

dBeamer and dBeamer!DPM
Quick Start Guide
v2.0 (beta)

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Table of Contents

TABLE OF CONTENTS	II
1. QUICK START GUIDE OVERVIEW	1
2. USER ACCOUNT AND PRIVILEGES FOR INSTALLATION AND UN-INSTALLATION	2
3. DBEAMER QUICK START	4
3.1 DBEAMER QUICK INSTALLATION	4
3.2 ACTIVATE YOUR DBEAMER LICENSE	5
3.3 QUICK TEST DRIVE	7
3.4 GETTING MORE CONTROL	11
3.5 SIMPLE SETUP FOR OTHER USERS	14
4. DBEAMER!DPM QUICK START	17
4.1 DBEAMER!DPM SERVER INSTALLATION	17
4.2 DBEAMER!DPM CLIENT INSTALLATION	22
4.3 QUICK CHECK OF THE DBEAMER!DPM INSTALLATION	24
4.4 TEST DRIVE OF AN INSTANT SQL RECOVERY FIRE DRILL	27
5. LICENSE ACTIVATION WITHOUT INTERNET CONNECTIVITY	34
5.1 FOR DBEAMER	34
5.2 FOR DBEAMER!DPM	37
6. BEAMING LARGE NUMBERS OF OBJECTS	40

1. Quick Start Guide Overview

The Quick Start Guide covers two key products:

- Section 2. for dBeamer – The base product that provides instant data availability when you need to transfer large amounts of data but you don't want to wait
- Section 3. for dBeamer!DPM – A dBeamer-based solution suite which offers “*Instant*” recovery of mission critical data for the servers protected by Microsoft DPM

CAUTION: The Microsoft DPM protection agent (DPMRA) will stop its data protection activity when it detects the presence of a mini-filter that is not in its exclude list. Since there is a mini-filter in dBeamer™, the installation of dBeamer™ will affect data protection for systems on which it is to be installed. In order to prevent the DPMRA service from stopping its data protection, an IT Administrator must create a **DWORD** registry entry called **ForceFixup** in the following registry location:

HKLM\Software\Microsoft\Microsoft Data Protection Manager\Agent\2.0\ForceFixup

(Set its value to 1)

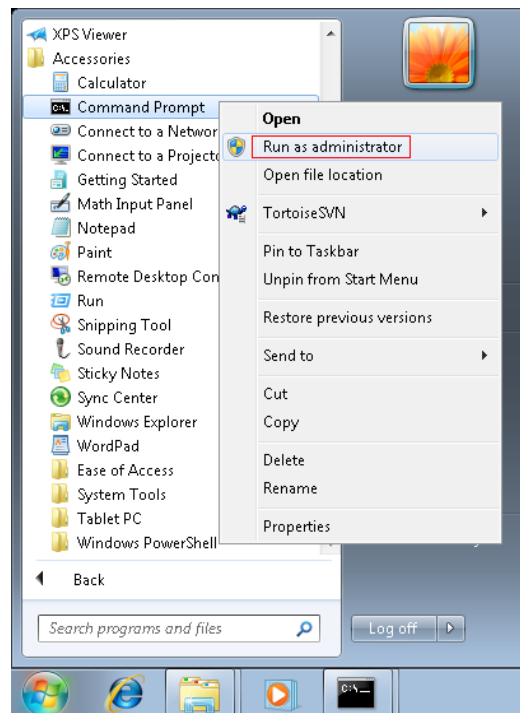
The registry should be modified when there is no DPM synchronization activity taking place and the DPMRA service must be restarted after the registry entry has been created in order for it to take effect.

Please refer to **dBeamerDPMBestPractice.pdf** for more information.

