



Setup Examples

Redundant Alarm Monitoring Configuration Example

Redundant Alarm Configuration Example

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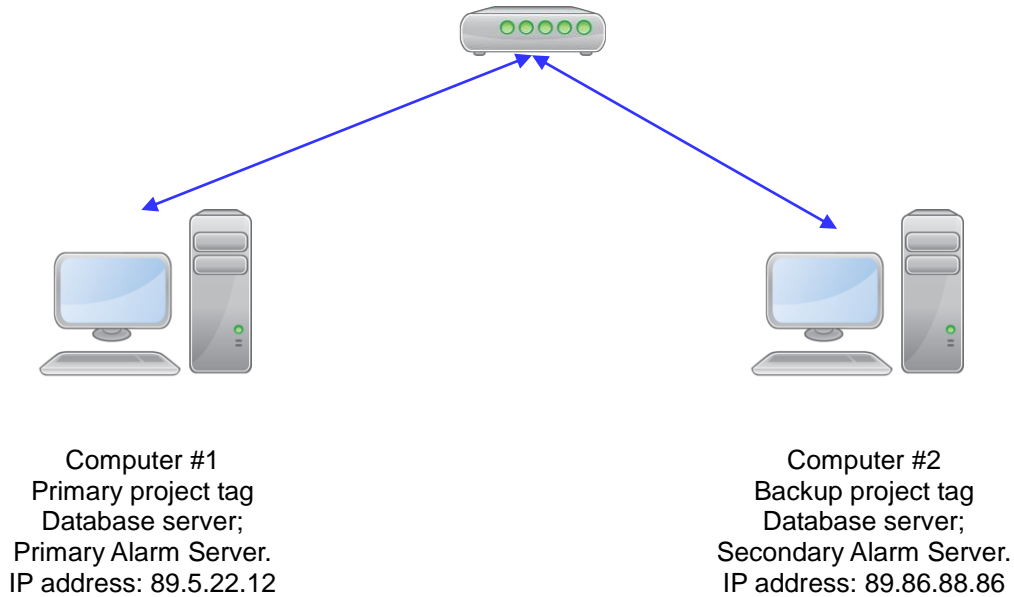
Redundant Alarm Monitoring Configuration

This document demonstrates how to setup a Dual Redundant Alarm Monitoring configurations using RTPADA NetSuite Software. This example consists of two computers connected to the host network; one computer is configured as the primary alarm server and the other is configured as the secondary alarm server.

It is important to mention that the computer names and IP addresses used in this document are samples. Within this document, the two computers are referred as Computer #1 and Computer #2. Therefore, you must substitute these names and addresses with actual names and IP addresses in your network.

Computer #1 is configured as the primary Project Tag Database server and the primary alarm server. In addition, this computer will run a NetArrays Program. The IP address of this computer is 89.5.22.12

Computer #2 is configured as the backup Project Tag Database server and the secondary alarm server. The IP address of this computer is 89.86.88.86



Example 1

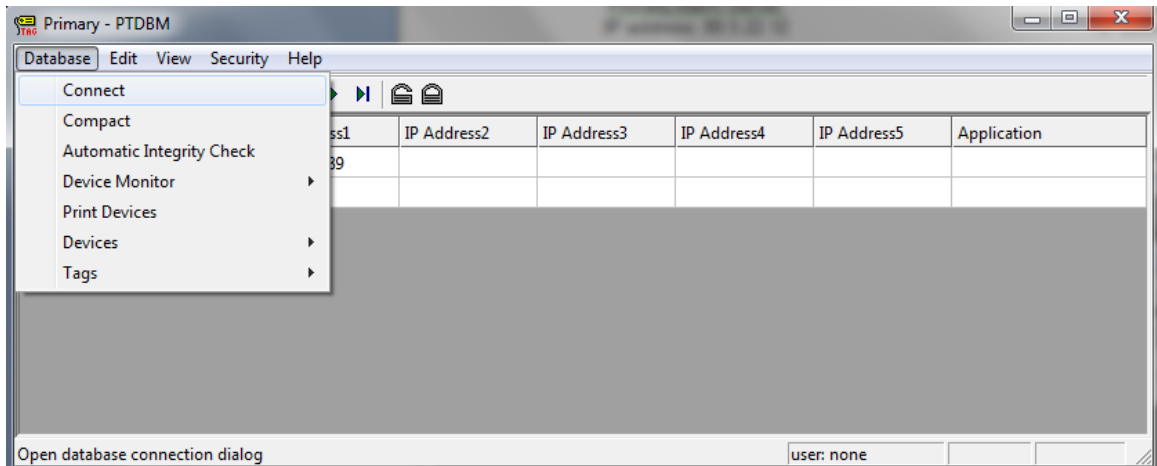
In this example, two computers will be running RTPADA. Computer #1 will be configured as the primary; Computer #2 will be configured as the secondary.

Project Tag Database – Computer #1

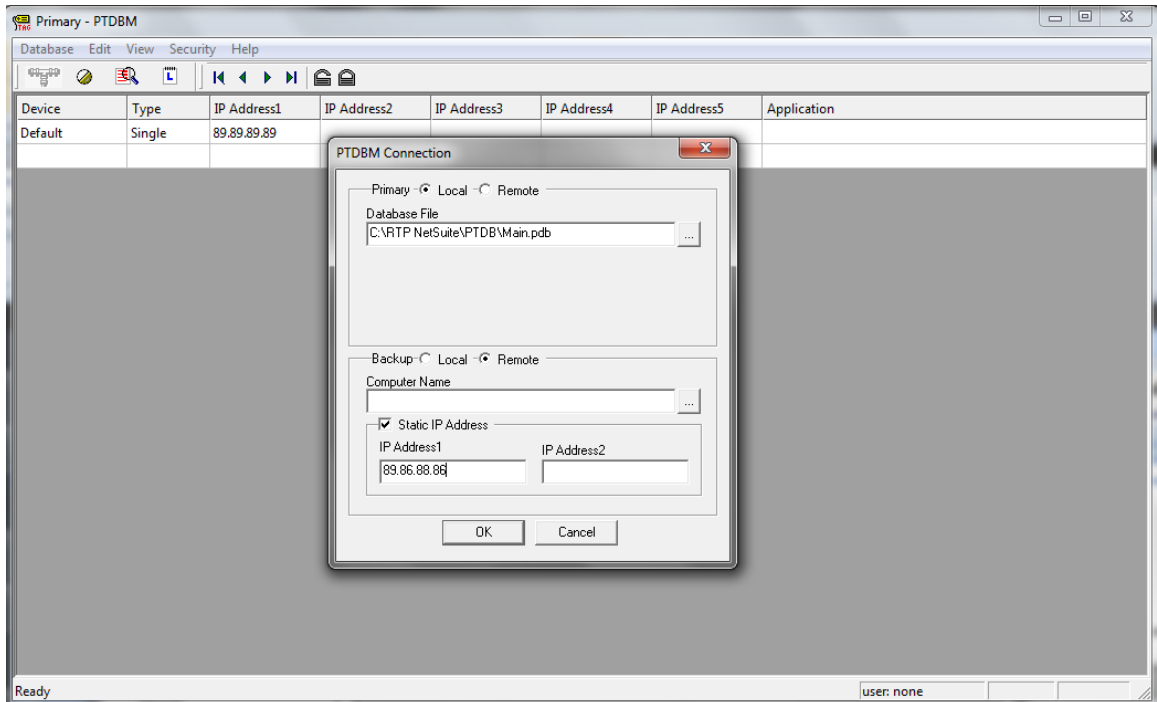
The first step is to create a new Project Tag Database on Computer #1, and configure this computer as the Primary Project Tag Database. Then, move on to Computer #2 and configure it as the backup for the Project Tag Database.

