

## [Tech Note 791](#)

# Galaxy Alarms are not Displayed in an Alarm Client

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## Introduction

This Tech Note describes scenarios that can result in your Alarm Client not displaying Galaxy Alarms, and procedures to diagnose and correct the issue.

## Application Versions

- InTouch 10.1 SP2 and later
- Wonderware Application Server 3.1 SP2 and later

## Overview

Galaxy Alarms might not be displayed in an Alarm Client (despite the queries being correct), in the following scenarios:

1. **Alarm Manager (Alarmmgr.exe) starts before Suite Link Service (slssvc.exe)**
2. **On Windows Vista, Windows 7, or Windows 2008, Window Viewer Starts Before a Platform is Deployed**

In both cases the query on the Alarm Client Control is unsuccessful (Figure 1 below).

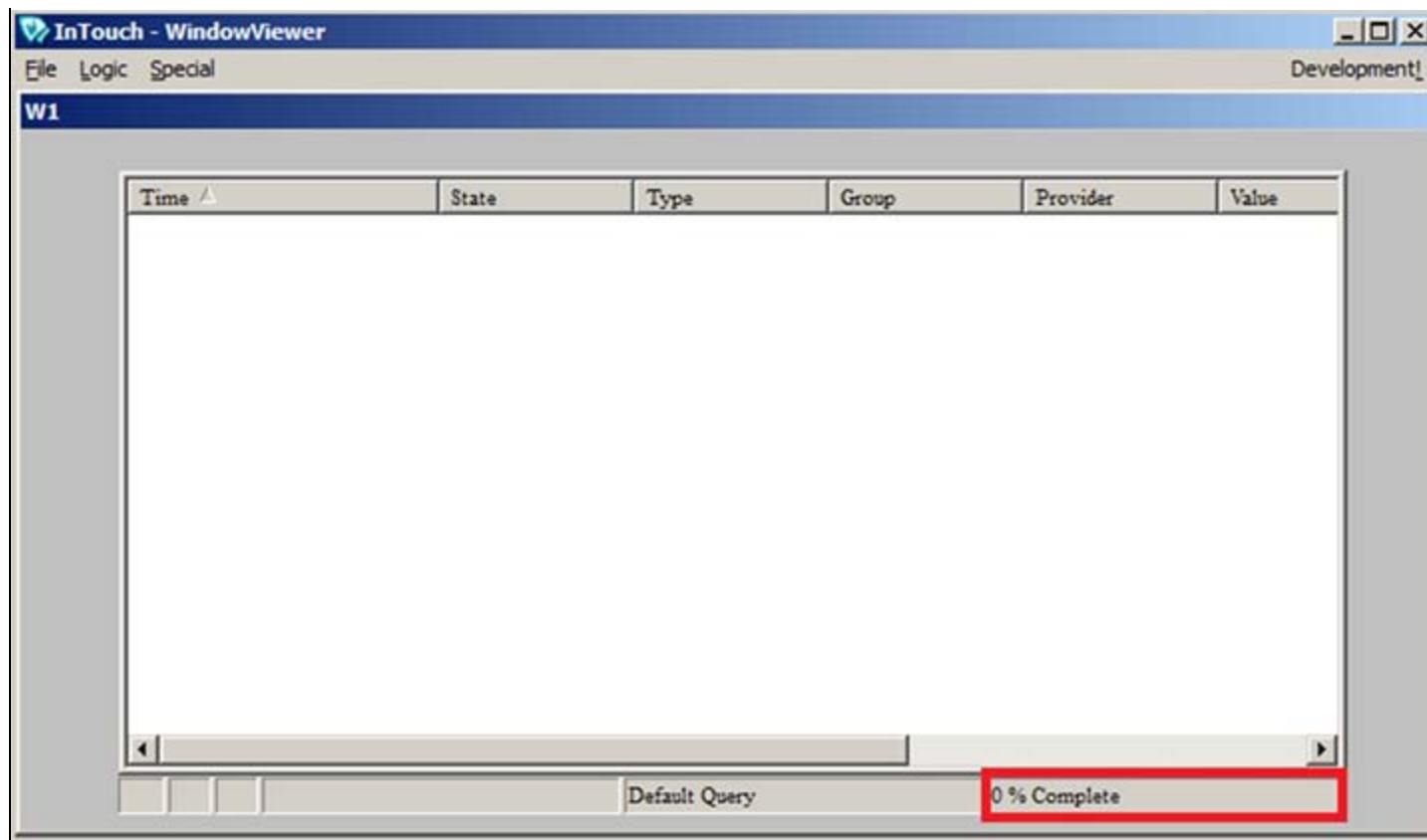


FIGURE 1: ALARM QUERY RETURNS NO RESULTS

## Diagnostic Checklist

Before applying the workarounds, verify that the following items are configured correctly.

- In IDE, the **Platform** is checked as InTouch Alarm Provider.
- The correct alarm query is specified in the Alarm Client (Alarm View Control or Alarm Client Control):
  - **\Galaxy!Area** if local platform is selected as InTouch Alarm Provider
  - **\\PlatformNodeName\ Galaxy!Area** if local platform is NOT selected as InTouch Alarm Provider

The following are the Wonderware processes that can start **Alarmmgr.exe**.

