Tech Note 685
Using FSGateway to Communicate between Two Different Galaxies

Topic#: 002454
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Introduction

This Tech Note outlines using FSGateway to transfer data between two different ArchestrA Galaxies.

Application Versions

- Industrial Application Server 2.1 and later
- Wonderware Application Server 3.1
- FSGateway 1.5 SP1

Configuration Details

In order to transfer data between two Galaxies, FSGateway must be used as a protocol converter. FSGateway ArchestrA configuration objects utilize the Message Exchange (MX) protocol to communicate to ArchestrA objects within the Galaxy that the Platform on that same node is a member of. FSGateway can then act as a SuiteLink® server to a remote galaxy's DDESuiteLinkClient object (Figure 1 below).

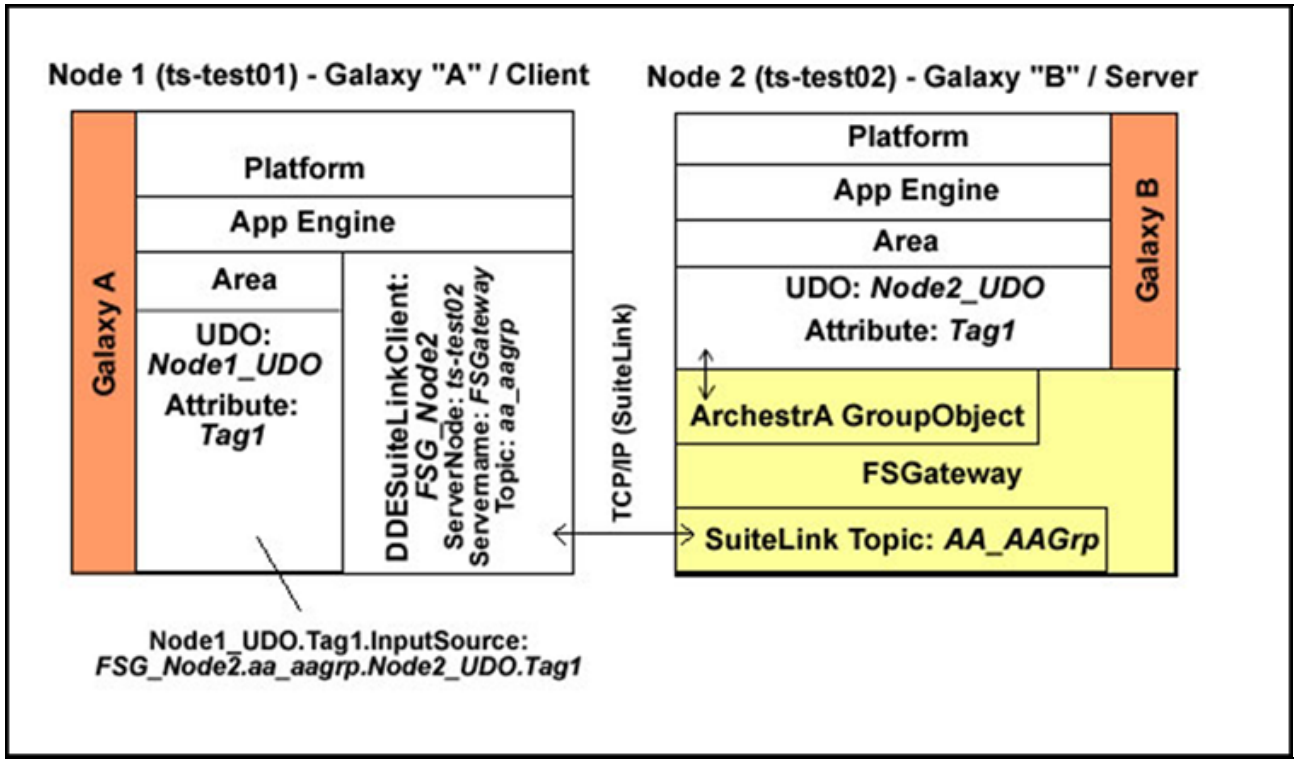

Figure 1: Configuration Overview

Galaxy B Configuration

1. Create an Object and an Attribute.

   Galaxy **B** is hosted on **Node 2**, and named **ts-test02** in this example. The galaxy contains a deployed User Defined Object named **Node2_UDO** with a User Defined Attribute named **Tag1** (Figure 2 below).