Redundant Alarm Configuration Example

On Computer #1 open PTDB Software. Then, Left Click on the Database in the main menu and select Connect.

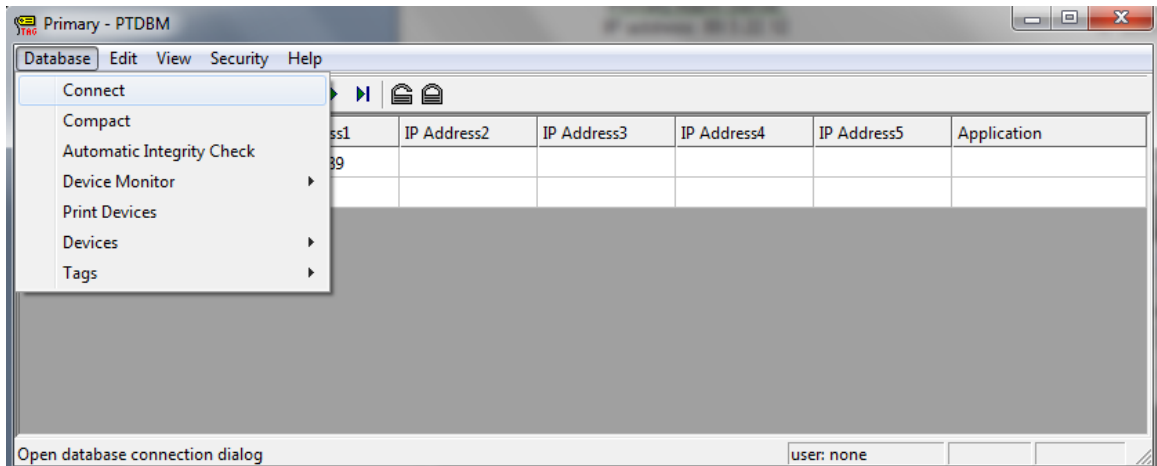


Then, in the PTDBM connection window choose Primary as Local and select the file Main.pdb in the directory C:\RTP NetSuite\PTDBMain.pdb. In the section for Backup choose Remote, Enable Static IP Address and type IP address for the Computer# 2 (89.86.88.86). Then, click OK.

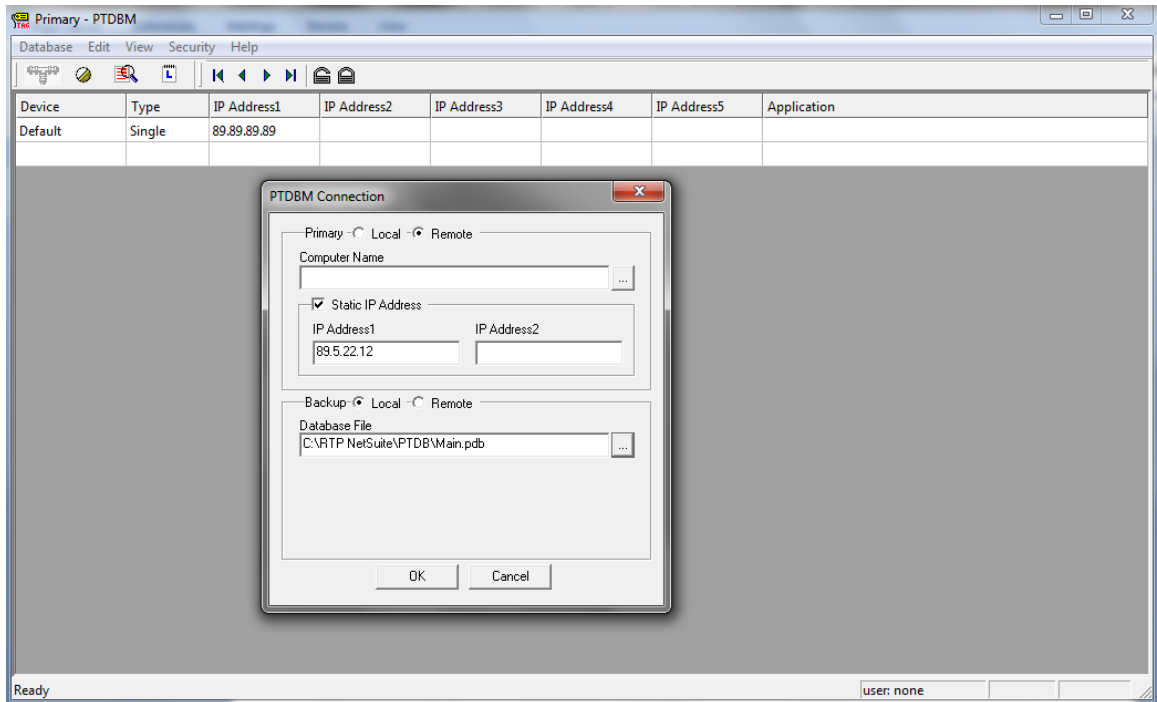


Redundant Alarm Configuration Example

On Computer #2 open PTDB Software. Then, Left Click on the Database in the main menu and select Connect.

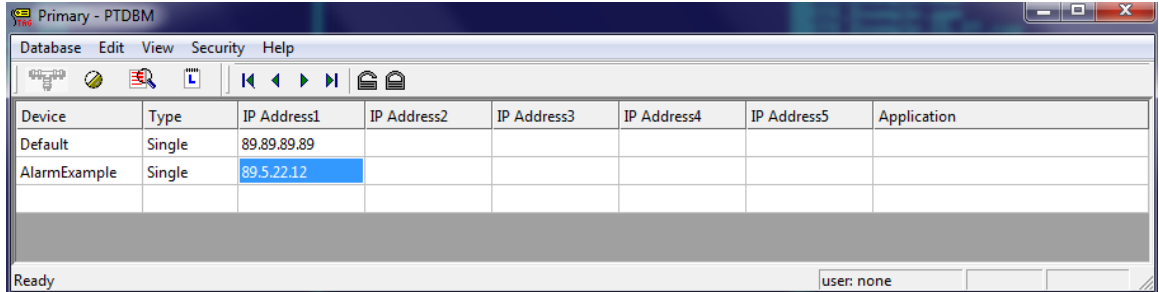


Then, in the PTDBM connection window choose Primary as Remote, enable Static IP Address and type IP address for the Computer# 1 (89.5.22.12). In the section for Backup choose Local and select the file Main.pdb in the directory C:\RTP NetSuite\PTDBMain.pdb.



Redundant Alarm Configuration Example

Now, add a Device to PTDBM. For this example, name the Device as AlarmExample, choose the "Type" as Single and in IP Address1 column type the IP Address of the Computer #1.

