

ArcFM Solution 9.3.1 - Partial Certification Announcement

This document lists which components of the ArcFM Solution 9.3.1 have been officially certified or are supported on Windows 7 (32-bit) and Windows Server 2008 SP2 (32-bit and 64-bit). It also explains a new security feature of these operating systems called 'User Account Control' and how it affects our products in the ArcFM Solution 9.3.1 release. Additionally, it notes the certification of SQL Server 2008 with the ArcFM Solution 9.3.1 release.

Certification Information - OS

The following components of the ArcFM Solution 9.3.1 release have been certified on the following operating systems:

- Windows 7 32-bit only (any version)
- Windows Server 2008 SP2 64-bit

Certified Products & Components:

- ArcFM Desktop
- ArcFM Viewer for ArcGIS Engine
- Conduit Manager / Underground Facility Manager
- Designer
- Designer Express
- Designer Staker
- Fiber Manager
- Geodatabase Manager
- License Manager
- License Server
- Network Adapter
- Workflow Manager

The same products listed above are supported but have not been certified on the following operating systems:

- Windows Server 2008 SP2 32-bit

Certification Information - Database

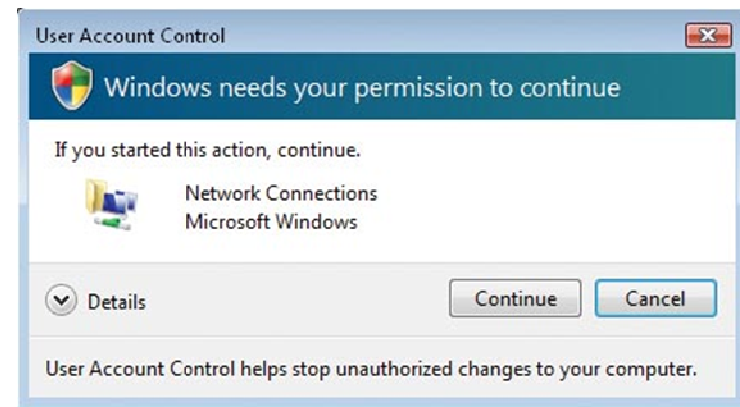
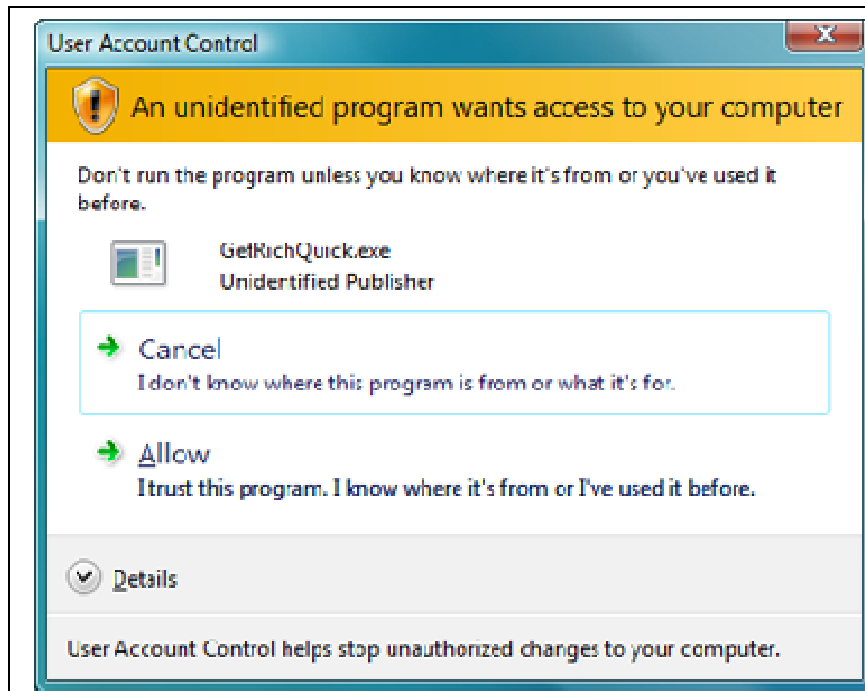
The ArcFM Solution 9.3.1 release is now been certified on the following database formats. Note that these are supported but uncertified on ArcFM 9.3 SP1 and 9.3 Rev2:

- SQL Server 2008
- Oracle 11

Customer Brief: User Account Control

With Windows Vista and Windows Server 2008 SP2, Microsoft introduced a new security feature called **User Account Control (UAC)**. UAC was designed with the philosophy that even if a user on a computer had administrative rights, not all applications that user launched should have administrative privileges by default. When the user or application requests administrative access, a dialog box prompting the user for elevation will appear, and the user can decide to allow or deny administrator-level elevation.

Figure 1: User Account Control Dialog Examples



These dialog boxes will appear if a user or application requests administrative access to your system on a computer with UAC enabled.

Knowing the difference between administrator-level privileges and standard user privileges is important. Applications running with administrator privileges have access to entire system's settings and critical system files. Applications running with standard user privileges are 'fenced off' from these sensitive parts of a system, unless given explicit permission to leave the 'fenced off' area. It is a similar notion to the Unix best practice to not let users 'run as root.'

This is where many third party applications have experienced problems. Before UAC, if a user had administrative privileges on a computer, all applications they launched had complete access to a system. When these same applications were run on Windows Vista (and later) with UAC enabled, they may have **expected** to have complete access to the system and appear to not work correctly (or at all) with standard user permissions. Types of items that UAC-incompatible applications might have expected access to are the **registry**, **windows services**, and **access to system folders**. Note that this is **not** a comprehensive list.

User Access Control **may** be disabled by administrators so users will not need to worry about applications not working with UAC, but it is strongly advised against to maintain a more secure computing environment in your organization.

Detailed Information for User Account Control can be found below:

- General UAC information: <http://windows.microsoft.com/en-us/windows-vista/What-is-User-Account-Control>
- UAC on Windows Server 2008: [http://technet.microsoft.com/en-us/library/cc709628\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc709628(WS.10).aspx)
- UAC on Windows 7: [http://technet.microsoft.com/en-us/library/dd560669\(WS.10\).aspx](http://technet.microsoft.com/en-us/library/dd560669(WS.10).aspx)

User Account Control and the ArcFM Solution 9.3.1 Release

This section will show how User Account Control affects our 9.3.1 release products in detail with two examples: Geodatabase Manager and License Manager. Other things UAC affects will be listed after this in-depth look.

