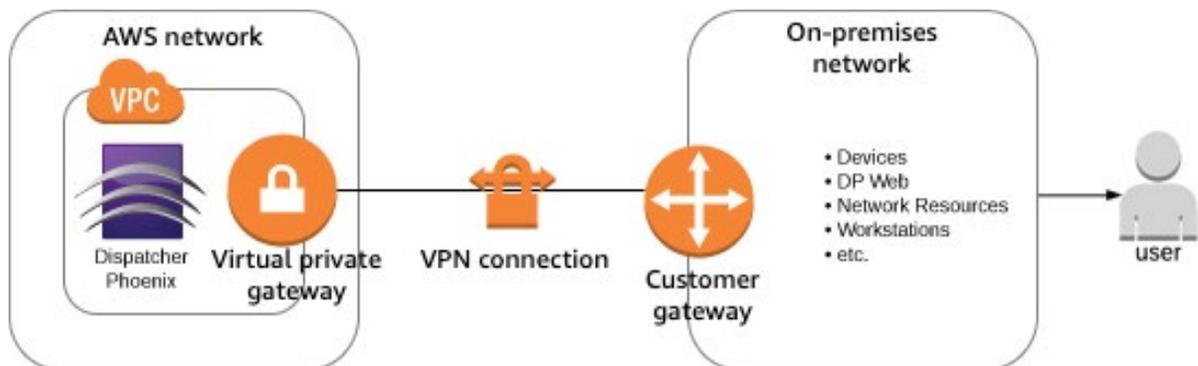
The recommendation for Dispatcher Phoenix virtual machine instances in EC2 is to utilize the c5.2xlarge (Server 2019) option. This EC2 instance has the following specifications:

Model	vCPU	Memory (GiB)	Instance Storage (GiB)	Network Bandwidth (Gbps)	EBS Bandwidth (Mbps)
C5.2xlarge	8	16	250GB EBS-Only	Up to 10	Up to 4,750

Connectivity Configuration

To enable secure connectivity from the Dispatcher Phoenix installation within AWS to the on-premise network and a user, we recommend using a Virtual Private Network (VPN). The configuration of the VPN will depend on an organization's cloud infrastructure. Connectivity via a site-to-site VPN to the on-premises environment is enabled for the following purposes:

1. Administration of the EC2 Instance & Dispatcher Phoenix application (Remote Desktop Protocol or RDP, dependent on VPN).
2. Access to Dispatcher Phoenix Web, Dispatcher Phoenix Multi-Function Printer (MFP) communication, and Dispatcher Phoenix network resources.



This connectivity configuration assumes a site-to-site VPN connection is scoped as part of the overall environment. It is NOT recommended that the Dispatcher Phoenix server instance be provided a public IP for connectivity. This is a highly risky, insecure configuration that is not recommended by Konica Minolta's Solutions Engineering Center.

Installation

Installation of Dispatcher Phoenix in the environment outlined in this White Paper aligns closely with the typical installation process. In addition to the standard installation and licensing of Dispatcher Phoenix on a Windows Server 2019 operating system, please confirm the following configurations are accessible to the user on the on-premise network:

- Dispatcher Phoenix Web.
- Dispatcher Phoenix MFP Panel Node.
- Dispatcher Phoenix MFP Registration.

Confirming a successful connection to Dispatcher Phoenix Web, Dispatcher Phoenix MFP Panel node and MFP Registration are essential to ensuring that the VPN is operating correctly.

Licensing Considerations

There is no special licensing to install or manage Dispatcher Phoenix in a cloud environment. The configuration described above will support all existing Dispatcher Phoenix licensing modules, including perpetual and subscription licensing.

The customer should be licensed for the features and functionality they will require. The configuration described in this White Paper supports all existing licensing models.



Frequently Asked Questions



Is a VPN necessary to host Dispatcher Phoenix in the cloud?



We recommend a VPN to maintain network security.



What are the recommendations for a VPN to the Cloud Service?



Depending on the customer's preferences and environment, the recommendations for a VPN will vary. The requirements for the VPN will be dependent upon the cloud platform used to host Dispatcher Phoenix and should be consistent with the cloud strategy of each customer.



Are Professional Services required to host Dispatcher Phoenix in the cloud?



Professional services are recommended to host Dispatcher Phoenix in the cloud. Please contact sec@kmb.konicaminolta.us for more information.



Are hosting services provided as part of a Dispatcher Phoenix license?



No, hosting services are not provided. The customer will utilize the cloud platform they are currently using or implementing. In addition, there is no additional Dispatcher Phoenix license required to enable cloud-hosting. However, the customer will need to have the appropriate cloud platform licenses for the cloud services they will be utilizing.