**Note:** You can use **Process Explorer** to find out which particular process invoked Alarmmgr.exe. Refer to the Miscellaneous section ([below](#)) for download details.

- Galaxy Platform (**wnwrapServerEx.exe**)
- InTouch Window Viewer (**view.exe**)

- AlarmDBLogger Manager (**wwalmlogger.exe**)
- Wonderware SuiteVoyager Alarm Consumer service (**wwsvalmsvc.exe**)
- Custom Alarm Provider created using the Alarm Toolkit
- QI Analyst (**QIAlarmProvider.exe**)

The following sections provide detailed information about each scenario.

## Alarm Manager (Alarmmgr.exe) Starts Before SuiteLink Service (slssvc.exe)

### Overview

If Alarm Manager (Alarmmgr.exe) starts before Suite Link Service (slssvc.exe), SuiteLink is unable to communicate with Alarm Manager. The start-up sequence is critical. SuiteLink and Alarm Manager usually start in proper order because SuiteLink (being a service) is started by the operating system, and Alarm Manager is started by one of the processes listed earlier.

However, if AlarmDBLogger Manager is running as a service, it starts Alarm Manager first. This might occur before SuiteLink is started. And even though AlarmDbLogger Manager does not handle current alarms, the fact that it needs to start Alarm Manager could disrupt the start-up order.

**Note:** To find out which service started first, please refer to **Windows Event Viewer/Systems** file.

### To resolve this scenario

1. Stop AlarmDBLogger Manager running as a service and reboot the machine. If your alarms are now displayed, starting DBLogger Manager as a service is relevant as a cause.

You can set AlarmDBLogger Manager to run as a normal application (Figure 2 below).

