Configuring Alarm Controls to Use a Galaxy Alarm Hot Backup Pair

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Introduction

This *Tech Note* explains the procedure for setting up Galaxy Alarm Hot Backup pair for the following InTouch controls:

- **Alarm Printer**

- **Alarm DB Logger Manager**

- **Alarm DB Viewer Control**

- **Alarm Viewer Control**

- **Alarm Client Control**

The Hot Backup pair is configured using the Alarm Hot Backup Manager application. The Alarm Hot Backup Manager is located under the **Tools** panel in Intouch WindowMaker.

You create the Hot Backup pair from two host nodes running Alarm provider applications.

Refer to **Tech Note 925 Configuring Alarm Hot Backup Using Galaxy Provider**. That Tech Note explains using a Galaxy Provider for configuring Alarm Hot Backup in the IDE, and from InTouch using **Galaxy** as the provider.

The Hot Backup pair name used in the folliwing graphic is **GalaxyPair**. The Hot Backup pair name can be anything.

> **Tip**: Some content in this *Tech Note* can appear more clearly using the browser's 150% zoom level.
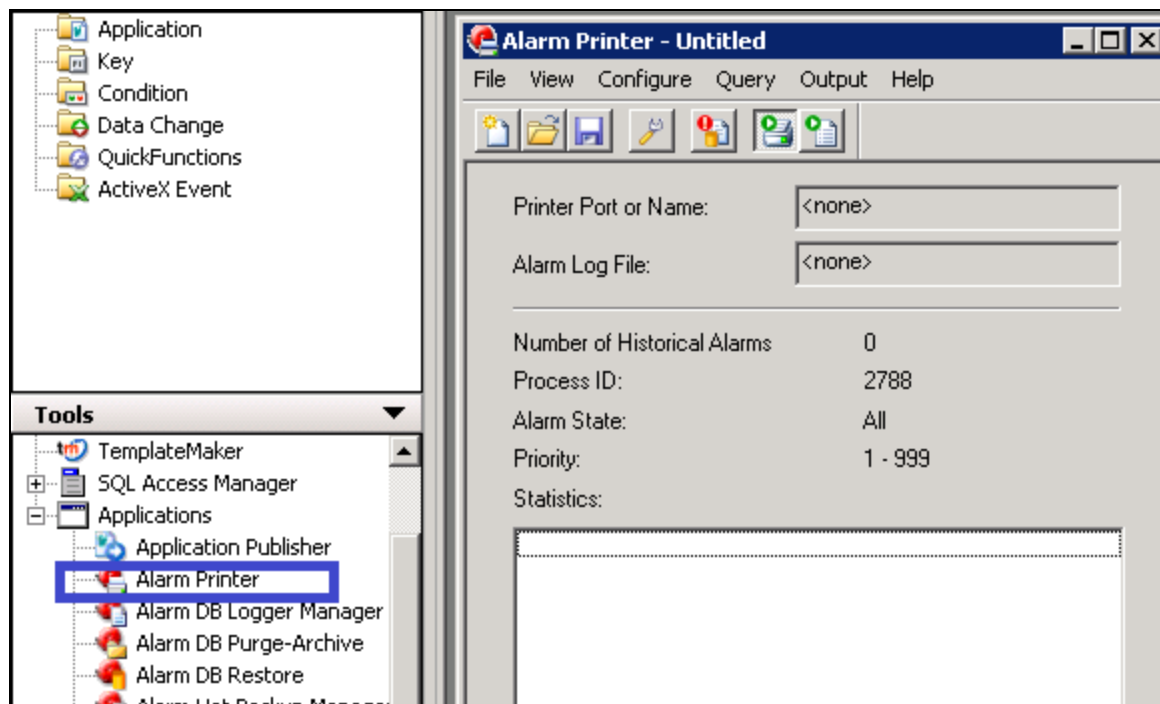
Application Versions

Using **Galaxy** as the Alarm Provider in Hot Backup is introduced in 2012 R2.

- InTouch 2012 R2 (10.6) and later.

> **Note:** The Hot Backup pair name is NOT case sensitive when used in the Controls.
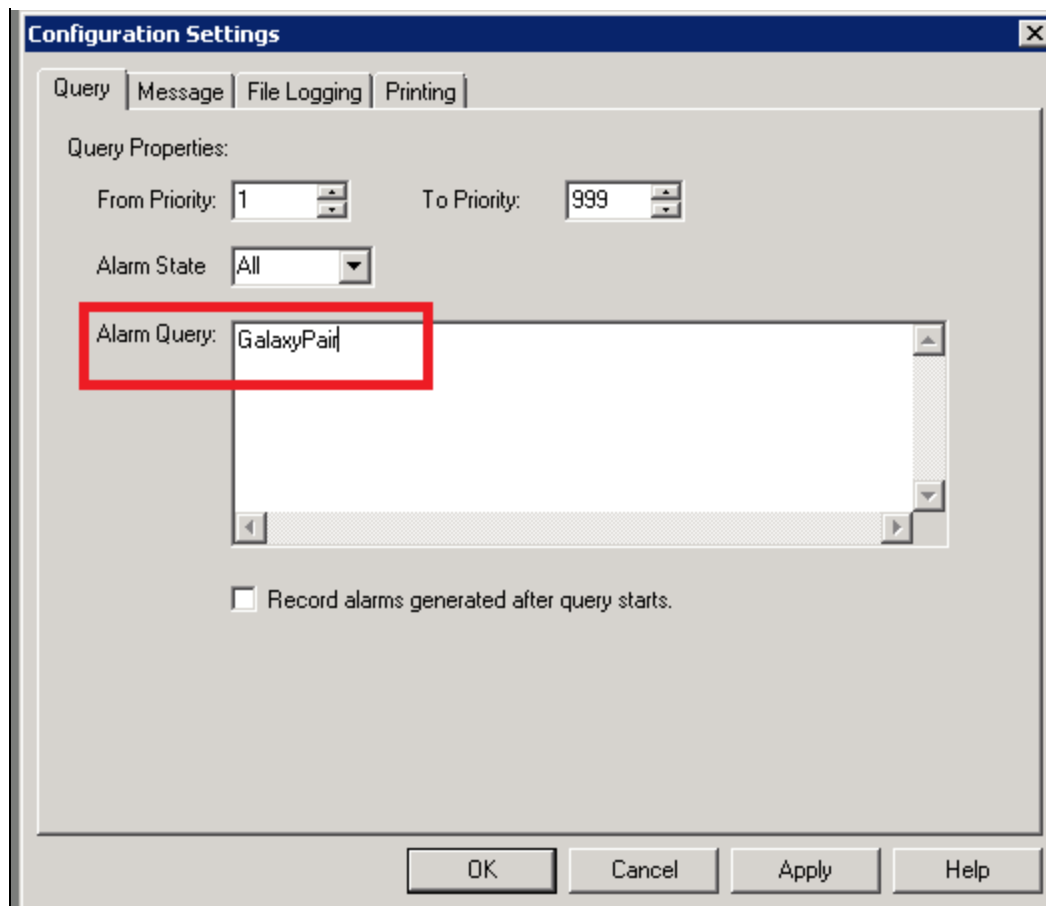
Configuring Alarm Printer to use Alarm Hot Backup Pair

1. In the WindowMaker Tools panel, expand **Applications**, then double-click **Alarm Printer**.

FIGURE 1: START ALARM PRINTER

2. Click **Configure** on the main menu, and type the Hot Backup name in the **Alarm Query** field. This example uses **GalaxyPair**.

FIGURE 2: PROVIDE THE HOTBACKUP NAME

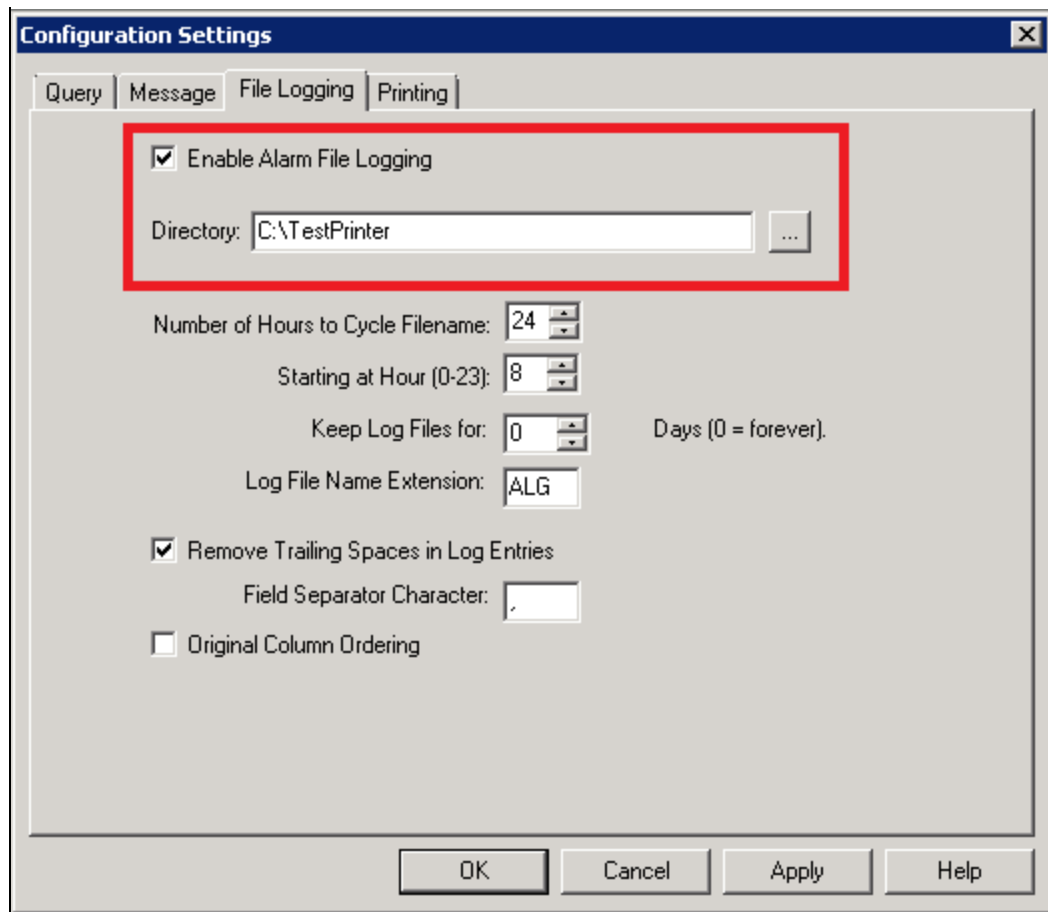3. Click the **File Logging** tab and provide a path to a local folder on your **C:** drive.

