



# MAS Upgrade Considerations

---

Scott Peluso

VP, Cloud Services & Support

Interloc Solutions

# Starting Your Journey to MAS

- The future of Maximo 7
- Preparation is the key to a successful upgrade
- New functionality & capabilities
- The Licensing model has changed significantly
- The technology and necessary skills have changed dramatically
- Where to turn for assistance

# MAS Capabilities

## Why Upgrade Now?

1. Maximo Manage (Core EAM) Improvements – Reduce Costs
  - AI-infused technologies
  - User interface, dashboards, scheduling
  - Mobile
  - Reliability Strategies
2. Health scoring for critical assets
  - Foundation for condition-based maintenance
  - Reduce asset failures
3. Asset Performance Management & Computer Vision Inspections
  - Optimize asset lifecycle & maintenance strategies
  - Reduce inspection costs, while improving the frequency & accuracy
4. Access to partner technologies ecosystem that drives time to value.
5. New MAS SaaS offerings provide entry level pricing for core maintenance that scales with your business.



# MAS Applications & Technologies

## Maximo Application Suite

Best-of-class capabilities to provide complete view of your assets addressing the needs of key personas in your organization.

- Technicians
- Technician Supervisor
- Asset Maintenance Manager
- Plant Manager
- Fleet Manager
- Operations Manager
- Reliability Engineer
- Quality Manager
- Planners / Schedulers
- Dispatchers
- Purchasing Managers

<p>Manage Intelligent Asset Management</p>	<p>Monitor Monitor and Detect Anomalies</p>	<p>Health 360 View of Assets</p>
<p>Predict Predictive Failures</p>	<p>Visual Inspection AI-Powered Insights</p>	<p>IT ITSM and ITAM combined</p>
<p>Mobile Technician Work Execution</p>	<p>Assist Prescriptive Assistance</p>	<p>Reliability Strategies Dedicated Reliability Centered Maintenance</p>
<p><b>Industry Solutions</b>   Accelerate time to value</p>		
<p><b>Maximo Accelerators Catalog</b>   Complement, extend or enhance MAS</p>		
<p>IBM Cloud Pak for Data   Watson Studio   Watson ML   Watson Discovery   Watson Assistant   App Connect   Cognos Analytics</p>		



# Why Upgrade Now?

Maximo Version	Upgradable to MAS	Date of Last iFix for Release	EOM- End of Market Date*	EOS – End of Support Date**
Maximo 7.6.1	Not available	October 17, 2021	April 30, 2024	September 30, 2025
Maximo 7.6.1.1	Not available	December 11, 2022		
Maximo 7.6.1.2	Yes	December 2023 – TBD		
Maximo 7.6.1.3	Yes	July 2025 - TBD		

*\*End of Market means no longer able to purchase licensing of these products*

*\*\*End of Support means product fixes and support no longer available from IBM*

**IBM Extended Support:** Enables clients continued access to IBM Support for "how to" questions, usage issues, known defects published in IBM Fix Central, and new critical sev1 defects (no security fixes) after IBM standard support ends for 7.6.1.x.

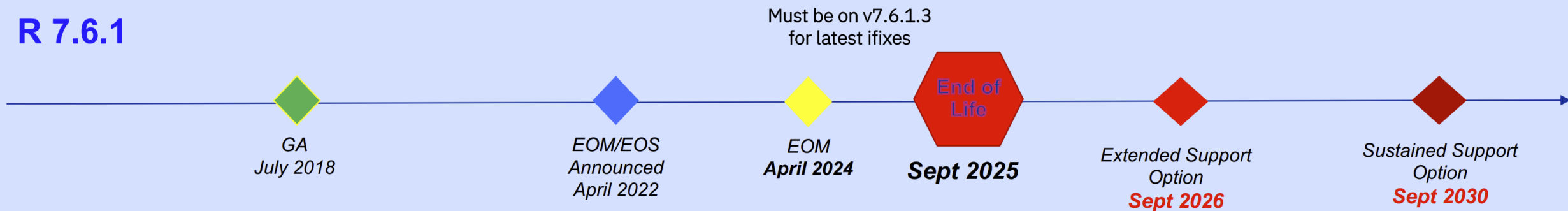
**IBM Sustained Support:** Enables clients to continue to get support for "how to" questions, usage issues, and known defects published in IBM Fix Central after IBM standard/extended support ends for 7.6.1.x. IBM Sustained Support does not include support for new defects or new security fixes.

# Maximo 7.6.1.x Product Life Cycle



	DESCRIPTION	DATE
Announce End of Market (EOM & EOS)	Announcement Letter published <a href="#">IBM Announcement Letter #922-024</a>	April 12, 2022
End of Marketing (EOM)	EOM and New Support Parts are available for purchase	April 19, 2024
End of Support (EOS)	Update Support Plans and Lifecycle page	Sept 30, 2025

## R 7.6.1



**\*IBM Extended Support:** Enables clients continued access to IBM Support for "how to" questions, usage issues, known defects published in IBM Fix Central, and new critical sev1 defects (no proactive security fixes) after IBM standard support ends for 7.6.1.x.

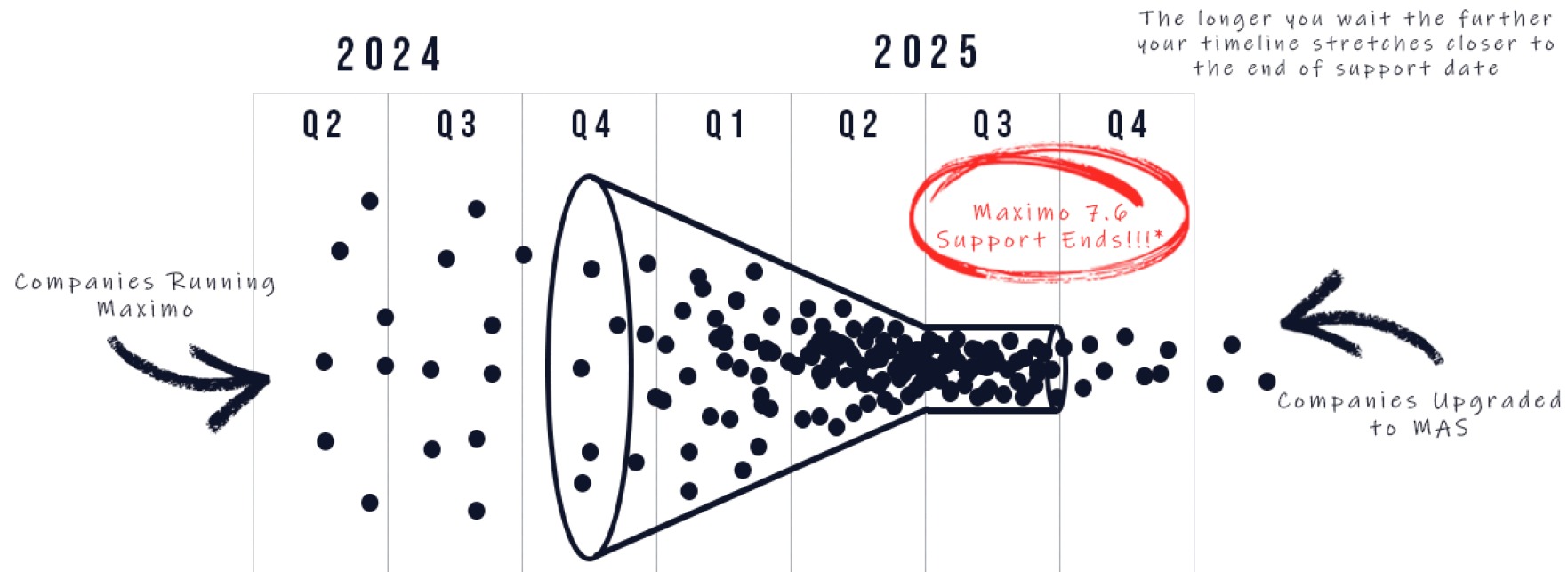
**\*IBM Sustained Support:** Enables clients to continue to get support for "how to" questions, usage issues, and known defects published in IBM Fix Central after IBM standard/extended support ends for 7.6.1.x. IBM Sustained Support does not include support for new defects or new security fixes.

