

# Tri-IO



Niagara AX Supervisor serves real-time graphical Information displays to standard Web browser clients and also provides server level functions with enterprise software applications, such as centralized data logging, archiving, alarming, real-time graphical displays, master scheduling, system-wide database management and integration.

## Overview

New levels of flexibility available from the leading provider of open, Internet-enabled, automation infrastructure solutions.

Tri-IO is a suite of Niagara-based products designed to integrate diverse smart devices into a unified, Internet-enabled, web-based system. Tri-IO solutions integrate LonWorks™, BACnet™, Modbus, oBIX, Internet and web services protocols in a software platform that can be used in embedded controllers or server applications. Tri-IO includes integrated network management tools to support the design, configuration, installation, and maintenance of interoperable networks.

The Tri-IO AX Supervisor is a flexible network server used in applications where multiple NiagaraAX-based JACE controllers will be networked together (SoftJACE®, JACE-545®, JACE-403®, JACE-200®, JACE-600®, JACE-700®, JACE-XPR®, or JACE-NXT® series.) The AX Supervisor serves real time graphical information displays to standard web-browser clients and also provides server-level functions such as centralized data logging, archiving, alarming, real time graphical displays, master scheduling, system-wide database management, and integration with enterprise software applications. Additionally, the AX Supervisor provides a comprehensive, graphical engineering toolset for application development.

In addition to the standard AX Supervisor, a 64 bit version for PCs supporting the Windows 64 bit OS is available for monitoring systems intended to monitor in excess of 150 and up to 500 JACEs. This version supports the same feature set as the standard version.

oBIX is included with the standard AX Supervisor as well as the 64 bit and Linux versions, as a means of integrating Niagara-based R2 JACEs at release 2.3.522 or greater. The oBIX driver can be added to R2 platforms at release 2.3.522 or greater to expose all data points, schedules, trends and alarms to an AX system. This oBIX driver is both a client and a server

## AX Supervisor

### Features

- Java-enabled user interface (UI) as well as a non-Java UI for browsers.
- Supports an unlimited number of users over the Internet / Intranet with a standard web browser, depending on the host PC resources.
- Optional enterprise-level data archival using SQL, Oracle or DB2 database, and HTTP/HTML/XML text formats.
- “Audit Trail” of database changes, database storage and backup, global time functions, calendar, central scheduling, control, and energy management routines.
- Sophisticated alarm processing and routing, including e-mail and paging.

- Provides access to alarms, logs, graphics, schedules, and configuration data with a standard web browser.
- Password protection and security using standard Java authentication and encryption techniques with optional security supported via an external LDAP connection and SSL.
- HTML-based help system that includes comprehensive on-line system documentation.
- Supports multiple SoftJACE, JACE-200, JACE-403, JACE-545, JACE-600, JACE-700, JACE-XPR or JACE-NXT stations connected to a local Ethernet network or the Internet.
- Provides online/offline use of the VYKON WorkPlace AX® graphical configuration tool and a comprehensive Java Object Library.
- Optional direct Ethernet based driver support for BACnet I/P, OPC (Client), Modbus TCP, and SNMP; additional point blocks for each driver may be purchased in blocks of 500 for each protocol.
- A “Small Building System” version is available for support of a system with up to three JACEs.
- Available in a 64 bit Windows compliant version of the AX Supervisor for large systems monitoring in excess of 150 JACEs. All features of the standard AX Supervisor are included with this platform.

## Platform Requirements

### Processor

- Intel Pentium® IV, 2 GHz or higher, Core 2 Duo also acceptable.

### Operating System

- Microsoft Windows XP Professional, Windows 2003 or 2008 Server (if Microsoft IIS is disabled), Vista Ultimate, Windows 7, Microsoft Virtual Server 2008, VMWare Server 2
- For the 64 bit AX Supervisor, the required OS is Windows XP Professional-64 bit.
- For the Linux version, the required version is Red Hat Enterprise Linux 5.

### Browsers

- Mozilla Firefox™ or Internet Explorer™ 5.0 or later

### Memory

- 1 GB minimum, 2GB or more recommended for large systems; 8 GB or more recommended for the Windows 64 bit version.

### Hard Drive

- 1 GB minimum, 5 GB for applications that need more archiving capacity

### Display

- Video card and monitor capable of displaying 1024 x 768 pixel resolution or greater

### Network Support

- Ethernet adapter (10/100 Mb with RJ-45 connector)

### Modem

- 56 KB minimum, full time high speed ISP connection recommended for remote site access (i.e. T1, ADSL, cable modem)