FIGURE 3: PROVIDE A FILE LOGGING LOCATION

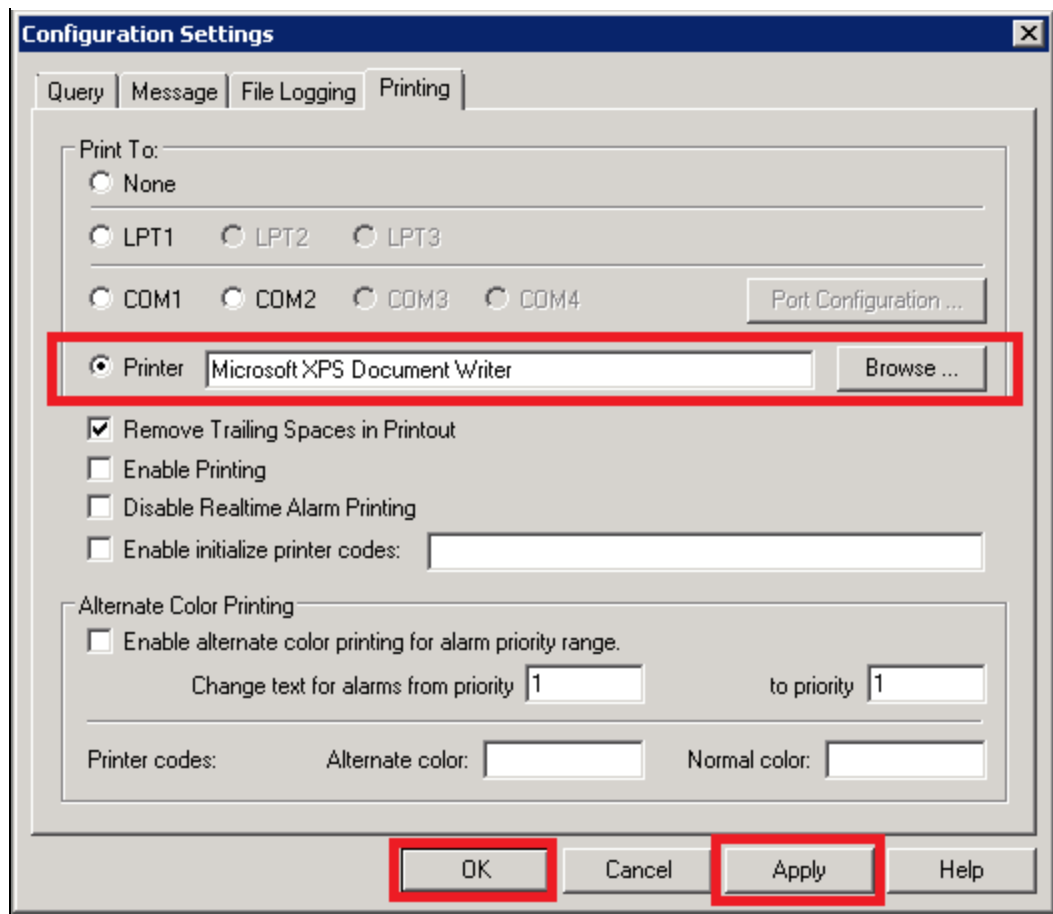4. Click the **Printing** tab and click the desired printer.

FIGURE 4: PROVIDE A PRINTER

5. Click **Apply** and then **OK**.

6. Save the **Configuration** by clicking **File/Save**.

7. Start Alarm Printing by clicking on **Query** then **Start.**

8. Printer Port and Alarm Log File appears in the Alarm Printer window.
   - Statistics is 100% for both Primary and Secondary. (Both Primary and Secondary are Running On Scan)
   - the ALG file is generated in the specified location. In this example, the Configuration File is saved in **C:\TestPrinter**.
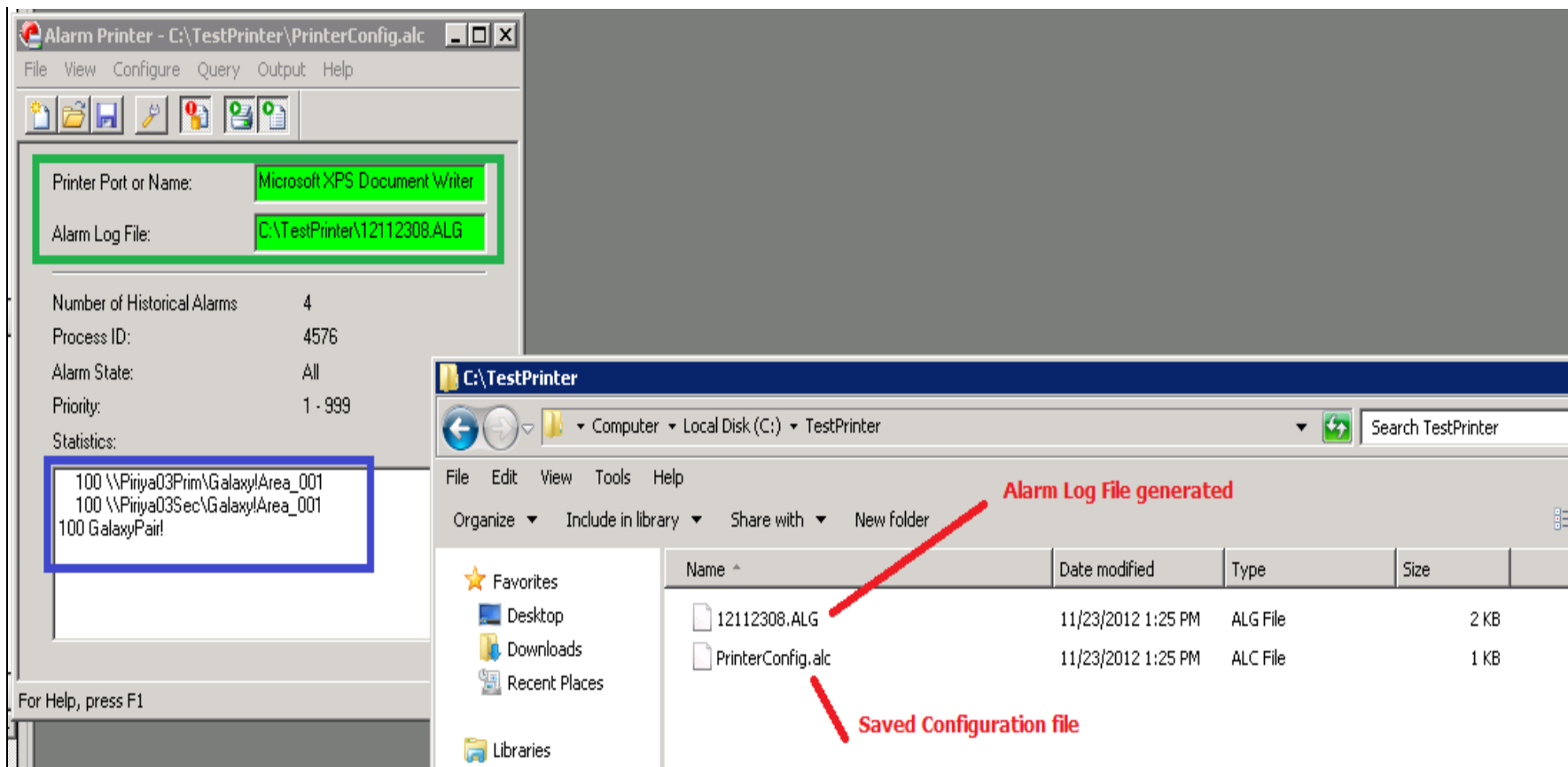
FIGURE 5: ALARM PRINTER (IN RUNTIME) AND OUTPUT LOCATION

9. Open the ALG file using Notepad.

FIGURE 6: ALG FILE IN NOTEPAD

Note: Normally Alarm Printer is configured to print to an actual printer in a production environment. This Tech Note shows writing to a file. This file can be later printed to maintain paper records of the alarms.

Configuring Alarm DB Logger Manager to use Alarm Hot Backup Pair

The AlarmDBLoggerManager should be run on a machine that is neither the primary nor the backup node. The client machine that runs AlarmDBLoggerManager should use the Hot Backup pair name as the alarm query. This ensures that the alarms from one of the alarm hot backup pair nodes will be logged correctly.