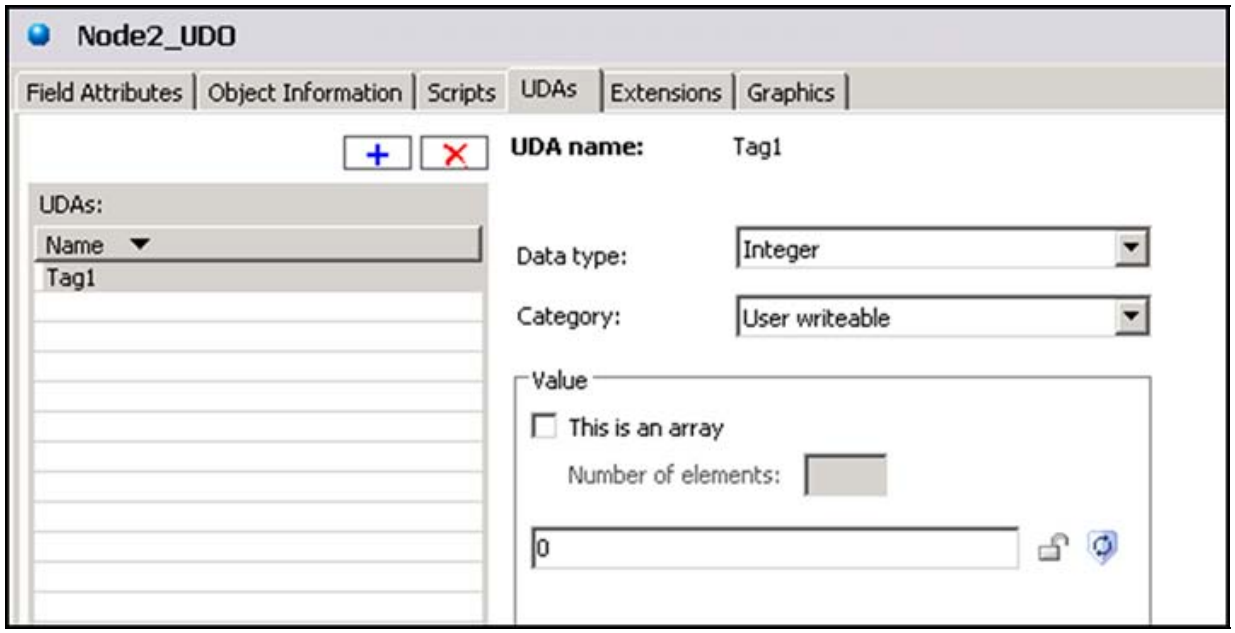

Figure 2: Node 2 User Defined Object and Attribute

FSGateway must be installed locally to the node where a Platform from this Galaxy is deployed. In this case, we will install FSGateway on the GR Node (**Node 2**).

FSGateway should be configured with an ArchestrA and ArchestrAGroup object using the default configuration options (Figure 3 below). In the case where ArchestrA security is enabled, the login information must be entered.

