AI, application, and data portability across OT/IT

Edge application platform for distributed operations

The Atomiton Stack (A-Stack) enables distributed operations by moving applications, data, and AI across OT/IT barriers. With a virtualized device model layer, AI runtimes can be deployed on any nodes across the OT-IT continuum. Heterogeneous OT devices and data become universally accessible in structured model formats wherever applications run. Edge analytics can be deployed closer to assets and operational activities.

Executive summary

Atomiton Stack provides the virtualization to eliminate OT complexity from AI and application runtime. It is essential infrastructure for multi-tier or multi-node deployment connected to data from sensors, machines or devices. Integrated with Red Hat OpenShift, the system provides end-to-end edge to cloud infrastructure for distributed operations crossing OT-IT boundaries.

Product profile

A-Stack core components include:
- Communication fabric and protocol mediation, mediating any-to-any industrial and application protocols down to the last mile;
- A distributed model engine, unifying stream, event-based, and unstructured data into AI-ready formats with common APIs across all compute nodes;
- Analytics broker services, orchestrating runtime AI processes.

A-Stack offers “a solution that kind of blew our minds, ... with an ability to talk to these different electrical devices and understand the data that’s coming from them and put it in a format that we could use to make decisions.”

- Head of Operations,
  Vopak Terminal
Disparate edges, standard applications. A-Stack homogenizes disparate device connectivity at different edge nodes, allowing the same applications to be deployed across different edge environments.

Move AI into production. A-Stack allows algorithms to directly run with production data by taking care of model processing and lifecycle management.

Enterprise OT/IT integration. A-Stack brings OT data into compatible structures with IT information models, eliminating differences from plant to plant.

Product benefits

- **Disparate edges, standard applications.** A-Stack homogenizes disparate device connectivity at different edge nodes, allowing the same applications to be deployed across different edge environments.
- **Move AI into production.** A-Stack allows algorithms to directly run with production data by taking care of model processing and lifecycle management.
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Use cases

A-Stack helps create optimized business decisions informed by distributed operational intelligence.

- **Digital Plant.** Manufacturing schedule, process, energy and asset performance optimization.
- **Intelligent Asset.** Manage, diagnose, and optimize remote assets, equipment, and infrastructure.
- **Predictive Supply Chain.** Optimize inventory, pricing, delivery, and logistics decisions with

Learn more

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About Atomiton

Atomiton is an edge IoT platform for distributed AI and applications. It eliminates OT complexity with a unified model layer that virtualizes external devices. Global enterprises have used Atomiton to bring IT/OT integration, and deploy AI to optimize networked business functions such as supply chain and manufacturing. Headquartered in California, Atomiton software footprint reaches 25 countries across 4 continents, with customers in the energy, manufacturing, engineering services and smart city sectors.

About Red Hat

Red Hat is the world’s leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.