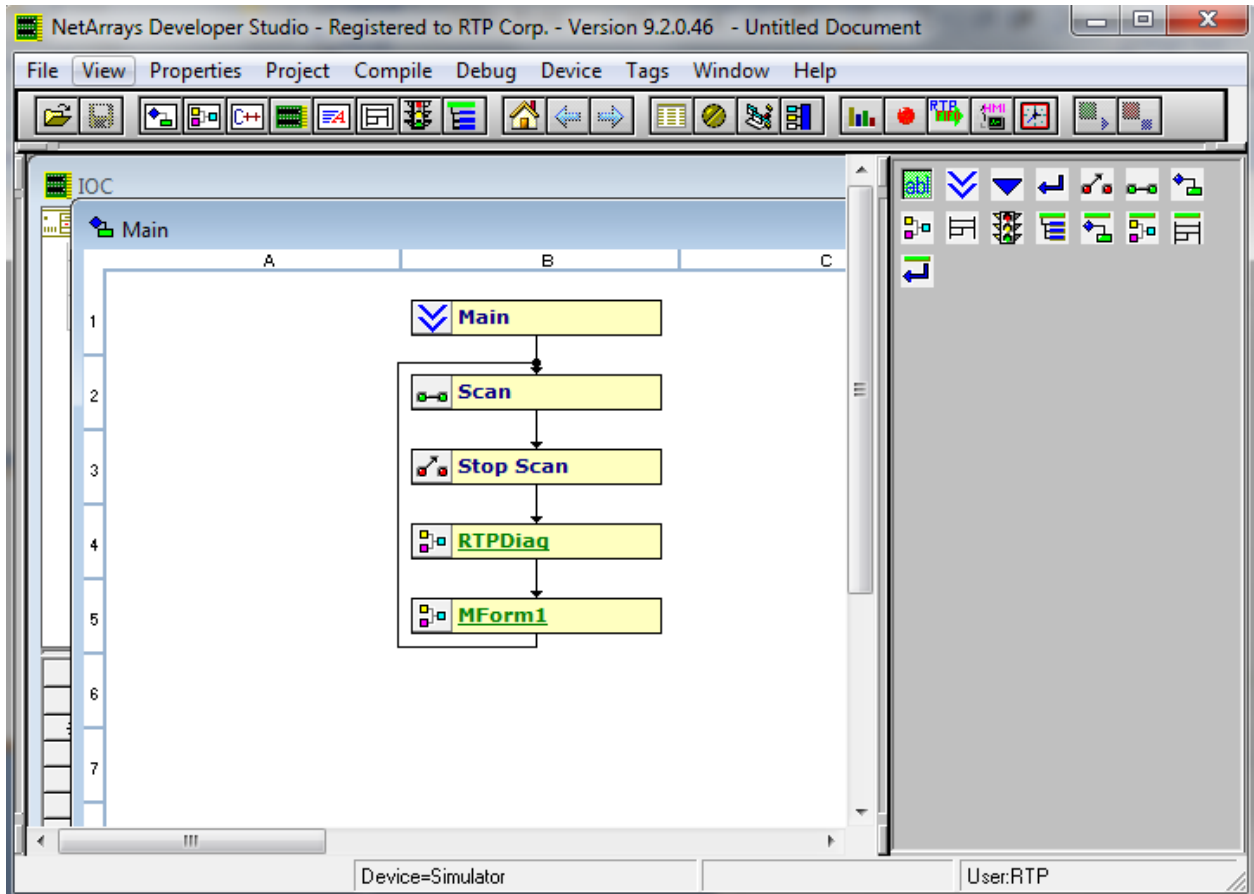


Device	Type	IP Address1	IP Address2	IP Address3	IP Address4	IP Address5	Application
Default	Single	89.89.89.89					
AlarmExample	Single	89.5.22.12					


At this point, the Redundant Tag Database for the two computers has been configured.

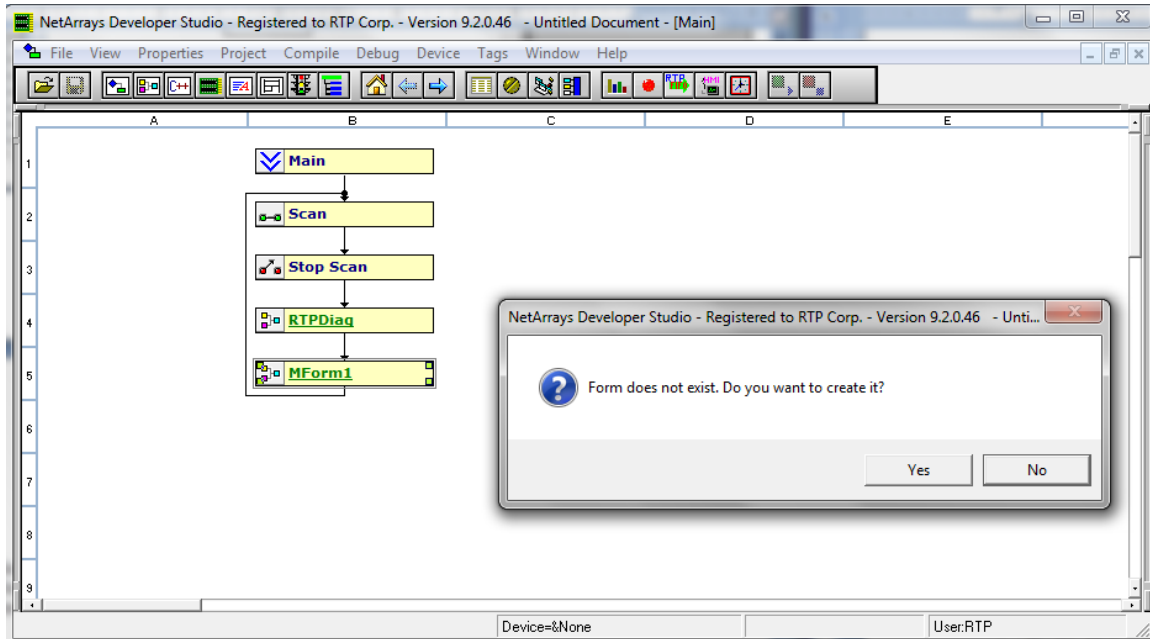
Create a program in NetArrays – Computer #1

Open NetArrays and log in. If you have not created a user account please refers to the file ug-netsuite.pdf found in the directory C:\RTP NetSuite\Manuals. After logging in, you are going to see the figure below



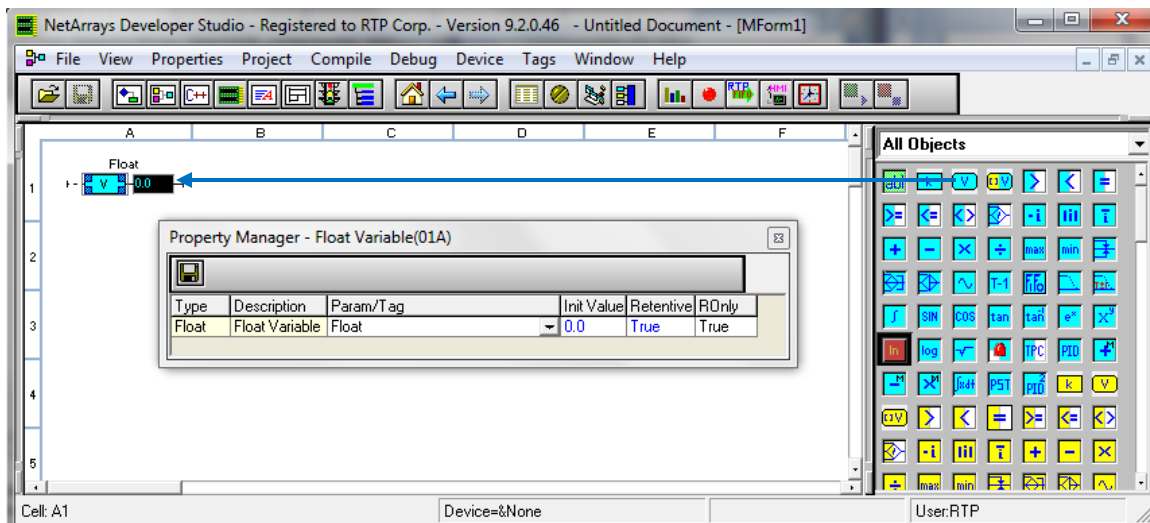
Redundant Alarm Configuration Example

- Go to the main form by clicking on icon  in the main Toolbar.
- Double Click on the M_Form1 Form. Then, click yes in the pop-up window to create this form.



