

Tech Note 845

Resolving the InTouchViewApp Deployment Issue (a.k.a. "Orange Icon")

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Introduction

This *Tech Note* does the following.

- Explains what the known causes are to InTouchViewApp deployment issue (a.k.a. the "Orange Icon" issue); and
- How to avoid or resolve the issue.

When an InTouchViewApp object is deployed from a GR Platform to another remote platform (AOS), the InTouchViewAppRuntimePrimitive component on the remote Platform connects to the Share folder on GR node where the InTouch application is stored, and downloads the InTouch application files from the Share. The deployed InTouchViewApp object on the remote Platform will display an Orange Icon in the IDE before the entire InTouch application (including ArchestrA graphics) is successfully downloaded.

Issue

While InTouchViewAppRuntimePrimitive is making the connection to the Share folder on the GR node, the GR's NetBIOS name is always used in concatenating the share path, regardless of whether the NetBIOS name is mapped to the IP of the NIC connected the ArchestrA network or not.

When the GR's NetBIOS name is mapped to an IP address from a NIC connected to a non-ArchestrA network, and the AOS node (InTouchViewApp deployment target) is **not** connected to the non-ArchestrA network, the share path (`\\GR_NetBIOS_Name\ShareName`) used by InTouchViewAppRuntimePrimitive cannot connect to the Share on the GR node where InTouch application is stored.

The connection attempt fails and InTouchViewApp object gets stuck in "Orange Icon" state.

Application Versions

- All versions of Application Server and InTouch that support Managed InTouch applications.

Operating Systems

- All supported OS versions by the Application Server and InTouch.

Known Causes to the "Orange Icon" Issue

GR Node's NetBIOS name resolution

It is common that a computer's NetBIOS name *cannot* be used in an IP resolution mapping table for a network, whether it is in a domain's DNS or a local **Hosts** file. For example:

- An FQDN (Fully Qualified Domain Name) is required for IP resolution because of a hierarchical domain structure.
- The NetBIOS name is reserved for mapping to an IP from a NIC connected a non-Archestra network when the computer has multiple network connections.
- The User intentionally chooses not to use NetBIOS in any IP resolution mapping.

For Application Server and InTouch, it is *not* required that the NetBIOS name be mapped to the IP connecting with the Archestra network. The recommended (common) practice is to use the IP address of the NIC connected to the Archestra network, whether it is

- Used in configuring the Network Address of the Platform objects in Application Server or
- When configuring the Access Names in InTouch.

Microsoft's Half-Open TCP Connections Limit

With the release of Windows XP SP2, Microsoft introduced a limit of 10 outgoing TCP connections in order to restrict the number of allowed, simultaneous, outgoing, half-open TCP connections. The restriction was an attempt to prevent a virus or malicious program to make unlimited infectious connections to other systems when the PC is compromised. This limit also exists in Windows Vista, with or without SP1.

Because of enhanced security features in both design and coding, the connection limit is removed beginning with Windows Vista SP2 and Windows 7, and does not exist in any of the Server OSs, such as Windows 2003 and 2008. However, the limit can still be enforced with a registry key added to the Windows Vista SP2 and Windows 7 Operating Systems.

The connection made by InTouchViewAppRuntimePrimitive to the Share on GR to download InTouch application is using TCP. This means that when the InTouchViewApp deployment target platform is running on a Windows workstation such as Window XP SP2 or later where this Limit exists and is enforced, the success of the attempt to download InTouch application depends on if the TCP connection limit is reached or not. If the limit is already reached before the connection attempt, the connection requested by InTouchViewAppRuntimePrimitive will be put in waiting list. The result of this is, the completion of InTouchViewApp deployment is either delayed over an extended period of time or never finishes.

For diagnosing the TCP Connection Limitation, refer to [Tech Note 838 Resolving TCP Connection Restriction Issues for an Alarm Provider Running on a Workstation OS](#).

Solutions to the "Orange Icon" Issue

GR Node's NetBIOS name resolution

When concatenating the share name to connect to the Share on GR node, InTouchViewAppRuntimePrimitive should use whatever is entered in the Network Address of the GR platform, for example, IP address. **CR L00119267** (for WAS 3.1 SP3 patch 1) and **CR L00119704** (for WAS 3.5, or SP 2012) have been created to address this issue. A hotfix is available for **CR L00119267**.

Microsoft's Half-Open TCP Connections Limit

CR L00119714 (for WAS 3.5) has been created to log this issue. While the CR is being investigated, the current recommendation is to seek solutions or workarounds from Microsoft.

There is ample information from the Internet that explains and provides solution options, including replacing tcpip.sys file with a modified version. Search the internet for **Remove Half-Open TCP Connection Limit** or **Remove Concurrent TCP Connection Limit**.

Another recommended option is to replace the workstation OS with either a server OS or another workstation OS version that does not have the TCP connection limit enforced.

Note: Invensys does not support, nor is responsible for any of the solutions provided by third-parties.

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