# Maximo 7.6.1.x product Life Cycle

# Time is Running Short!

- **18 months** left of Standard Support
- Approx. **2500** NA Maximo Clients
- Limited Red Hat Open Shift Container Platform Skill Set/Professionals
- Only a small number of consulting firms have the needed skills and experience- If you're not upgrading yourself, find an IBM Business Partner NOW!

## ARE YOU READY TO UPGRADE TO MAS?



TIME LEFT TO UPGRADE TO MAS BEFORE MAXIMO 7.6.1.X EOS





# Upgrade Readiness

- Perform a MAS Upgrade Readiness Assessment
- What version are you currently on?
  - Cannot upgrade from MX 7.6.0.x , 7.6.1, or 7.6.1.1. Upgrade from either 7.6.1.2 or 7.6.1.3
  - Are you running FedRAMP Authorized version of 7.6??
- Which MAS apps will you implement?
  - Manage? Health? Monitor? Predict?
  - Do you need to replace legacy work centers?
  - Consider your mobility strategy in light of Maximo Mobile and other 3<sup>rd</sup> party mobility solutions
- What license types will you need?
  - Limited? Base? Premium?
  - Concurrent versus Authorized/reserved
- How many AppPoints are required?
  - Review existing user permissions and access
  - Utilize AppPoint tooling in legacy Maximo to estimate MAS AppPoint requirements



# Upgrade Readiness

- Where to deploy?
  - On-prem?
    - Do you have necessary Red Hat skills?
    - Review hardware sizing and adjust for increased resource requirements
  - Time to move to the Cloud?
    - Which Cloud?
    - Security considerations if moving to the Cloud
    - Backup, availability, Disaster Recovery offerings
- Review Integrations
  - MAS uses API keys for web-based interactions-may require changes in integration(s) authentication and construction methods
  - JMS queues replaced by Kafka
- Customizations
  - Review and determine if need to be modified or replaced with new function or automation scripts



# Upgrade Readiness

- Is this the time to review your data and archive?
- Do you have all the right stakeholders in the room?
- Have you verified all your 3<sup>rd</sup> party solutions are MAS compatible?
- Have you scoped out the upgrade Level of Effort (LoE)?
- Do you have a plan for user acceptance and training?
- Testing scope & effort?
- Do you need a sandbox environment for users, others?
- Do. You have a Post Go Live Support plan?

Have a clear, defined upgrade project plan!

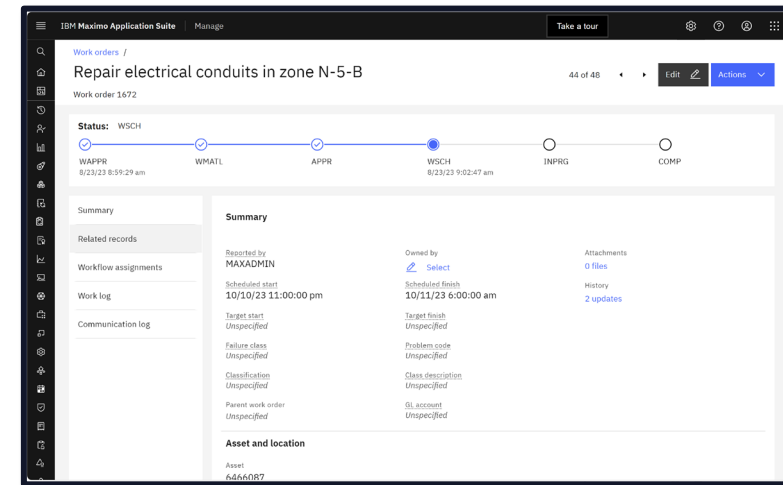
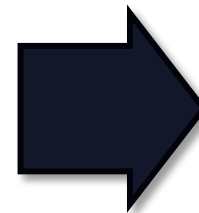
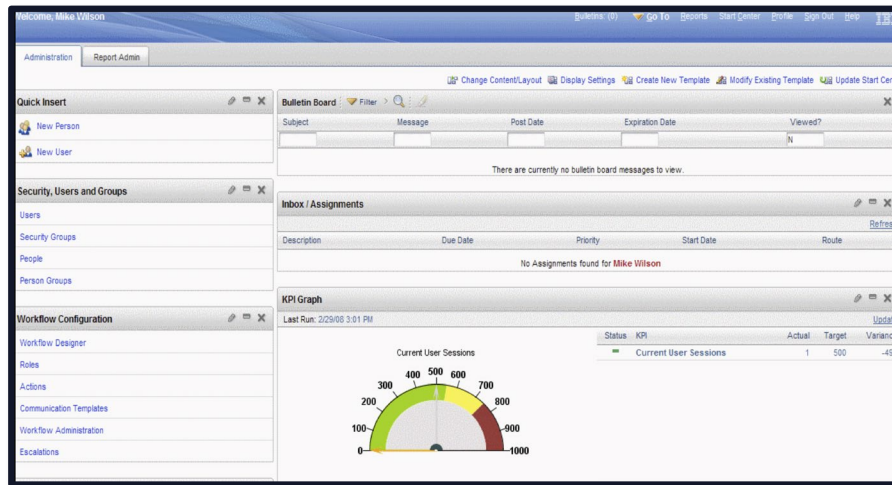