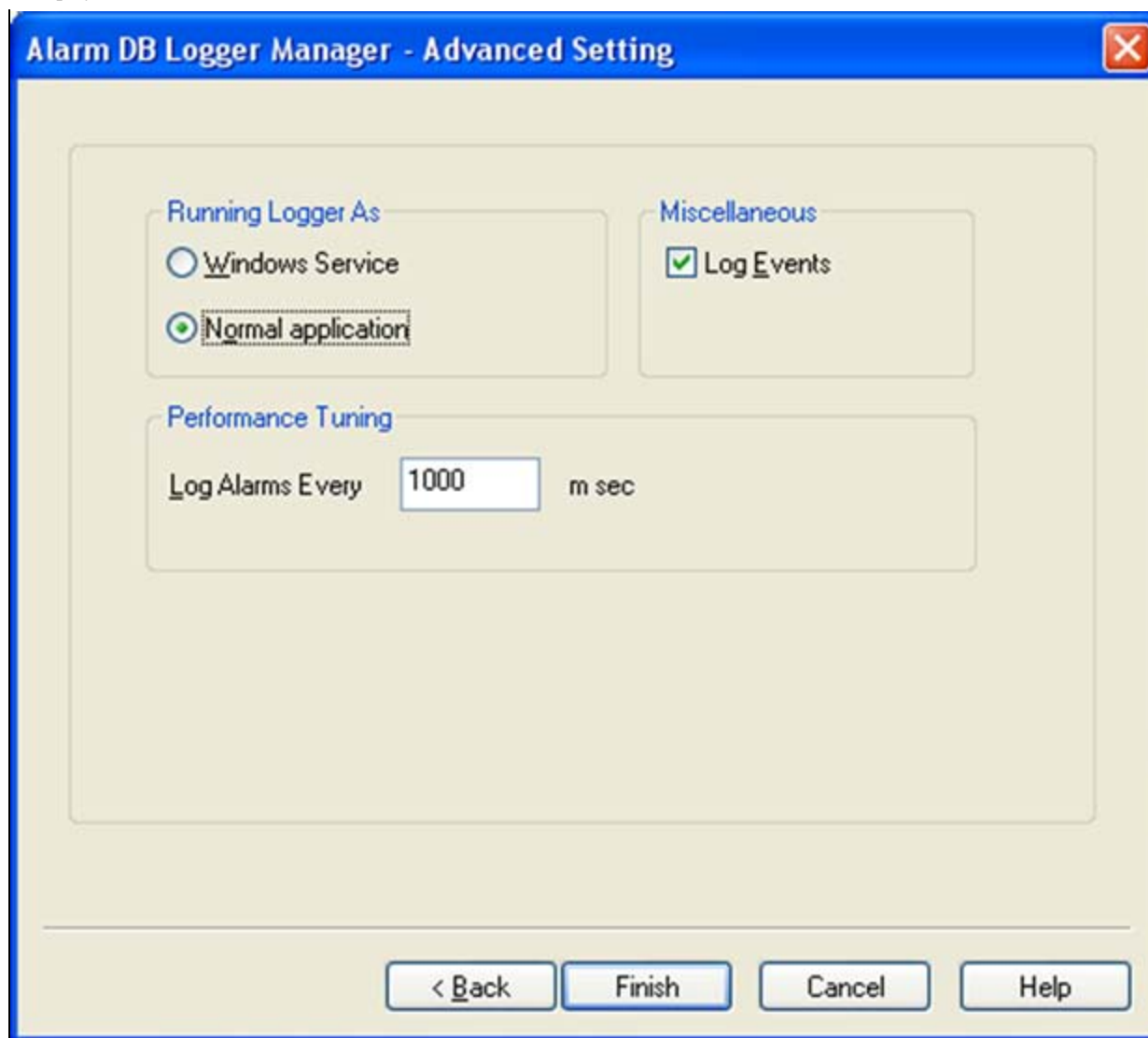


FIGURE 2: ALARM DB MANAGER - ADVANCED SETTING

2. If your application requires that AlarmDBLogger manager runs as a service, refer to [Tech Note 716 Viewing, Creating and Modifying Service Dependencies in Windows Server 2003](#) to configure SuiteLink as a dependency for AlarmDBLoggerManager (`wwalmlogger.exe`).
3. For Vista or later Operating Systems, refer to [Tech Note 725 Running InTouch and AlarmDBLogger Services for Vista and Later Operating Systems](#) to configure AlarmDBLogger manager as a service.
4. Refer to the [InTouch 10.1 SP3 P01 readme](#) for limitations of running AlarmDBLogger Manager as service on Vista or Later Operating Systems.
5. For methods to autostart Alarm DB Logger, see [Tech Note 348 Autostart of the InTouch Alarm Utilities](#).

## On Windows Vista, Windows 7, or Windows 2008, Window Viewer Starts Before a Platform is Deployed

### Overview

In operating systems like Windows XP and Windows 2003 server, all services and user applications run in the same session called Session 0. This poses a security risk.

The advanced operating systems like Windows Vista and Windows 2008 server alleviate the security risk by running services in Session 0 and not allowing the services to interact with the desktop. The desktop interactive processes run in a session ID greater than 0.

On later operating systems, App Server-related Windows Services always run in **Session ID 0**.

Since InTouch is a desktop interactive process, it runs in a Session ID greater than 0, typically **Session ID 1**.

When your application is configured to get Galaxy Alarms in Window Viewer, the **Advanced Operating System Task Manager -> Processes** tab displays two AlarmMgr.exes.

- **AlarmMgr.exe**: Started by Platform – Session ID 0 (With ArcestraA account, IASUser)
- **AlarmMgr.exe**: Started by View – Session ID 1 (with windows login account, RoopaH) (Figure 3 below).