Follow the steps below to add a Float Variable object in the Form.

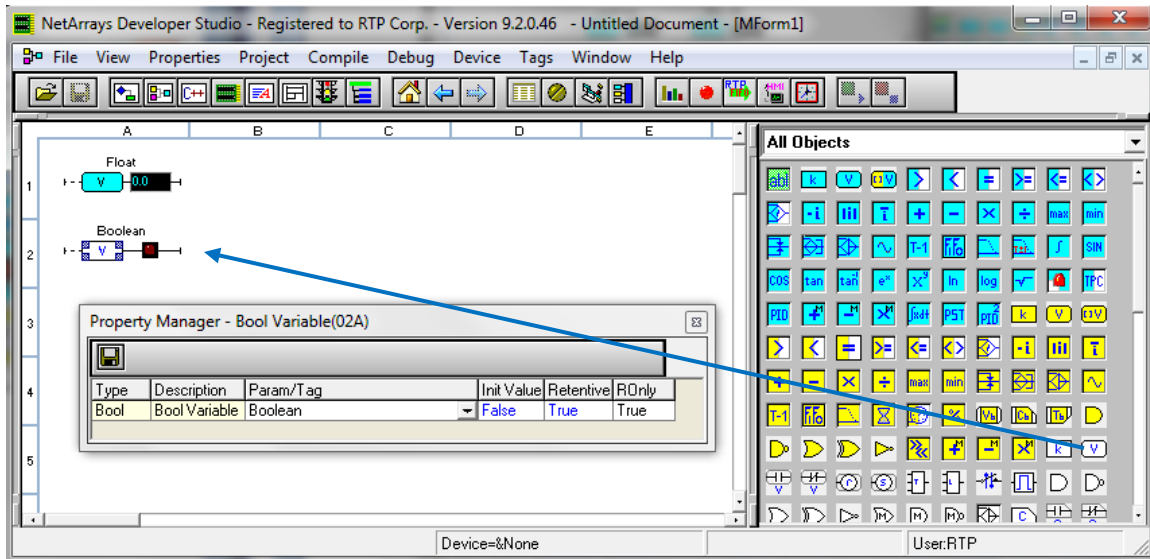
- In the Object Module, grab the Float Variable Object and drop it in the cell A1.
- Right Click on the object and click on properties option from the pop-up menu.
- In the column Param/Tag, rename the tag with the name "Float". Then, press enter.
- Set the Init Value to 0.0.



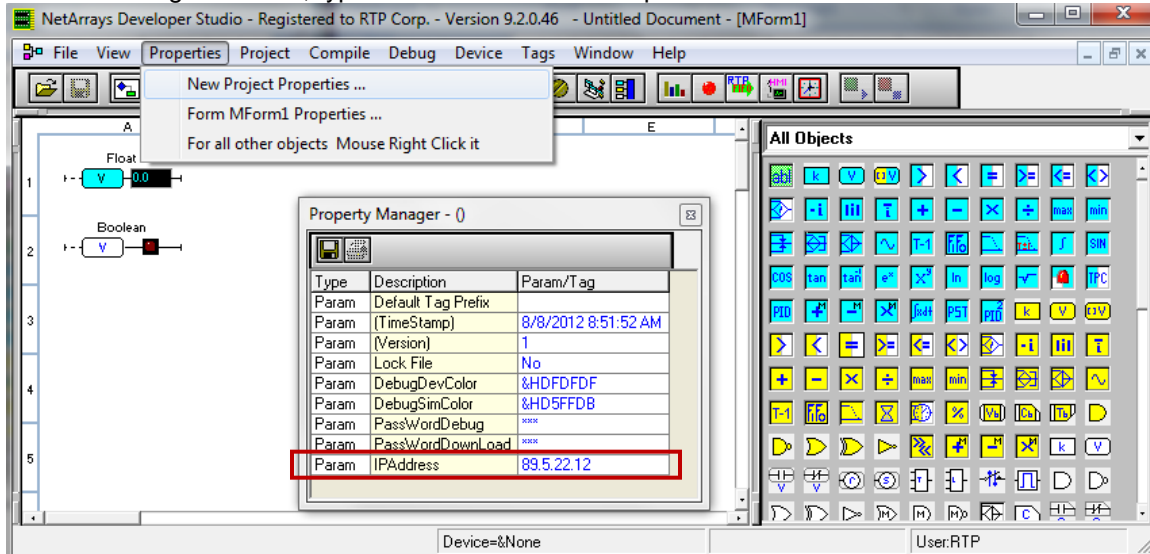
Redundant Alarm Configuration Example

Follow the steps below to add a Bool Variable object in the Form.

- In the Object Module, grab a Bool Variable Object and drop it in the cell A2.
- Right Click on the object and click on properties option from the pop-up menu.
- In the column Param/Tag, rename the tag with the name “Boolean”. Then, press enter.
- Set the Init Value to False.

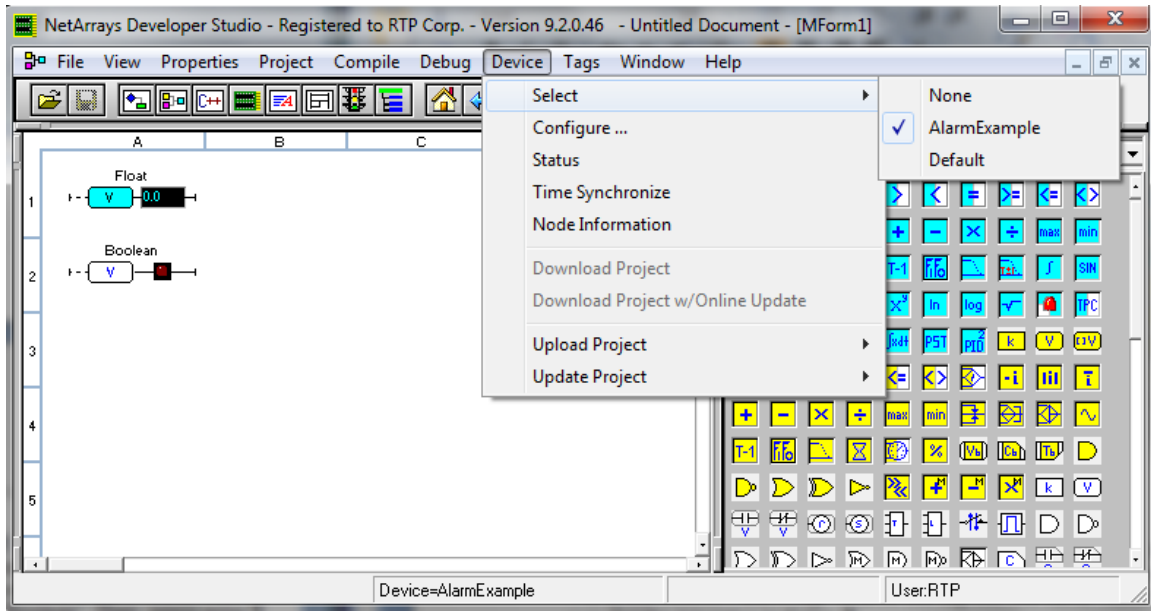


- Go to Properties in the main menu and select New Project Properties. In the Property Manager window, type the IP Address of Computer #1 in the IPAddress Cell.

