

## Tech Note 478

# Industrial Application Server Platform Deployment Checklist

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## Summary

This *Tech Note* gives a checklist to cover before deploying a platform to a computer. It is the same content as Appendix A **System Integrator Checklist** from the FactorySuite A<sup>2</sup> Deployment Guide.

The FactorySuite A<sup>2</sup> Deployment Guide is available from the [Tech Support web site](#).

Use this checklist to evaluate current systems with the goal of uncovering sources of errors or poor performance. For example, the error message "Platform exceed maximum heartbeats timeout of 8000 ms" along with poor performance and strange symptoms is often caused by not having the Archestra network first in the Network Binding Order. See the section Multiple NICs below for more information about this configuration.

## Application Version

- All Industrial Application Server Versions

## Platform Deployment Checklist

The list items are compiled from integrator comments, Tech Support sources, and documentation. The items include internal and external links to supporting information.

The checklist is organized into the following areas:

- **General**
- **Communication**
- **Security**
- **Administration (Local and Remote)**
- **Redundancy Configuration**
- **Migration**
- **Compatibility**

## General

### Use Time Synchronization

Configure the computers in a Galaxy to synchronize time at regular intervals.

This is particularly important for alarm and data historization. The Historian node is a good candidate for the computer by which all other computers will synchronize time.

**Note:** Details about Time Synchronization are available throughout the Deployment Guide by searching (Ctrl + F keys) for **time sync**.

### Disable Hyper-Threading

Disable Hyper-Threading on computers that support this hardware function.

Hyper-Threading gives a false impression of lowering processor load while actually increasing the load on the actual (rather than virtual) processor. Some computers vendors (for instance, Dell) may enable hyper-threading by default.

### To disable hyper-threading

1. Reboot the computer.
2. Enter BIOS setup.
3. Disable hyper-threading.
4. Save and exit setup.

**Note:** For more information on hyper-threading, see **Best Practice** on page 233 of the Deployment Guide.

## Communication

### Configure IP Addressing

All nodes in your Galaxy must be able to communicate with each other by using both IP address and Node Name in the Network Address option of the WinPlatform's editor.

If PCs in the Galaxy are using fixed IP addresses, create a hosts file with the host name to IP Address mapping.

WinPlatform connection problems may result if computers cannot be accessed by both Hostname and IP address. This is true no matter which type of Network Address you choose to use.

For example, assume two nodes in your Galaxy (host name: NodeA, IP address: 10.2.69.1; host name: NodeB, IP address: 10.2.69.2). NodeA must be able to ping NodeB with both **NodeB** and **10.2.69.2**.

The reverse must also be true for NodeB pinging NodeA. Failure in either case may result in the following: you may not be able to connect to a remote Galaxy Repository node from the IDE or deployment operations may fail.

### Configure Dual NICs

Use two Network Cards on a computer that hosts I/O DAServers. Doing so will increase throughput, and improve load balancing.

It is also good practice to place PLC communication on a dedicated (Control) network.

**Note:** More information on dual NIC configuration is contained in **NIC Configuration: Redundant Message Channel (RMC)** on page 63 of the Deployment Guide.

## Security

### Confirm User Name and Password

All nodes in the Galaxy need to have the same user name/password for the Archestra Admin User (**aaAdminUser.exe**).

### Configure Anti-Virus Software

Anti-Virus software should not process files in the ArchestrA folders listed below.

**Note:** The following paths assume C: as the drive. The paths could also be on D: or E: drives.

```
C:\Program Files\ArchestrA\Framework\Bin\CheckPointer  
C:\Program Files\ArchestrA\Framework\Bin\GalaxyData  
C:\Program Files\ArchestrA\Framework\Bin\GlobalDataCache  
C:\Program Files\ArchestrA\Framework\Bin\Cache  
C:\Documents and Settings\All Users\Application Data\ArchestrA (default setting, specified on WinPlatform editor's General page, History store forward directory option)
```

If the Anti-Virus software processes these files, it may result in slow performance as deploys are performed.

**Note:** More information on Virus protection is found in **Virus Protection** on page 195 of the Deployment Guide.

## Administration (Local and Remote)

### Install Correct IAS Components

- Install the IDE and Bootstrap on any PC that will browse the Galaxy. This includes WindowMaker and SCADAAlarm Event Notification Software nodes.

- Install the Bootstrap and Deploy a platform to any PC that will be an AOS (Application Object Server) or will be doing I/O with a Galaxy (includes WindowViewer and SCADAAlarm Event Notification Software nodes).

**Note:** See **Integrating FactorySuite Applications** on page 91 of the Deployment Guide.

## Connection Requirements for Remote IDE (from a Client Machine to a Galaxy)

(Tested with Windows XP Pro SP1 on the client machine and Windows 2000 Server SP3 on the GR node.)

- A. The Archestra Admin User (accessed via the Change Network Account utility) needs to have the same Username and Password on both the client machine and the GR Node.
- B. The Logged in user on the client machine needs to be part of the local Administrators group.
- C. The GR Node needs to have a user account with the same username and password as the logged-in user on the client machine. This GR Node user does not have to be logged in and does not have to be part of the Power Users or Administrators group.

## Redundancy Configuration

### Redundant AppEngines

WinPlatforms hosting redundancy-enabled AppEngines must run on the same operating system. For redundancy to function properly, WinPlatforms hosting redundancy-enabled AppEngines must be deployed to computers running the same operating system.

### Multiple NICs

In general, multiple NIC configuration is recommended only for Redundancy purposes. Using 1GB network cards in combination with managed switches should be sufficient for most process network throughput needs.

If any nodes in your Archestra environment (outside of redundant nodes) have multiple NICs, be aware that proper configuration of those computers is essential to successful communication between Archestra nodes.

In other words, if a PC has two network cards and will have a platform deployed to it, then the Network Binding Order must have the Archestra network as the first network even if one of the Network cards is disabled.

Information about configuring multiple NIC computers is included in the Introduction and Archestra Redundancy chapters of the IDE documentation (IDE.pdf).

See **NIC Configuration: Redundant Message Channel (RMC)** on page 63 of the document.

The setting for the Network Binding Order can be found in [Tech Note 368, Network Setup for AppEngine Redundancy](#).

**Note:** See **Implementing Redundancy** on page 61 of the Deployment Guide.

## Migration

### Verify Version and Patches

Verify that all nodes in the Galaxy have the same version and patch level of Industrial Application Server.

### Upgrade Correctly

When upgrading from IAS 1.x to IAS 2.x be sure to uninstall IAS 1.x first before installing IAS 2.x.

## Compatibility

### FactorySuite Component Version Compatibility

Ensure that there is no conflict between FactorySuite A<sup>2</sup> System Components and FactorySuite 2000 Components by following [Tech Note 313, Installing FactorySuite® A<sup>2</sup> Components Alongside FactorySuite 2000 Components](#).

IAS and IndustrialSQL Server have specific version compatibility requirements. Check the FactorySuite A<sup>2</sup> Compatibility Matrix on the [FactorySuite support Website](#) for detailed compatibility information.

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