This walkthrough assumes basic knowledge of License Manager, Geodatabase Manager, and certain Windows components such as services and background processes.

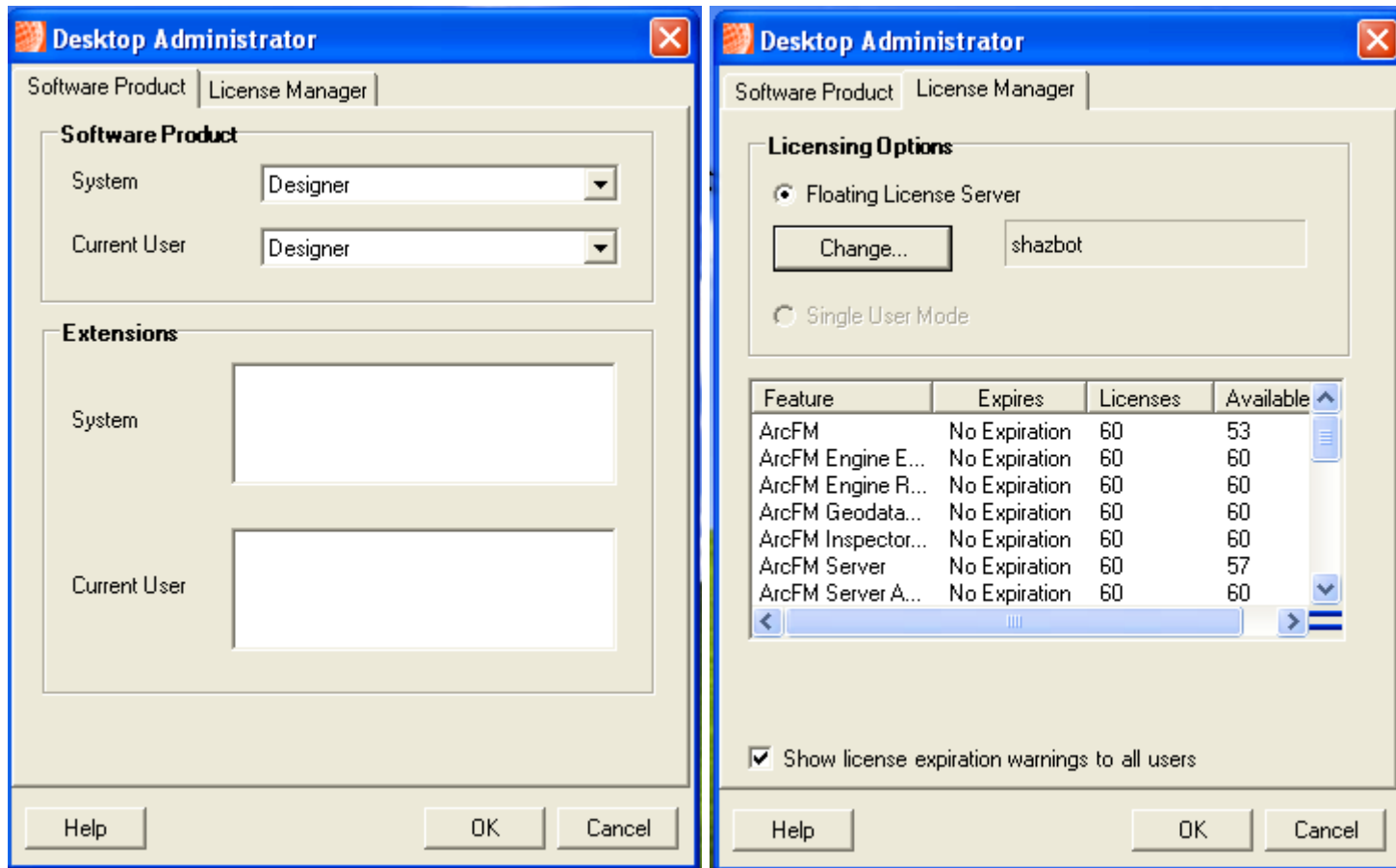
NOTE: Users should be aware that the ArcFM Solution 9.3.1 release was not designed to specifically work with Microsoft's User Account Control feature. Internal testing has shown product functionality has only been minimally affected, but users running in environments with UAC enabled should be aware that unexpected application behavior could be attributed to UAC. If in doubt, run the application as administrator and try the same thing.

License Manager and User Account Control:

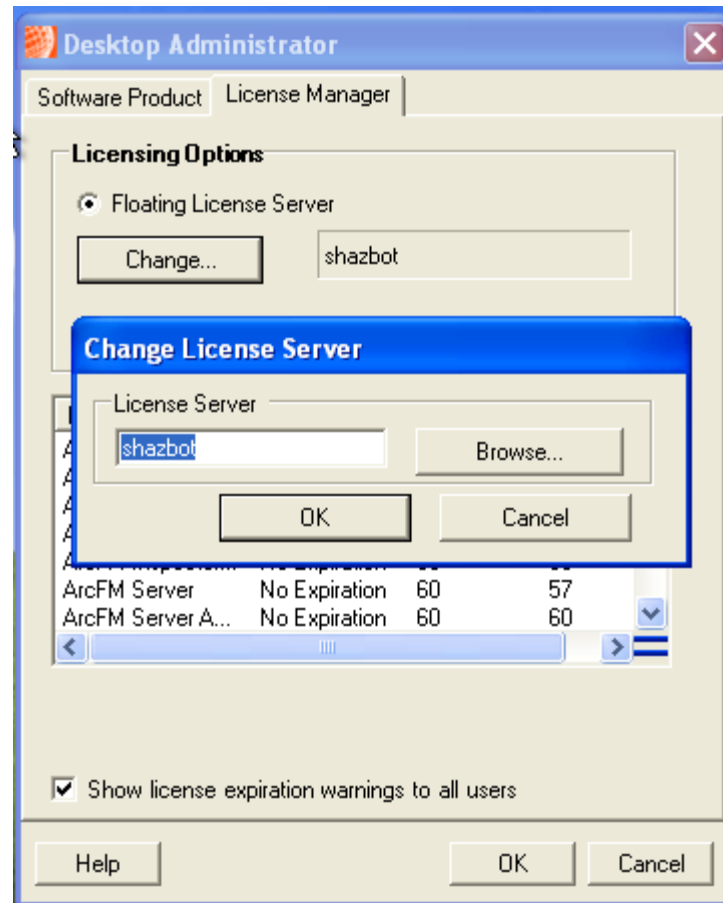
License Manager is a very simple component, and UAC affects it in a way that is clearly visible to the end user, which is why we will start with this product.

