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# Insider's Guide to Deploying Maximo Application Suite

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Transitioning from Maximo to the IBM Maximo Application Suite (MAS) involves making important decisions, namely **how you will deploy MAS and how you will maintain it.**

The way that MAS is built represents a significant departure from the previous Maximo Asset Management architecture, which used a traditional client/server topology. Instead, MAS has a container-based microservices architecture running on IBM Red Hat OpenShift. The change improves the platform's core capabilities, security, and supportability.

However, it also requires different IT resources and support models than previous versions. Unfortunately, it's not a transferable skill set for teams who are used to running Maximo on Windows.

The path you choose will impact your budget, timeline, and performance of your new MAS investment. Hidden costs and unexpected requirements can derail your MAS initiative.

After making a critical investment in Enterprise Asset Management, the last thing you want is for your system to go down with no path or expertise to get it back up and running.

This guide will help you understand your options so you can select the path that's right for you.

Make sure your investment in MAS yields the results you expect.

## MAS On-Premise vs. Cloud?

The first choice to make is the deployment model. You have several options:

- Self-hosted with your own physical or virtual hardware
- Private cloud – a computing environment dedicated to your organization
- A public cloud environment such as Microsoft Azure, Amazon Web Services (AWS) or Google Cloud Platform (GSP)

Each of these options has pros and cons to consider.

| Decision Factor             | On-Premise                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Private Cloud                                                                                                                                                                                                                                                                                                                                                 | Public Cloud                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| Infrastructure requirements | <p>Let's say you had one Windows production server for Maximo 7.6 for 100 concurrent users.</p> <p>Now, expect that you'll need to procure and provision five Linux production servers at a minimum, ideally six. Plus, you'll need an equal number of non-production servers.</p> <p>You'll also need database products such as IBM Db2, Oracle, or Microsoft, plus middleware, and storage.</p> <p>If you're a Windows shop, this can be an expensive investment, especially when you consider the provisioning and maintenance process. The networking, IP, and DNS is significantly different than classic Windows-based deployments.</p> | <p>While private cloud allows the most options around customization and flexibility - the downside of the increase of resources and cost, and knowledge to support the system.</p> <p>In your private cloud, you can deploy MAS using single-node or distributed OpenShift to meet your resource and budget requirements.</p>                                 | <p>Networks, servers, storage, operating systems, middleware, databases, and other crucial component services to host the application are provided by your cloud service provider.</p> <p>They may provide multiple instances for testing and production.</p> <p>You can have your own public cloud tenant.</p> <p>You could leverage Platform-as-a-Service (PAAS) offerings to help you provision and deploy MAS.</p>                                                                              |
| Timeline                    | <p>MAS deployment can't begin until architecture design is completed. This step can take time based on the number of modules, configurations, and integrations your program entails.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <p>Cloud deployment is faster than on-prem because it can leverage services. For example, a relational database service can help rapidly deploy, manage and maintain your database.</p>                                                                                                                                                                       | <p>Cloud deployment is faster than on-prem because it can leverage services. For example, a relational database service can help rapidly deploy, manage and maintain your database</p>                                                                                                                                                                                                                                                                                                              |
| Security and compliance     | <p>If you're required by regulations or company policy to host data within your country or region, this may be the best choice for you.</p> <p>An airgapped architecture allows you to connect securely to the internet for updates.</p> <p>Your IT and security team will be responsible for access management, including authorization and authentication.</p> <p>You'll also need to manage network security, threat detection, and incident response.</p> <p>If a Zero Day vulnerability is found within OpenShift, you will need to address it immediately.</p>                                                                          | <p>Your IT and security teams will be responsible for security, including authorization and authentication, network security, threat detection, and incident response.</p> <p>You'll also be responsible for security for the MAS application itself. So, if a Zero Day vulnerability is found within OpenShift, you will need to address it immediately.</p> | <p>If you're required by regulations or company policy to host data within your country or region, a cloud service provider may be able to offer multiple locations to meet your needs.</p> <p>A cloud service provider should also be able to segregate your data so that you aren't sharing systems or resources with other organizations.</p> <p>They should also manage network security, threat detection, and incident response and connect with your in-house team in case of emergency.</p> |
| Scalability                 | <p>As you add new enterprise assets, MAS users, or MAS modules, you'll need to plan changes to your architecture to ensure your infrastructure can handle the load and performance won't deteriorate.</p> <p>You may need to purchase additional resources, even if your usage varies and you don't need to leverage them all the time.</p>                                                                                                                                                                                                                                                                                                   | <p>As you add new users and adopt new MAS modules, your private hosting environment should scale, increasing computing capacity on demand.</p>                                                                                                                                                                                                                | <p>With a public cloud provider, High Availability and georedundancy ensure you never have to go without access to MAS.</p> <p>Keep in mind, you'll pay more as you use more CSP resources. With a consumption-based licensing model, your costs may be variable and hard to predict.</p>                                                                                                                                                                                                           |