2. Save your changes and activate FSGateway.

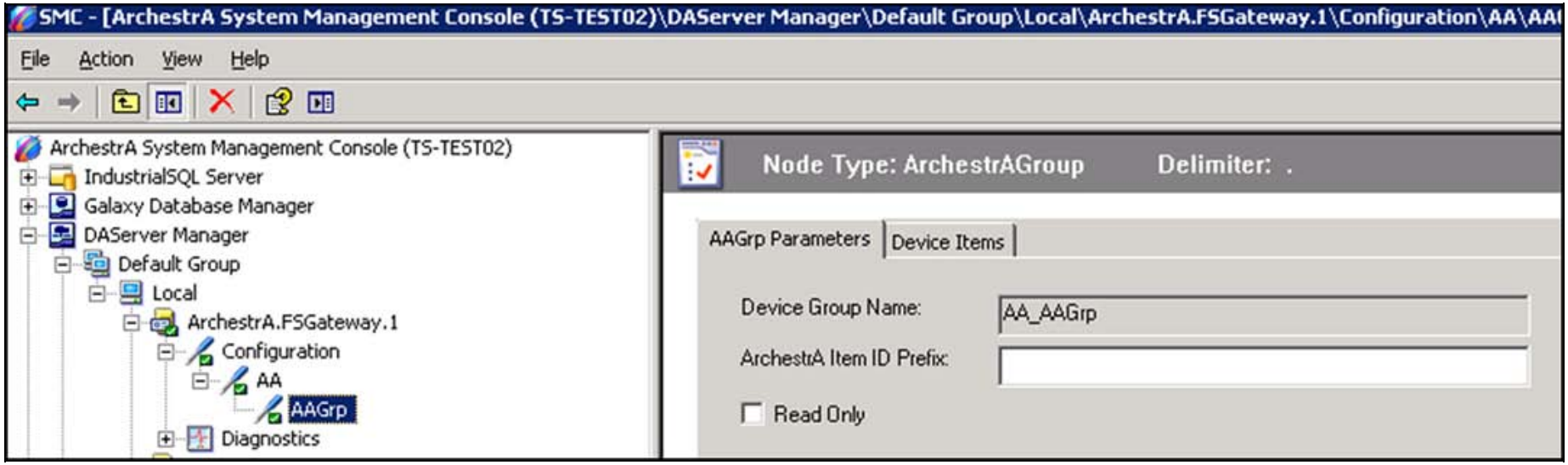

Figure 3: Node 2 FSGateway Configuration

Galaxy A Configuration

1. Create an Object and Attribute.

   Galaxy **A** is hosted on Node 1, named **ts-test01** in this example. The galaxy contains a deployed User Defined Object named **Node1_UDO** with a User Defined Attribute named **Tag1** (Figure 4 below).