# Technology Shifts

## Legacy Maximo

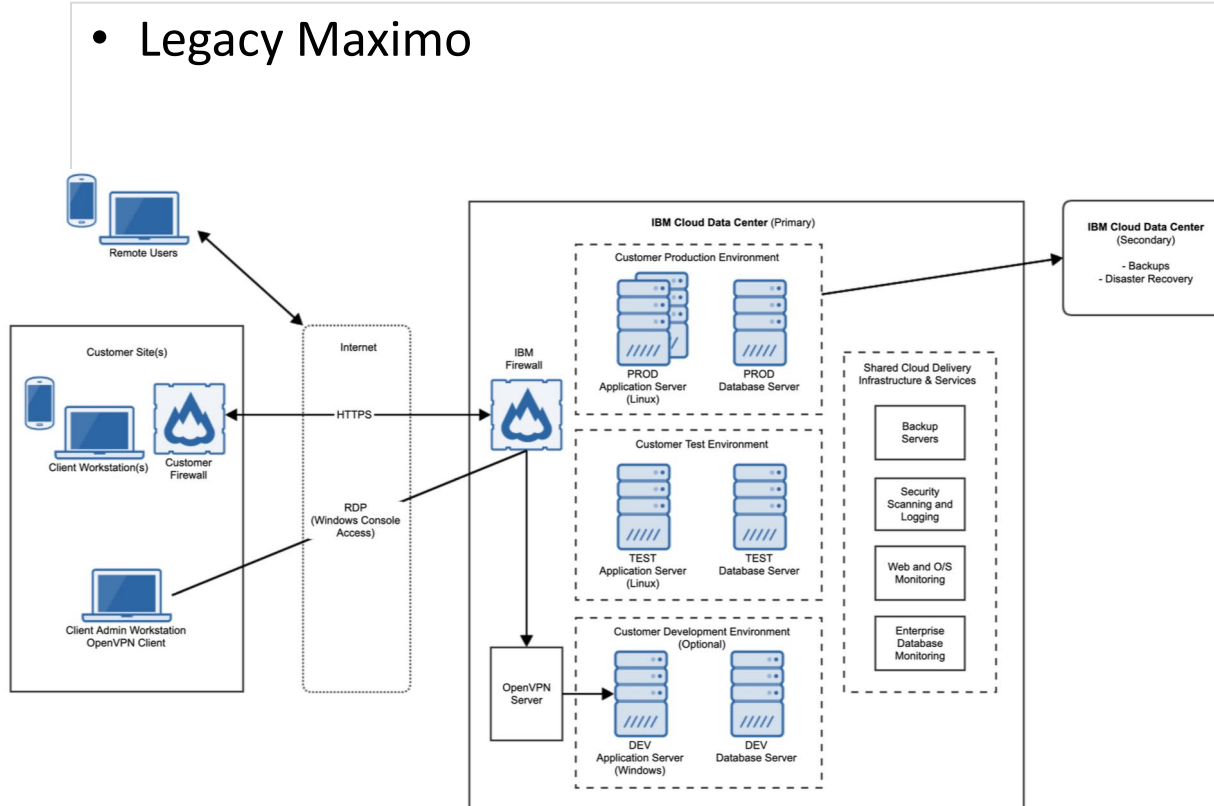


## MAS

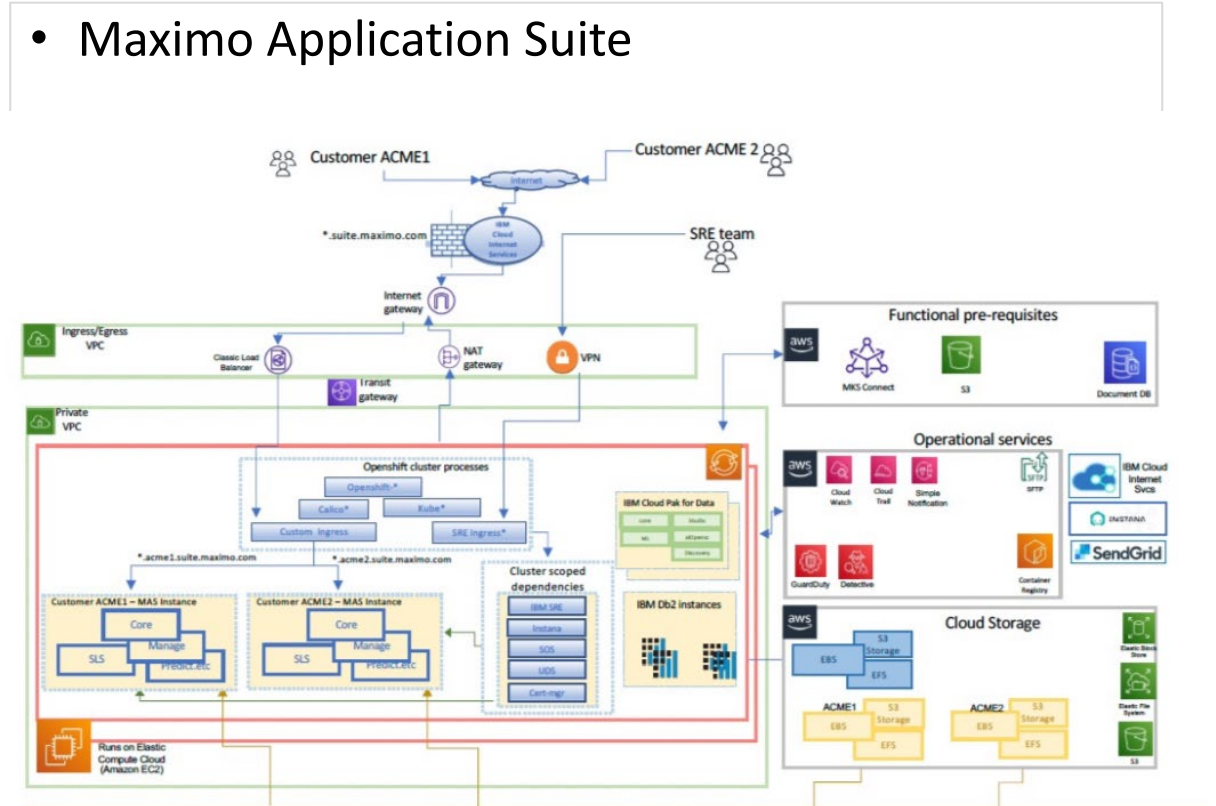


# MAS Infrastructure

- Legacy Maximo



- Maximo Application Suite



# MAS Licensing Model

The Licensing Model for MAS has completely changed

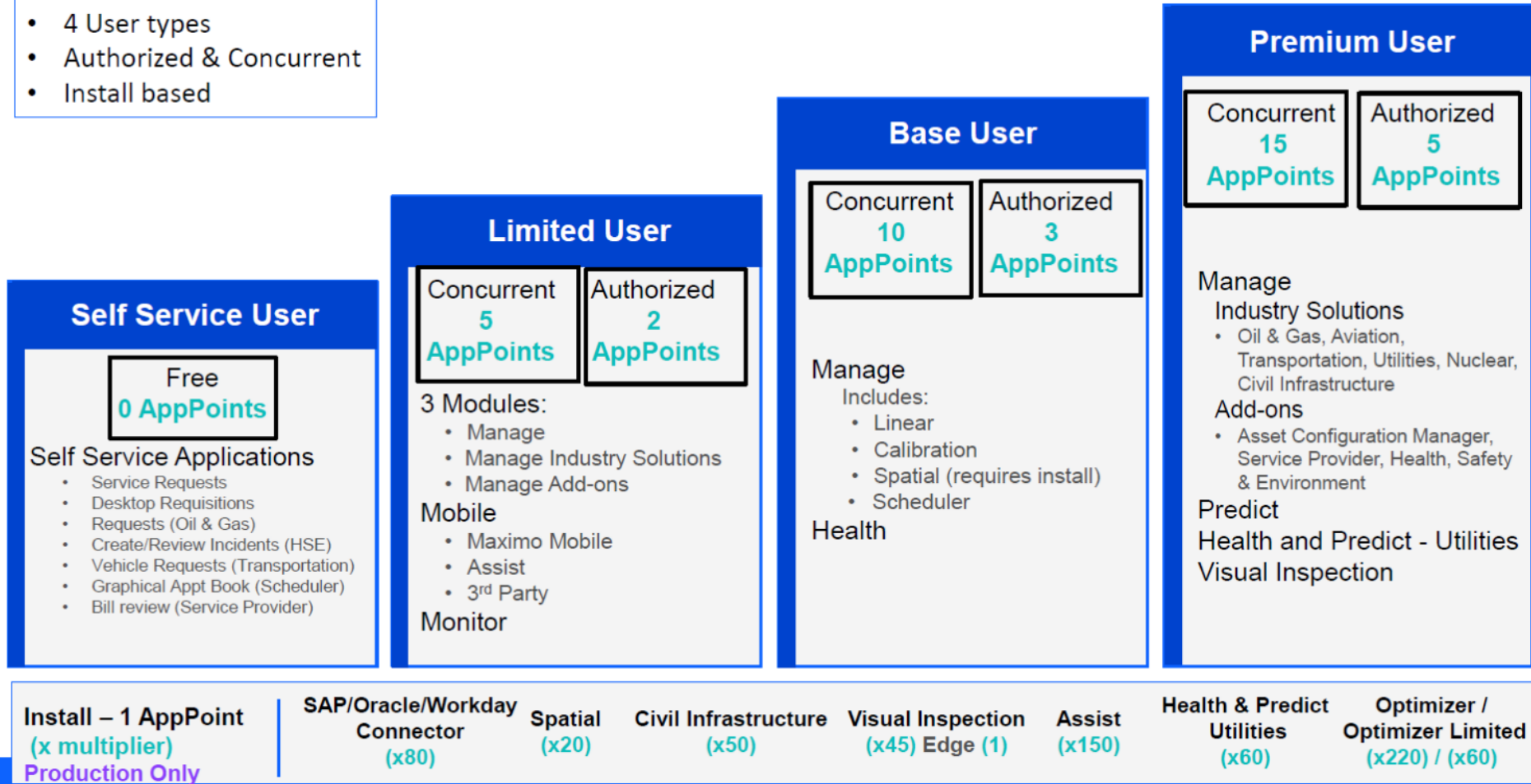
- Your existing licenses convert to a pool of AppPoints
  - AppPoints can be Authorized or Concurrent User Licenses
  - Real-Time License Usage is now tracked and enforced
- What do you need? How do you tell?
  - Run MAS License Utilities
  - Authorized vs. Concurrent Users
  - All new Functionality requires AppPoints



*IBM or your license provider can give you a quote for your AppPoint conversion*

# MAS Application License Model

- 4 User types
- Authorized & Concurrent
- Install based



# FedRAMP

- MAS 8.11 is now FISMA compliant
  - Allows for 3<sup>rd</sup> party hosting path forward
- MAS SaaS FedRAMP - 1H2025
  - On AWS Gov Cloud
  - Support for MAS Manage only on initial launch
- Maximo SaaS FedRAMP
  - End of Market (EOM) planned announce in April 2024, effective July 2024
  - End of Support (EOS) moved to 2027, giving time for existing customers to move to the future MAS FedRAMP offering
  - IBM Development to support 7.6.x for Maximo SaaS FedRAMP through 2027





# Upgrade Tooling

- MAS Infrastructure Sizing
- Customization Tool
- Integrity Checker
- AppPoint calculator utility
- AppPoint 'Magic' scripts