Walkthrough Steps:

1. First, let's look at how License Manager behaves on Windows XP running under an account with administrative privileges:

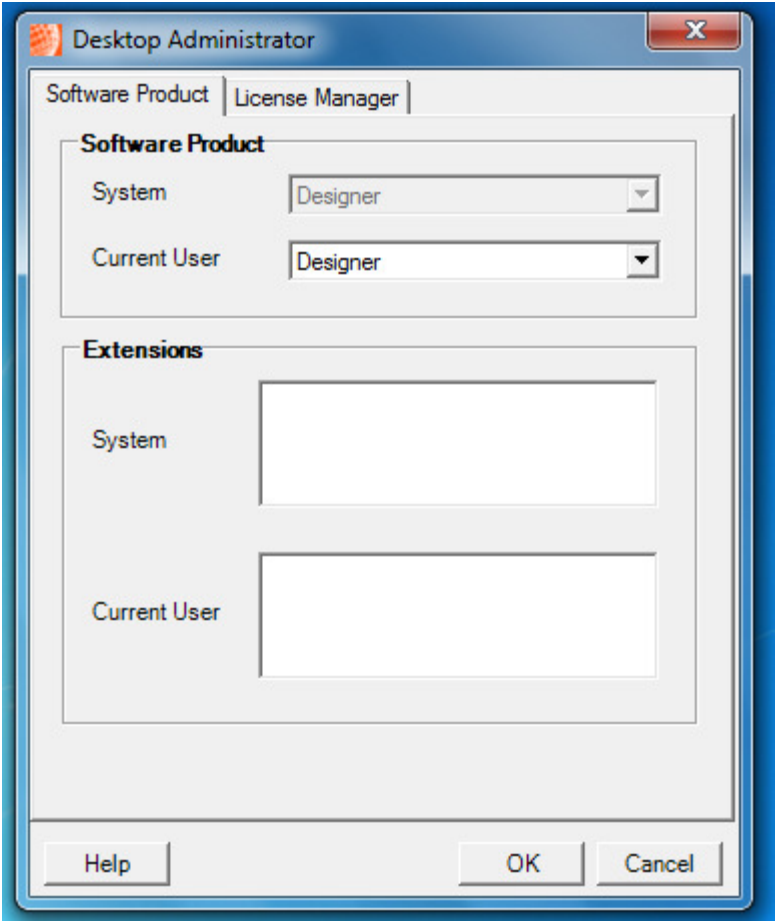


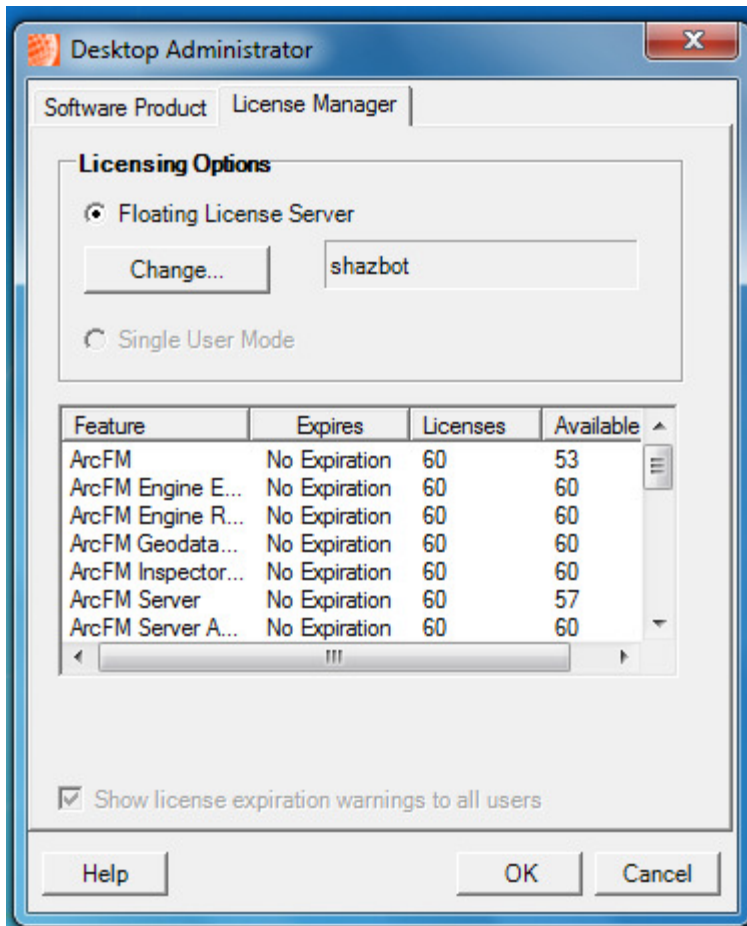
a. Notice that everything appears as you are used to. Click on the 'Change...' button:



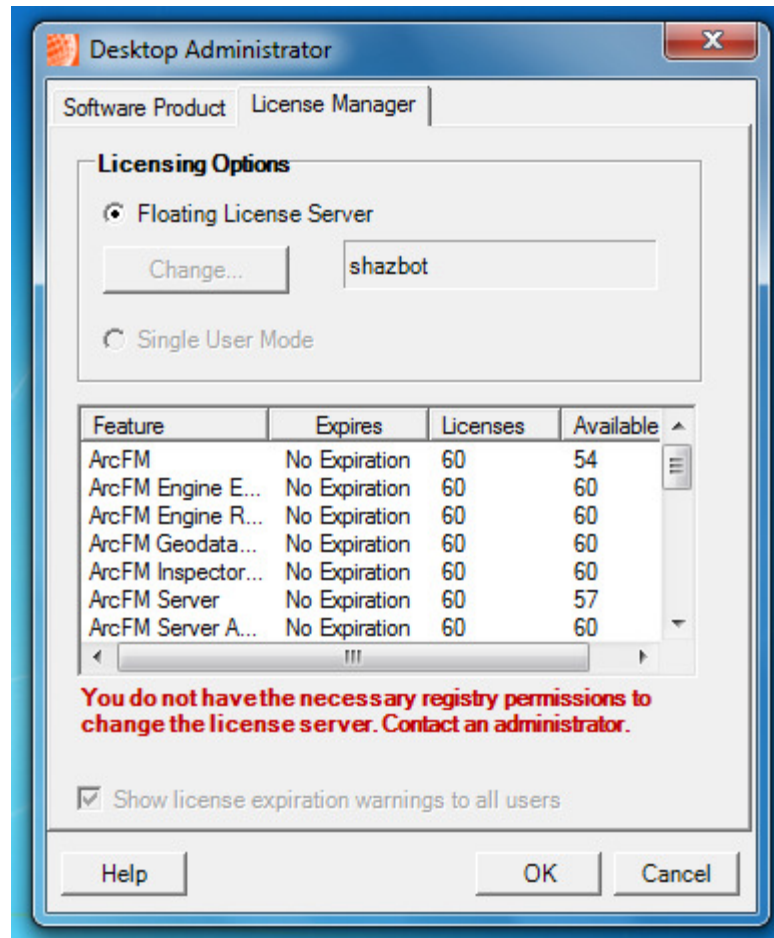
b. Everything still works normally.

2. Now, let's see how License Manager appears on Windows 7, with UAC enabled.





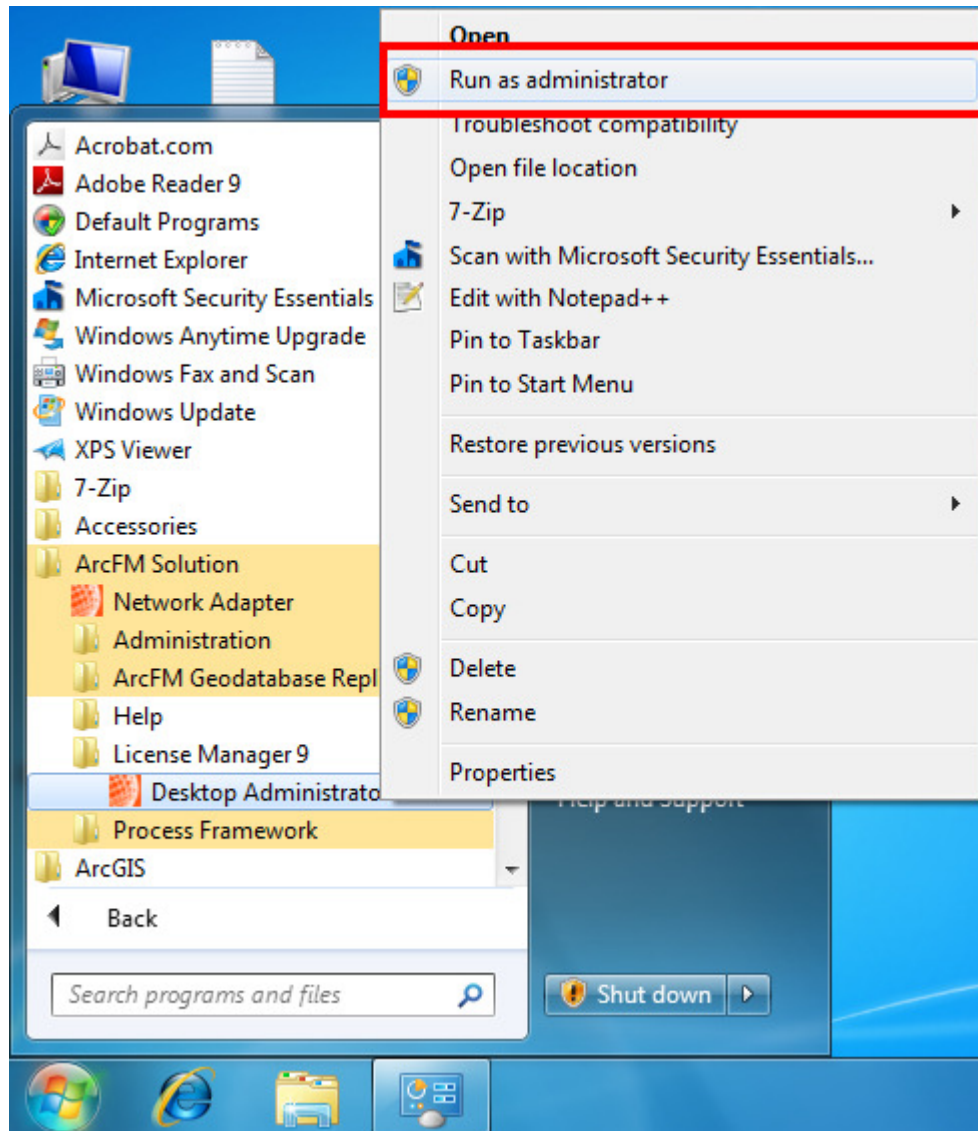
- a. Notice the differences between Windows XP and Windows 7 with UAC enabled:
- The 'System' License level control is disabled and cannot be changed by the user.
 - The 'Show license expiration warnings to all users' checkbox control is disabled.
- b. Now, try clicking the 'Change...' button on the License Manager tab:



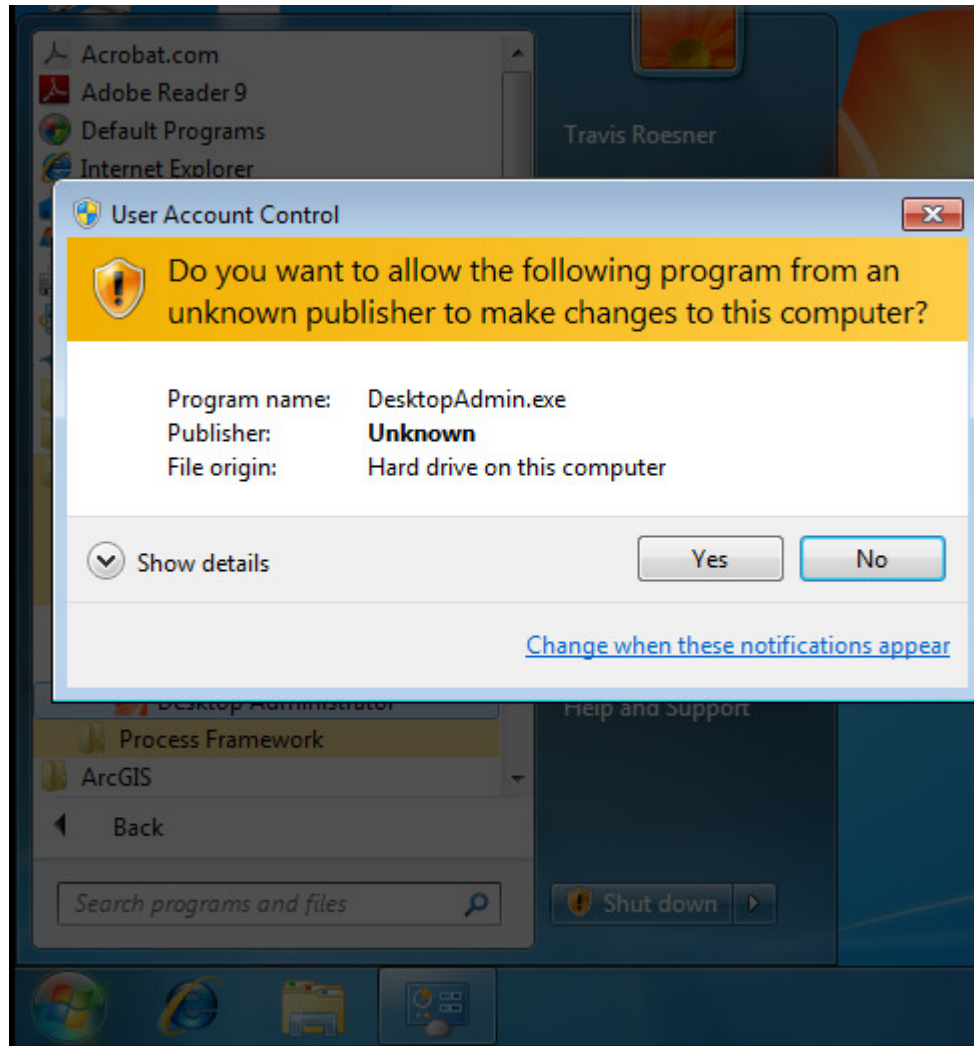
c. Notice that the application informs you that you don't have the rights to do this. This is the work of UAC. You started the application with standard user privileges, even though your user account is able to use those privileges.

3. Now, let's tell License Manager we want it to have administrator-level access to the whole system:

a. First, navigate to 'Desktop Administrator' in your start menu. Then, right click on it:



- b. Notice that the screen dims and a noticeable dialog box appears. This is UAC asking if we really want to allow this application to access our system at an administrator-level. Click the 'Yes' button.
 - i. Notice the 'Run as administrator context menu option. Click it. This command is similar to the sudo command in Unix environments.



User Account Control



Do you want to allow the following program from an unknown publisher to make changes to this computer?

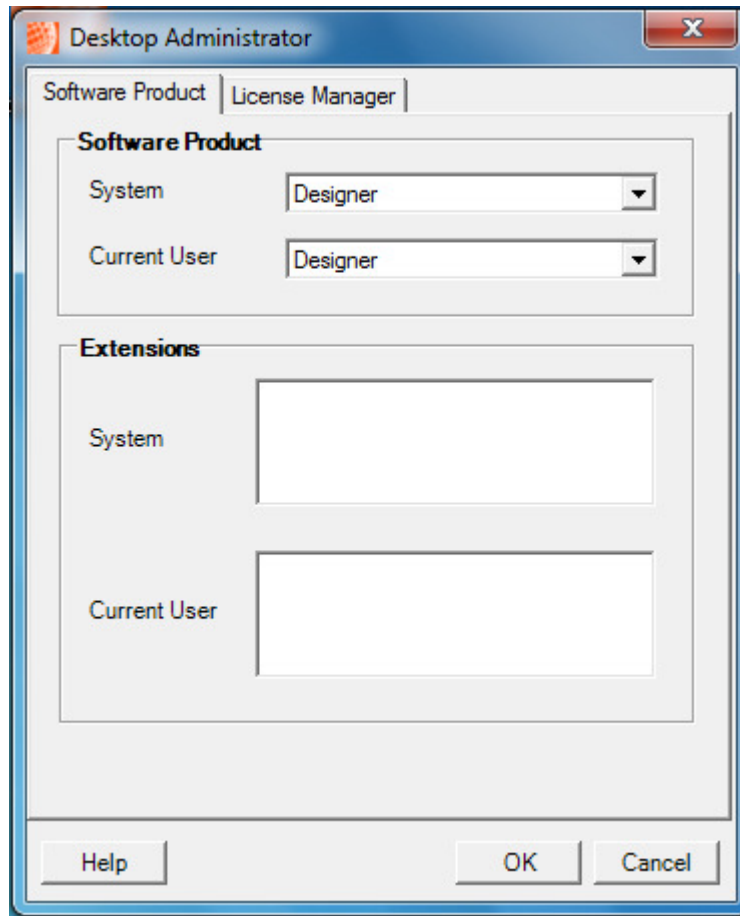
Program name: DesktopAdmin.exe
Publisher: **Unknown**
File origin: Hard drive on this computer