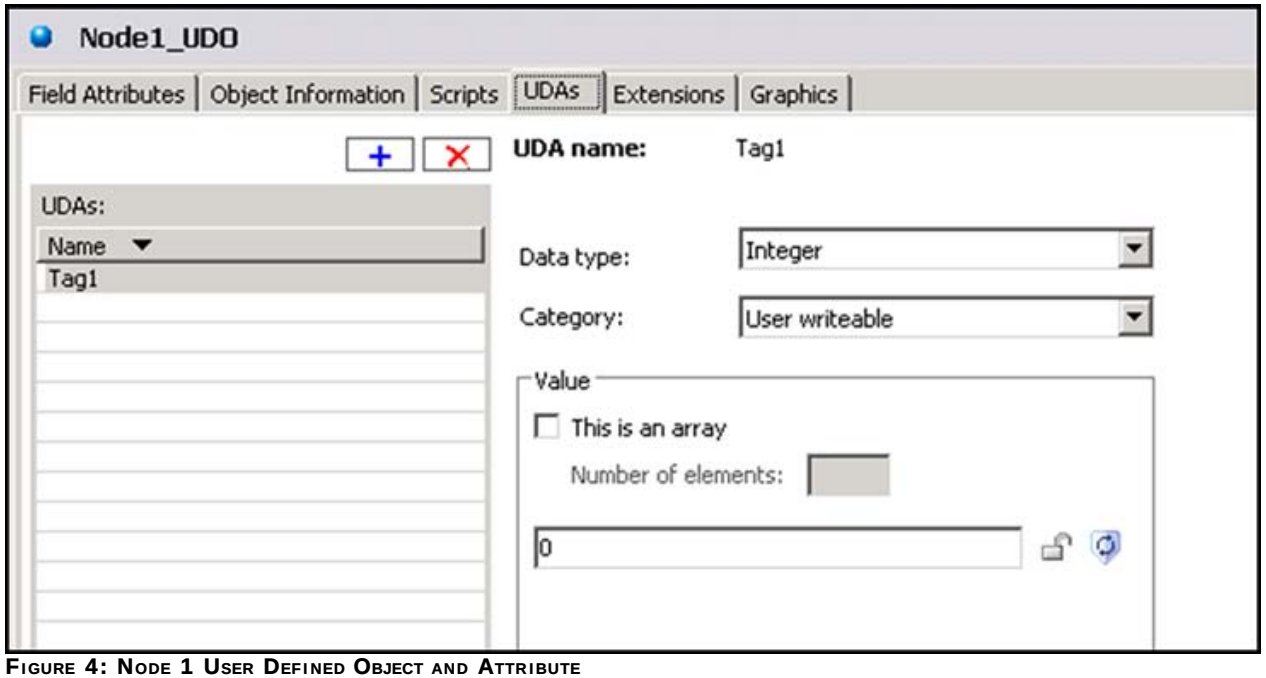

Figure 4: Node 1 User Defined Object and Attribute

Galaxy **A** also contains a deployed DDESuiteLinkClient object directed to FSGateway running on Node 2 (Figure 5 below).