2. User Account and Privileges for Installation and Un-installation

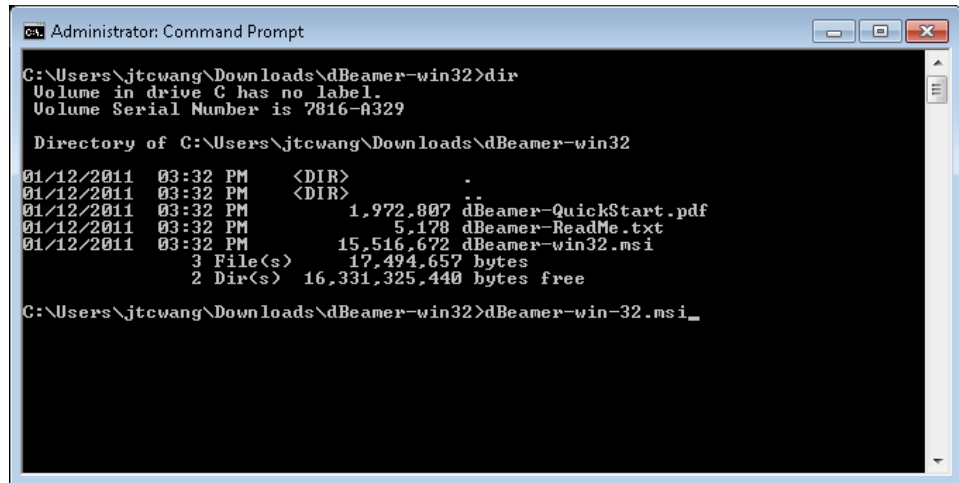
Information in this section applies to both dBeamer and dBeamer!DPM installation and un-installation as well as for workgroup and domain environments. Using an account with the required privileges is critical to ensure the correct software installation, un-installation and operation. Please choose one of the following options:

- Administrator Account:
 - No special action is needed on all supported operating system platforms. Simply double-click the MSI file to install and un-install.
- Non-Administrator Account but in the Administrators Group:
 - On Windows 2003, no special action is needed. Simply double-click the MSI file to install and un-install.
 - On Windows 2008 and Windows 7:
 - Start the “**Command Prompt**” window with “**Run as administrator**” privileges:



- Then type in the corresponding dBeamer*.msi or dBeamerDPM*.msi file name in the “**Command Prompt**” window to install or un-install the

software. The example below shows how to do this in a Windows 7 x86 environment.



```
Administrator: Command Prompt

C:\Users\jtcwang\Downloads\dBeamer-win32>dir
Volume in drive C has no label.
Volume Serial Number is 7816-A329

Directory of C:\Users\jtcwang\Downloads\dBeamer-win32

01/12/2011  03:32 PM    <DIR>          .
01/12/2011  03:32 PM    <DIR>          ..
01/12/2011  03:32 PM                1,972,807 dBeamer-QuickStart.pdf
01/12/2011  03:32 PM                5,178 dBeamer-ReadMe.txt
01/12/2011  03:32 PM            15,516,672 dBeamer-win32.msi
               3 File(s)            17,494,657 bytes
               2 Dir(s)   16,331,325,440 bytes free

C:\Users\jtcwang\Downloads\dBeamer-win32>dBeamer-win-32.msi_
```

3. dBeamer Quick Start

This section of the Quick Start Guide covers the following topics:

- 3.1 dBeamer Quick Installation
- 3.2 Review Your dBeamer License
- 3.3 A Quick Test Drive
- 3.4 A Practical Example
- 3.5 Getting More Control
- 3.6 Simple Setup for Other Users