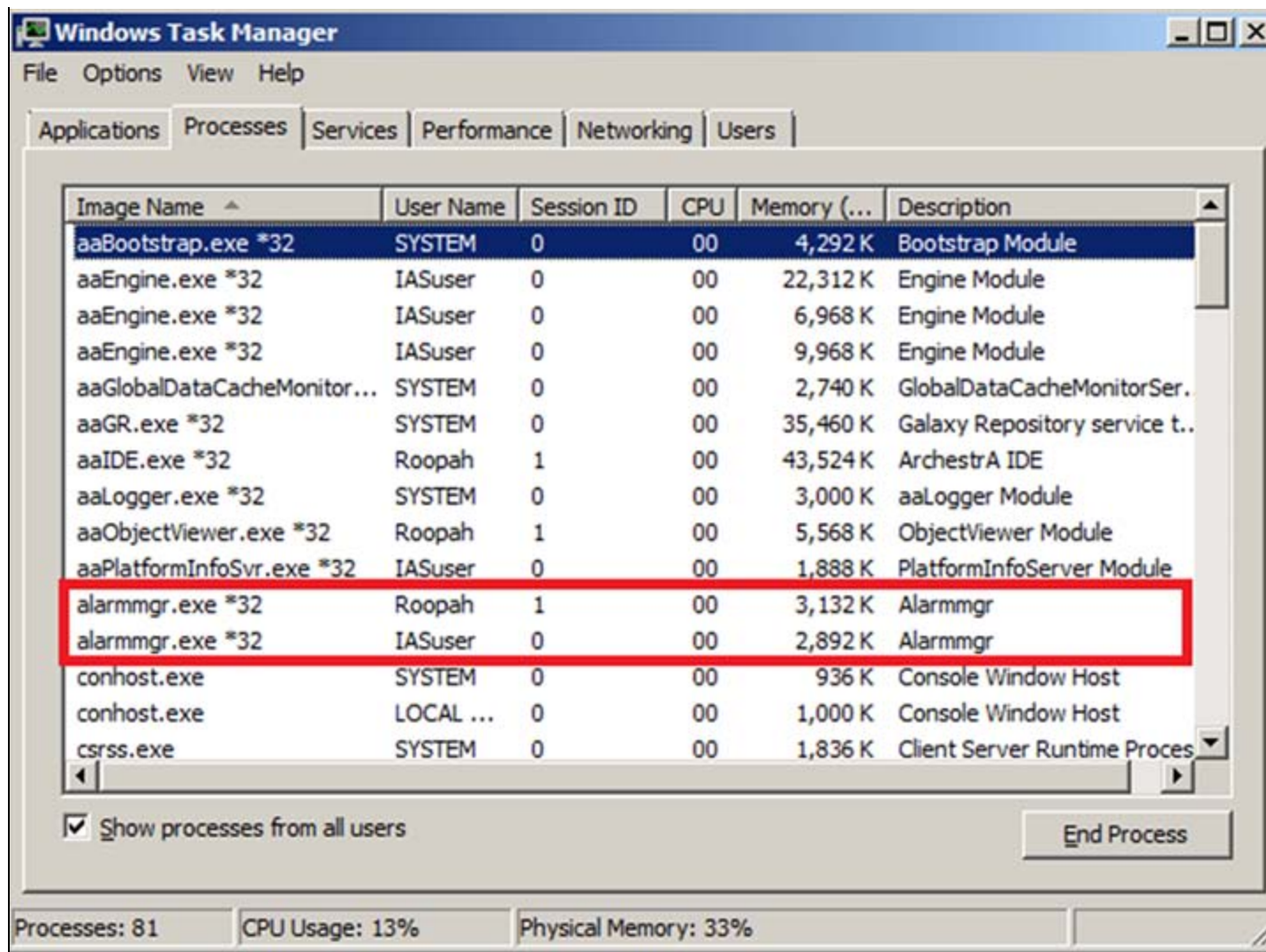


FIGURE 3: TWO ALARMMGR.EXE PROCESSES DISPLAYED IN WINDOWS TASK MANAGER

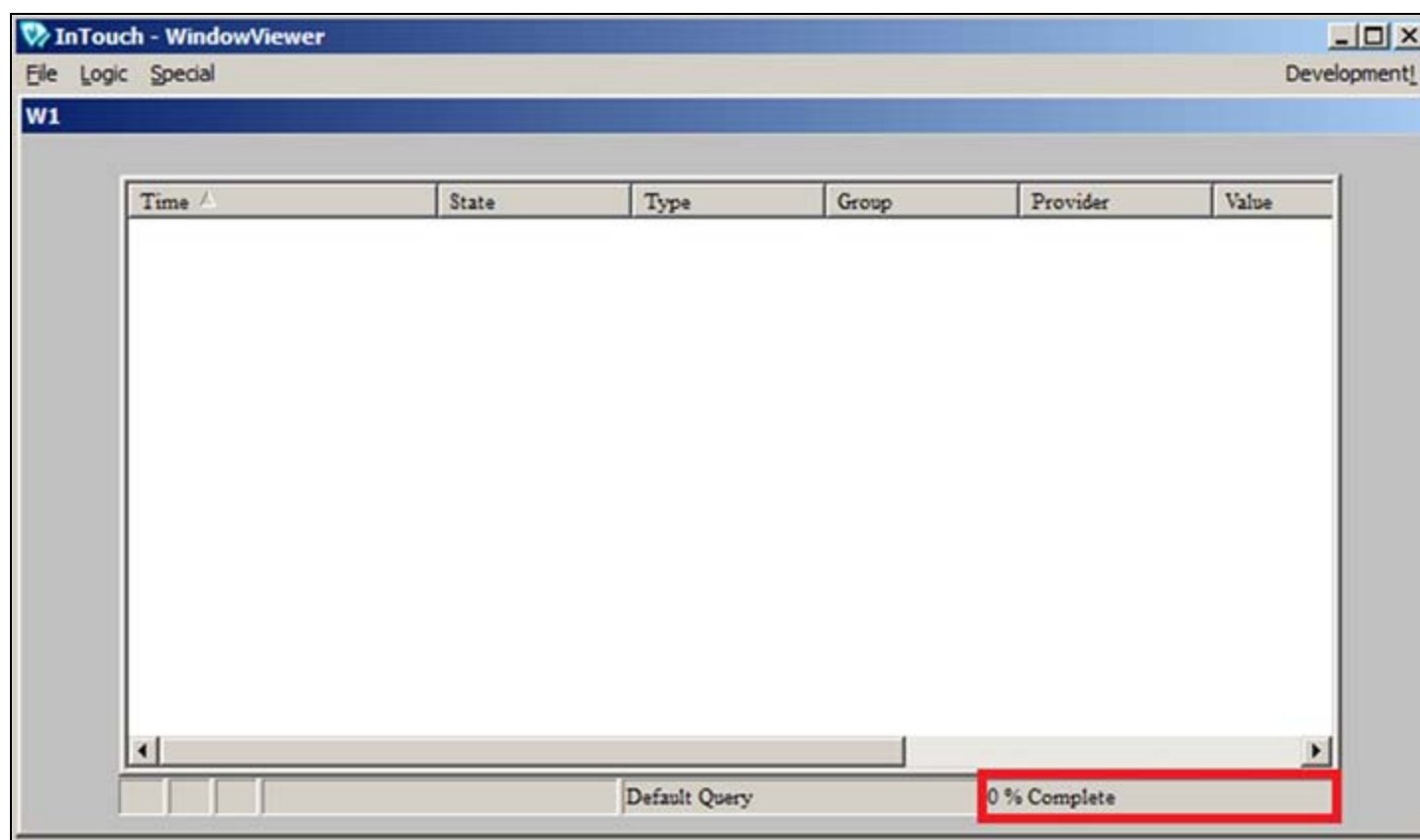
To get the Galaxy alarms in Runtime

- The InTouch Alarm Viewer Control in **Session ID 1** must contact the Session ID 1 instance of AlarmMgr to request the alarms from a Galaxy running in **Session ID 0**.
- The Session ID 1 AlarmMgr then contacts the Session ID 0 instance of AlarmMgr and asks for those alarms.
- The alarms then get transferred from the **Session ID 0** AlarmMgr to the **Session ID 1** AlarmMgr.
- The alarms are displayed in the AlarmViewer Control.