1. In WindowMaker, expand **Applications** and double-click **Alarm DB Logger Manager** in the **Tools** panel.

2. Provide the information shown in Figure 7 (below) and click **Test Connection**.

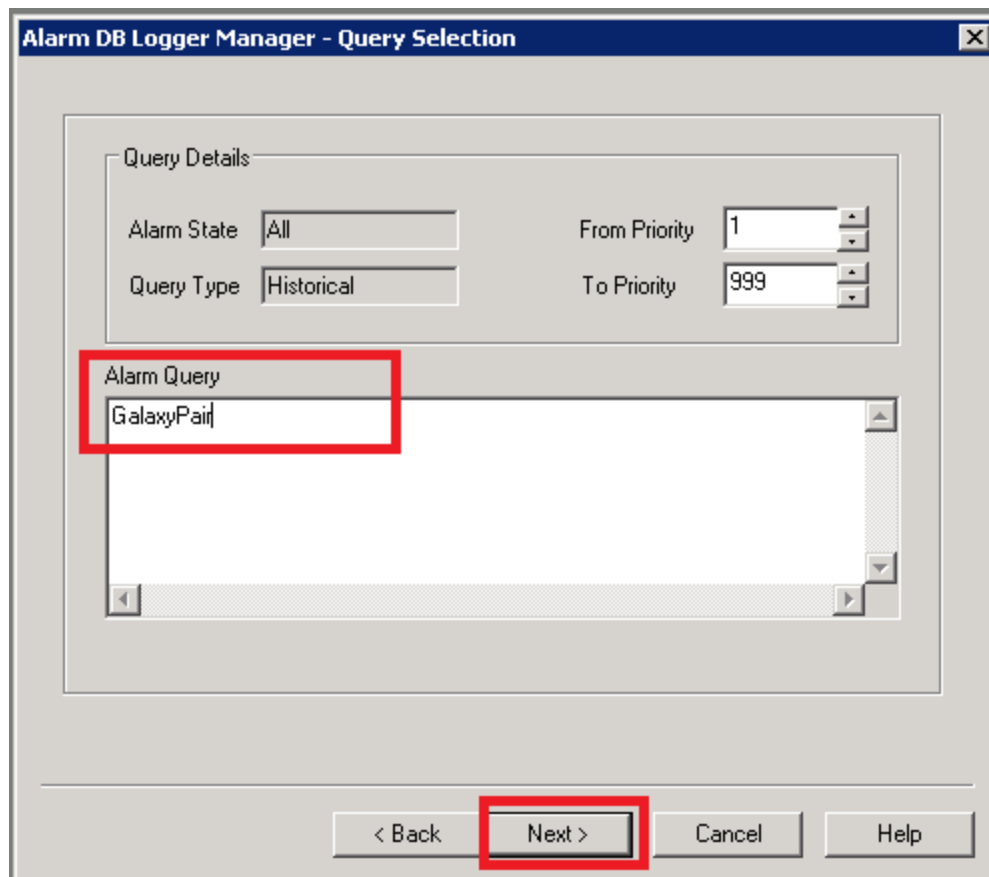3. When the **Success** notification appears, click **OK**, then **Next**.
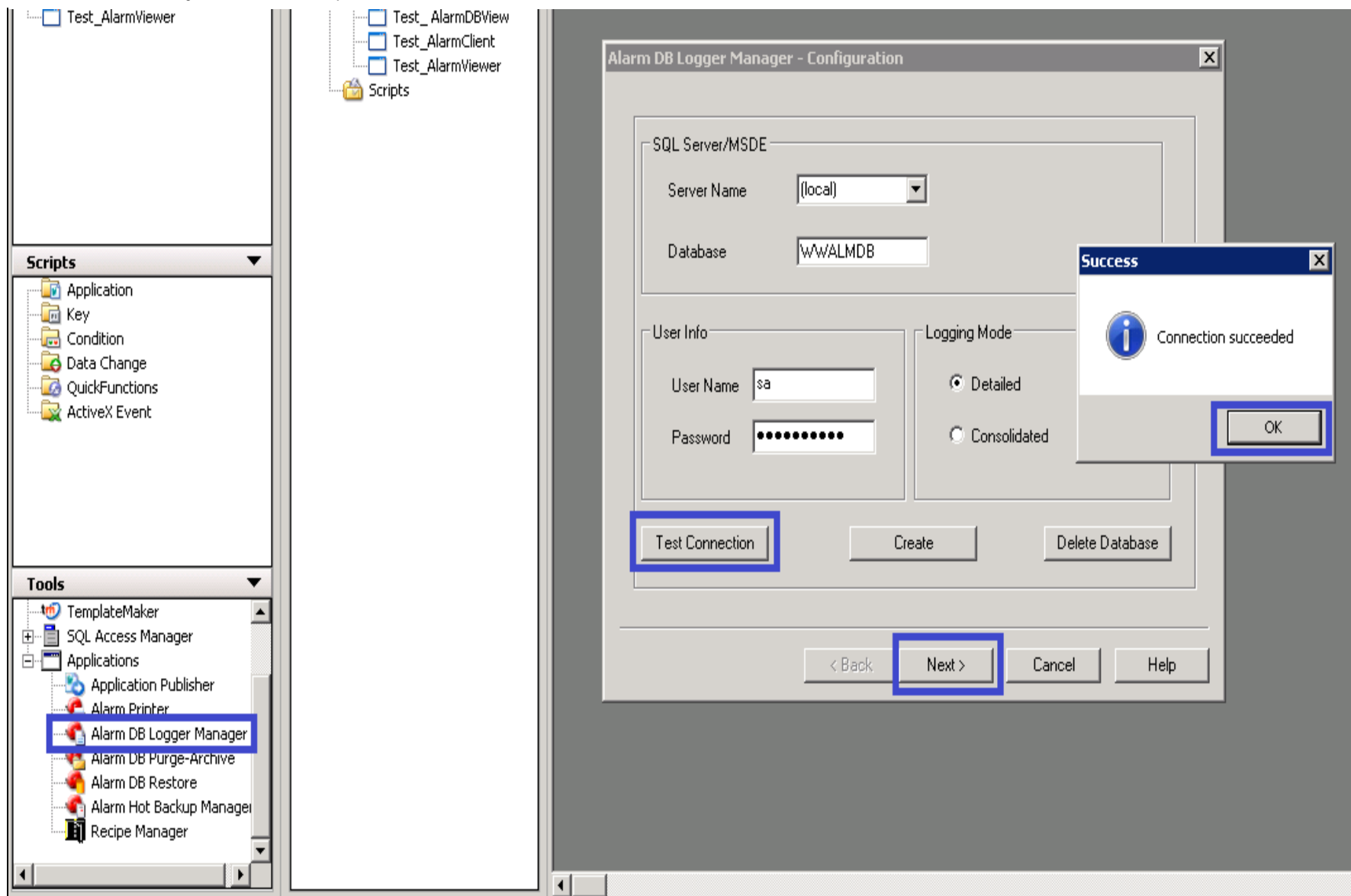
FIGURE 7: CONNECT ALARM DB LOGGER MANAGER

4. Type the Hot Backup name (**GalaxyPair**) in the **Alarm Query** field and click **Next** (Figure 7 below).

FIGURE 8: PROVIDE THE HOT BACKUP NAME

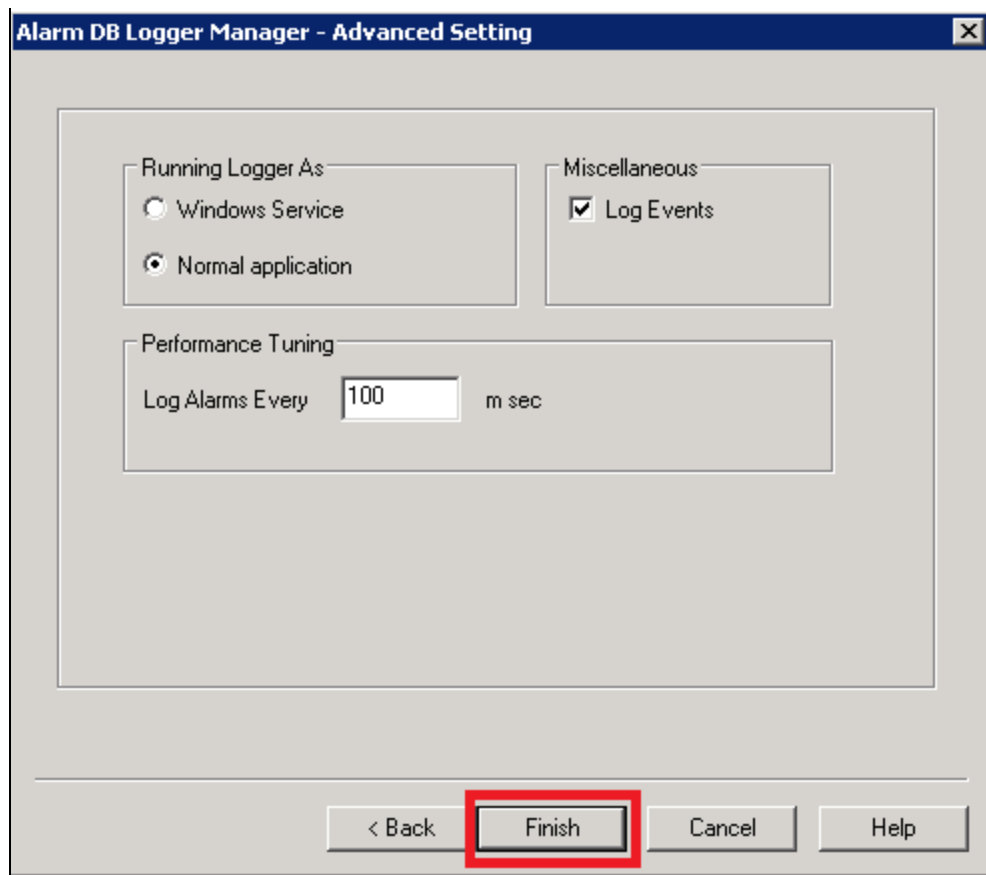5. For this example, leave the default settings and click **Finish** (Figure 8 below).

FIGURE 9: FINISH THE CONFIGURATION

6. When the **Alarm DB Logger Manager** window appears, click **Start**, then close the Alarm DB Logger Manager window (Figure 9 below).
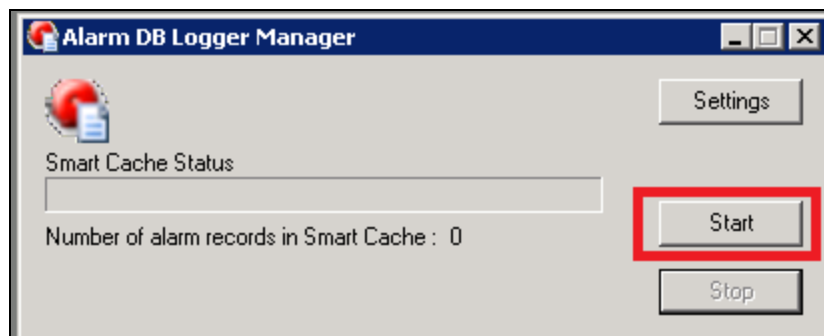

