

# DeltaV™ System —Version 12 Update

*With continued focus on human centered design, the DeltaV Version 12 offers an array of technological innovations taking the user beyond ease of use and enhanced control. They deliver functionalities that translate directly into significant cost savings in design, engineering, commissioning and operations safety, while enabling enhanced product throughput and quality.*

## DeltaV SIS with Electronic Marshalling

The DeltaV SIS process safety system has a uniquely scalable modular architecture that is based on the CHARMs Smart Logic Solver (CSLS) providing unprecedented flexibility and ease of use with Emerson's Electronic Marshalling solution. Each CSLS provides I/O processing, SIL 3-capable logic solving, and diagnostics in a single logic solver.



The CSLS supports up to 96 individually configurable channels, allowing flexibility for implementing safety instrumented functions and is

designed specifically to eliminate conventional marshalling and home run multicore installation.

All communications are completely redundant from the channel (LS-CHARM) to the CSLS. Integrated HART® I/O brings field diagnostics into the CSLS.

Discover the benefits of DeltaV SIS:

- Optimized process reliability
- Flexibility to meet project needs
- Simplified safety lifecycle management
- I/O anywhere you need it
- Reduces installed cost of system
- Fully redundant communications
- Field mounted capable hardware
- Plug & play I/O.



For complete product information, visit  
[www.EmersonProcess.com/DeltaV](http://www.EmersonProcess.com/DeltaV)



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## Virtualization

Virtualization lets you consolidate computer resources, reduce hardware footprint, increase availability, and reduce implementation and maintenance costs. With the DeltaV system's integrated virtualization you can confidently capture the value of virtualization with a fully tested and supported solution.

### DeltaV Virtual Studio

DeltaV Virtual Studio makes it easy to create and maintain virtual DeltaV systems for development, testing, training and on-line production. Virtualization is made easy using prebuilt DeltaV virtual machine templates and virtual networks which simplify system set-up and reduce the risk of configuration errors. DeltaV Virtual Studio supports all DeltaV workstation types including AMS™ Device Manager functionality.

### DeltaV Virtual S-Series and M-Series Controller Simulation

For off-line development and test systems, DeltaV Virtual S-series and M-series controllers provide an easy,

cost effective way to implement and test control configurations and IO assignments in a host computer without the actual controller hardware.

### DeltaV Obsolete Server Replacement

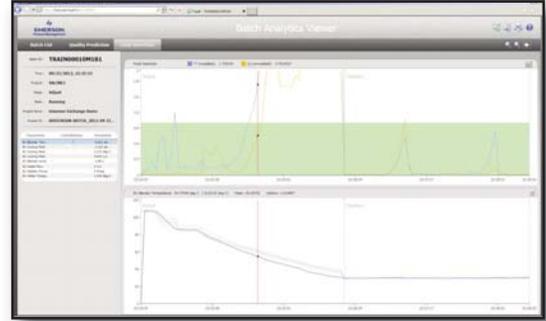
This Emerson offering lets you replace older server hardware used with legacy DeltaV v9.3 and v10.3 with new server hardware running DeltaV software in a virtual machine.

### DeltaV Simulate Standalone Virtual Machine

The DeltaV Simulate Standalone Virtual Machine (a.k.a., "simulate on a stick") makes it simple to run DeltaV simulate on your laptop or desktop computer without any software installation.

## Batch Analytics

Batch Analytics reduces the risks and costs associated with batch inconsistencies by identifying quality problems for corrective action before a batch is lost.



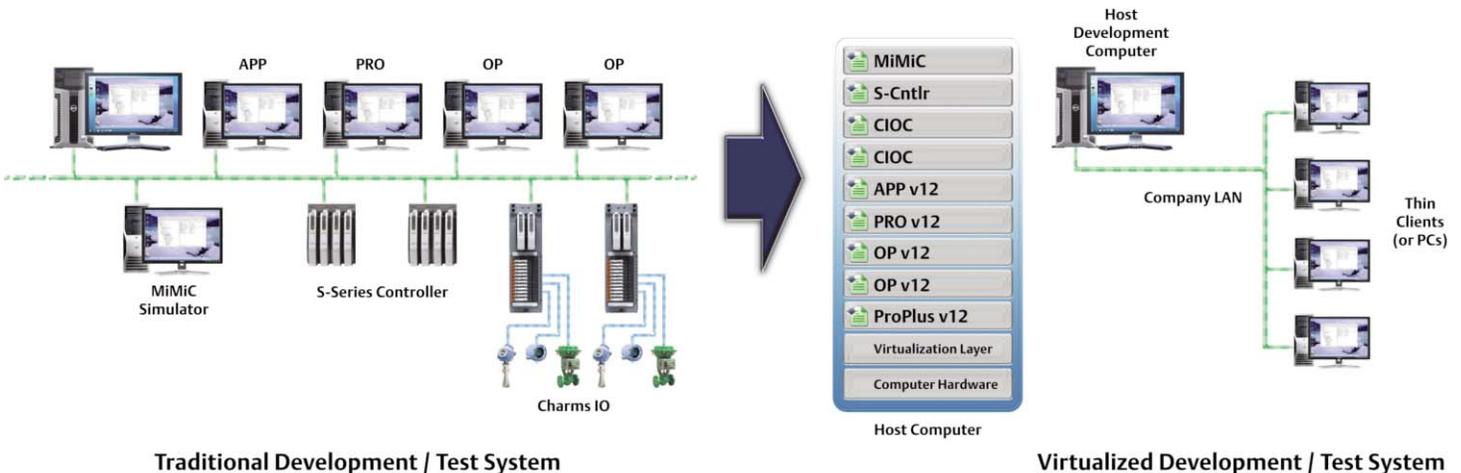
Batch Analytics' web-based interface makes it easy for the operator to see immediately where a problem is occurring. In the example shown, a variable is trending below the level indicated by the model.