Note that whoever starts the AlarmMgr *first* is registered as the Alarm Provider. So in order to view Galaxy Alarms in InTouch it is important to have the *Platform* start the AlarmMgr instance first.

**CASE1**

If InTouch WindowViewer started the AlarmMgr first, the AlarmViewer Control does not display the Galaxy alarms (Figure 4 below).



**FIGURE 4: WINDOWVIEWER STARTS ALARMGR FIRST**

**Case 1 Workaround**

1. Close InTouch View. Verify the **AlarmMgr Session ID 1** is gone from the Windows Task Manager display.
2. Do any of the following:
  1. Redeploy the platform.
  2. Restart aaBootstrap service.
  3. Restart the Platform and App Engine from the SMC .
3. Verify Task Manager now shows only **AlarmMgr Session ID 0** (with Archestra Account).
4. Start InTouchView.
5. AlarmViewer control query should show 100% (Figure 5 below).

6. Task Manager should now show **AlarmMgr session ID 0** (with Archestra account) and AlarmMgr session ID 1 (windows login).
7. Your Galaxy alarms should now appear in the InTouch Alarm Viewer control (Figure 5 below).

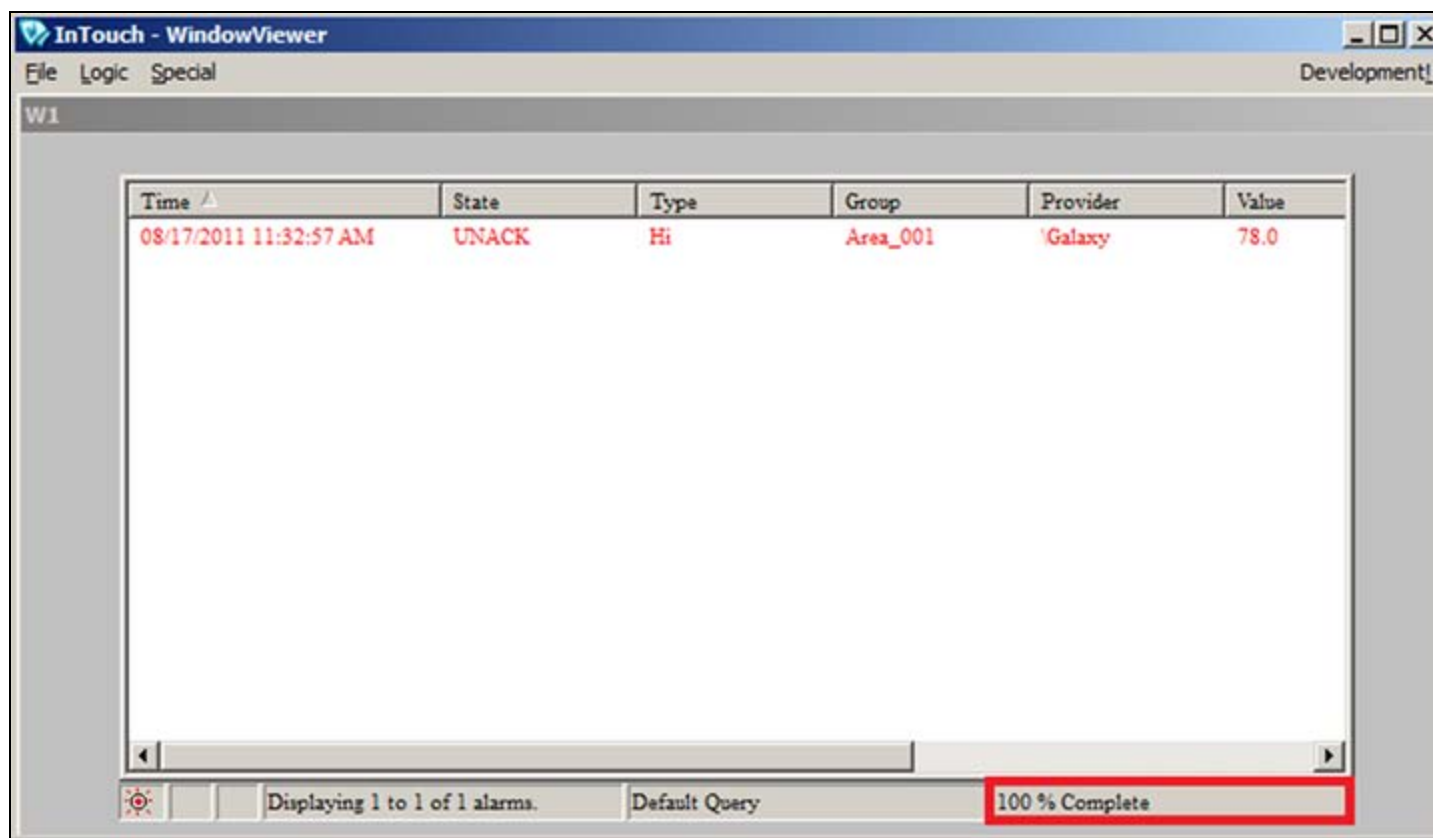


FIGURE 5: ALARM QUERY RESPONSE

## CASE 2

If AlarmMgr.exe is started by AlarmDBLogger Manager running as a service or Wonderware SuiteVoyager alarm consumer service, the AlarmViewer Control might not display the Galaxy alarms.