FIGURE 10: START AND CLOSE THE ALARM DB LOGGER MANAGER

Configuring Alarm DB View Control to use Alarm Hot Backup Pair

1. Open WindowMaker and create a new window called **Test_ AlarmDBView**.

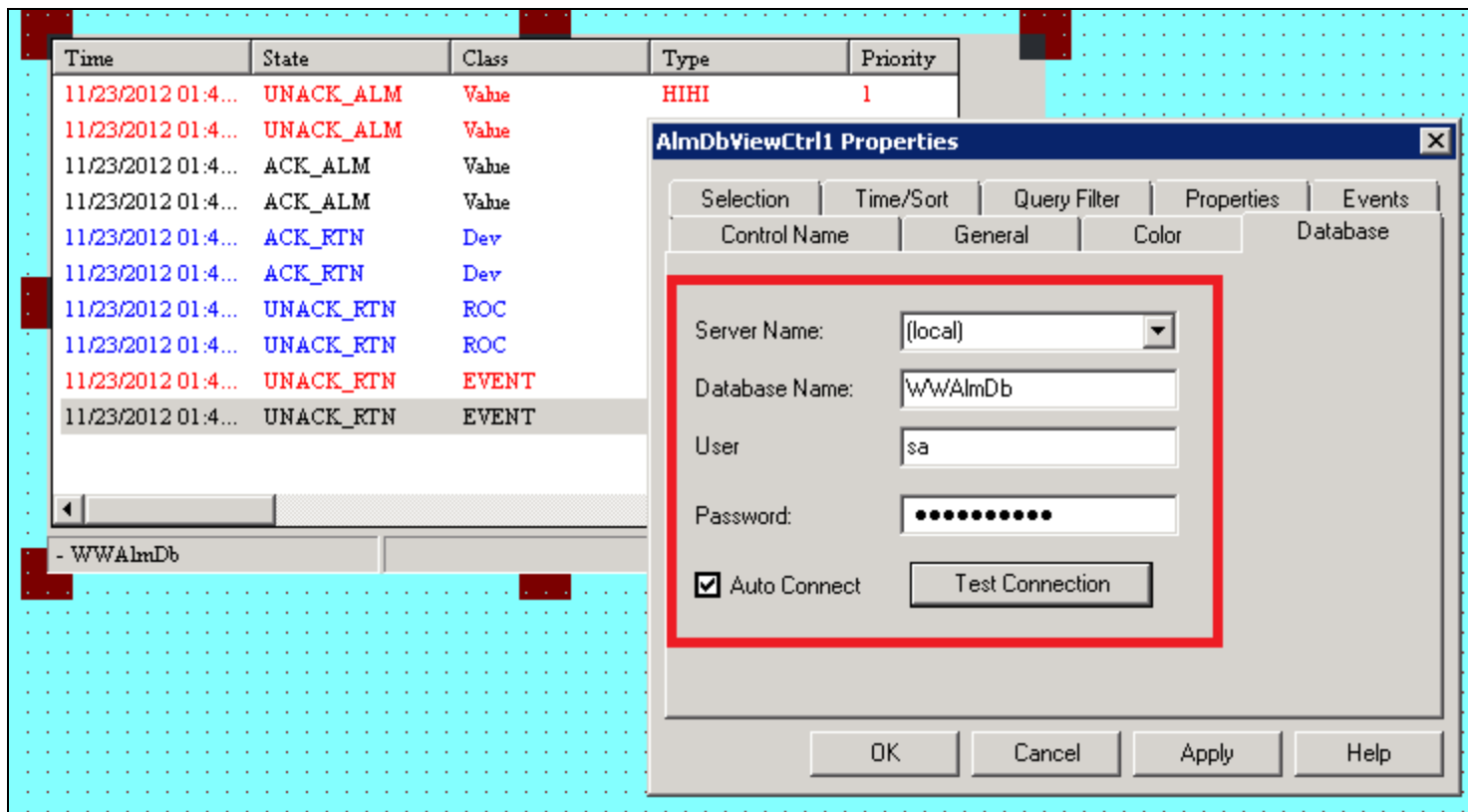2. Place the **Alarm DB View** control in the window. Provide the Database details shown in step ##.
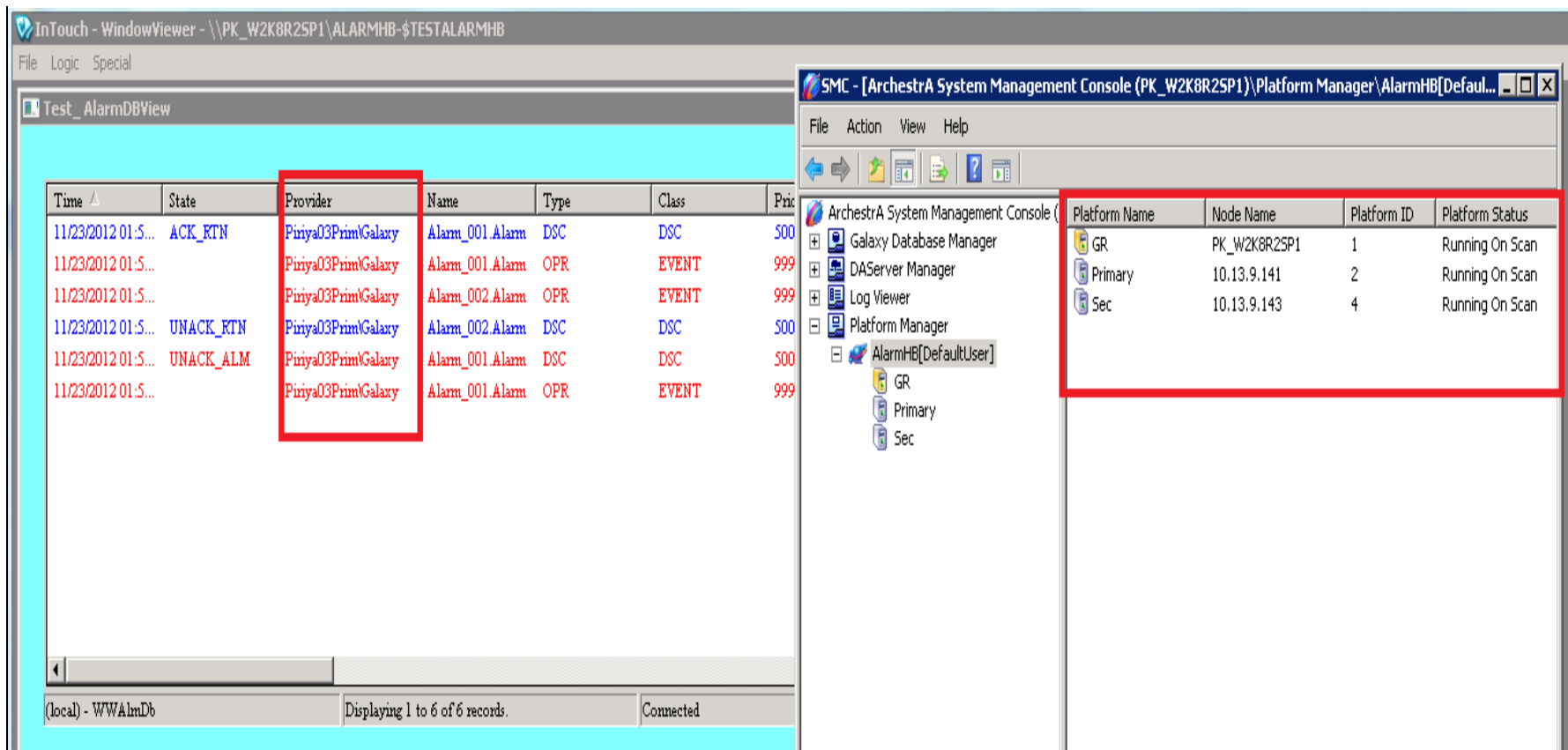
3. Click **Apply**, then **OK**.

FIGURE 11: ALARM DB VIEW CONTROL

4. Switch to WindowViewer.

• In this example, the window shows both the Primary and Secondary Platforms running. The Primary Platform Provider is **Piriya03Prim\Galaxy** (Figure 11 below).

FIGURE 12: PRIMARY AND SECONDARY PLATFORMS WITH A COMMON GALAXY PROVIDER

• When the Primary Platform is Shutdown, the provider is the Secondary Platform: **Piriya03Sec\Galaxy** (Figure 12 below).

• Notice that originally there were 6 records, and now there are 12 records. The alarms are now logged under Secondary Platform.

FIGURE 13: PRIMARY PROVIDER IS SHUTDOWN

• Start the Primary Platform On Scan. The Provider switches back to **Primary** (Figure 13 below).
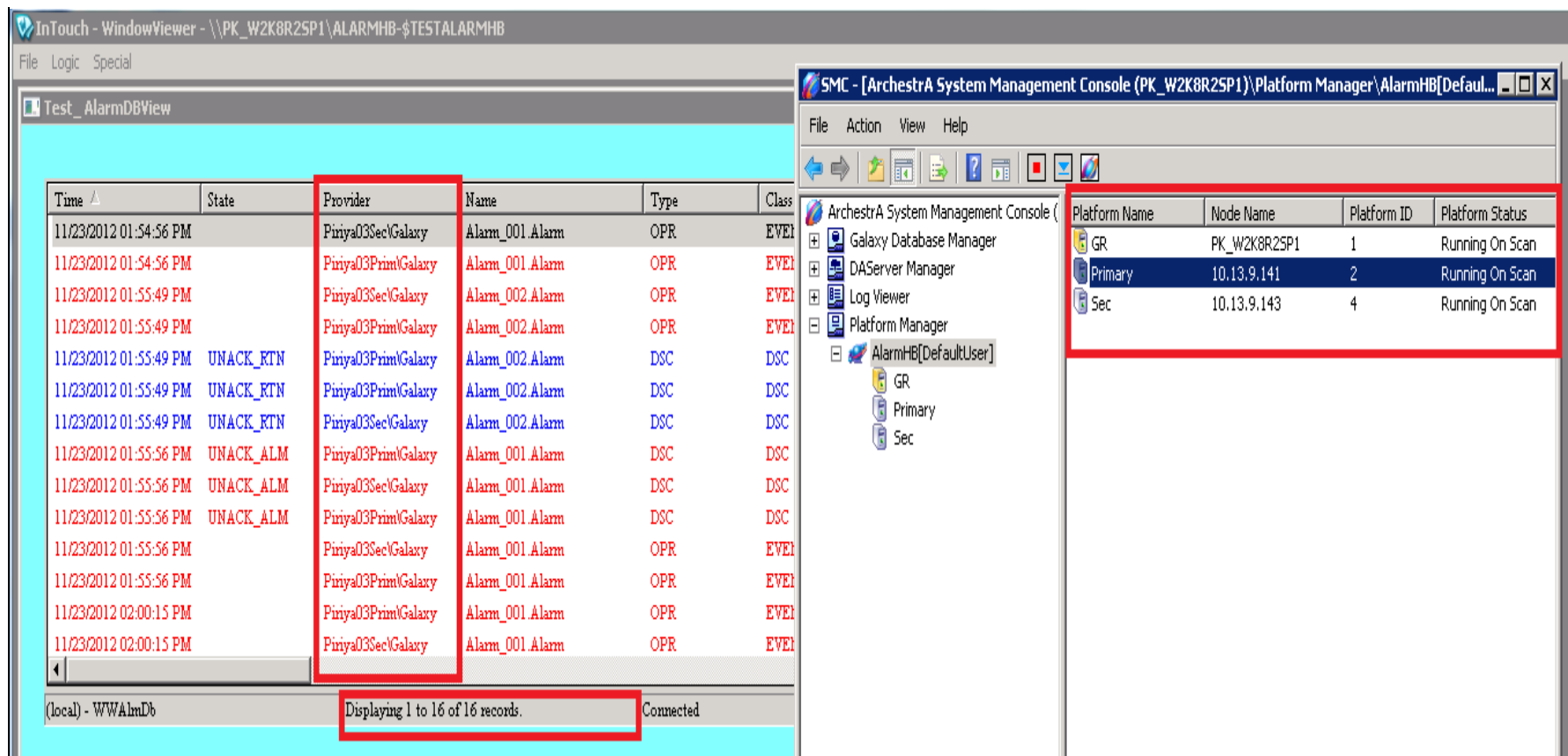
FIGURE 14: PRIMARY RESTARTED