**IBM® Maximo® Application Suite Infrastructure Calculator - v8\_10**  
 \*\*\*For GUIDANCE Purpose Only\*\*\* - Enter inputs in Yellow Cells Only

<b>Enforce 3 Master + 2 Worker Nodes?</b>	Y
<b>Installing into Existing OpenShift?</b>	N
<b>Install Manage w/Existing Database?</b>	Y
<b>Install Monitor w/Existing Database?</b>	N
<b>Isolate DB2 Databases on Single Server?</b>	N
<b>Isolate Visual Inspection GPU Nodes?</b>	N
<b>Number of Development Environments</b>	0
<b>Enforce Dev DBStorage = Prod DBStorage?</b>	N

<sup>1</sup>Users: Users are defined as **\*concurrent\*** users when sizing the infrastructure requirements

<sup>2</sup>When calculating with **I/O** points, the total is equal to the product of the following three dimensions:  
 1) Number of devices  
 2) Number of data points sent in each message  
 3) Number of messages sent per minute per device

<sup>3</sup>To calculate Predict Data Points, Use the "Predict Data Points" tab

<sup>4</sup>Existing JVMs Deployed with Maximo EAM v7.6.1.x  
 If both JVMs and Users are defined, the calculation will use the larger of the two outcomes.

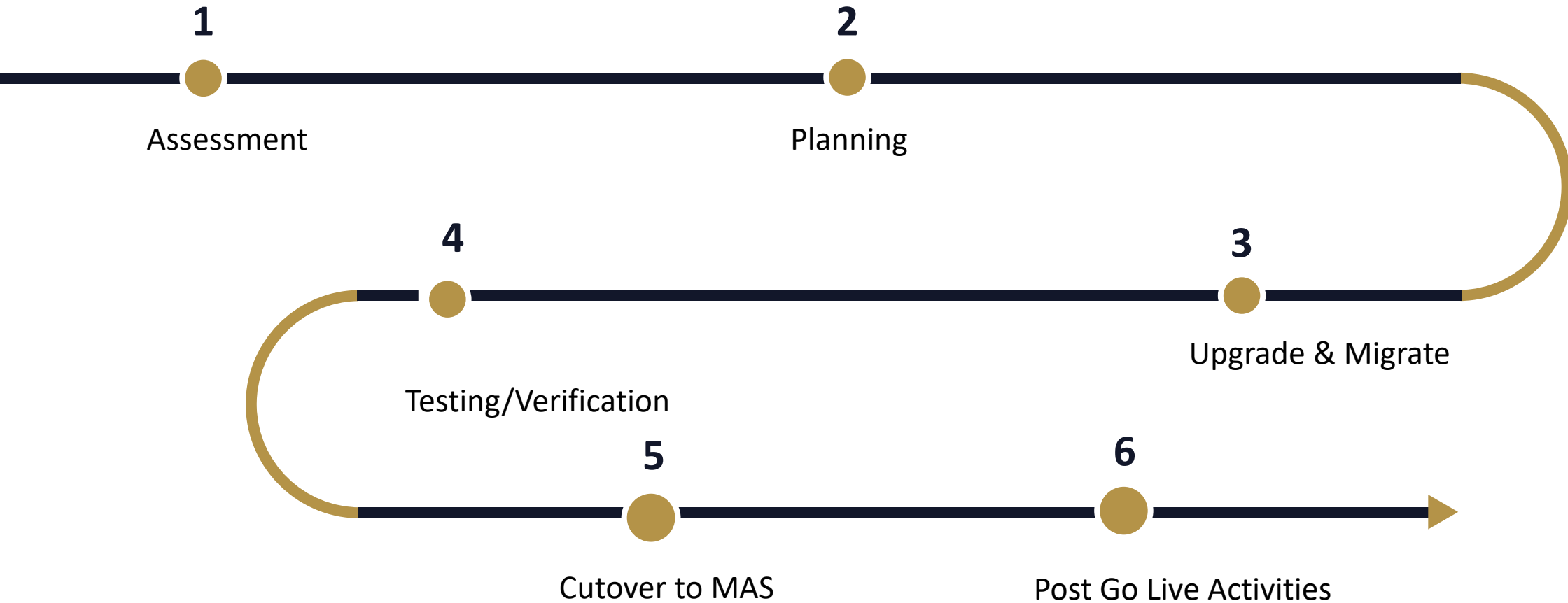
Calculations	Use (Y/N)	Primary		Secondary (Optional)	
		Size Metric	Quantity	Size Metric	Quantity
Applications	Manage	Current	10	Users <sup>1</sup>	-
	Health	UI JVMs <sup>4</sup>	-	Users <sup>1</sup>	-
	Monitor	I/O points <sup>2</sup>	-	Users <sup>1</sup>	-
	Predict	Data Points <sup>3</sup>	65,700		
	H & P - Utilities	Asset Classes	-		
	Visual Inspection	Users <sup>1</sup>	-		
	Assist	Users <sup>1</sup>	-		
	Optimizer	Users <sup>1</sup>	-		