Who will be controlling the hosting platform environment?



The customer will maintain control of the hosting platform environment.

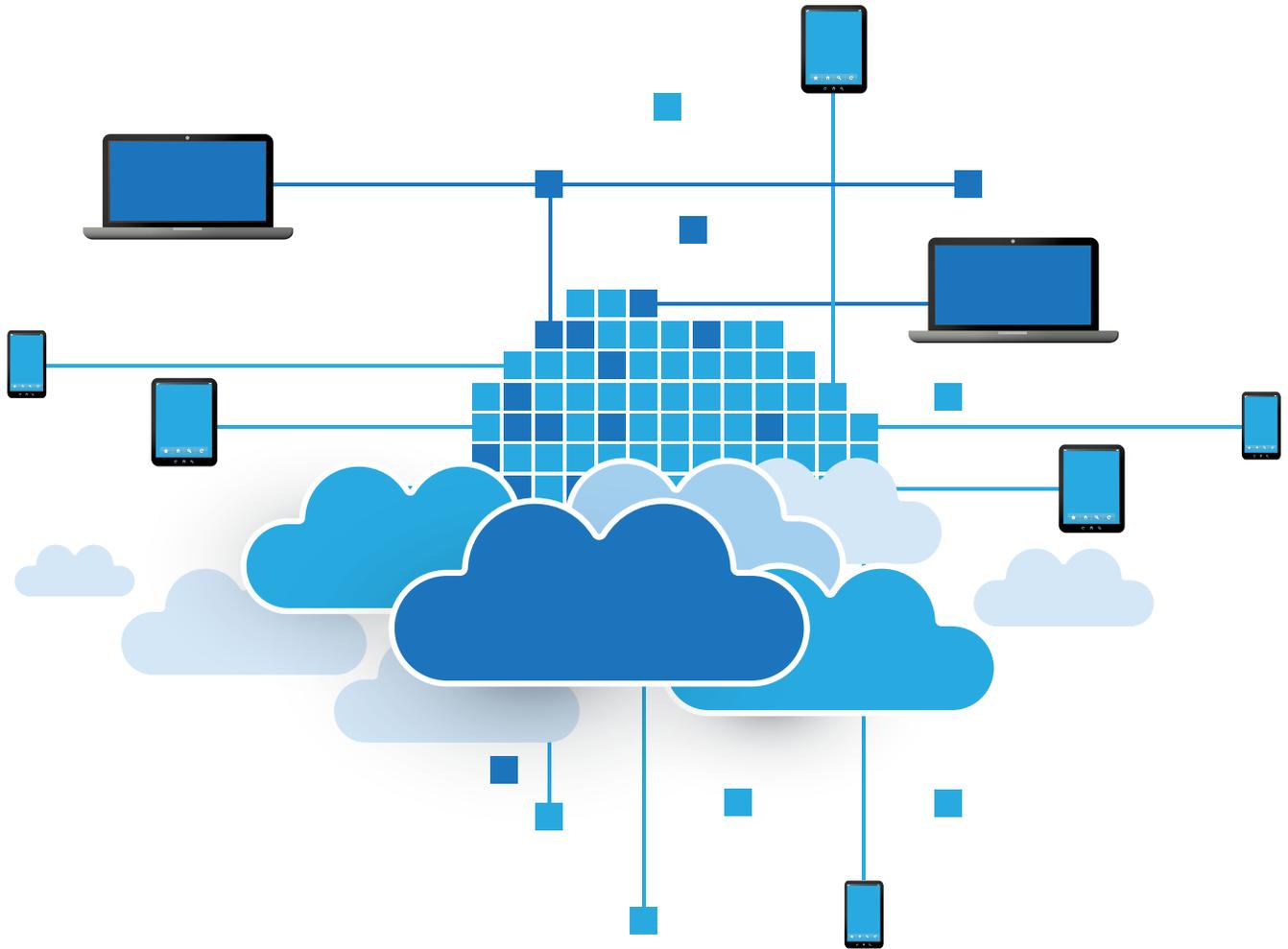


Will any license of Dispatcher Phoenix work in a cloud-hosted environment?



The configuration described in this White Paper will support all existing Dispatcher Phoenix licensing modules. The customer should still be licensed for the features and functionality they will require.

The configuration for Dispatcher Phoenix hosted in the Cloud will be different for each customer. For specific configuration recommendations, or to inquire about professional services, please contact sec@kmb.konicaminolta.us.



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