<u>**Tech Note 390**</u>

InTouch® NAD and Slow Networks: Reduce Startup Time and Network Bandwidth Consumption by Configuring a NAD Proxy

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Introduction

This Tech Note outlines how to reduce network utilization in a NAD environment by configuring one of the InTouch NAD-Clients to behave as a NAD-Proxy.

Issue

Publishing an application change in a typical NAD-Master \ NAD-Client configuration causes *all* NAD-Clients accessing the NAD-Master to receive the application updates. This operation reduces the available bandwidth and consumes it for long periods of time.

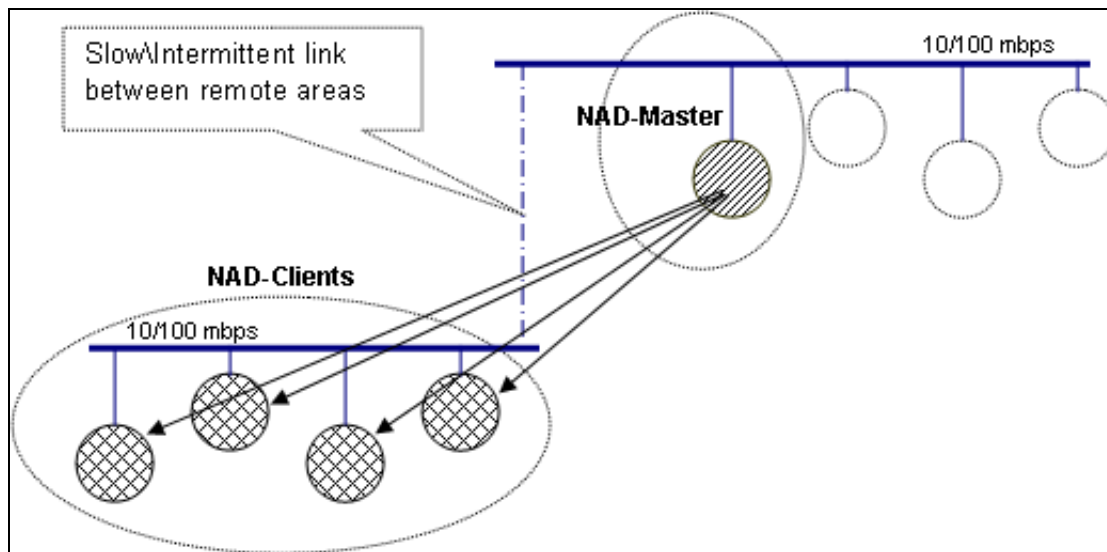The following figure shows a typical NAD Change Update operation:

FIGURE 1: TYPICAL NAD CHANGE UPDATE

Solution

To reduce the network utilization we can configure one of the InTouch NAD-Clients (which resides in the remote area) to behave as a **NAD-Proxy**.

A NAD-Proxy serves as a NAD-Client that accepts the application changes from the NAD-Master and then notifies the NAD-Clients on its local network of the application changes.

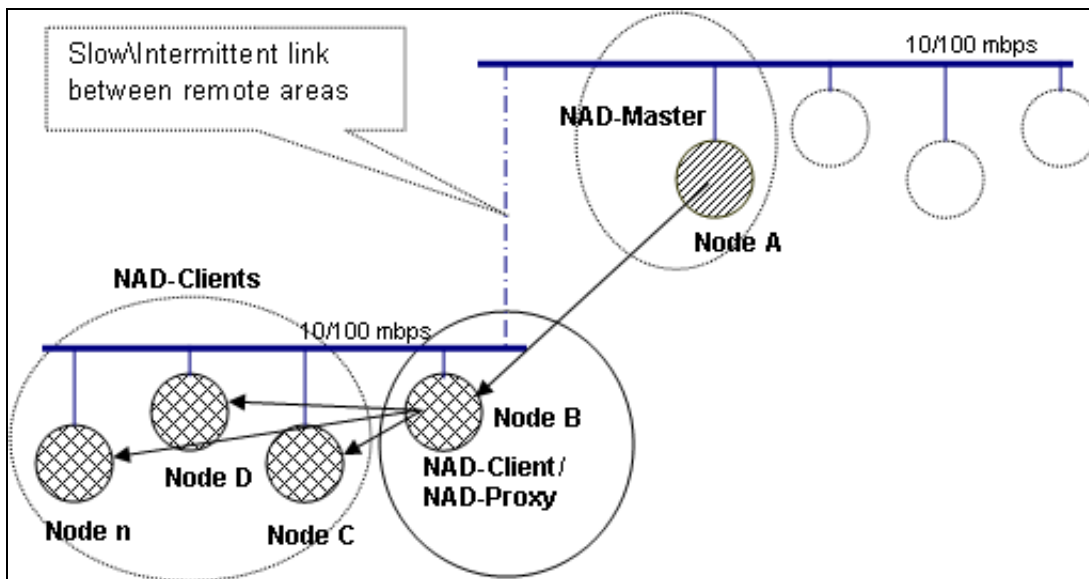The following figure shows a typical NAD Change Update operation using a node configured as a NAD-Proxy:

FIGURE 2: PROXY CONFIGURATION

NAD Configuration for NAD Proxy

Node A: NAD-Master

1. The NAD-Master Folder has to be shared (e.g. Application Directory as **C:\App\NADMaster**).

Node B: NAD-Client\NAD-Proxy

1. Configure the NAD-Client \ NAD-Proxy as a NAD-Client of the NAD-Master folder.

    For example: The Local Working Directory as **C:\App\NadClient** and Application Directory as **\\NodeA\NADMaster**.
2. Share the NAD-Client \ NAD-Proxy folder.