Scroll for Results ----->

Additional Manage Options			
Deploy	Manage Specific JVM Requirements		
Cognos?	MIF	Reporting	Crontask
N	1	1	2

Production Cluster TOTALS	vCPU	Memory (GiB)	File Storage (GiB)	DB2 Storage (GiB)	GPU
Production Cluster TOTALS	29	144.5	290	-	-
OpenShift Master Node Requirements	12	48	360	-	-
<b>Application Sizing</b>					
Application Sizing	vCPU	Memory (GiB)	File Storage (GiB)	DB2 Storage (GiB)	GPUs
Manage - Calculated	15.5	91	-	-	-
Health - Not Selected	-	-	-	-	-
Monitor - Not Selected	-	-	-	-	-
Predict - Not Selected	-	-	-	-	-
H & P - Utilities - Not Selected	-	-	-	-	-
Visual Inspection - Not Selected	-	-	-	-	-
Assist - Not Selected	-	-	-	-	-
Optimizer - Not Selected	-	-	-	-	-
<b>Total Application Quantities:</b>	<b>15.5</b>	<b>91</b>	-	-	-
<b>Additional Application Sizing</b>					
Additional Application Sizing	vCPU	Memory (GiB)	File Storage (GiB)	DB2 Storage (GiB)	
Manage/Health DB2 - Medium	-	-	-	-	-
Monitor DB2 - Not Selected	-	-	-	-	-
Manage - (MIF, Rprt, Crontask) + Cognos	6	36	-	-	-
Watson Studio - Not Selected	-	-	-	-	-
Watson ML - Not Selected	-	-	-	-	-
Watson Discovery - Not Selected	-	-	-	-	-
Kafka - Not Selected	-	-	-	-	-
CouchDB - Not Selected	-	-	-	-	-
<b>Total Additional Application Quantities:</b>	<b>6</b>	<b>36</b>	-	-	-
<b>Cluster Wide Allocations</b>					
Cluster Wide Allocations	vCPU	Memory (GiB)	File Storage (GiB)	DB2 Storage (GiB)	
MongoDB - Medium	2	-	30	-	-
MAS Core	2	2	20	-	-
OpenShift Worker Nodes	3.5	15.5	240	-	-
CP4D Base - Not Required	-	-	-	-	-
<b>Total Cluster Wide Quantities:</b>	<b>7.5</b>	<b>17.5</b>	<b>290</b>	-	-

# MAS Upgrade Overview



# Useful Links

- [Product Lifecycle for Maximo 7.6.1.x](#)
- [End of Interim Fixes Maximo 7.6.1.2](#)
- [End of Support for Maximo 7.6.1.x](#)
- [IBM Subscription & Support Overview](#)
- [Upgrading from Maximo Asset Management to Maximo Application Suite](#)
- [IBM Community for Asset & Facilities Management](#)
- [Maximo Application Suite product Documentation](#)
- [MAS Installation, Upgrade, and Deployment](#)
- [MAS and Red Hat OpenShift](#)
- [New IBM Support Offerings](#)
- [IBM Licensing Terms](#)



**Thank You**



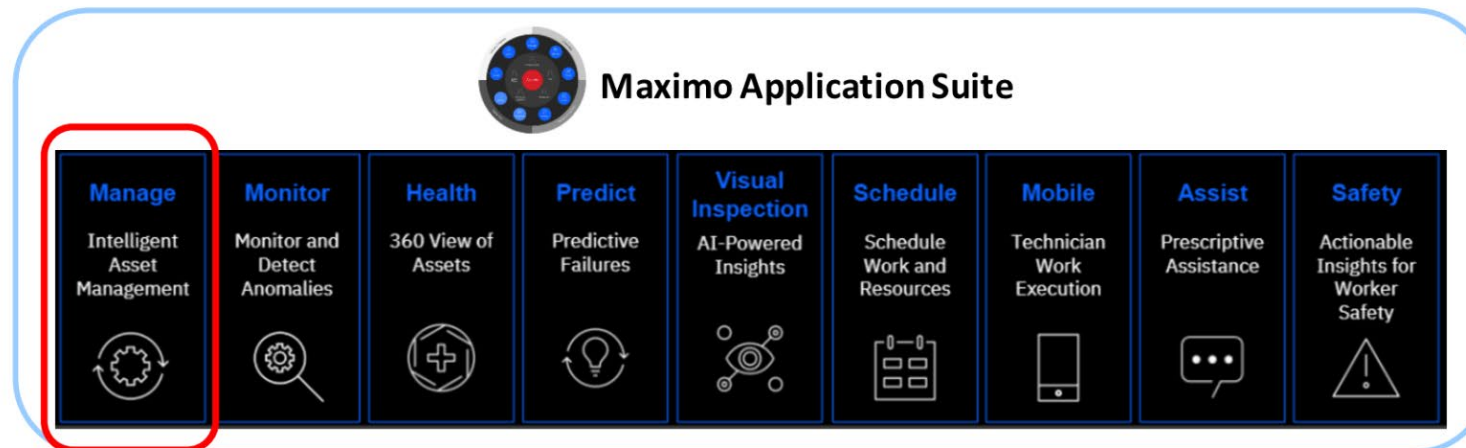
Backup

# Key RedHat Concepts & Terms

- Node
  - A node is a bare-metal or virtual server in a Kubernetes cluster
    - Worker nodes host the application containers (grouped in Pods)
    - Control plane node runs the services required to manage the Kubernetes cluster
- Single Node OpenShift (SNO)
  - A single-node cluster with no high availability and limited resources/user size
  - For MAS, SNO is only for Maximo Manage application
- Pod
  - A pod is a collection of one or more application containers with shared storage and networking resources
- Deployment
  - A collection of pods that make up individual application workloads for user consumption
- Cluster
  - A cluster is a collection of nodes/hosts associated with a specific deployment
  - At minimum, clusters have 2 worker nodes and 3 control plane nodes
- Project
  - Delineation of content within OpenShift Container Platform