Configuring Alarm Viewer Control to use Alarm Hot Backup Pair

1. In WindowMaker, create new Window called **Test_AlarmViewer**.

2. Place the **AlarmViewer** control in the window.

3. Configure the Alarm Viewer Control to use the Alarm Hot Backup by providing **Galaxypair** for the alarm query.
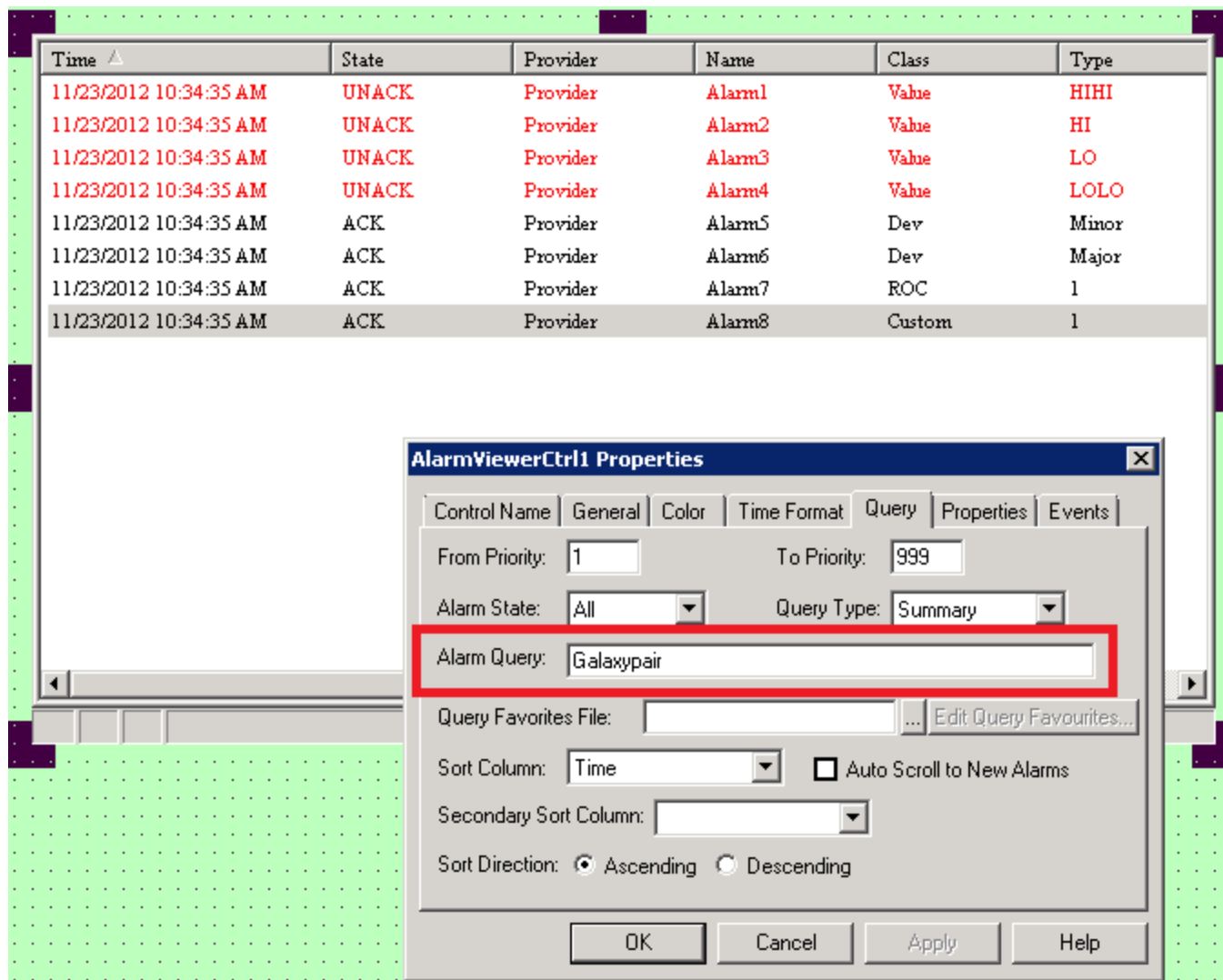
Time △	State	Provider	Name	Class	Type
11/23/2012 10:34:35 AM	UNACK	Provider	Alarm1	Value	HIHI
11/23/2012 10:34:35 AM	UNACK	Provider	Alarm2	Value	HI
11/23/2012 10:34:35 AM	UNACK	Provider	Alarm3	Value	LO
11/23/2012 10:34:35 AM	UNACK	Provider	Alarm4	Value	LOLO
11/23/2012 10:34:35 AM	ACK	Provider	Alarm5	Dev	Minor
11/23/2012 10:34:35 AM	ACK	Provider	Alarm6	Dev	Major
11/23/2012 10:34:35 AM	ACK	Provider	Alarm7	ROC	1
11/23/2012 10:34:35 AM	ACK	Provider	Alarm8	Custom	1

AlarmViewerCtrl1 Properties ☒

Control Name | General | Color | Time Format | Query | Properties | Events

From Priority: 1   To Priority: 999

Alarm State: All ▼   Query Type: Summary ▼

Alarm Query: Galaxypair

Query Favorites File: [   ] ... Edit Query Favourites...

Sort Column: Time ▼   ☐ Auto Scroll to New Alarms

Secondary Sort Column: [▼]

Sort Direction: ⦿ Ascending ◯ Descending

OK   Cancel   Apply   Help

FIGURE 15: GALAXYPAIR FOR ALARMVIEWER CONTROL

4. Switch to WindowViewer and note the following:

   • The provider is **\\Piriya03Prim\Galaxy**. The Primary node is providing the alarms.

5. Right-click on the AlarmViewer control and select **Stats**.
   • The Hot Backup pair – GalaxyPair is querying 100%.
   • Notice that alarms are being pulled from both primary and secondary at 100% since both are available.
   • Use the SMC to verify that the Primary and Secondary Platforms are Running On Scan.
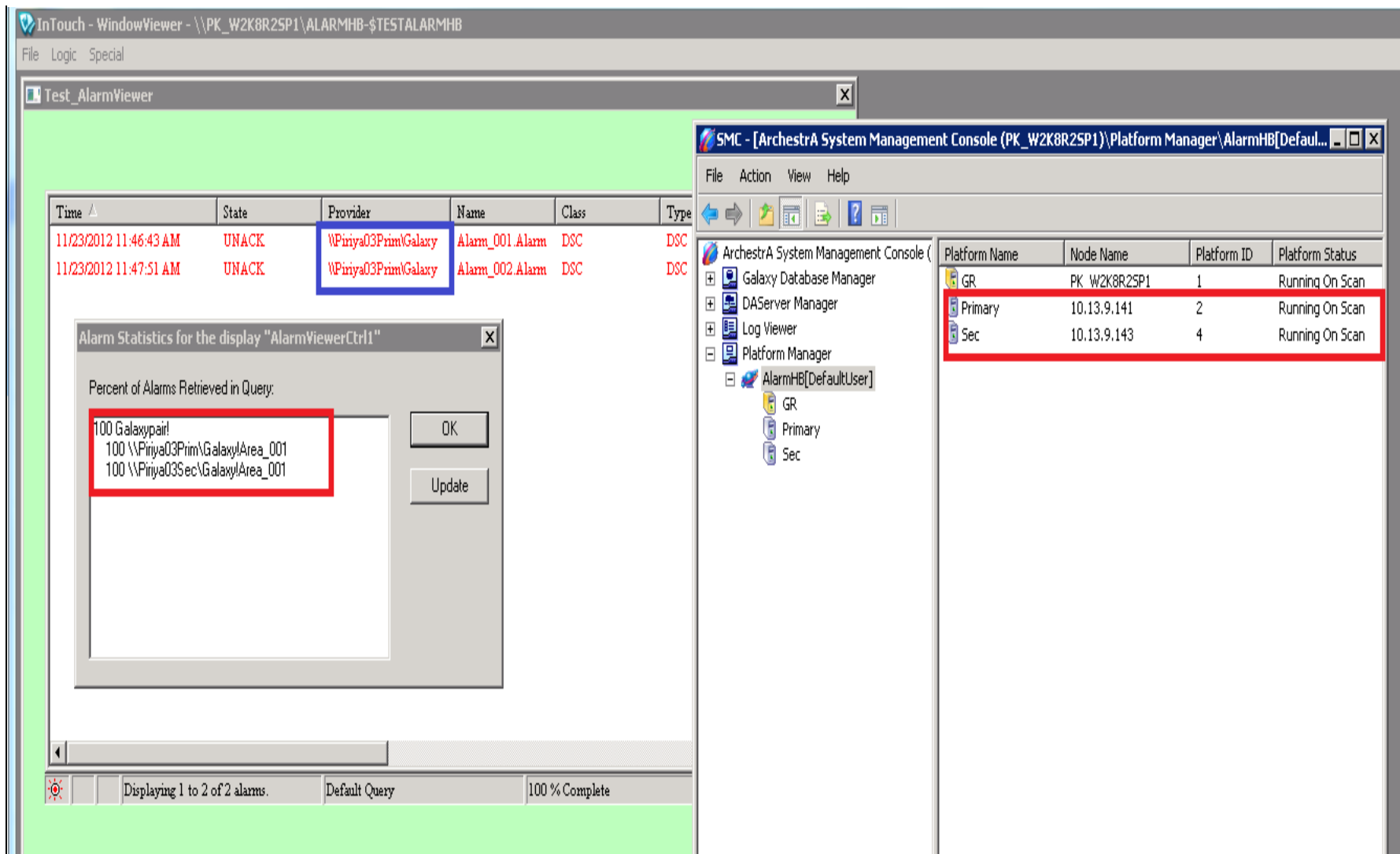
FIGURE 16: ALARMVIEWERCTRL IN RUNTIME