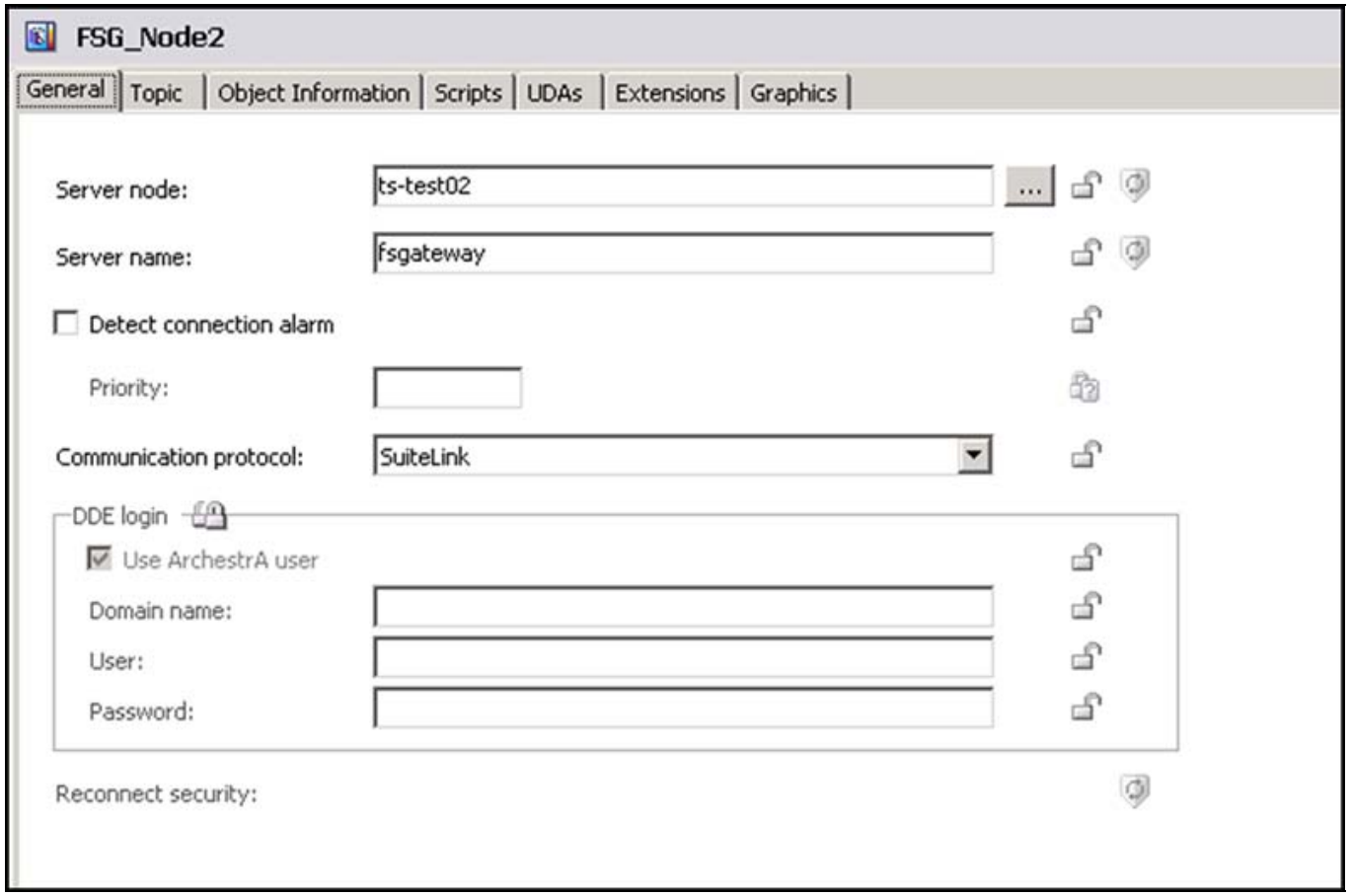

Figure 5: Node 1 DDESuiteLinkClient Object connecting to Node 2

2. The DDESuiteLinkClient object has a Topic configured to match the Device Group Name on the ArchestrAGroup object of FSGateway on Node 2 (Figure 6 below).