# RedHat Architecture

## Application



## Cloud Paks



IBM Watson Machine Learning



IBM Cloud Pak for Data



IBM Watson Studio

## Foundation



Red Hat Enterprise Linux



RED HAT ANSIBLE



RED HAT OPENSIFT  
Container Platform



kubernetes



docker

## Infrastructure



IBM Cloud



aws



Google Cloud Platform



Microsoft Azure



Private Cloud



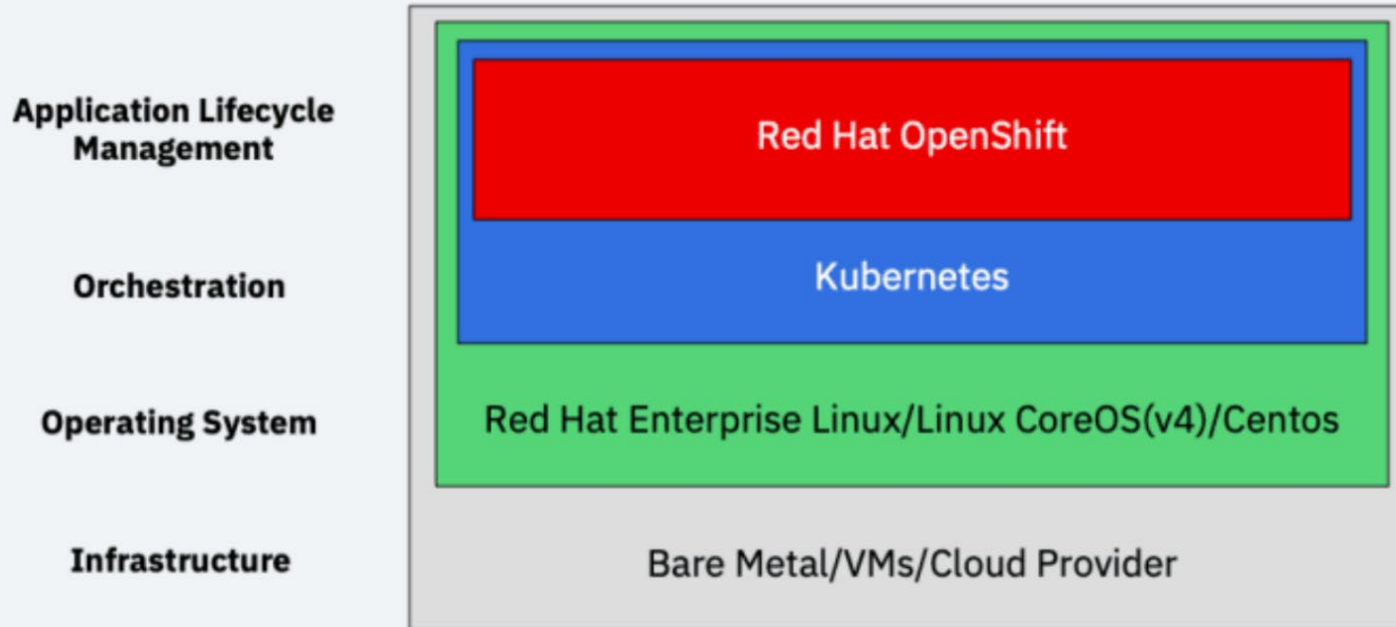
Hybrid Cloud



On-Premise

# RedHat Architecture

## OpenShift Architecture Diagram



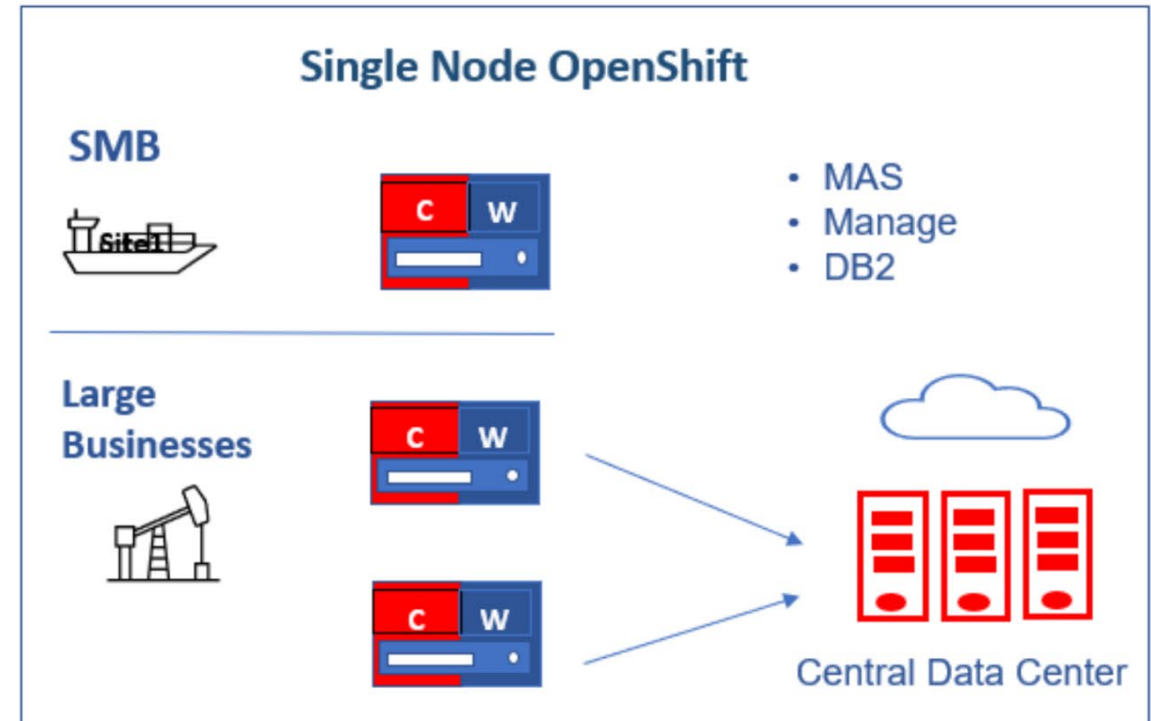


# Single Node OpenShift (SNO)

Single Node OpenShift (SNO) is a configuration of a standard OpenShift cluster that consists of a single control plane node that is configured to run workloads on it.

This configuration offers both control and worker node functionality, allowing users to deploy a smaller OpenShift footprint and have minimal to no dependence on a centralized management cluster.

No high-availability and only supports **Manage** at the moment.