### Predicts Batch Quality While In Process

Online Batch Analytics gives you real-time prediction of end-of-batch product quality through multivariate analysis.

### Provides Real-time Fault Detection and Reason for Deviation

A streamlined view indicates when a batch has a problem so operators can take action in real time. This relieves operators of the need to monitor all the data all the time.



Example for Off-line Virtual Development/Test Systems

## Real-time Correlated Models Help improve Yield

Visibility of real-time, correlated data helps operations personnel understand process interactions and their impact on end-of-batch product quality. This enables better decision-making through better understanding the effect of input and process variabilities and allows operators to better focus their attention.

## Minimizes Batch-to-Batch Variation

Better understanding of interactions between parameters allows process adjustments—made over time—to help eliminate differences between batches.

## Web-based Data for Real-time Process

The easy-to-use web-based interface in Batch Analytics allows your operators to share data anytime, anywhere, with individuals and groups for real-time analysis and action.

## NE-107 Alerts in FOUNDATION™ fieldbus Devices

In version 12, the DeltaV system gives users continued use of the PlantWeb alarms, while adding the optional use of NE-107 alarm objects in Emerson and non-Emerson devices that support NE-107.

The DeltaV system maps NE-107 alerts into PlantWeb alerts and incorporates them into the overall alarm management system. This enables you to fine-tune annunciation based on assignment of alarm priority, plant area, and workstation alarm banner threshold.



## Smart Firewall and Easy Security

The DeltaV system's Smart Firewall lets you easily set up a safe and secure network for your automation system. Lock down the control system network to protect against unauthorized downloads and hacking without costly security expert consulting.



Additional security tools ensure that your system is secure both internally and externally.

## Control Hardware Updates

### DeltaV Controllers

The new MQ and SQ Controllers offer the same DST capabilities as the MD Plus and SD Plus Controllers with these additional features:

#### DeltaV M-series MQ Controller

The MQ Controller enables the DeltaV platform to migrate PROVOX™ and RS3™ controllers, also supporting PROVOX and RS3 Migration I/O interfaces.

#### DeltaV S-series SQ Controller

The SQ Controller gives you all the features and functions of the M-series controllers with the added support for CHARM-based electronic marshalling for unprecedented system flexibility and dramatically reduced design and engineering complexity.

## DeltaV I/O

### Virtual I/O Module 2

The Virtual I/O Module 2 (VIM2) for both the M-series and S-series provides non-intrusive process simulation of DeltaV I/O cards and digital bus field devices when used with MYNAH® Technologies' MiMiC® simulation software.



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## WIOC Fiber Optic IOP

The Fiber Optic IOP for the DeltaV Wireless I/O Card lets you connect the WIOC to the DeltaV ACN using fiber optic cable instead of copper. This greatly extends operational distance and provides greater flexibility.

## 24 VDC Power CHARM

This feature provides simplified wiring options for powering 4-wire transmitters directly from an electronic marshalling CHARM baseplate.

## IS Thermocouple & RTD CHARMS

DeltaV v12 now provides direct intrinsically safe connectivity to temperature measuring points with the addition of IS Thermocouple & IS RTD CHARMS to the existing IS CHARMS portfolio. This addition eliminates the need for any additional IS barrier or other IS electronic in the loop.

## AMS Device Manager

AMS Device Manager v12.0 expands asset support even further with support for PROFIBUS PA on the DeltaV system.

A new interface to Det-Tronics' EQP System is available so that fire and gas detection systems can be integrated and monitored with AMS Device Manager and Alert Monitor. Enhanced calibration offerings with Beamex® and AMS Suite: APM are also available to provide best-in-class calibration capabilities. New integrated support for DTMs in addition to DDs and EDDs is now included in every system.

Guardian has been enhanced to automatically update device drivers on DeltaV system and AMS Device Manager, so your system is always ready and up to date on the latest revisions of device files.

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