Ovation™ Simulation Cloud

Value

- Provides secure, on-demand Ovation digital twin simulation functions at anytime from anywhere

- Simplifies the development, deployment and management of Ovation simulation solutions

- Increases productivity by enabling collaboration between engineering, operations and maintenance teams regardless of location

- Eliminates equipment obsolescence and lifecycle limitations

- Reduces simulation system maintenance costs

- Offers flexible and scalable options for a best-fit solution that meets changing needs

Introduction

Ovation™ digital twin technology integrates simulation and plant control on a single platform, both running in parallel to enable real-time advanced testing of new operating strategies in a risk-free environment before changes are applied to the operating plant.

Simulators with embedded Ovation-based models can be used to develop and test new applications and graphics; provide instructor or self-guided training; enable multi-user, multi-site cooperation on control system projects and manage control system standards.

Digital twin simulators are configured with traditional and/or virtual hardware and software that match the plant control system architecture. The simulator's design can include virtual controllers that execute the plant models, an instructor station for manipulating simulation scenarios and various workstations for operator, engineering and maintenance training.

Just like the control system, simulators require security patching as well as hardware and software upgrades to keep current. Subscribing to the Ovation simulation cloud supplements limited onsite resources and reduces maintenance burdens by allowing Emerson to establish and manage an easily accessible cloud-based simulator environment.

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Benefits

- **Convenient Access:** The Ovation simulation cloud can be conveniently accessed through a web portal by pre-authorized, designated users at one or multiple locations.

- **Minimized Maintenance:** Emerson experts perform routine backups and apply patches upon request to the virtual Ovation simulation cloud environment, which minimizes owner maintenance time.

- **Managed Security:** Emerson conforms to cybersecurity best practices by implementing measures to secure the networks, virtual machines and host infrastructure for the Ovation simulation cloud environment. For example, to minimize the risk of malware infection in the host environment, Emerson deploys antivirus software to all virtual machines and scanned files that are to be imported into the system.

Subscription Services

Through the subscription, Emerson provides full commissioning, management and support of the Ovation simulation cloud software, infrastructure and user accounts. Authorized personnel use a secure virtual private network to access Ovation digital twin applications.

Support is available 24 x 5 and subscriptions are renewable on an annual basis. Each subscription includes system and application setup, data transfer, Ovation product support and decommissioning when the service is terminated.

System Set Up

Emerson will set up the initial Ovation simulation cloud environment, which includes:
- Creating Ovation virtual machines based on a preferred architecture
- Creating authorized end-user accounts
- Verifying connectivity for each user

Application Set Up

Emerson will set up the Ovation simulation cloud applications by replicating the Ovation control system and plant process environment per customer specifications at the desired fidelity.

Data Transfer

Emerson will transfer control strategy configuration files to and from the Ovation simulation cloud and the control system. Files transferred between the systems will be scanned for malware and managed appropriately.

Product Support

Ovation product support for the Ovation simulation cloud includes:
- Expert technical phone support
- Ovation simulation cloud updates
- Operating system security update management
- Guardian™ portal access

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Service Termination

Emerson will perform the following when the Ovation simulation cloud services are terminated:

- Decommission the cloud-hosted virtual system
- If the simulation is customer-specific (not generic) the Ovation simulation cloud configuration files will be transferred to the owner/customer
- Remove all customer data from the Emerson cloud-hosted environment

Optional Services

- **Software Upgrade -** Emerson can upgrade the Ovation simulation cloud to the version of software needed, even if that differs from the control system version, providing an opportunity to explore newer Ovation features without disrupting the operating control system.

- **System Expansion –** Emerson can create additional virtualized Ovation nodes if a customer's needs exceed the initial architecture limits.

- **Cloud Sharing –** Emerson can add, remove or change authorized users as customer needs and organizations change. Emerson will manage the new user account process, including verifying the authenticity of each new user request.

- **Simulation Tuning –** Emerson can periodically retune Ovation simulator cloud models to match the control system environment.

- **Educational Services & Training –** Emerson's educational services can leverage the Ovation simulation cloud system for on-site training courses.

Requirements

- Ovation control system version 3.6 or higher
- Each subscription is specific to a single Ovation version
- Web browser (Microsoft Edge, Chrome, Firefox or Safari are recommended)

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