## Self-managed vs. managed services

Once that first decision is made, you can decide whether to manage the environment and application using your in-house team, or partner with a vendor offering management support. You can also partner with a third party for managed hosting, which includes both cloud hosting and ongoing maintenance and support services for MAS.

| Decision Factor                                    | Self-Managed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Managed Services                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>RedHat and MAS expertise</b>                    | <p>Deploying in your own data center or private cloud means you're responsible for provisioning servers, maintaining networks, and managing the application.</p> <p>MAS requires an IT team with expertise in RedHat to install, deploy, configure the environment, and customize your deployment and upgrade.</p> <p>This requires knowledge of containerization (how IBM now packages up the software), Kubernetes (the "engine" that OpenShift is built on), and Red Hat OpenShift Container Platform (OCP).</p> <p>If you've chosen cloud, your team will need to understand cloud operations and security and provision access appropriately. You may have that expertise on hand, or you may need to hire additional staff.</p> <p>You'll also need that team to be available for ongoing maintenance, updates, and support.</p> <p>Keep in mind, RedHat certified professionals command high salaries. Hiring them can take some time. Retaining them can also be difficult as they are in high demand.</p> | <p>Your managed service provider should have deep expertise not only in RedHat OpenShift, but also with MAS itself.</p> <p>While there are numerous Linux experts that have deployed and managed RedHat applications, understanding MAS and the legacy Maximo application is necessary for proper planning, thorough testing, and collaboration throughout the project.</p>                                                                     |
| <b>Ongoing MAS maintenance and updates</b>         | <p>Your IT team will be responsible for application management, hardware updates, server management, database administration, patch management, testing, validation, storage, and more.</p> <p>Maximo is a 24x7 application in many organizations or at least a 16x5. Your IT team will need to provide support to keep the system running as required.</p> <p>You will likely need to schedule downtime for MAS to execute updates.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>A managed hosting provider should handle all software and hardware updates, database administration, patch management, testing, validation, and more.</p> <p>They should be able to offer continuous monitoring and deployment without taking MAS offline.</p> <p>Your managed services provider should be able to work with you to anticipate your resource needs as your use of MAS evolves.</p>                                           |
| <b>Maintaining configurations and integrations</b> | <p>Your team will need to consider integrations in your design and rebuild any custom configurations you had in Maximo to fit the new MAS architecture.</p> <p>You won't want to lose any data or break any processes when you move from Maximo to MAS.</p> <p>Keep in mind: As IBM continues to update MAS and other software vendors update your connected systems, those connection points can break.</p> <p>Any configurations and integrations will be your responsibility to maintain.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <p>A managed hosting provider should build and maintain any necessary configurations and integrations with on-premise or cloud systems in your connected tech stack.</p> <p>They can assess your current configurations and determine the best way to update them, so they are sustainable.</p> <p>They should maintain your configurations, workflows, and integrations, even as IBM releases updates and other vendors update their APIs.</p> |
| <b>Support/ Service Level Agreements</b>           | <p>You should create and enforce internal Service Level Agreements (SLAs) with your IT team to ensure availability of MAS.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>A managed hosting provider ensures availability of the environment as well as the MAS application.</p> <p>They should have an SLA with availability commitments, as well as clear guidelines for roles and responsibilities (or RACI) between the managed service provider and the customer, a clear scope, and information on deployment.</p>                                                                                               |

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## Questions to ask any managed hosting provider you consider

- How many certified RedHat experts do you have?
- What type of experience do you have with upgrading legacy Maximo to MAS?
- How long will it take for deployment and what can you do to speed up the process?
- How do you manage updates without downtime?
- What type of SLA do you provide?
- What type of security controls do you provide to protect our data and application?
- How does your hosting environment meet compliance requirements, such as ISO 270001?
- How will you maintain and support our configurations and integrations?
- How will you help us scale as we grow, add more users, and adopt more MAS modules?



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## Learn more about Managed Hosting for MAS from Cohesive

**Cohesive offers end-to-end, turnkey MAS hosting and implementation solutions hosted on Amazon Web Services.**

**Our flexible hosting model is scalable to match your usage in a tier-based system using regional data centers. We offer a dedicated public cloud account, which is isolated and never co-located with other users' data or access.**

Learn more about the Cohesive IBM Maximo Hosting Solution at [www.cohesivesolutions.com](http://www.cohesivesolutions.com)