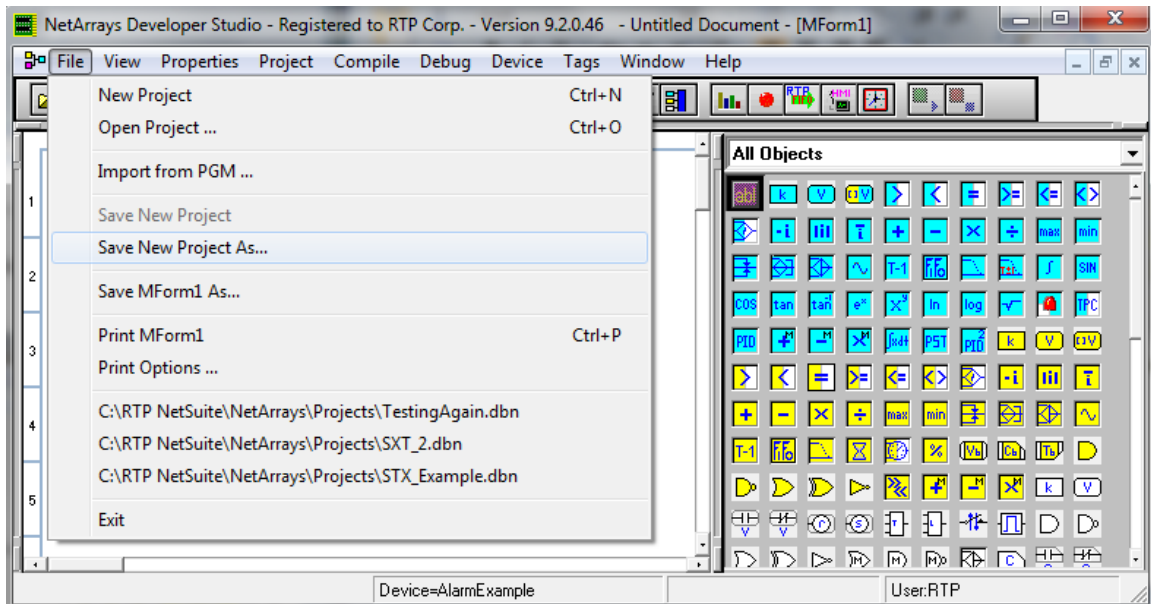


Redundant Alarm Configuration Example

- Left Click on Device in the main menu, then, go to “Select” and Choose “Alarm Example”.

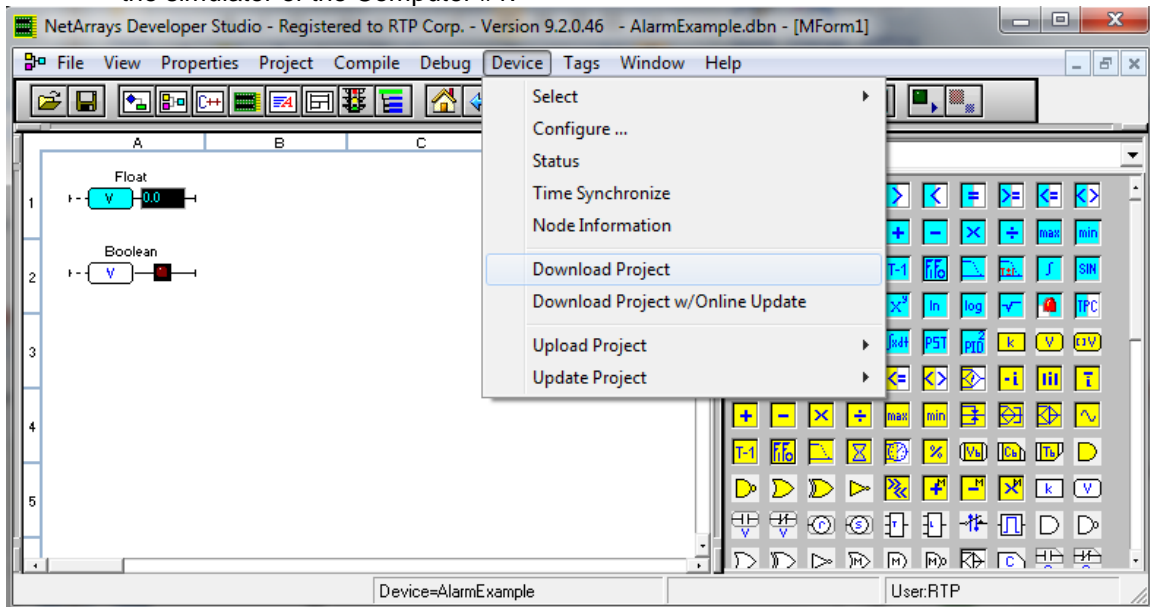


- Left click on File in the main menu and select “**Save New Project As..**” Choose the location and name to save this file. In this example, the program will be named AlarmExample.dbn.



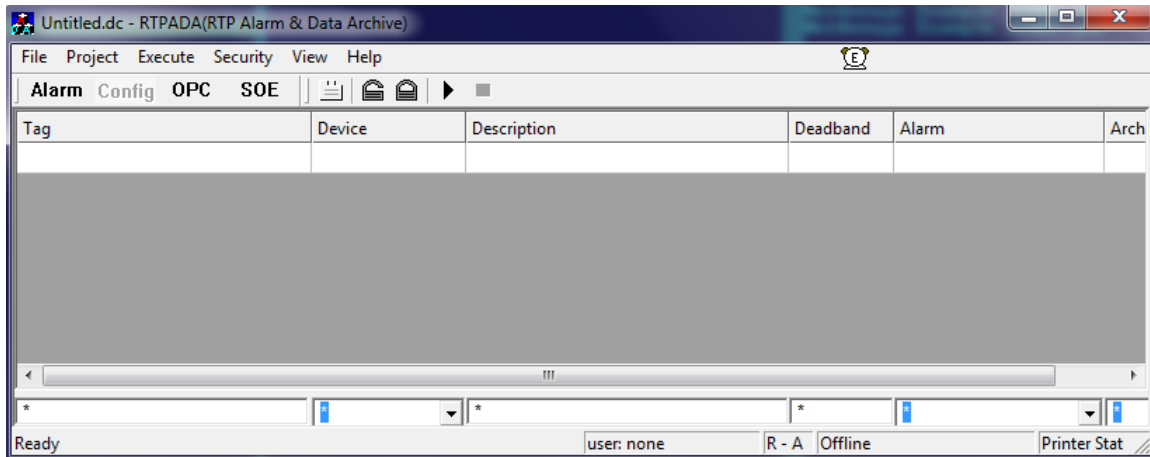
Redundant Alarm Configuration Example

- Left click on Device, and then select Download Project. This will download the project to the simulator of the Computer #1.