6. Stop the Primary Platform using the SMC. Then click the **Update** button in the **Alarm Statistics** window.
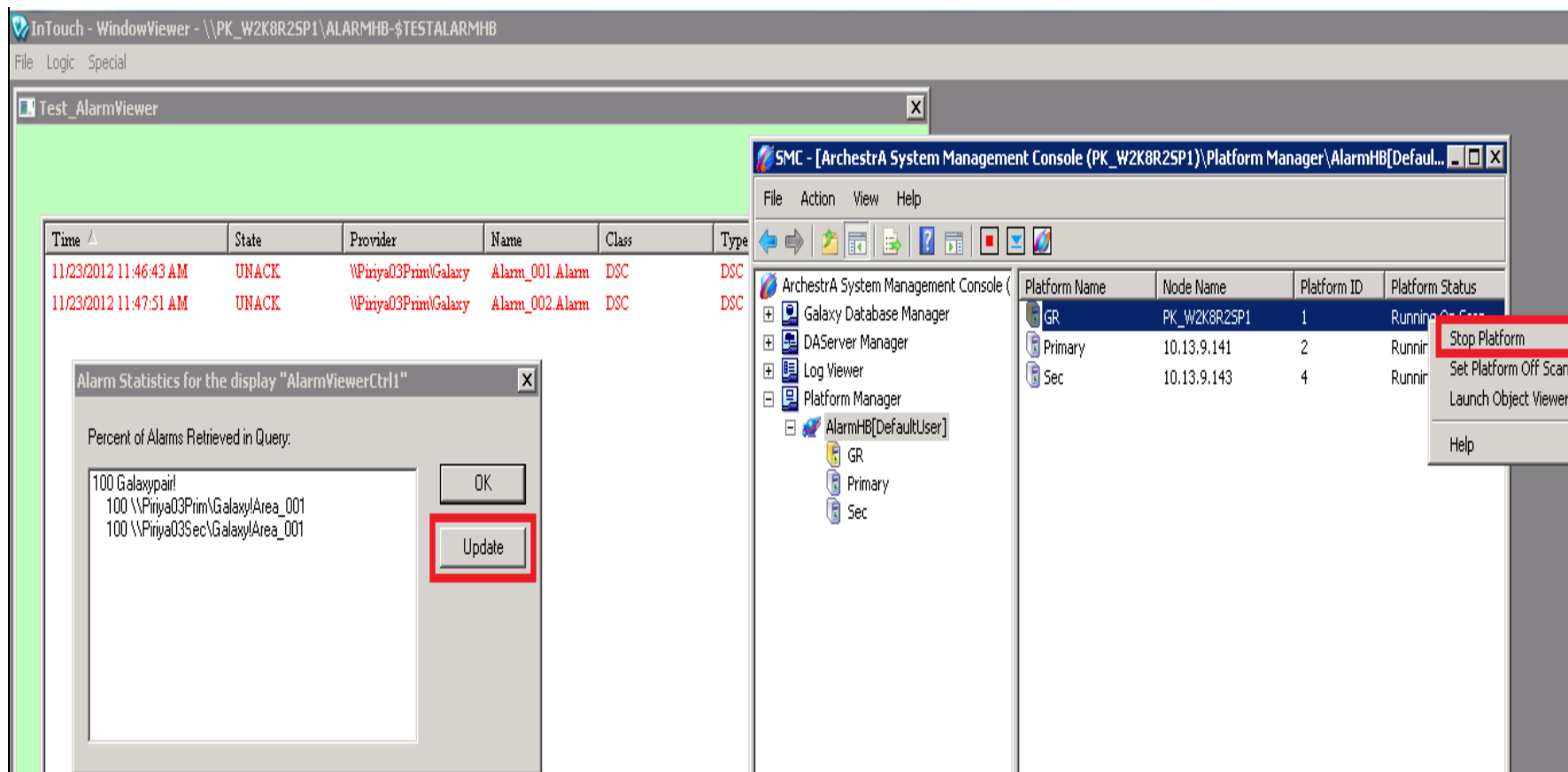
FIGURE 17: UPDATE ALARMVIEWERCTRL AFTER STOPPING THE PRIMARY PLATFORM

7. Note the following:

   • The provider is now **\\Piriya03Sec\Galaxy**. The Secondary node is now providing the alarms.

8. Right click on the AlarmViewer control and select stats.

   • The Hot Backup pair – GalaxyPair is querying 100%.
   • The Primary Platform is querying 0% since it is shutdown.
   • The Secondary Platform is querying 100%.

   In SMC, note that the Primary Platform is Shutdown and Secondary Platform is Running On Scan.

FIGURE 18: PRIMARY PLATFORM IS SHUTDOWN

Note: If the Secondary Platform is shutdown and the Primary is running on scan, the overall percentage of Alarms Retrieved in Query is at 100%, however the query is 0% for Secondary platform.

FIGURE 19: QUERY PERCENTAGES FOR BOTH PLATFORMS

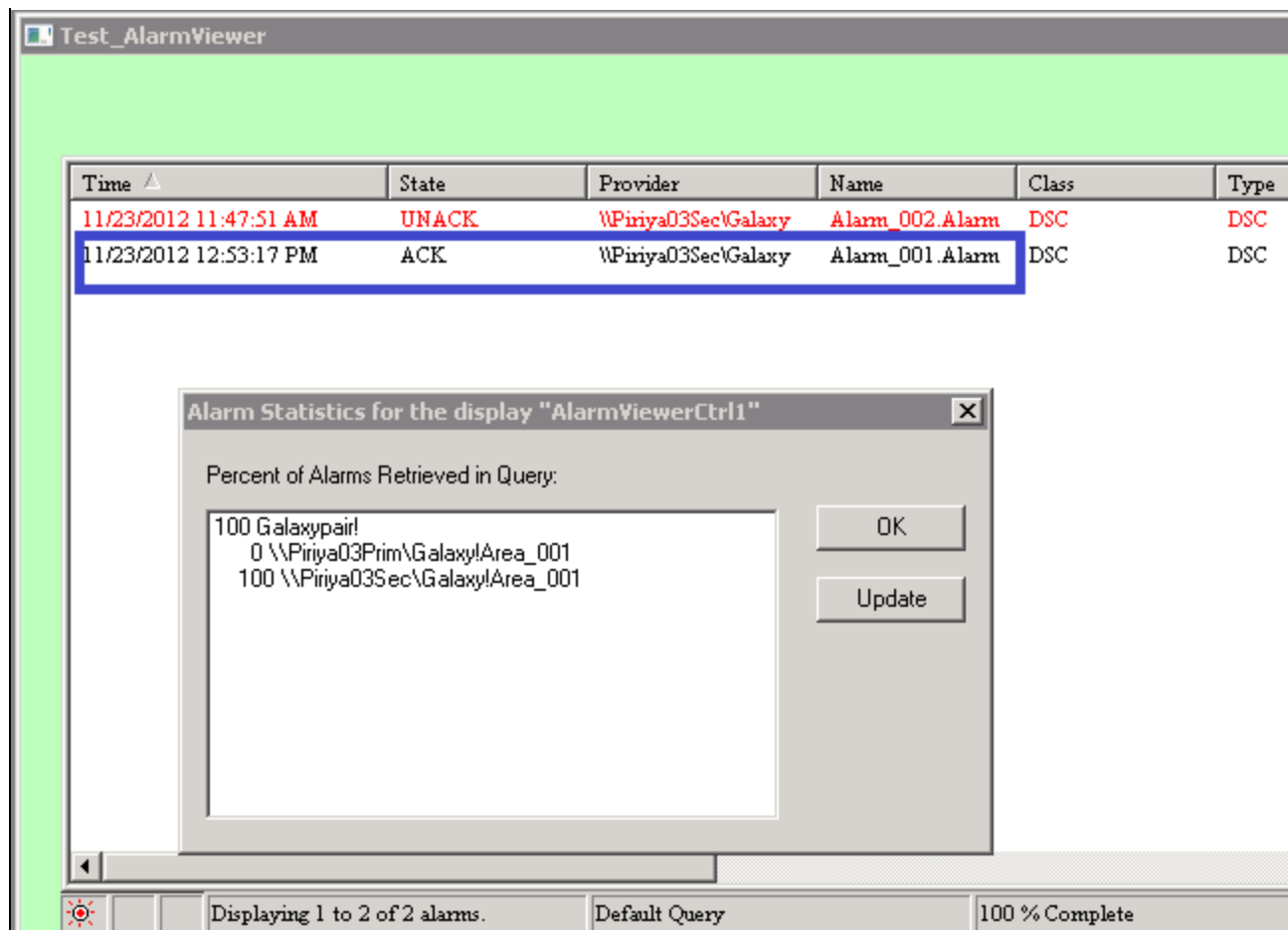9. When the Provider is Secondary Platform, acknowledge Alarm_001.

FIGURE 20: ACK THE ALARM

10. Start the Primary Platform using the SMC and click **Update**.

11. Note the following:
   • The Provider reverts to **\\Piriya03Prim\Galaxy**.
   • The Alarm_001 **Acknowledged** state is duplicated from the Secondary to the Primary Platform.
   • The query for GalaxyPair, Primary and Secondary is 100%.
   • The SMC shows the Primary and Secondary Platforms are Running On Scan.
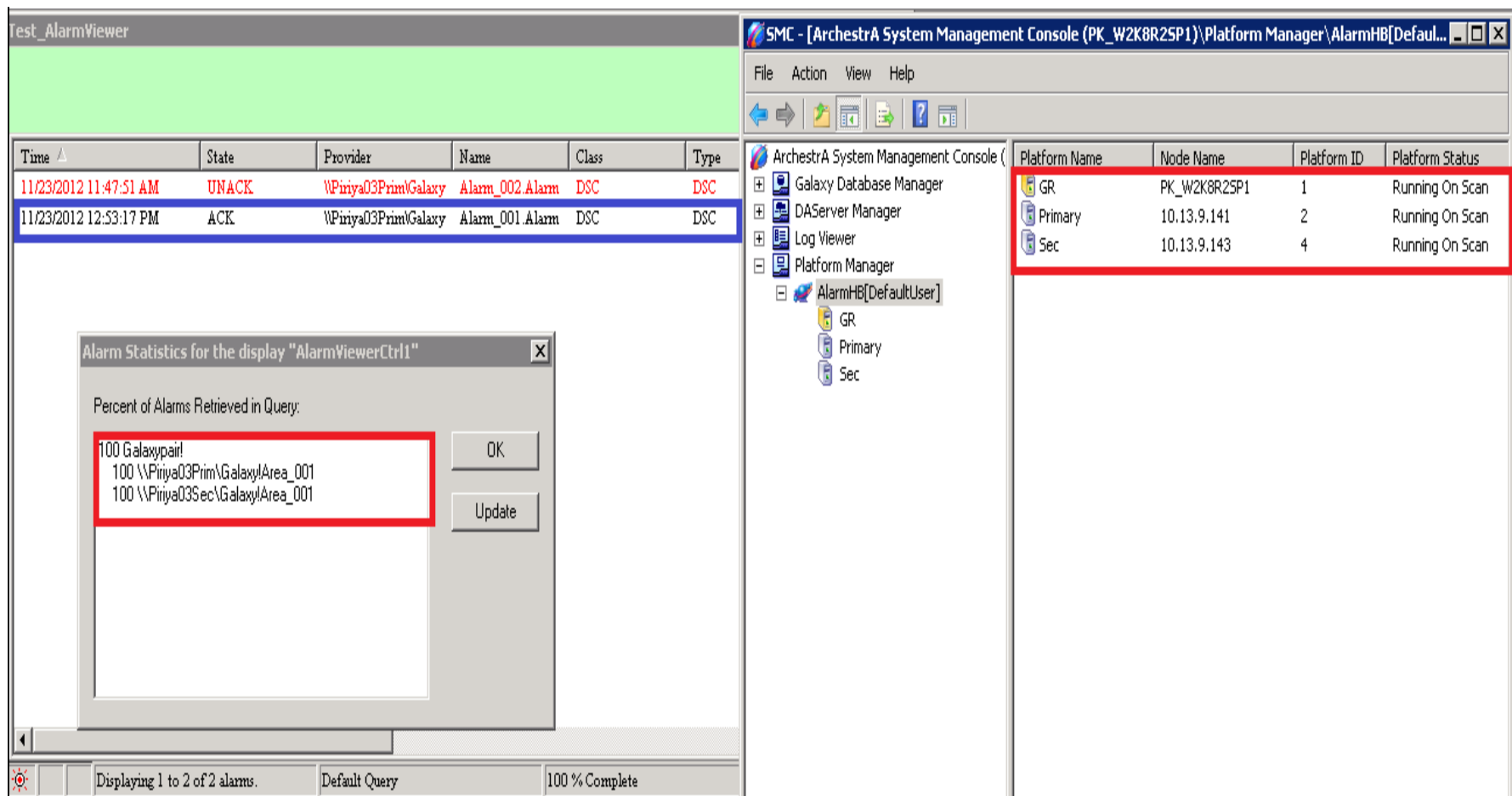
**FIGURE 21: ACK IS DUPLICATED TO PRIMARY PLATFORM**

