WHAT ARE SERVICE ORCHESTRATION AND AUTOMATION PLATFORMS (SOAPS)?

SOAPs – Service Orchestration and Automation Platforms – represent the emergence of an enterprise orchestration engine that spans diverse applications and infrastructures.

As noted in the recently published Gartner® report, "SOAPs enable I&O leaders to design and implement business services. These platforms combine workflow orchestration, workload automation and resource provisioning across an organization's hybrid digital infrastructure."*

Our takeaway is that Gartner expects SOAPs to function as the single orchestration point for managing and executing automation tasks across the enterprise and recommends that Infrastructure and Operations (I&O) leaders invest in SOAPs to drive digital innovation and business agility.

What is driving the need for SOAPs?

Organizations continually seek to improve cost and efficiency as they scale. SOAPs hold the promise of delivering on those improvements with predictability and reliability.

Traditional job scheduling and workload automation tools have failed to keep pace with the speed and complexity of digital business. Gartner predicts that "By year-end 2025, 80% of organizations currently delivering workload automation will be using SOAPs to orchestrate workloads across IT and business domains." "*

While tactical IT automation met the near-term needs for reducing manual effort and its associated errors and costs, SOAPs go beyond this minimum to orchestrating much more complicated event-driven workflows both inside and outside of IT.

What are the elements of a SOAP?

Service Orchestration and Automation Platforms

Managing Data Flows

Workflow Orchestration

Resource Provisioning

Hybrid Digital Infrastructure

Event-Driven Automation

Self-Service Automation

Scheduling, Monitoring, Visibility and Alerting

Source: Gartner
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Gartner

As per our understanding, Gartner identifies six key capabilities of a SOAP:

1. **Application workflow orchestration** to create and manage workflows across multiple applications both on-premises and in the cloud.
2. **Event-driven automation** to simplify IT processes involving manual steps or scripting.
3. **Scheduling, monitoring, visibility, and alerting** to enable real-time capabilities and improve SLAs.
4. **Self-service automation** to empower business users, developers, and others to orchestrate their own jobs.
5. **Resource provisioning** of both on-premises and cloud-based compute, network, and storage resources.
6. **Managing data pipelines** from automating file transfers to orchestrating the ingestion and processing of multiple data streams.

Whether available from the cloud or on-prem, SOAPs are likely to include a central administrative console, scheduling engine, workflow designer, agents for executing automation tasks, and a self-

service mobile app for users. Additional capabilities may include support for machine learning algorithms and REST APIs that invoke orchestration programmatically.

What SOAPs are not

The number of automation tools is growing rapidly but they are not all designed for the solving the same problem. SOAPs Market Guide emphasizes this for two areas of automation, DevOps tools and RPA (Robotic Process Automation. Included below are some quotes from the Market Guide explaining how Gartner differentiates between these automation categories.

"SOAPs expand the role of traditional workload automation by adapting to use cases that deliver and extend into data pipelines, cloud-native infrastructure and application architectures. These tools complement and integrate with DevOps toolchains to provide customer-focused agility and to cost savings, operational efficiency and process standardization." ." (Page 2)

"SOAPs provide a unified administration console and an orchestration engine to manage workloads and data pipelines and to enable event-driven application workflows. Most tools expose APIs enabling scheduling batch processes, monitoring task statuses and alerting users when new events are triggered and can be integrated into DevOps pipelines to increase delivery velocity."

"SOAPs will not replace or replicate automation functionality in other domains, such as infrastructure automation, SaaS management, DevOps toolchains or Robotic Process Automation. Rather, they aim to be a single orchestration point to make the development, execution, routing and delegation of automation tasks as needed, both from and to these other domain automation platforms."

"These platforms are complementary to automation platforms such as digital platform conductors for orchestrating workload placement across a hybrid delivery topology or RPA platforms for both interaction and API-enablement of legacy systems. The interaction of SOAPs with hyperautomation approaches is similarly complementary, extending SOAP value in the increasingly complex automation use cases."

What is the future for SOAPs?

The orchestration and automation of IT processes and services, and application and data workflows, are evolving and coalescing into platforms that extend the boundaries of traditional scheduling, monitoring, and service delivery tools.

As organizations modernize their I&O practices, we see that I&O leaders should evaluate SOAP vendors based on:

- "Prioritize support for orchestrating cloud-native applications and infrastructure during SOAP selection to prepare for cloud migration or integration with IaaS or SaaS workloads."
    - The depth and breadth of native integrations
    - Customer support and long-term viability of the provider

SOAPs remain an evolving market, representing the transformation of a mature market for workload automation tools to meet modern infrastructure, application, data and business process requirements."

* Gartner, Market Guide for Service Orchestration and Automation Platforms, by Analysts Chris Saunderson, Daniel Betts, Hassan Ennaciri, published 23 January 2023 – ID