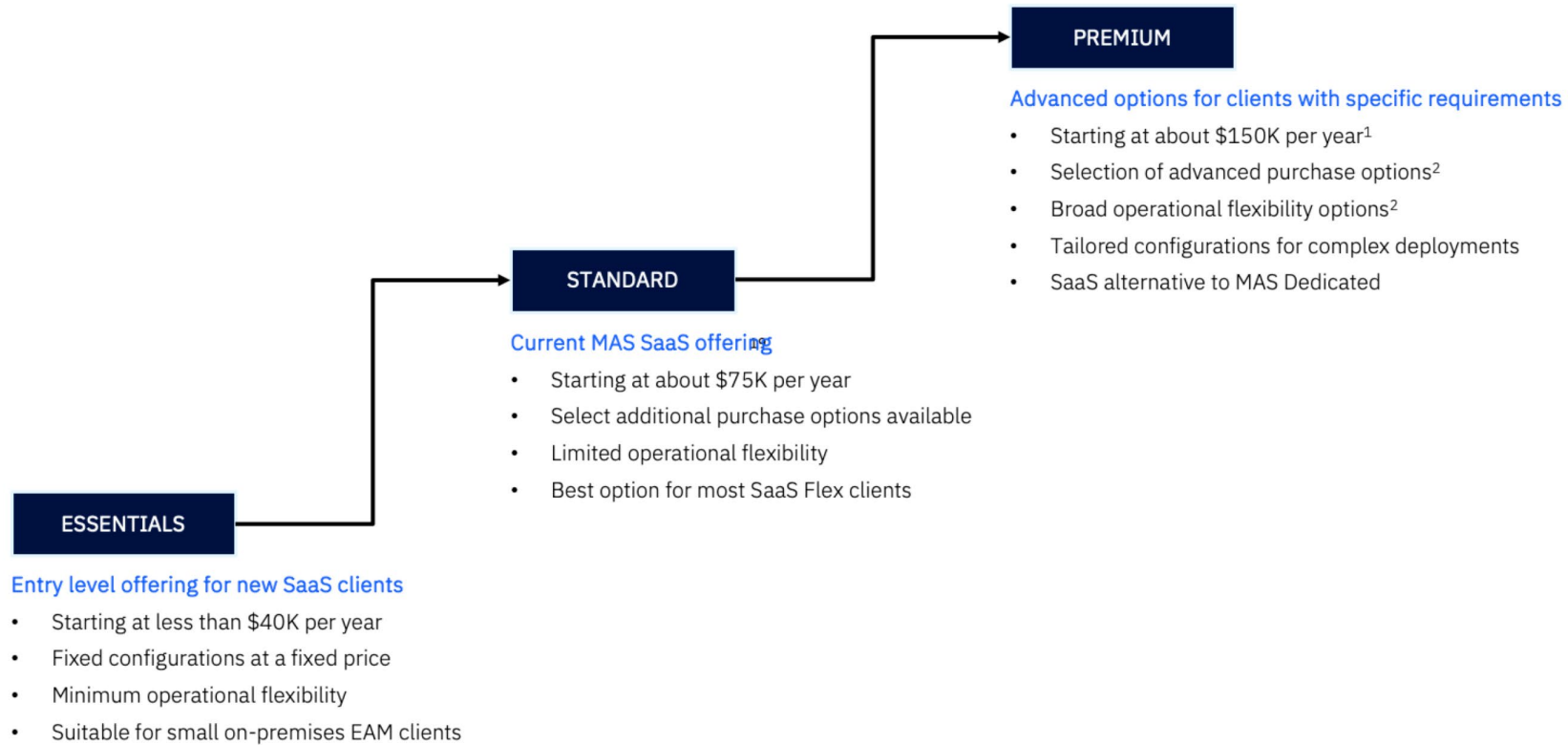


# IBM MAS Deployment Options

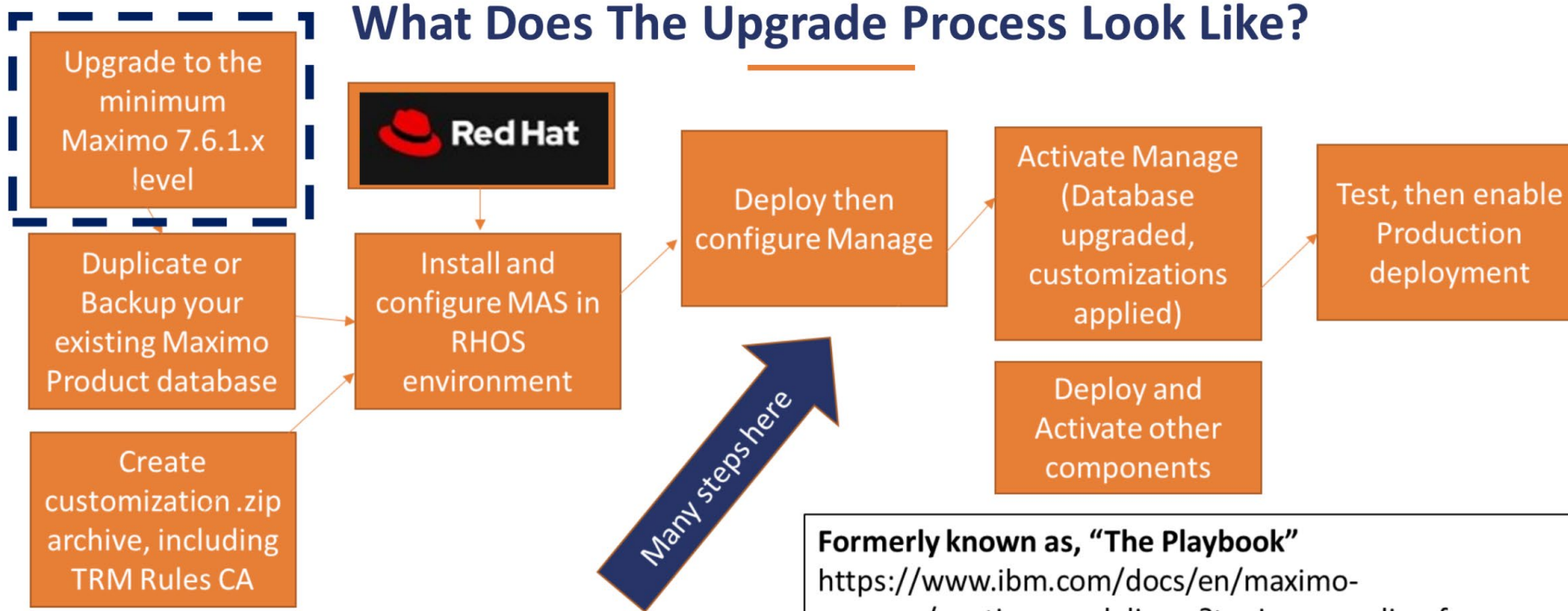
Deployment	Availability	Procure	Provision & Operate	Client Benefits
<b>On Premise</b> Customer Managed	<b>Now</b>	<b>Client</b> purchases MAS from IBM <b>Client</b> provides infrastructure	<b>Client</b> provisions, manages, and operates full stack	<ul style="list-style-type: none"> <li>• Maximum operational flexibility</li> </ul>
<b>Hyperscalers</b> Customer Managed	<b>Now</b> AWS 1Q22 Azure 2Q22	<b>BYOL</b> <b>Client</b> purchases software from IBM and infrastructure from Hyperscalers	<b>Client</b> runs IBM-provided automation scripts to deploy MAS on Hyperscalers' cloud  <b>Client</b> manages and operates both software and infrastructure	<ul style="list-style-type: none"> <li>• Simplifies procurement and deployment</li> <li>• Allows client to select their Hyperscalers</li> <li>• Flexibility for clients to manage and operate their environment</li> </ul>
	<b>Now</b> AWS 3Q22 Azure 4Q22	<b>Paid (Marketplace listing)</b> <b>Client</b> purchases software and infrastructure from Hyperscalers		
<b>SaaS</b> IBM Managed	<b>Now</b> AWS 3Q22	<b>Client</b> purchase single part (includes software, infrastructure, and operations) from <u>either</u> IBM or AWS Marketplace	IBM provisions, manages, and operates Client's MAS environment on AWS Cloud using IBM's AWS cloud account	<ul style="list-style-type: none"> <li>• Reduced time-to-value</li> <li>• Reduced operational costs</li> <li>• Allows clients to focus on business priorities</li> </ul>