Configuring the Alarm Client Control to use Alarm Hot Backup Pair

1. In the IDE, go to Graphic Toolbox.

2. Create a new Symbol and rename it to **AlarmClient1**.

3. Open AlarmClient1 using the Archestra Graphic Editor.

4. Place an Alarm Client Control into the graphic from the Tools pane in Archestra Graphics Editor.

5. Right-click on the Alarm Client Control and click **Edit Animations**.

6. Configure the Alarm Client Control as shown in Figure 22 (below).
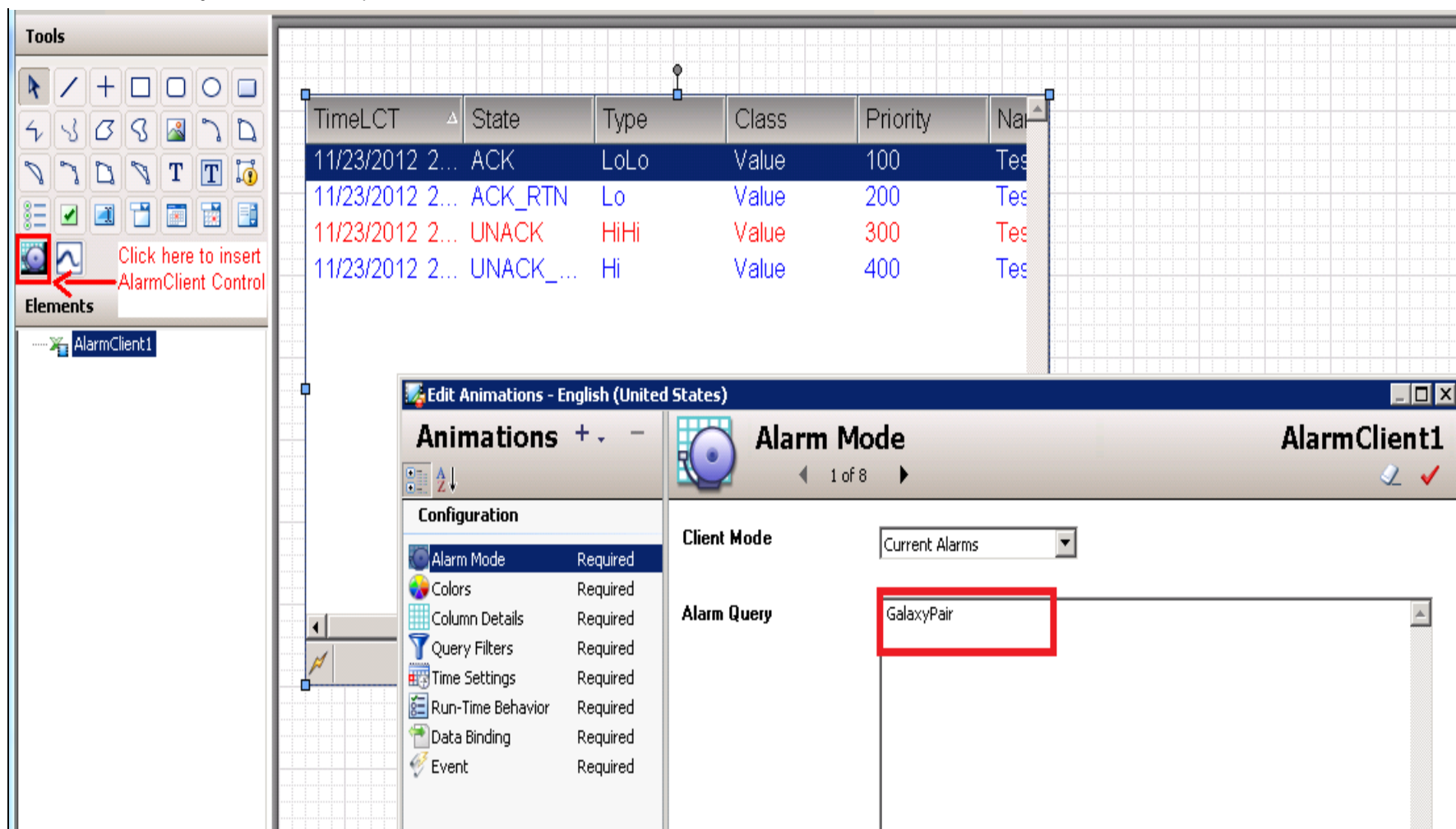
FIGURE 22: EDIT THE ALARM CLIENT CONTROL

7. In WindowViewer, create a new Window called **Test_AlarmClient**.

8. Place the Alarm Client Control on the window.

9. Switch to WindowViewer.

   • The Provider is **\\Piriya03Prim\Galaxy**. The Primary node is providing the alarms.

10. Right-click the AlarmClient control and click **Statistics**.
    • The Hot Backup pair – GalaxyPair is querying 100%.
    • Alarms are pulled from both primary and secondary at 100% since both are available.
    • The SMC shows Primary and Secondary Platforms are **Running On Scan**.
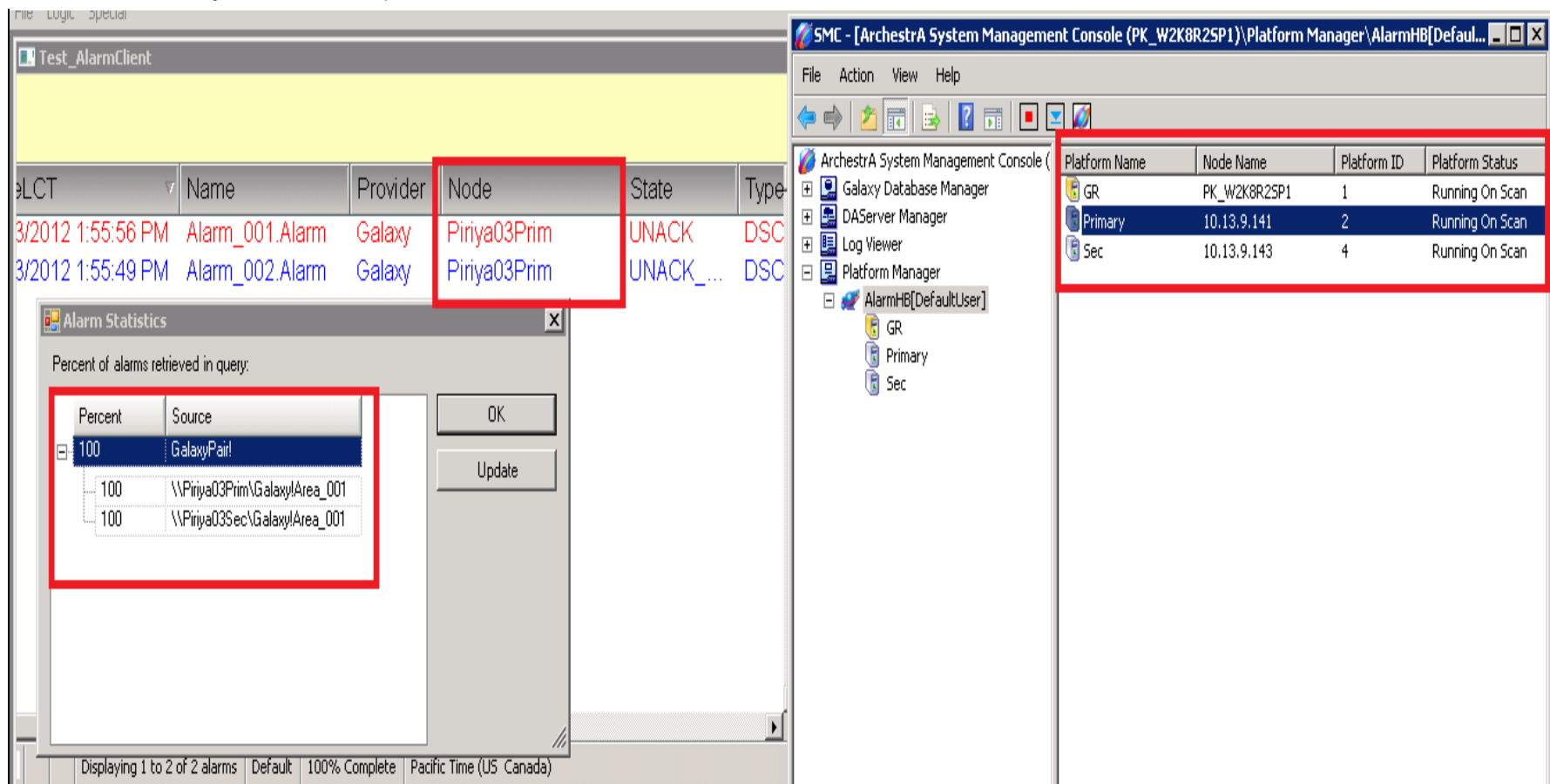
FIGURE 23: GALAXYPAIR STATISTICS