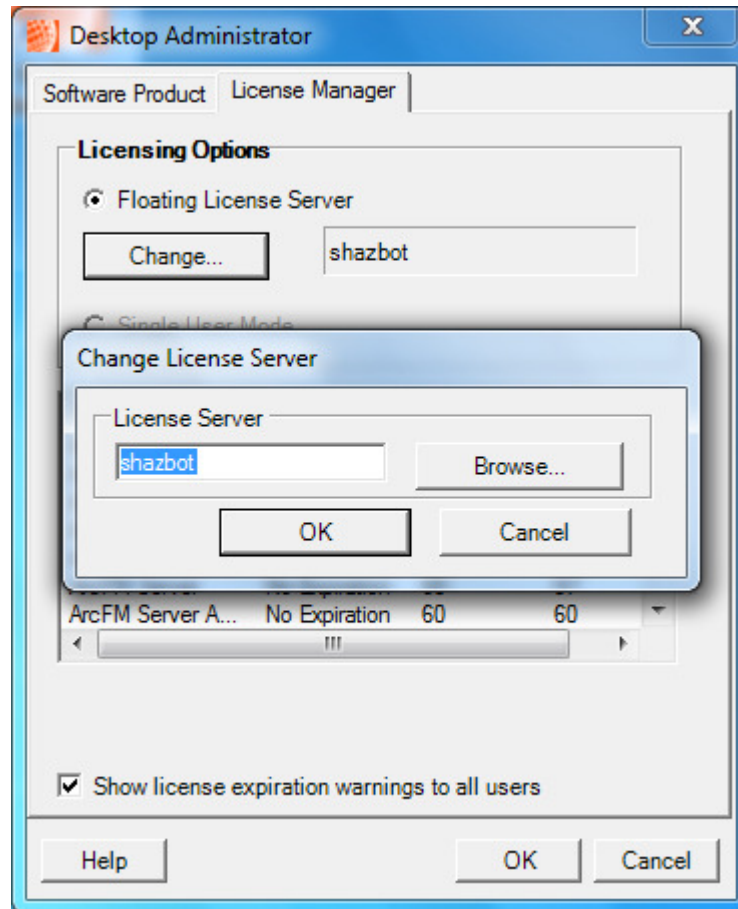
Show details

Yes

No

[Change when these notifications appear](#)



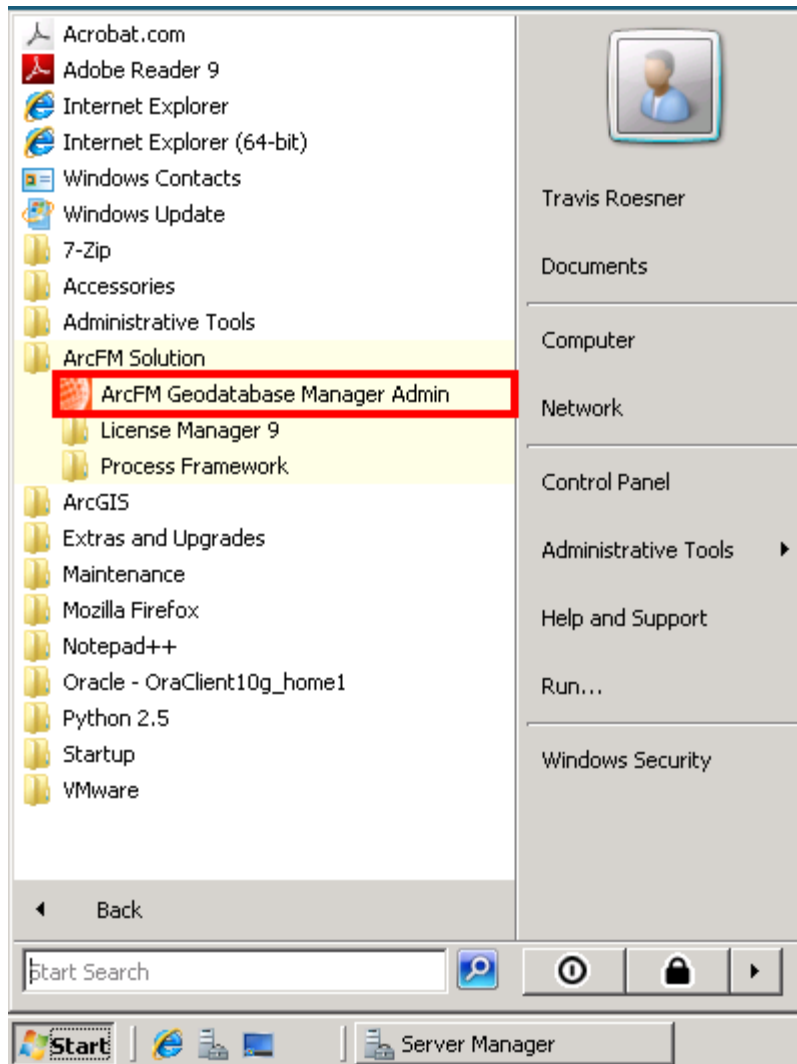


- ii. Notice how License Manager now behaves like it did on Windows XP now that it has administrative-level privileges.

Geodatabase Manager and User Account Control:

Geodatabase Manager is a more complicated piece of software than License Manager. It deals with Windows Services and requires access to multiple system-level folders. This is an example of how UAC can unknowingly cripple an application.

1. First, install Geodatabase Manager on either Windows 7 or Server 2008 (this example is being performed on Server 2008). Then, open the ArcFM Geodatabase Manager Admin.





2. Now, try creating an interval on any of the days of the week in GDBM:

ArcFM Geodatabase Manager [Minimize] [Maximize] [Close]

View Tools Help

Available Services

Name	Status
 GDBMServic1	Stopped



Schedule | Version Processing | Database Connections | Licenses | Logging | Monitor

- Sunday
- Monday**
 - Interval 1
 - Reconcile: 12:00:00 AM - 11:59:59 PM
 - Post: 12:00:00 AM - 11:59:59 PM
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday


Apply OK Close


- a. Notice how the application behaves normally. Click 'OK' to close the application.
3. Re-open the ArcFM Geodatabase Manager application. Notice how your changes were lost:

ArcFM Geodatabase Manager [min] [max] [close]

View Tools Help

Available Services

Name	Status
 GDBMService1	Stopped



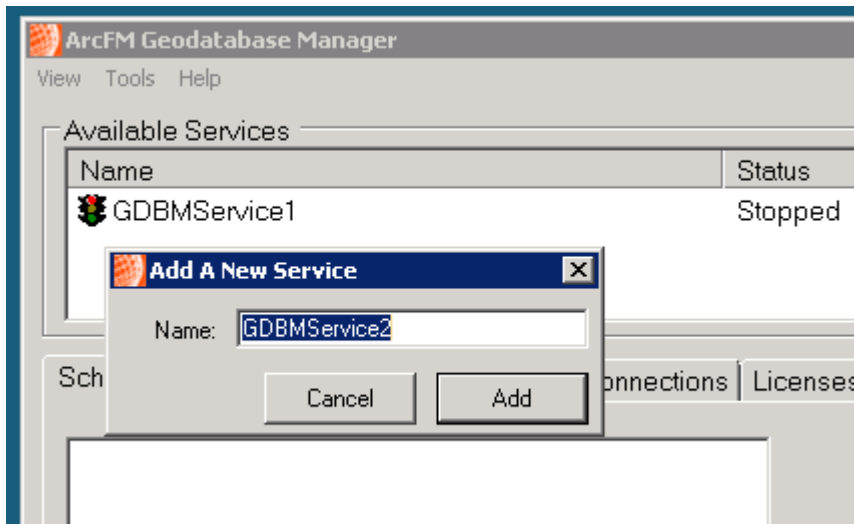
Schedule | Version Processing | Database Connections | Licenses | Logging | Monitor