# IBM MAS SaaS Options

## New MAS SaaS Tiers



# Upgrade Process

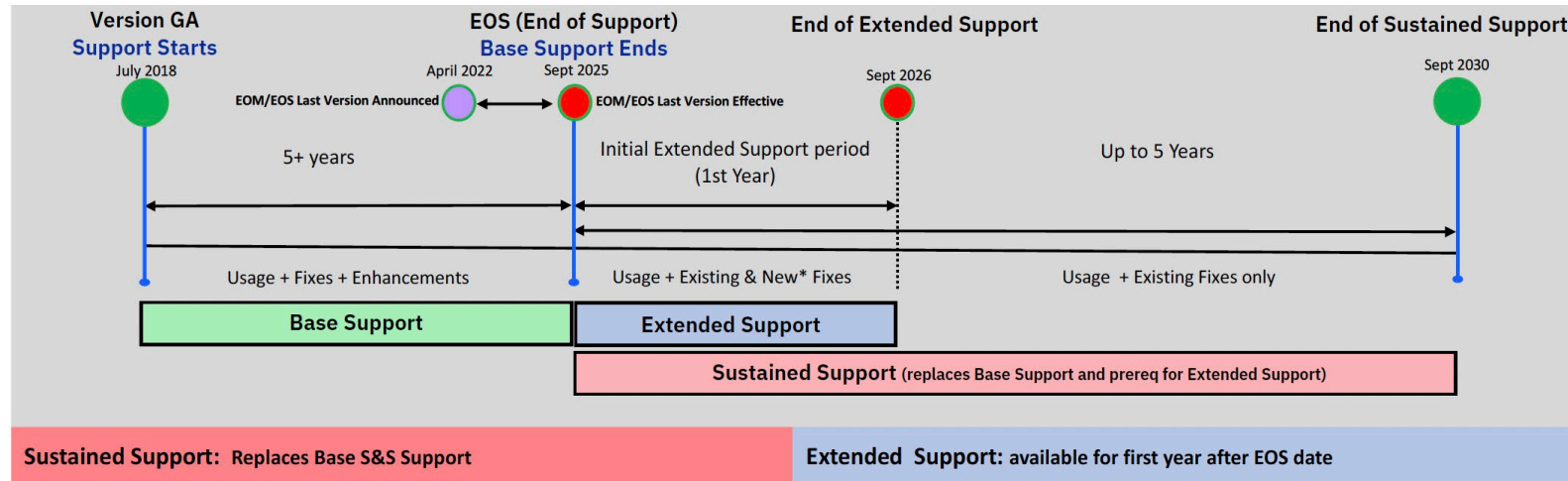


<https://www.ibm.com/docs/en/mas-cd/continuous-delivery?topic=planning-upgrade-checklist>

**Formerly known as, "The Playbook"**  
<https://www.ibm.com/docs/en/maximo-manage/continuous-delivery?topic=upgrading-from-maximo-enterprise-asset-management-maximo-manage>

<https://www.ibm.com/docs/en/mas-cd/continuous-delivery?topic=upgrading-from-maximo-asset-management-maximo-manage>

# Maximo 7 Parts & Licensing Agreements



- Available up to 5 years after EOS date – ends Sept 30, 2030.
- Available for the last supported version and fix pack.
  - EAM 7613 and latest IS/Add-on releases/fix pack
- Support access for usage and existing fixes only, no security fixes.
- New PassPort Advantage part purchase required

- Extended Support is be sold with Sustained Support.
- Available for 1 year after EOS date – ends Sept 30, 2026.
- Available for the last supported version and fix pack.
  - EAM 7613 and latest IS/Add-on releases/fix pack
- Support access for usage, existing and new critical Sev1 bug fixes, no proactive security fixes.
- New PassPort Advantage part purchase required

# Maximo 7 Extended Support Year 1

(9/30/25-9/30/26)



Support for routine Usage and How-to questions



Provide existing code patches and fixes



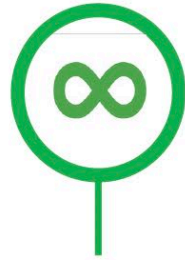
Critical/Severity 1 defects in the first year (cumulative fix)



No new patches will be provided



Access to documentation, technotes & other online product material



Unlimited number of technical support incidents



No new proactive security fixes will be provided



No new features or enhancements



Basic Troubleshooting



Standard SLO's apply (example 24x7 severity 1)



No new development analysis of new defects (excluding Sev1 in 1<sup>st</sup> year)



No support for Supporting Programs and 3<sup>rd</sup> part components

# Maximo 7 Sustained Support 5 Years

*(Through 9/30/30)*



Support for routine Usage  
and How-to questions



Provide existing code  
patches and fixes



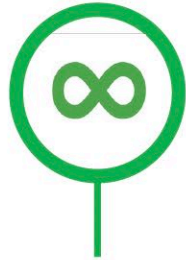
No Critical/Severity 1 defects



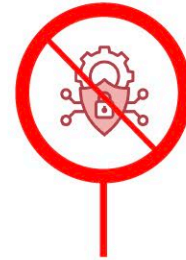
No new patches will be  
provided



Access to documentation,  
technotes & other online  
product material



Unlimited number of technical  
support incidents



No new proactive security  
fixes will be provided



No new features or  
enhancements



Basic Troubleshooting



Standard SLO's apply  
(example 24x7 severity 1)



No new development analysis  
of new defects



No support for Supporting  
Programs and 3<sup>rd</sup> part  
components

# 761x Parts and Licensing - Comparison Chart



## Customers on EAM 761x Parts and Licensing - Comparison Chart

	NEW Extended Support (1st year – Sept 30, 2025 to Sept 30, 2026)	NEW Sustained Support (5 years up to Sept 30, 2030)
Support for routine Usage and How-to questions	✓	✓
Basic Troubleshooting	✓	✓
Access to documentation, technotes & other online product material	✓	✓
Standard SLO's apply (i.e., 24/7 severity 1)	✓	✓
Unlimited number of technical support incidents	✓	✓
Provide existing code patches and fixes	✓	✓
Critical Sev 1 defect fixes in first year (delivered via cumulative ifix)	✓	X
New patches or ifixes	X	X
Proactive security fixes	X	X
New features or enhancements	X	X
New development analysis of new defects (excluding Sev1 in 1 <sup>st</sup> year Extended)	X	X
New support for Supporting Programs and 3 <sup>rd</sup> part components	X	X