3.1 dBeamer Quick Installation

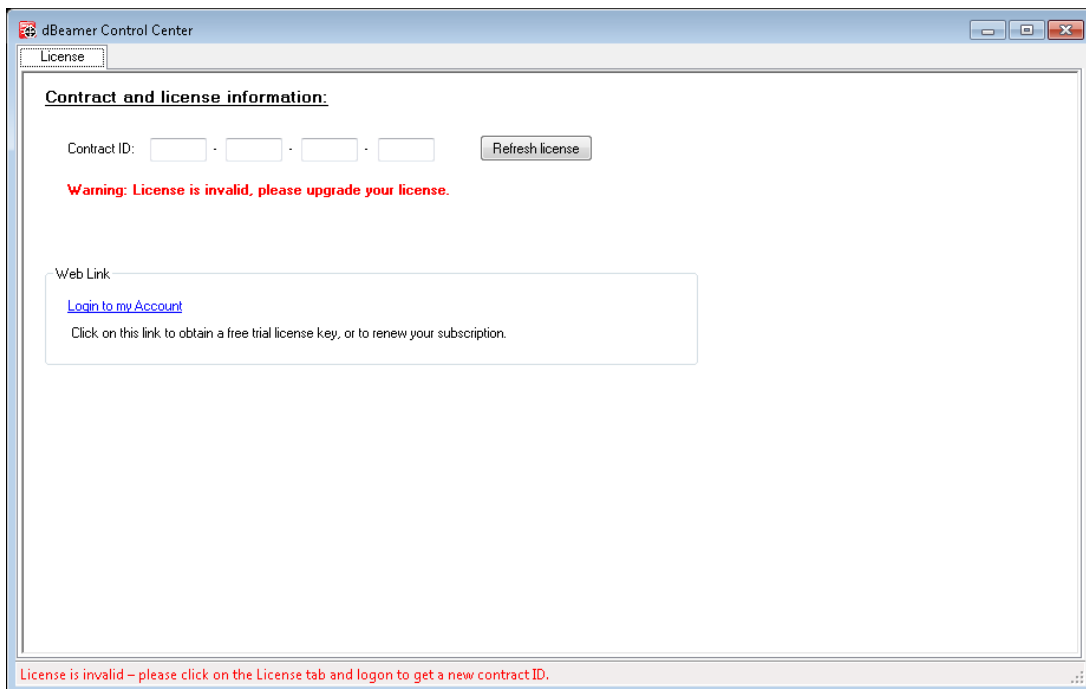
- Please make sure you use a **proper user account and privilege** described in section 2 before proceed.
- Extract the installation files from the downloaded zip files:
 - On a 32-bit Windows Operating System, unzip **dBeamer-win32.zip** to extract:
 - dBeamer-win32.msi
 - dBeamer-QuickStart.pdf (this document)
 - dBeamer-ReadMe.txt
 - On a 64-bit Windows Operating System, unzip **dBeamer-x64.zip** to extract:
 - dBeamer-x64.msi
 - dBeamer-QuickStart.pdf (this document)
 - dBeamer-ReadMe.txt
- If you are BEAMing a large number of objects and hundreds of GB of data, it is recommended that you use more than 4GB of RAM.
- Review dBeamer-ReadMe.txt
- Run **dBeamer-win32.msi** on a 32-bit Windows Operating System and accept the License Agreement to continue.
- Run **dBeamer-x64.msi** on a 64-bit Windows Operating System and accept the License Agreement to continue.
- At the end of the Installation:

- Reboot the system if the Installer prompts you to do so, then go to the **Review Your dBeamer License** section below.
- **OR** go directly to the **Review Your dBeamer License** section if no reboot prompt is displayed.