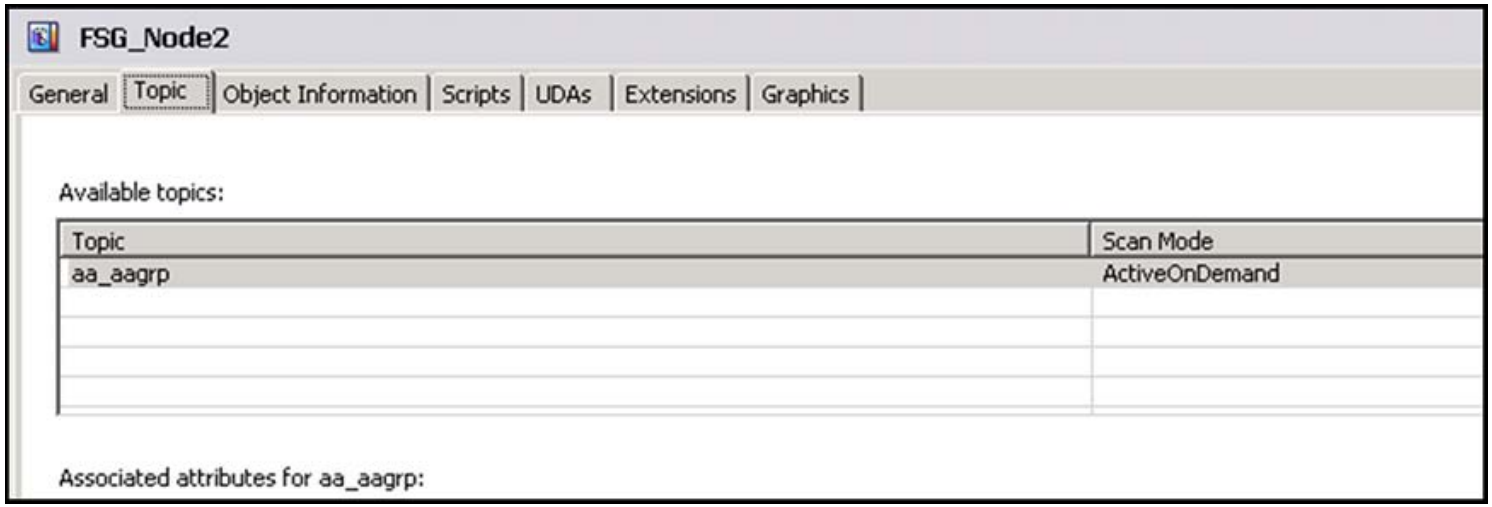

Figure 6: Node 1 DDESuiteLinkClient Object Topic Configuration

3. **Node1_UDO.Tag1** is extended to **FSG_Node2.aa_aagrp.Node2_UDO.Tag1** (DDESuiteLinkObject.Topic.SourceObject.Attribute).

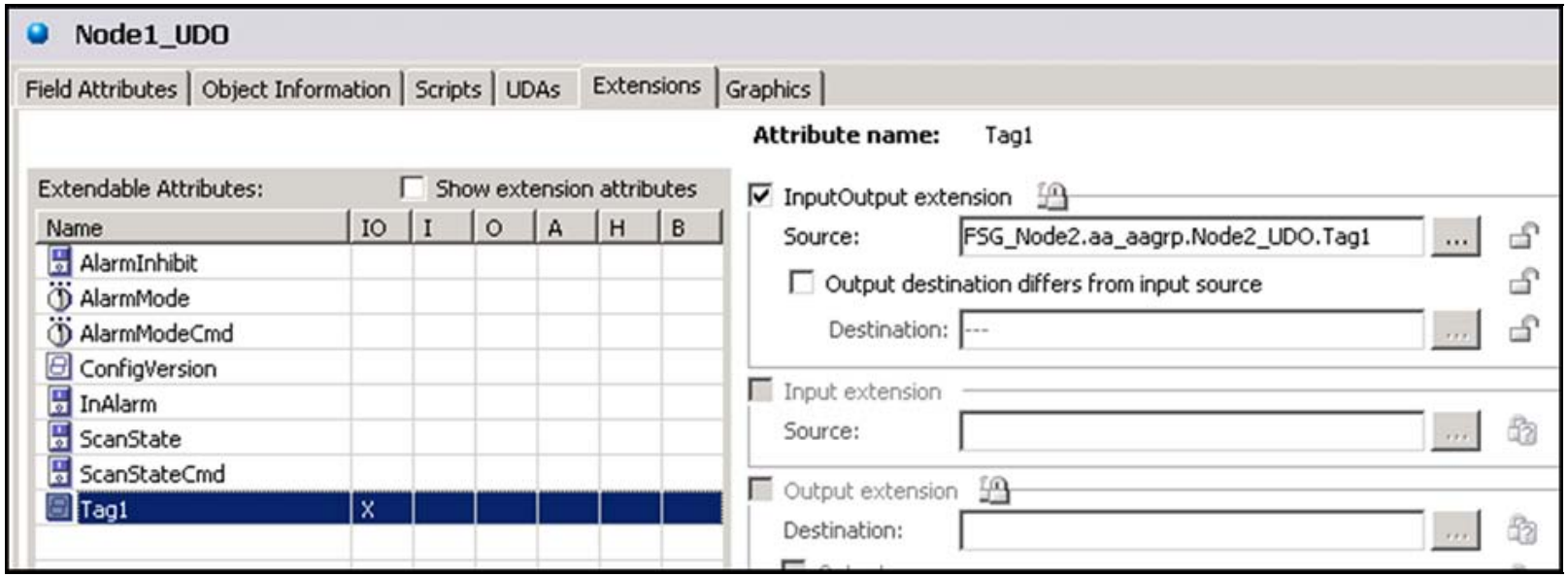

Figure 7: Node1_UDO.Tag1 Extension

Run-Time

Once everything is deployed, any change to **Node1_UDO.Tag1** will be passed to **Node2_UDO.Tag1** and vice versa (Figure 8 below).