In this case, it appears as follows in the Windows Task Manager (Figure 6 below).

- **AlarmMgr.exe**: Started by AlarmDBLogger Manager/ Wonderware SuiteVoyager alarm consumer service – **Session ID 0 (With SYSTEM account)**
- **AlarmMgr.exe**: Started by View – **Session ID 1 (with Windows Login account, Administrator)**



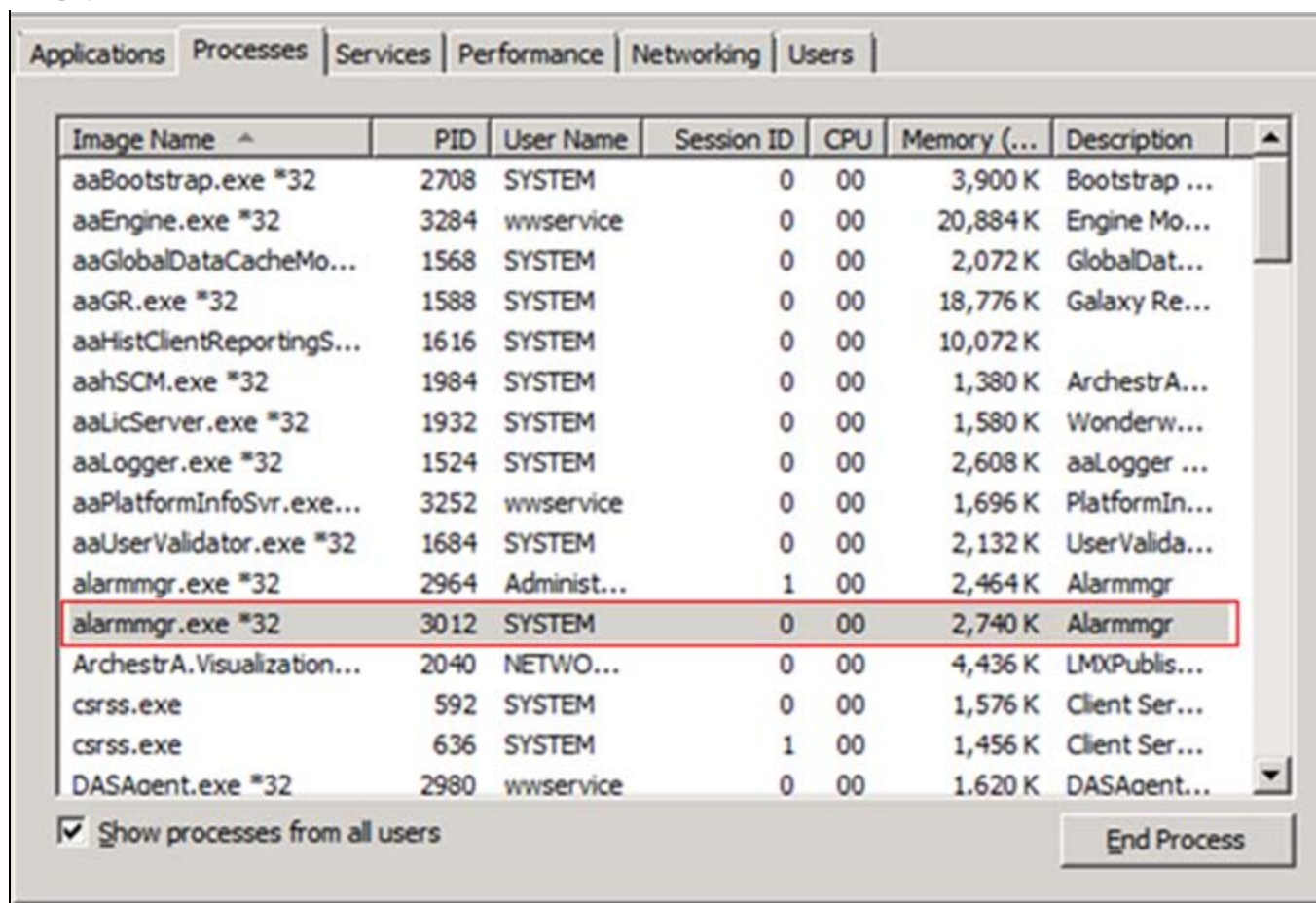


FIGURE 6: ALARMMGR.EXE / SESSION ID 0 (WITH SYSTEM ACCOUNT)

## Case 2 Workaround

If AlarmMgr.exe was started by AlarmDBLogger Manager running as a service, follow the resolution in [Alarm Manager \(Alarmmgr.exe\) Starts Before SuiteLink Service \(slssvc.exe\)](#) section.