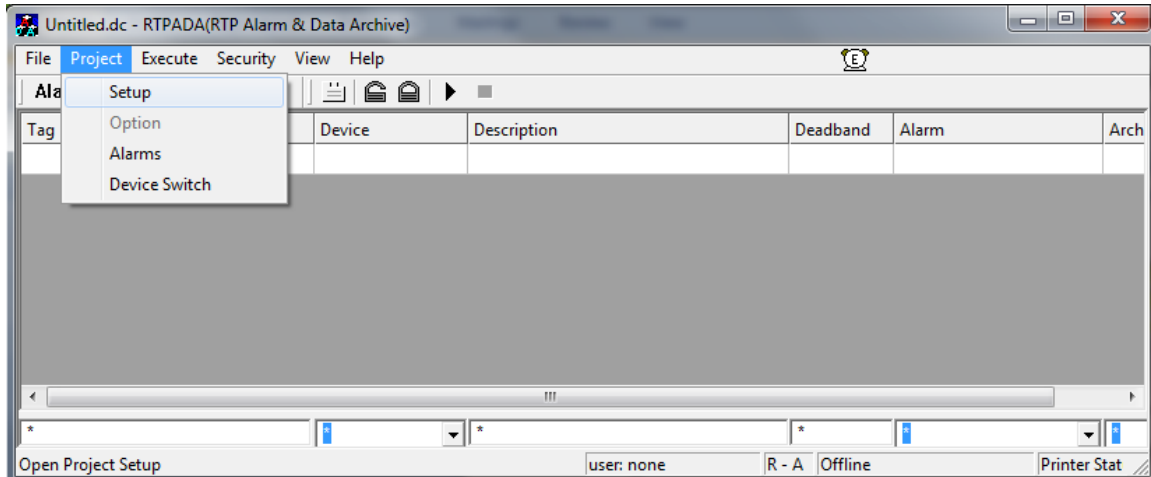
RTPADA Alarm Configuration – Computer #1

Open the RTPADA and you will see the figure below

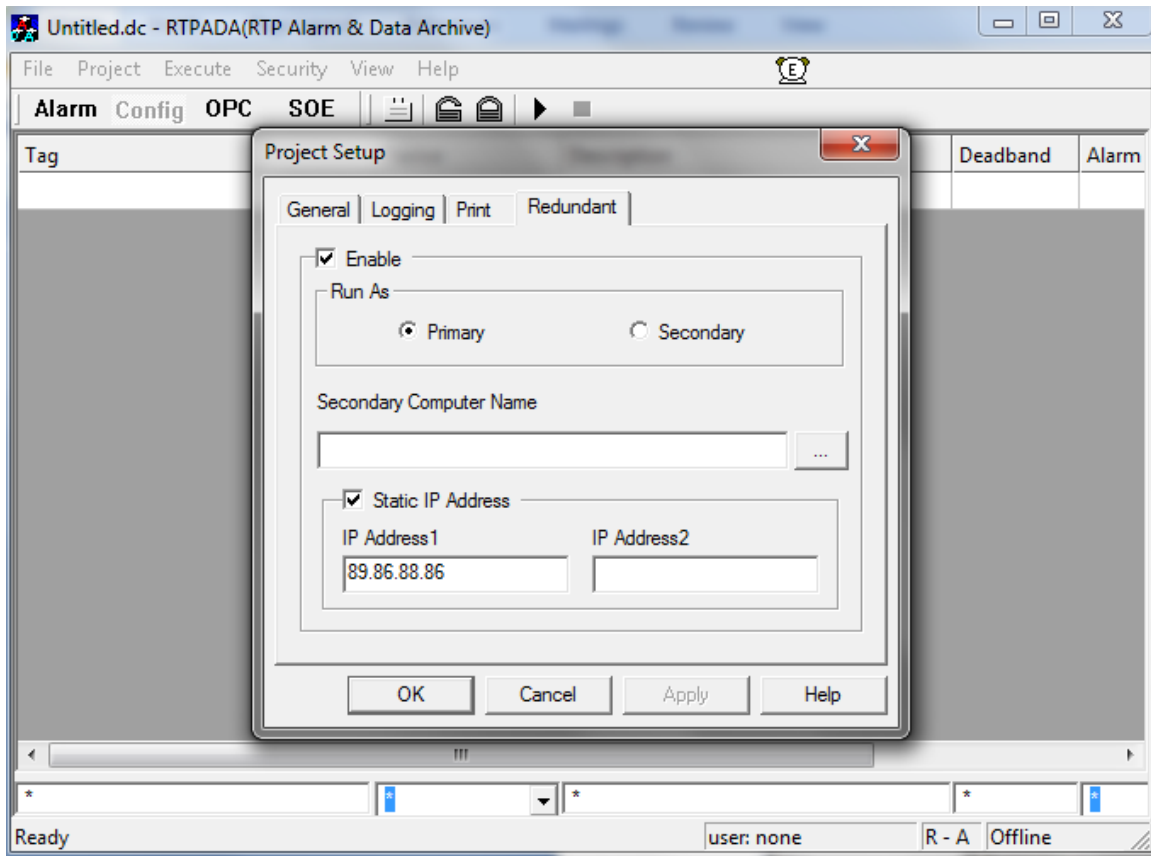


Redundant Alarm Configuration Example

Left Click on Project and Select Setup.



In the Project setup, go to the Redundant Tab and Check off the box to enable redundancy, and select Primary in the Run As section. Click the check-box for the Static IP Address and type the IP Address of the Computer#2. Then, Click Okay.



Redundant Alarm Configuration Example

Left Click on Project in main menu and select Alarms. This will prompt Alarm Window to configure the thresholds of the alarms for the system. In the Name Column, type AlarmTrue and Check off the Digital Check-box. In the Digital Triggering column set the value to True.

Go to the Second Row and Name the alarm as "AlarmFloat". Then, populate the values for the LowLow, Low, High and HighHigh as shown in the figure below. Then, press enter and Close the window.

E...	Name	Group	Priority	Engine	Hardw...	Digital	Digital Trig...	LowLow	Low	High	HighHigh	Deviation	DeviationAL...	Deadband	Condition	Application	Parame...
<input checked="" type="checkbox"/>	AlarmTrue	0	0	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	False	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
<input checked="" type="checkbox"/>	AlarmFloat			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	True	1	2	3	4	0	0	0			

Left Click on Config in the ToolBar and then in the First Row of the table select Boolean Tag. Then, select AlarmExample in the Device Column, choose AlarmTrue in the Alarm Column and set Enable in the Archive column.