- Sunday
- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday

Apply OK Close

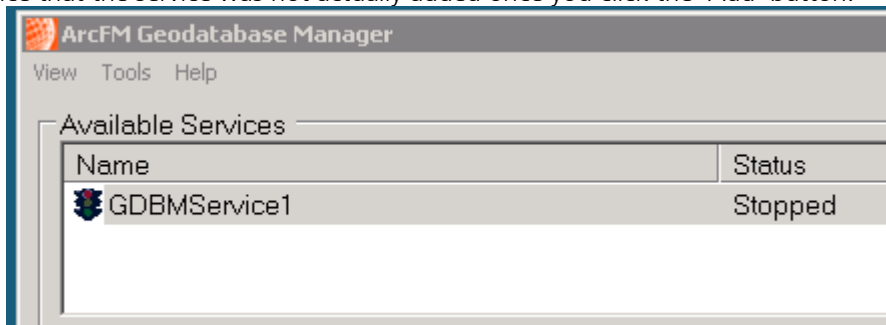
- a. This is an example of how UAC is preventing an application from performing its usual actions. Because Geodatabase Manager wasn't designed for use with UAC, there are currently no prompts to tell you this fact.

4. Try to add a GDBM Service:

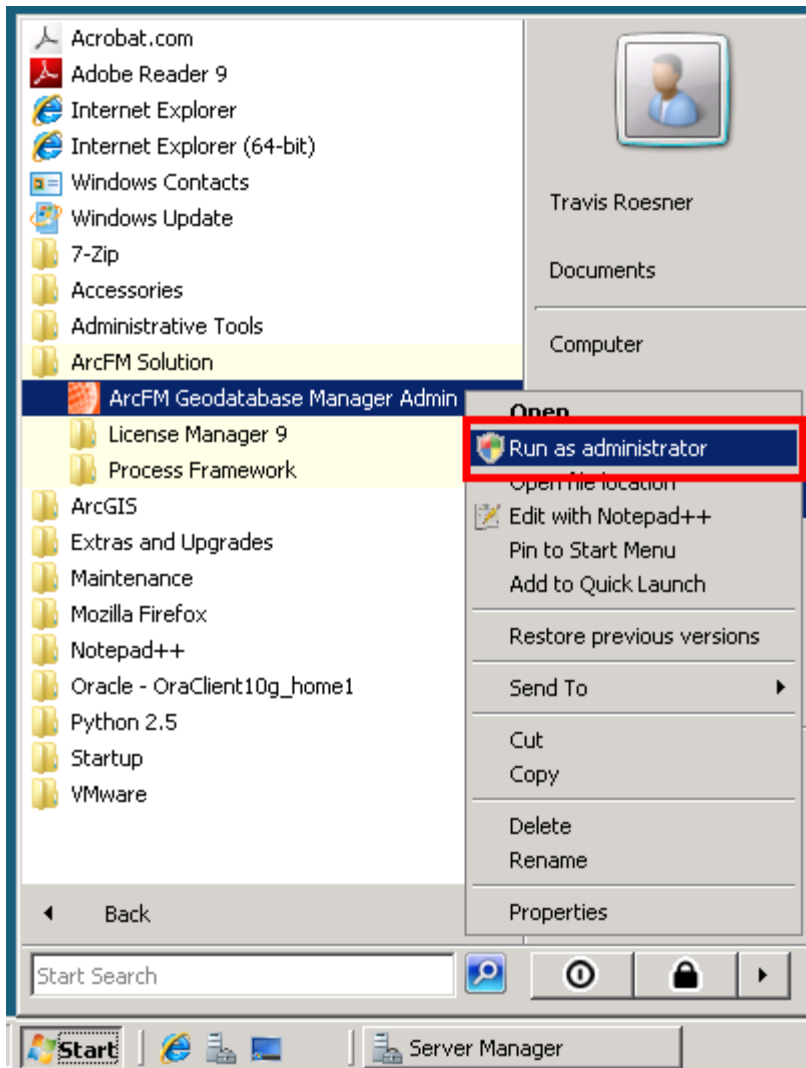


- a. Notice that the application seems to behave normally. Add the new service.

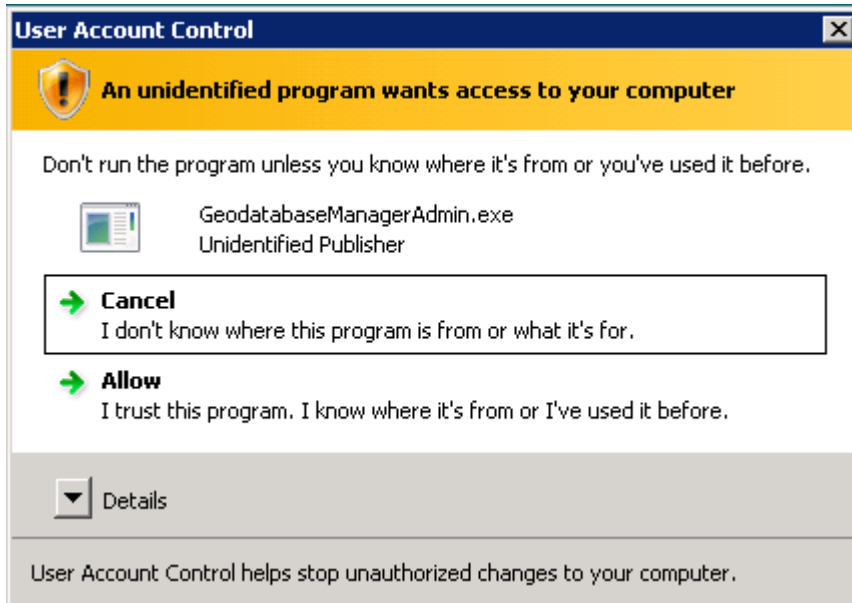
5. Notice that the service was not actually added once you click the 'Add' button:



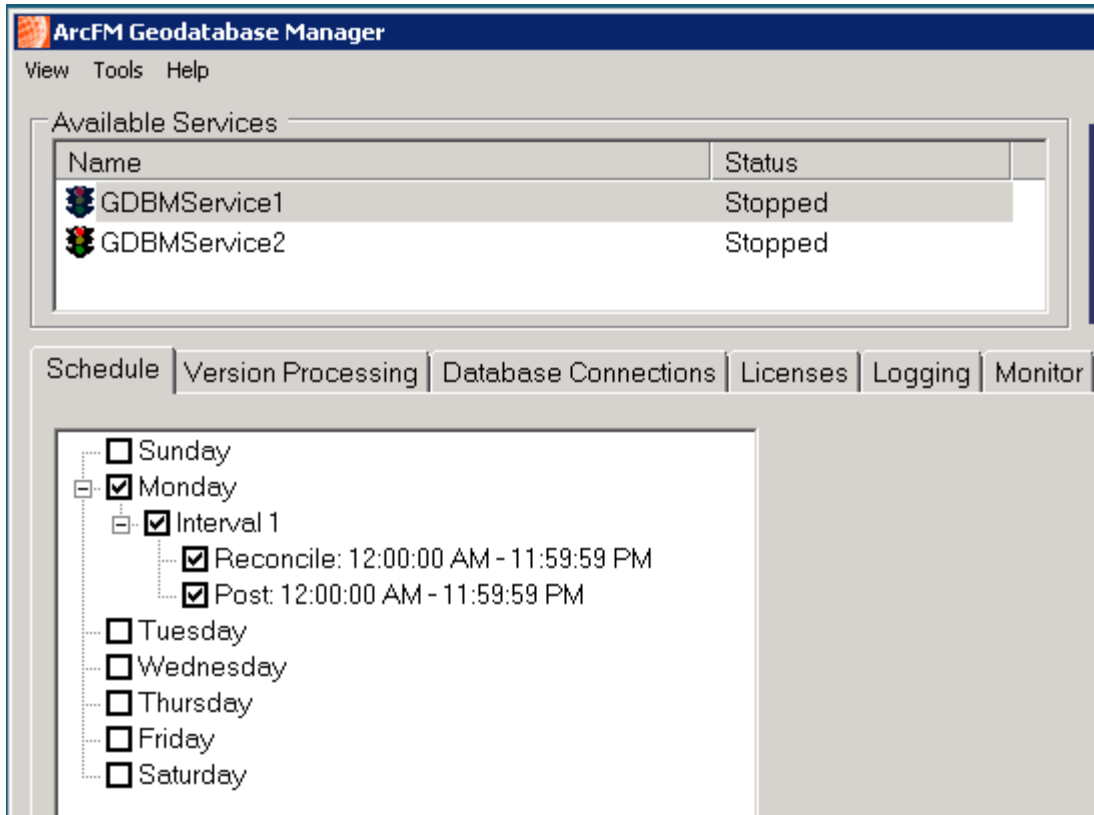
- a. This is another example of how UAC is blocking an application from interacting with core system features. In this case, Windows services.
 - b. **NOTE:** If you try to start GDBMService1, it will fail. UAC is preventing interaction with **all** aspects of Windows services.
6. Now, launch GDBM as administrator:



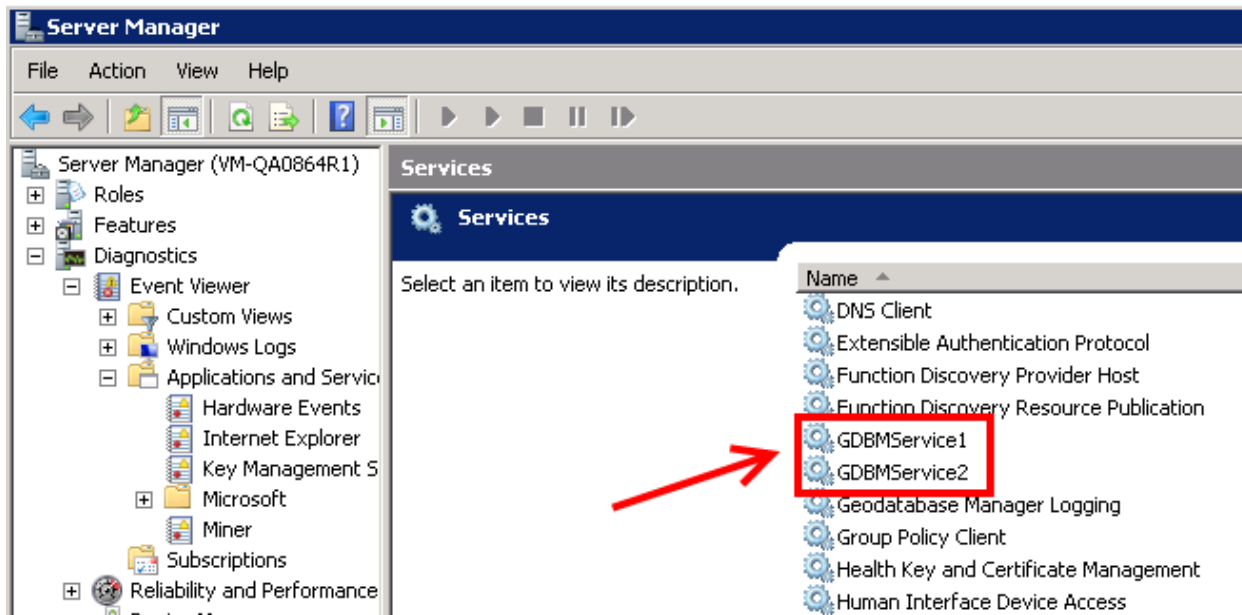
- a. Click 'Allow' to let GDBM run with administrator-level privileges.



7. Repeat steps 2 through 5.
8. Notice that your changes have persisted, now:



9. You can also see that these services exist in the Server Manager:



March 18, 2010