If AlarmMgr.exe was started by Wonderware SuiteVoyager alarm consumer service, do the following:

1. Go to Windows Services.
2. **Stop and disable** the **Wonderware SuiteVoyager Alarm Consumer** service.
3. Reboot the machine.
4. Use Task Manager to verify and display *only* the AlarmMgr **Session ID 0** (with Archestra account).
5. Start InTouch View.
6. Task Manager should show AlarmMgr **Session ID 0** (with Archestra account) and **AlarmMgr Session ID 1** (with Windows login).

7. Verify AlarmViewer control query caption shows 100%.
8. Verify Galaxy alarms are seen in InTouch Alarm Viewer control.

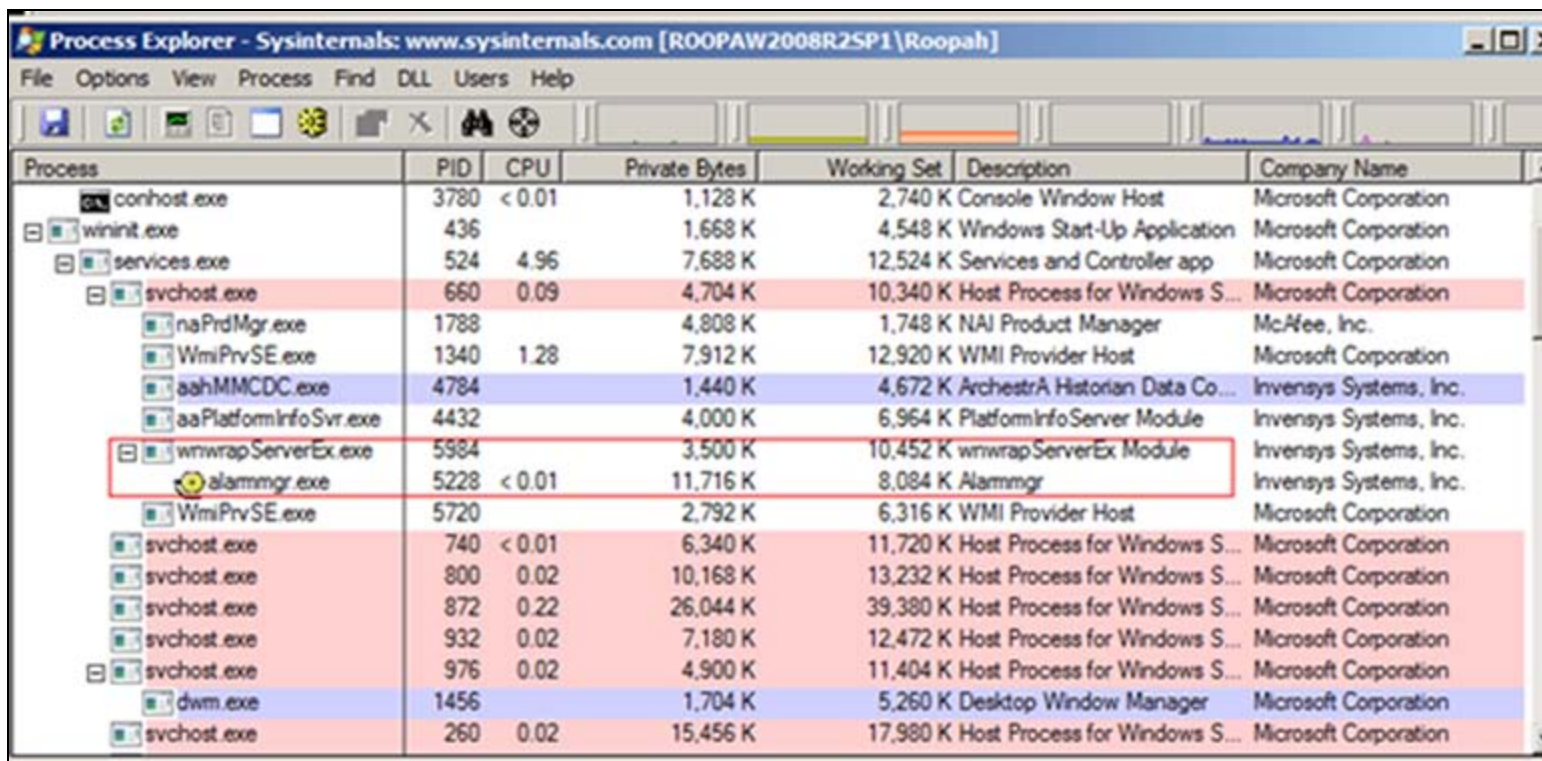
If the above is true then the **Wonderware SuiteVoyager Alarm Consumer Service** might be the cause of the problem.

Refer to the following Tech Notes regarding Wonderware Information Server(WIS/SuiteVoyager) best practices and troubleshooting Factory alarms issues.

- [790 Troubleshooting Wonderware Information Server \(WIS\) Part 2: Part Two: Factory Alarms](#)
- [794 Troubleshooting Wonderware Information Server \(WIS\) Part 3: Workarounds for Factory Alarms Issues in Windows Server 2008](#)

## Miscellaneous

Download the [Microsoft Process Explorer](#) to find out which process invokes **Alarmmgr.exe** (Figures 7 and 8 below).