3.2 Activate Your dBeamer License

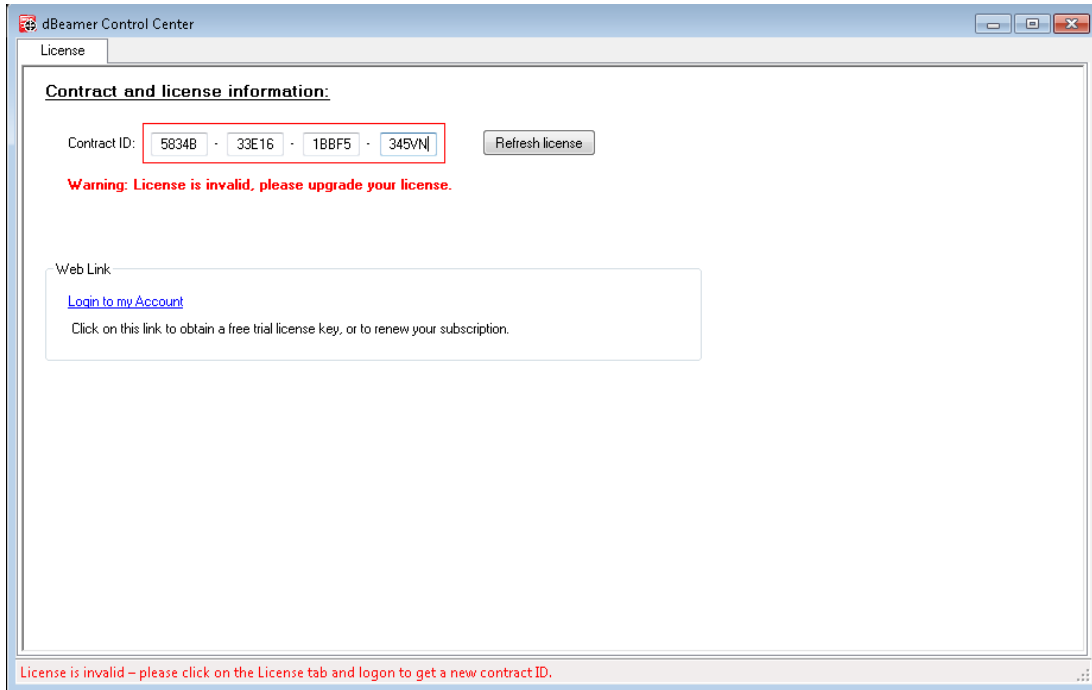
NOTE: If you are installing dBeamer!DPM client, dBeamer must be installed first. The version of dBeamer used by dBeamer!DPM can be unlicensed. It is not necessary to activate dBeamer if it is only used by dBeamer!DPM. However, in order to use dBeamer independently of dBeamer!DPM, a dBeamer license is required.

- Please make sure your system has Internet connectivity since all free or purchased licenses require activation via the Internet.
 - *If your IT environment does not allow your system to access the Internet directly, please refer to the “License Activation without Internet Connectivity” section at the end of this guide to activate your license.*
- Start the **dBeamer Control Center** by clicking on ”**Start→All Programs→Instavia dBeamer→dBeamer Control Center**”. Before the license is activated, you will see the following initial screen:

