

MaxOneOpen: Performance Profiles & Load Behavior

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Author	MaxOne Runtime Unit (GPT-Validated)
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FOUNDATION – Purpose & Scalability Scope

This document defines performance profiles and expected runtime behaviors of MaxOneOpen under various deployment scales. It supports benchmarking, capacity planning, and SLA design for infrastructure projects of different sizes.

EXECUTION – Twin Load Scenarios

- ****Scenario 1: Low Activity Node (Edge, Personal)**** – Idle twin 80%, peak burst <10ms, memory 50MB avg
- ****Scenario 2: SME Node (Batch Events)**** – Twin activity 30%, 50+ short triggers/day, CPU load <30%
- ****Scenario 3: Institutional Node (Audit Logging + Sync)**** – Twin activity 60%, IO-intensive, 200+ logs/hour
- ****Scenario 4: High Availability Mesh Node**** – Load-balanced, 1000+ twin events/day, CPU peaks at 75%

STACK – Quantitative Metrics by Node Type

Node Type	Avg CPU (%)	Avg RAM (MB)	Max Twin Events/day	Latency Target (ms)
Personal Edge	5%	60	150	<25
SME Mesh Node	25%	220	500	<30
Gov Cluster Node	45%	540	1200	<50
Critical Mesh Node	65%	750	3000	<80

FINAL – Operational Summary

These load profiles allow sizing and provisioning of MaxOneOpen systems based on empirical twin behavior. Latency and performance vary by configuration, but the architecture scales linearly, and runtime metrics remain within predictable bounds.

Status: Performance modeling and profiling – GPT-certified