Process	PID	CPU	Private Bytes	Working Set	Description	Company Name
conhost.exe	3780	< 0.01	1,128 K	2,740 K	Console Window Host	Microsoft Corporation
wininit.exe	436		1,668 K	4,548 K	Windows Start-Up Application	Microsoft Corporation
services.exe	524	4.96	7,688 K	12,524 K	Services and Controller app	Microsoft Corporation
svchost.exe	660	0.09	4,704 K	10,340 K	Host Process for Windows S...	Microsoft Corporation
naPrdMgr.exe	1788		4,808 K	1,748 K	NAI Product Manager	McAfee, Inc.
WmiPrvSE.exe	1340	1.28	7,912 K	12,920 K	WMI Provider Host	Microsoft Corporation
aahMMCDC.exe	4784		1,440 K	4,672 K	Archestra Historian Data Co...	Invenys Systems, Inc.
aaPlatformInfoSvr.exe	4432		4,000 K	6,964 K	PlatformInfoServer Module	Invenys Systems, Inc.
wmwrapServerEx.exe	5984		3,500 K	10,452 K	wmwrapServerEx Module	Invenys Systems, Inc.
alarmmgr.exe	5228	< 0.01	11,716 K	8,084 K	Alarmmgr	Invenys Systems, Inc.
WmiPrvSE.exe	5720		2,792 K	6,316 K	WMI Provider Host	Microsoft Corporation
svchost.exe	740	< 0.01	6,340 K	11,720 K	Host Process for Windows S...	Microsoft Corporation
svchost.exe	800	0.02	10,168 K	13,232 K	Host Process for Windows S...	Microsoft Corporation
svchost.exe	872	0.22	26,044 K	39,380 K	Host Process for Windows S...	Microsoft Corporation
svchost.exe	932	0.02	7,180 K	12,472 K	Host Process for Windows S...	Microsoft Corporation
svchost.exe	976	0.02	4,900 K	11,404 K	Host Process for Windows S...	Microsoft Corporation
dwm.exe	1456		1,704 K	5,260 K	Desktop Window Manager	Microsoft Corporation
svchost.exe	260	0.02	15,456 K	17,980 K	Host Process for Windows S...	Microsoft Corporation

FIGURE 7: PROCESS EXPLORER WITH ALARMMGR.EXE STARTED BY THE GALAXY PLATFORM



ReportingServicesServic...	2316	Reporting Services Service	Microsoft Corporation
slssvc.exe	2452	SuiteLink Inbound Connecti...	Invensys Systems, Inc.
sqlwriter.exe	2468	SQL Server VSS Writer - 64 ...	Microsoft Corporation
svchost.exe	2484	Host Process for Windows S...	Microsoft Corporation
svchost.exe	2508	Host Process for Windows S...	Microsoft Corporation
svchost.exe	2520	Host Process for Windows S...	Microsoft Corporation
wwsvalmvc.exe	2576	Wonderware SuiteVoyager ...	Invensys Systems, Inc.
alammgr.exe	3012	Alammgr	Invensys Systems, Inc.
wwsvlicmgr.exe	2656	Wonderware License Mang...	Invensys Systems, Inc.
aaBootstrap.exe	2708	Bootstrap Module	Invensys Systems, Inc.
aaEngine.exe	3284	Engine Module	Invensys Systems, Inc.
FSGateway.exe	2740	ServerExe Module	Invensys Systems, Inc.
rdbhandler.exe	2856	Outpost RDB Handler	Invensys Systems, Inc.
dllhost.exe	3344	COM Surrogate	Microsoft Corporation
NmxSvc.exe	3384	NmxSvc Module	Invensys Systems, Inc.
TrustedInstaller.exe	3076	Windows Modules Installer	Microsoft Corporation
svchost.exe	304	Host Process for Windows S...	Microsoft Corporation
lsass.exe	732	Local Security Authority Pro...	Microsoft Corporation
lsm.exe	740	Local Session Manager Ser...	Microsoft Corporation
winlogon.exe	672	Windows Logon Application	Microsoft Corporation
explorer.exe	3912	Windows Explorer	Microsoft Corporation
MagicDisc.exe	2972	MagicISO Virtual CD/DVD ...	MagicISO, Inc.
procexp.exe	1896	Sysinternals Process Explorer	Sysinternals
procexp64.exe	3736	Sysinternals Process Explorer	Sysinternals
taskmgr.exe	3932	1.55 Windows Task Manager	Microsoft Corporation
mmc.exe	2704	Microsoft Management Cons...	Microsoft Corporation
WINWORD.EXE	4116	Microsoft Office Word	Microsoft Corporation
splwow64.exe	4248	Thinking Spooler APIS from...	Microsoft Corporation
PWRISOVM.EXE	2808	PowerISO Virtual Drive Man...	PowerISO Computing, Inc.
mmc.exe	3716	Microsoft Management Cons...	Microsoft Corporation
view.exe	3776	InTouch WindowViewer	Invensys Systems, Inc.
alammgr.exe	2964	Alammgr	Invensys Systems, Inc.

FIGURE 8: ALARMGR.EXE'S STARTED BY THE SUITEVOYAGER ALARM CONSUMER SERVICE AND INTOUCH WINDOW VIEWER

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