    For example: Share the (NAD-Proxy) application directory as (e.g. **C:\App\NADClient**).
3. Select a **Change Mode** of your choice in the **Node Properties/Change Mode** area.

    In this example, the **Load Changes into WindowViewer** option is selected (Figure 3 below):
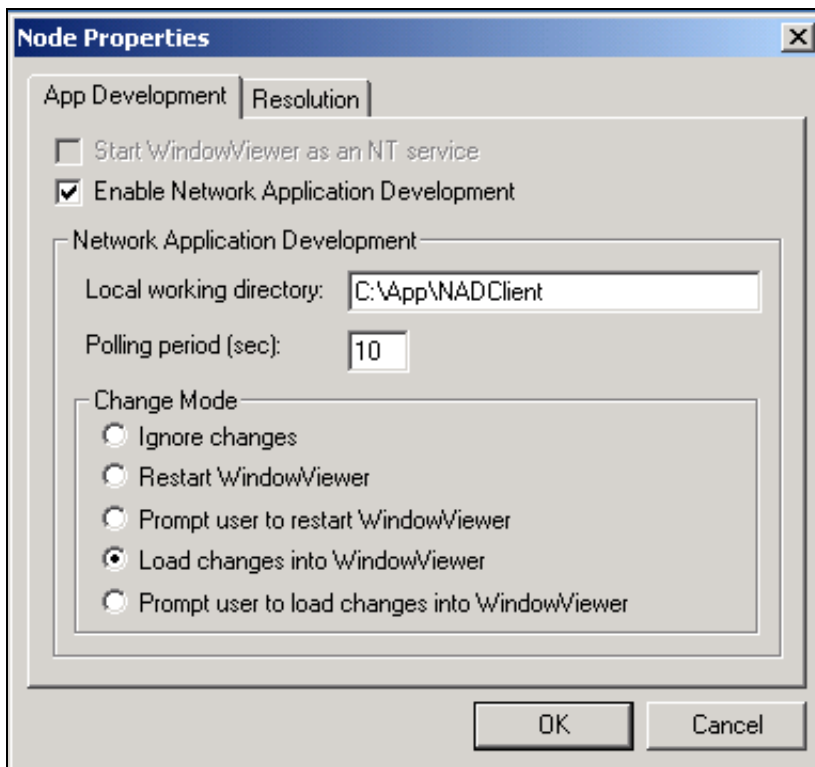
FIGURE 3: NAD CLIENT NODE SETTINGS

Other NAD-Clients Nodes:

1. Configure all other NAD-Clients to be NAD-Clients of the **NAD-Proxy** folder.

   For example: The Local Working Directory as **C:\App\NADClient** and Application Directory as **\\NodeB\NadClient**.

2. Select a **Change Mode** of your choice in the **Node Properties/Change Mode** area.

Scripting

Add the following Data Change script *into* the NAD Master application. This script updates the **.fsm** file on the NAD Proxy and sends the application updates out to the NAD-Clients. The NAD-Master will not be affected by this script as the NAD-Master's $ApplicationChanged tag is never updated. Note that this script will only actually execute on the **NAD-Proxy** node:

Tagname: $ApplicationChanged

```
If $ApplicationChanged==0 THEN

    If InfoInTouchAppDir()<>"" THEN

        FileWriteMessage( InfoInTouchAppDir() +"\appchngd.fsm" ,
        0,"ApplicationChanged", 0 );

    Endif;

Endif;
```

> **Note** The tag $ApplicationChanged is set to **1** when a NAD-Client detects that the file **appchngd.fsm** on the Master-NAD has a new time stamp and resets itself to **0** (zero) when the application update is complete. Please refer to the InTouch NAD online help for additional

information regarding this process.

Monitor NAD Updates

Wonderware suggests monitoring the **$ApplicationChanged** tag to indicate when the NAD-Proxy and NAD-Client updates are taking place. For example, set a display link's visibility or a pop-up window to show when **$ApplicationChanged = 1**.

NAD-Related Documents

Please refer to the following documents for additional information and settings:

Tech Note 256: Using Network Application Development (NAD) with InTouch

Tech Note 360: Overcoming NAD-Related Errors

Tech Note 380: InTouch HMI® NAD and Slow Networks: How to Reduce Initial Startup Time and Network Usage by Preventing the Copy of the Full Application (v7.x and higher)

The InTouchUG.pdf: Chapter 5, **Building a Distributed Application**.

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