

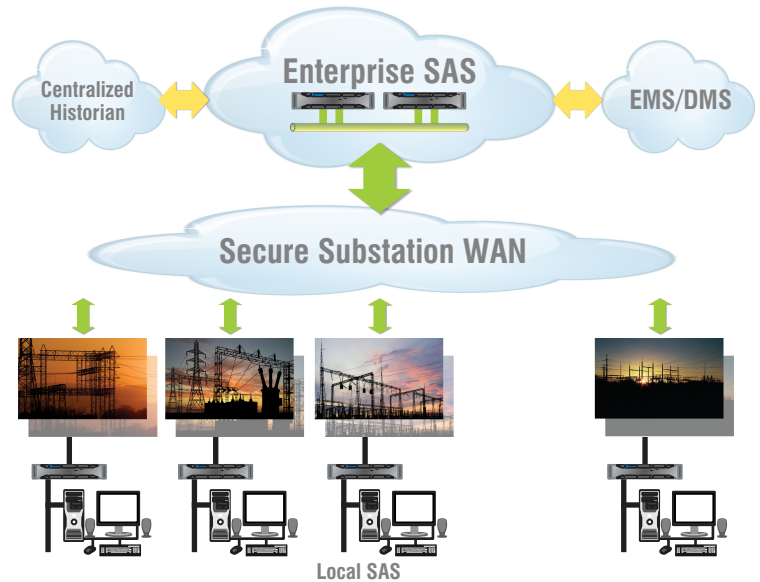
# monarch SA™

## OSI Enterprise Substation Automation Solution

Among the major drivers dictating the need for automating substations are the ability to monitor substations locally, minimizing manpower requirements and the flexibility and reduced cost for maintenance and upgrades of monitoring equipment at the substation. As opposed to traditional substations with large hardwired RTUs, hardwired switching and limited communications, Substation Automation (SA) offers a reliable, hardened and open communications network, advanced data/communications protocols, flexible HMI and convenient small, distributed RTUs. SA can reduce materials and labor cost for your utility while adding additional capability and reliability for your substation.

OSI's Enterprise **monarch SA™** (Substation Automation Solution) offers a truly unique approach to the uniform deployment, coordinated operation and centralized management of your control systems throughout your enterprise. This approach is vital to meeting today's needs of the ever-changing Cyber Security and reliability mandates for all large system deployments and mission-critical operations. Utilities can no longer manage the operational safety concerns and maintenance burdens associated with using multiple, disjointed operational tools within their critical control infrastructure.

OSI's Enterprise **monarch SA** is one of the most secure, flexible and open Substation Automation solutions on the market. **monarch SA** is a configured and pre-packaged SA solution based on OSI's **monarch lite™** platform, a streamlined and optimized version of OSI's **monarch™** architecture installed worldwide. It provides the necessary flexibility for SA by using open industry standards including Windows or Linux™ and DNP™ or IEC Communications protocols, and can be installed on or utilize all common hardened substation automation hardware platforms and equipment.



**monarch SA** features a flexible communications architecture and is a hardware-independent solution, protecting your investment against obsolescence, access bottlenecks and replacement costs. **monarch SA** features advanced functions including a redundant/failover configuration option and full multiple-client support, as well as Web-based Graphical User

Interface, electronic operator logbook, secure ICCP communications, real-time/historical trending and historical information system and data archiving.

OSI's **monarch SA** has fault-tolerant capabilities including a rugged half-height cabinet. **monarch SA** is easily expandable and most new features are available through regular software updates.

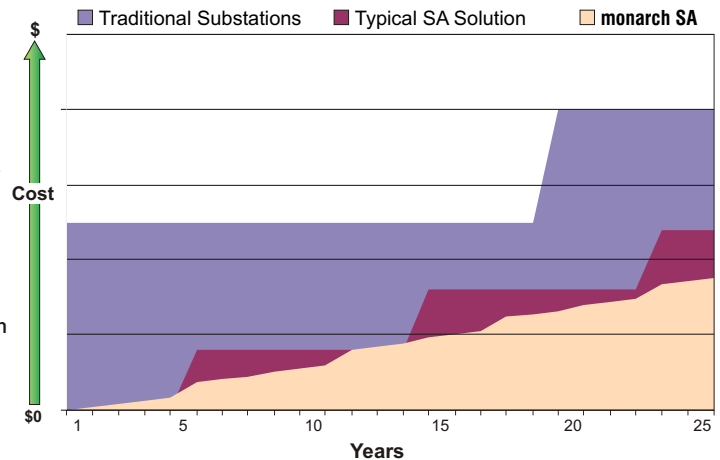
Standard benefits of implementing a **monarch SA** include much faster payback time, as well as lower cost of ownership and maintenance than other solutions on the market.



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Standard configurations can be further enhanced with an array of optional hardware and software features including custom RTU protocols, additional user consoles, operational data synchronization with the master SCADA/EMS, centralized database and display maintenance, centralized historical archival, DNP slave communications, **OSIRIS™** Remote Terminal Unit for distributed I/O, GPS time source and additional applications software, as well as training, installation and general engineering assistance. The Enterprise **monarch SA** platform can readily interface with additional third-party products including protection relays, IEDs, historians and other customer-defined applications.

### Life Cycle Cumulative Cost Comparison For Typical Substation



#### monarch SA Salient Features:

- Fully NERC CIP compliant
- Simple configuration management
- Secured communications and enterprise middleware for connectivity
- Secure engineering/maintenance and secure corporate data access
- Protection against technological obsolescence
- Common maintenance, administration and test environments
- Coordinated software release management and security patching capability
- Coordinated historian and system logging
- Common platform and evergreen support program throughout Enterprise
- Operational safety coordination from Control Center Master Station down to substation and vice versa (i.e. tags, etc.)
- Notification of Remote Operator Actions
- Unprecedented display options and customization tools
- Common displays and look/feel with Control Center Master Station
- Secure web view of the data remotely
- Auto-Generation of monarch database from IED or relay data

Product specifications in this document are subject to change without notice.