11. Stop the **Primary** Platform in the SMC, then click the **Update** button in the Alarm Statistics window.

12. Note the following:
    • The provider is **\\Piriya03Sec\Galaxy**. The Secondary node is providing the alarms.

13. Right-click on the AlarmViewer control and click **Statistics**.
    • The Hot Backup pair – GalaxyPair is querying 100%.
    • Primary Platform is querying 0% since it is shutdown.
    • The Secondary Platform is querying 100%.
    • In the SMC, the Primary Platform is Shutdown and the Secondary Platform is Running On Scan.
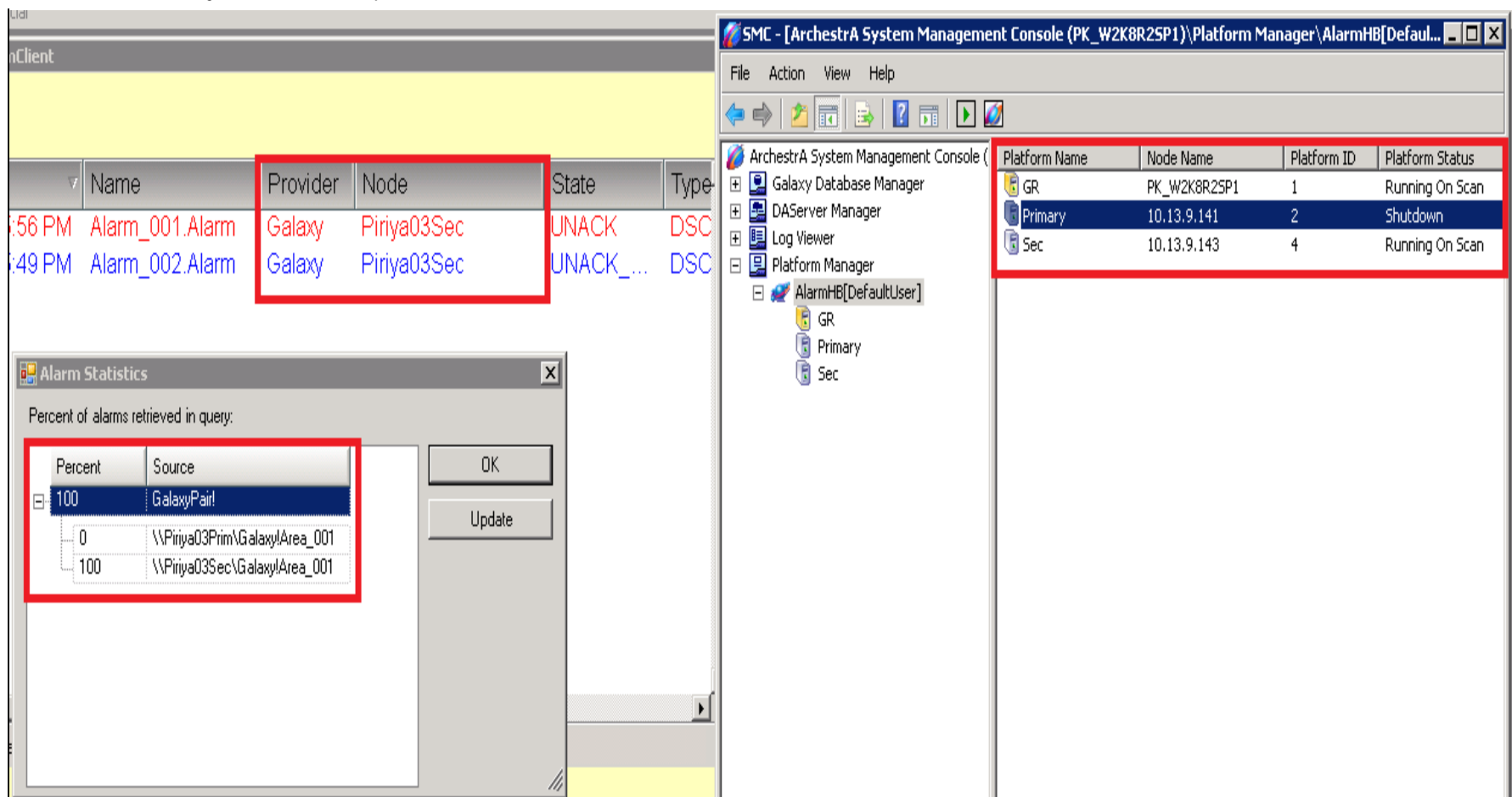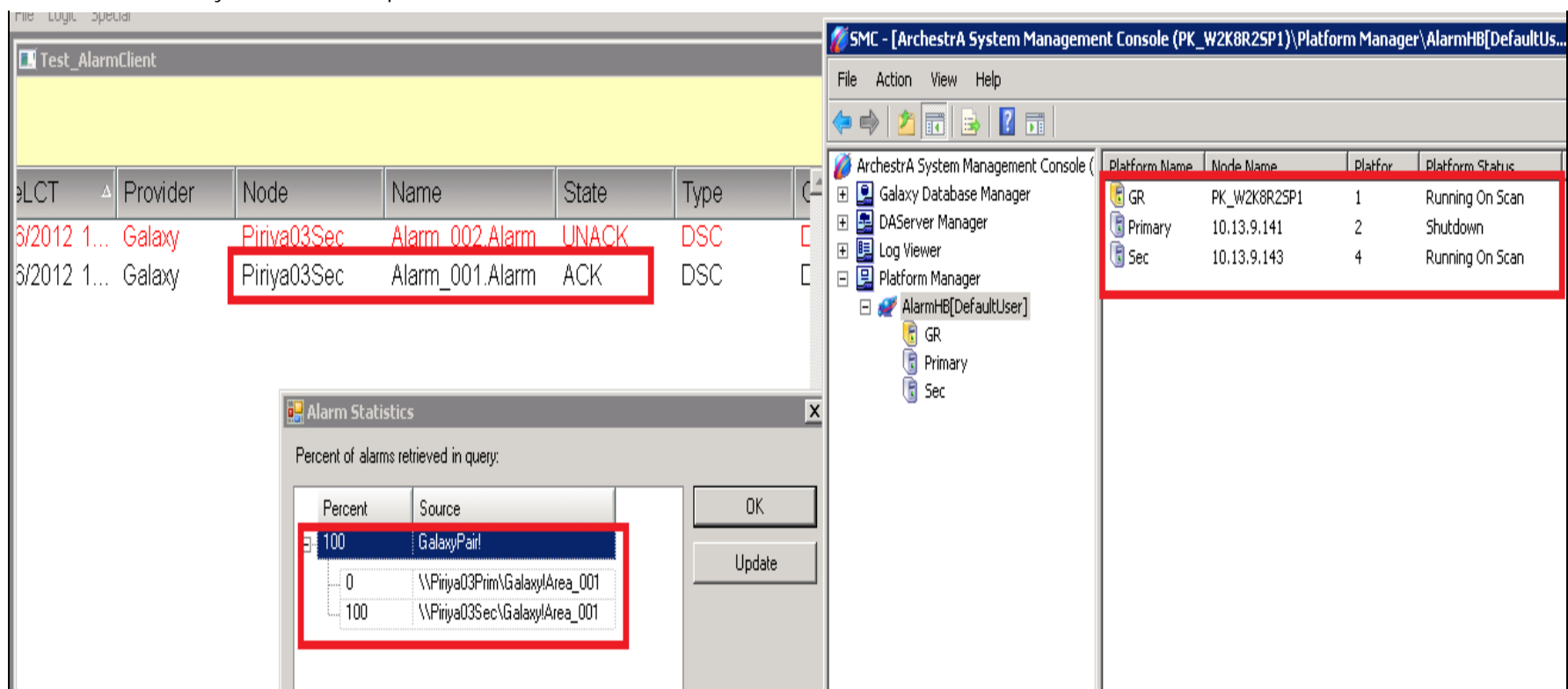
FIGURE 24: PRIMARY PLATFORM SHUTDOWN

14. Acknowledge **Alarm_001**.

FIGURE 25: ACK THE ALARM PROVIDED BY THE SECONDARY PROVIDER PLATFORM

15. Start the **Primary** Platform using the SMC and click **Update** in the Alarm Statistics window.
    • The provider reverts to **\\Piriya03Prim\Galaxy**.
    • Alarm_001 is acknowledged.
    • The query for GalaxyPair, Primary and Secondary is 100%
    • The Primary and Secondary are Running On Scan.
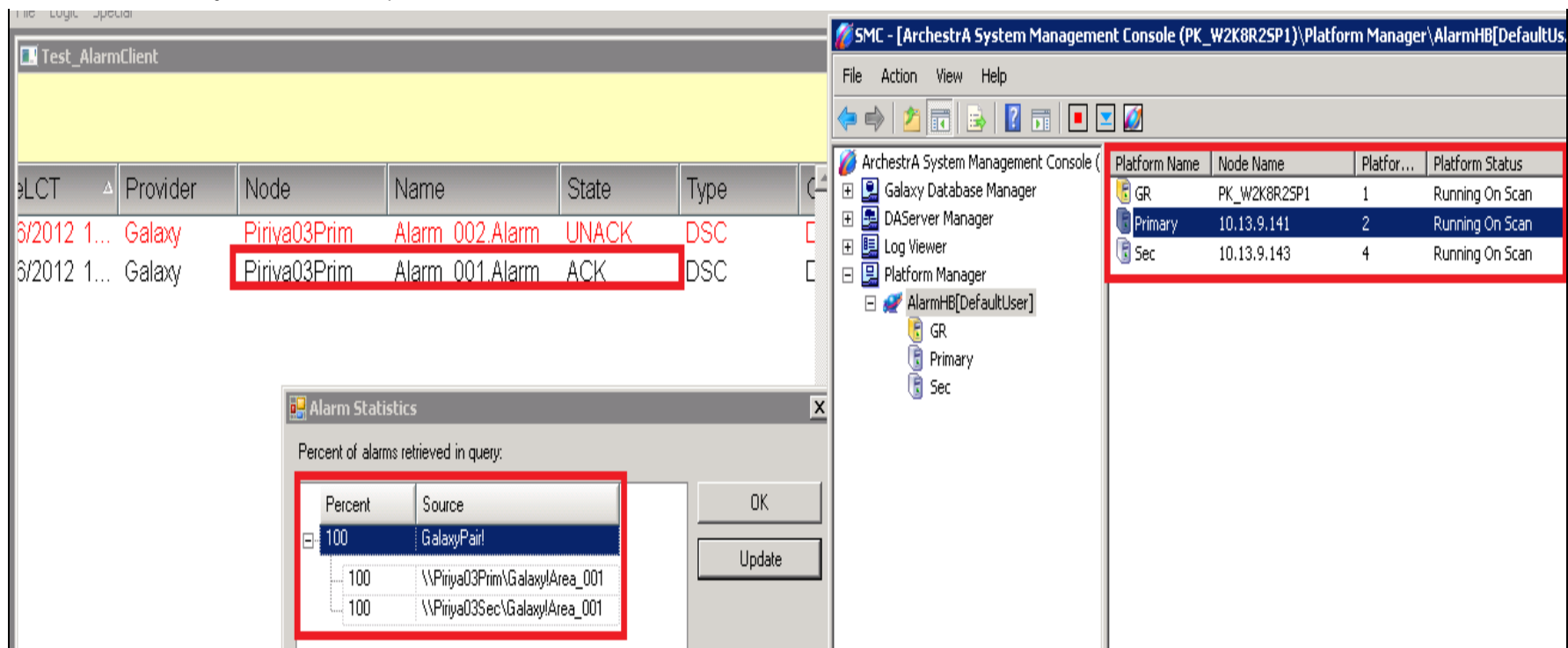
FIGURE 26: BOTH PROVIDERS RUNNING ON SCAN

Note that the behavior of Alarm Client Control in Historical mode is similar to Alarm DB View Control.

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For technical support questions, send an e-mail to **wwsupport@invensys.com**.

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