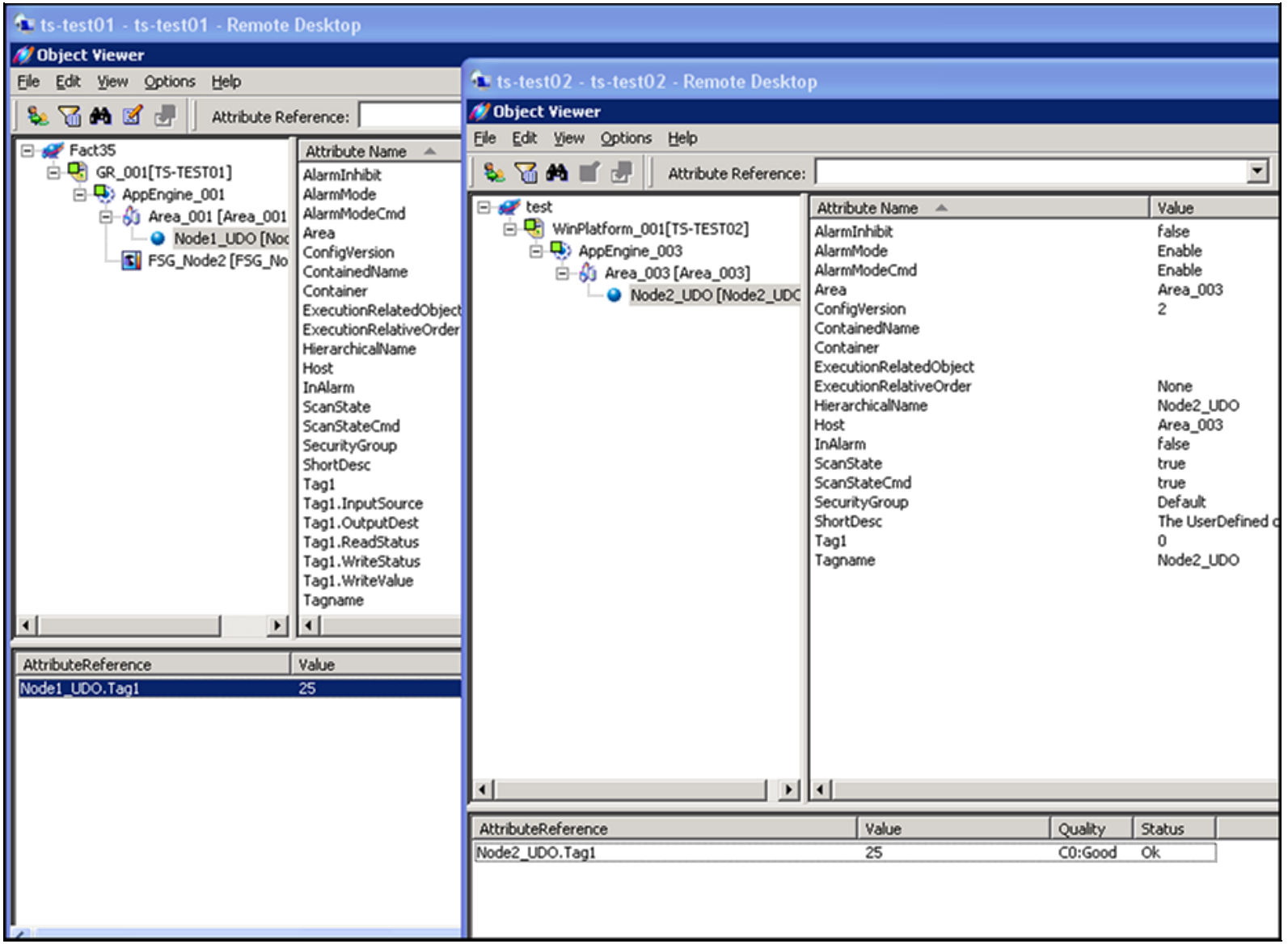

FIGURE 8: VALUES LINKED BETWEEN GALAXIES

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