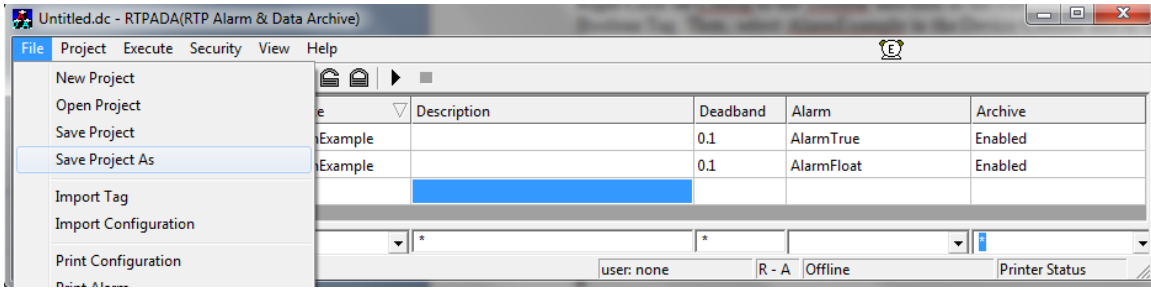
Tag	Device	Description	Deadband	Alarm	Archive
Boolean	AlarmExample		0.1	AlarmTrue	Enabled

In the second row of the table select Float tag. Then, select AlarmExample in the Device Column, choose AlarmFloat in the Alarm Column and set Enable in the Archive column.

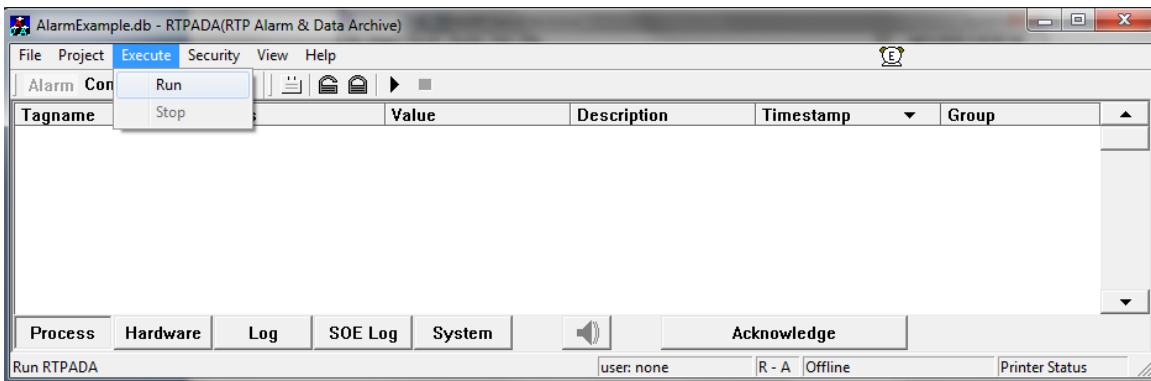
Tag	Device	Description	Deadband	Alarm	Archive
Boolean	AlarmExample		0.1	AlarmTrue	Enabled
Float	AlarmExample		0.1	AlarmFloat	Enabled

Left click on File in the main menu and select "Save Project As.." Choose the location and name to save this file. In this example, the program will be named AlarmExample.db.

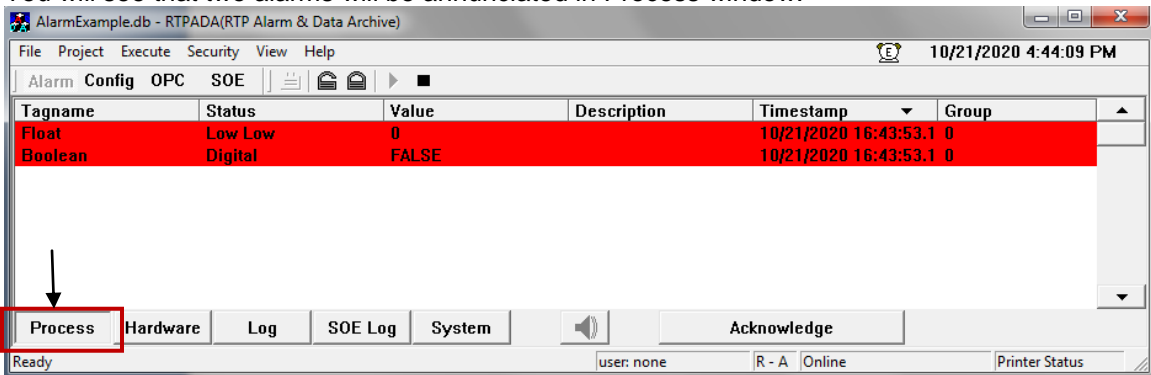
Redundant Alarm Configuration Example



Left Click on Execute in the main menu and select Run

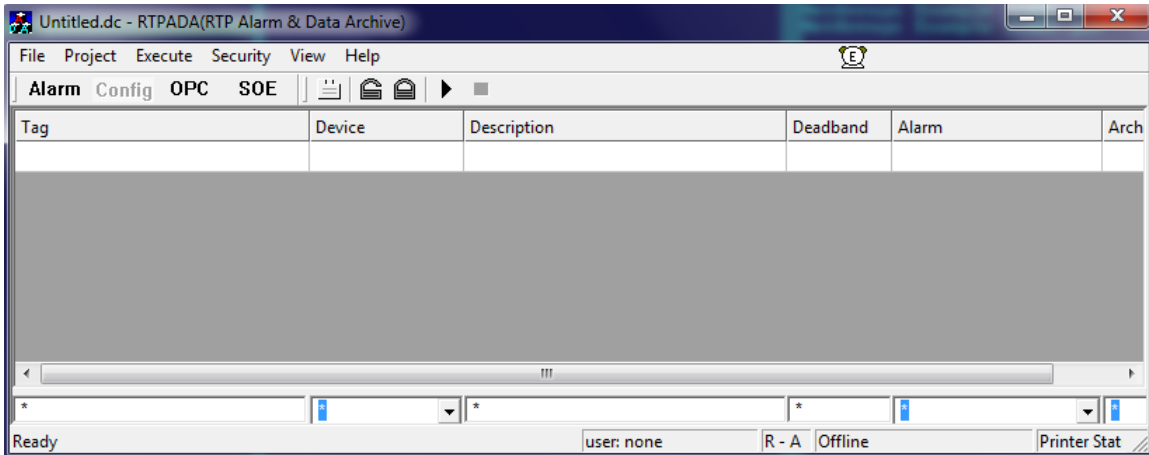


You will see that two alarms will be announced in Process window:

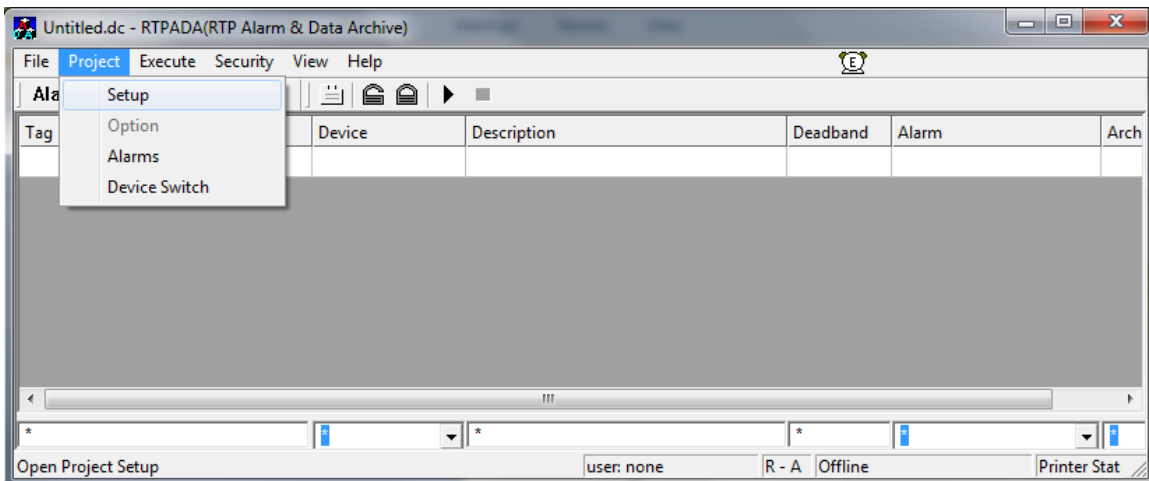


RTPADA Alarm Configuration – Computer #2

Open the RTPADA and you will see the figure below

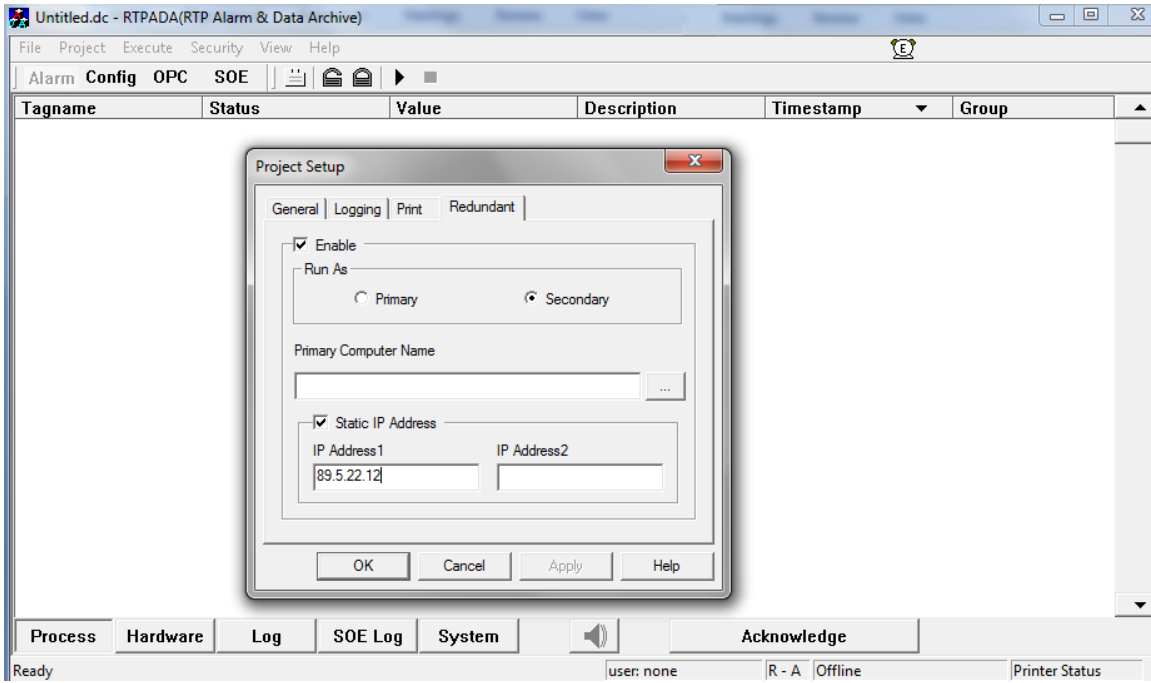


Left Click on Project and Select Setup.

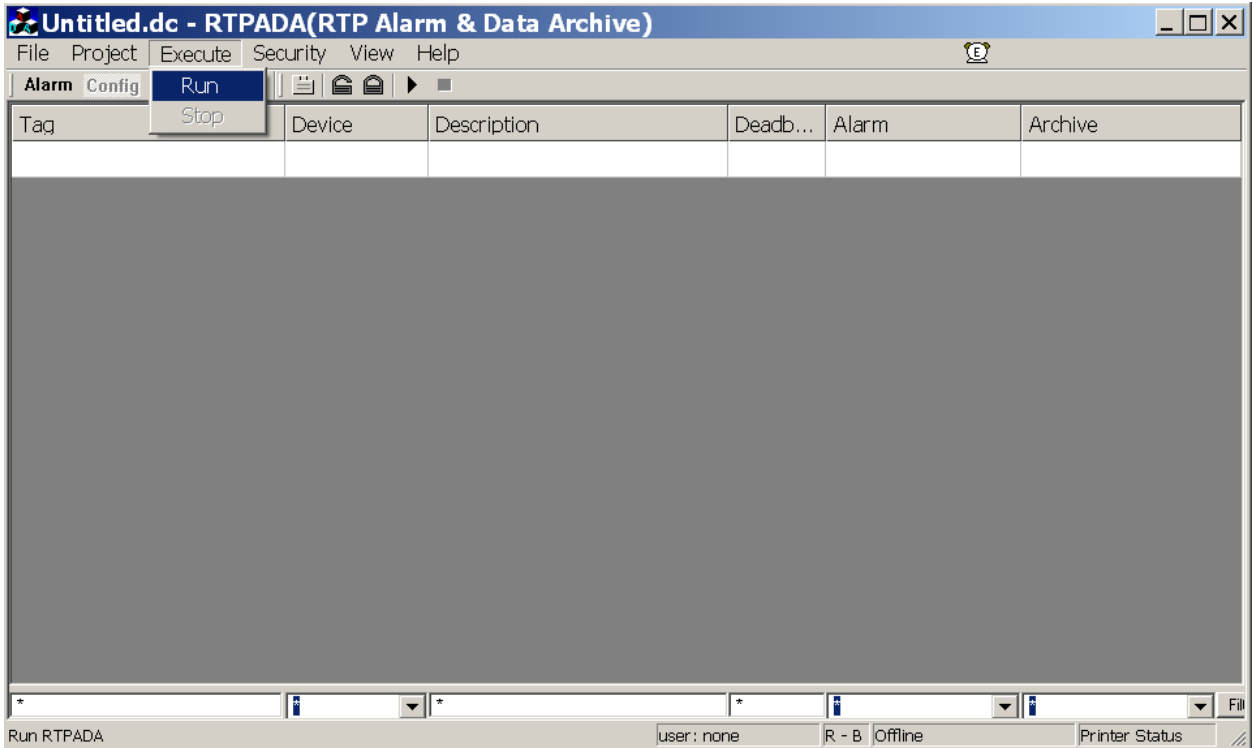


In the Project setup, go to the Redundant Tab and Check off the box to enable redundancy, and select Secondary in the Run As section. Click the check-box for the Static IP Address and type the IP Address of the Computer# 1 Then, Click Okay.

Redundant Alarm Configuration Example



Left Click on Execute in the main menu, and select Run.



Redundant Alarm Configuration Example

The RTPADA will receive the ADA configuration from the computer #1 and start acquiring data from the other computer. Then, RTPADA application will be set to Standby Online state until the other RTPADA application in the computer gets offline.

AlarmExample.db - RTPADA(RTP Alarm & Data Archive)

File Project Execute Security View Help 10/21/2020 4:50:44 PM

Alarm Config OPC SOE

Tagname	Status	Value	Description	Timestamp	Group
Float	Low Low	0		10/21/2020 16:58:15.2 0	0
Boolean	Digital	FALSE		10/21/2020 16:58:15.2 0	0

Process Hardware Log SOE Log System Acknowledge

Ready user: none R - E Standby Online Printer Status