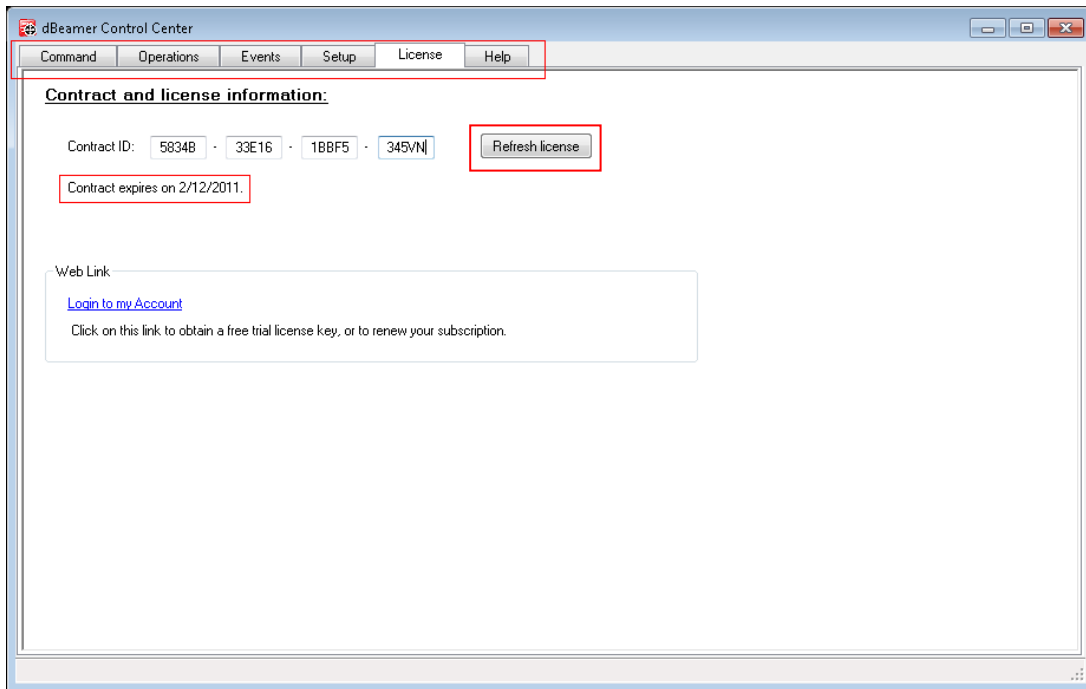


- You must have either of the following dBeamer **Contract IDs** to activate your license:

- *To get a Free Trial license:*
- Please visit the software download page at <https://www.instavia.com/istv/lib/download/download.php>
 - Click "*Create an account*" at the top of the page if you don't have an account.
 - Click "*Get Evaluation Key*" on the download page and follow the steps.
 - You will receive your free trial Contract ID via an email.
- *For a Purchased license:*
 - You will receive your purchased Contract ID via an email after the payment is received.
- Once you get your Contract ID, please take the following steps to activate it:
 - Copy the Contract ID from the email, then click in the left-most text field of the "*Contract ID*" field and paste it.



- Click the **Refresh License** button on the right, and you will see a refreshed expiration date based on your purchase. Also, all the functional tabs will appear at the top of the **dBeamer Control Center** window.

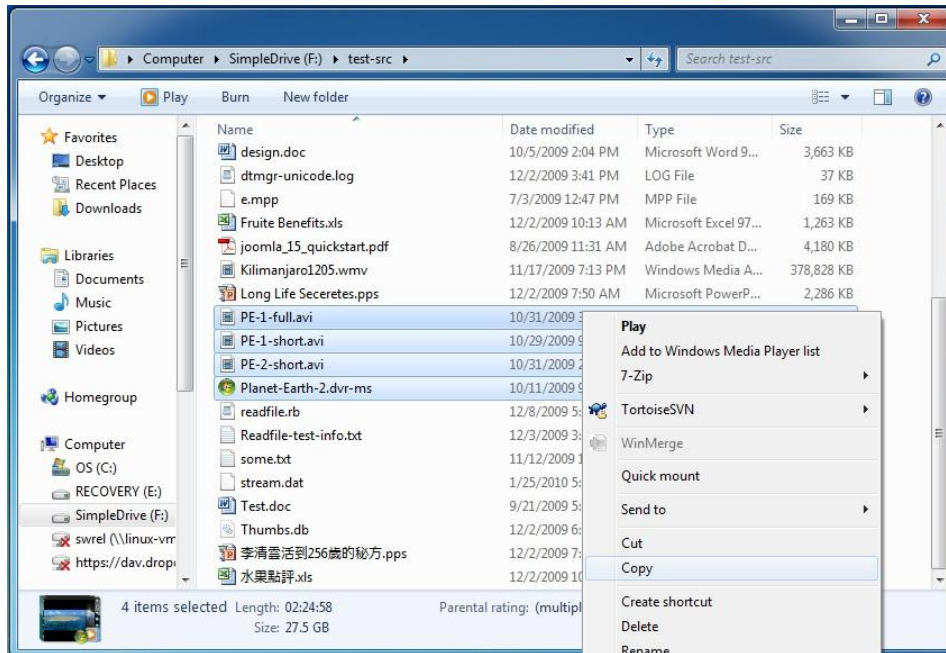


- Congratulations! You have successfully activated your license and may now perform the following dBeamer test drive.

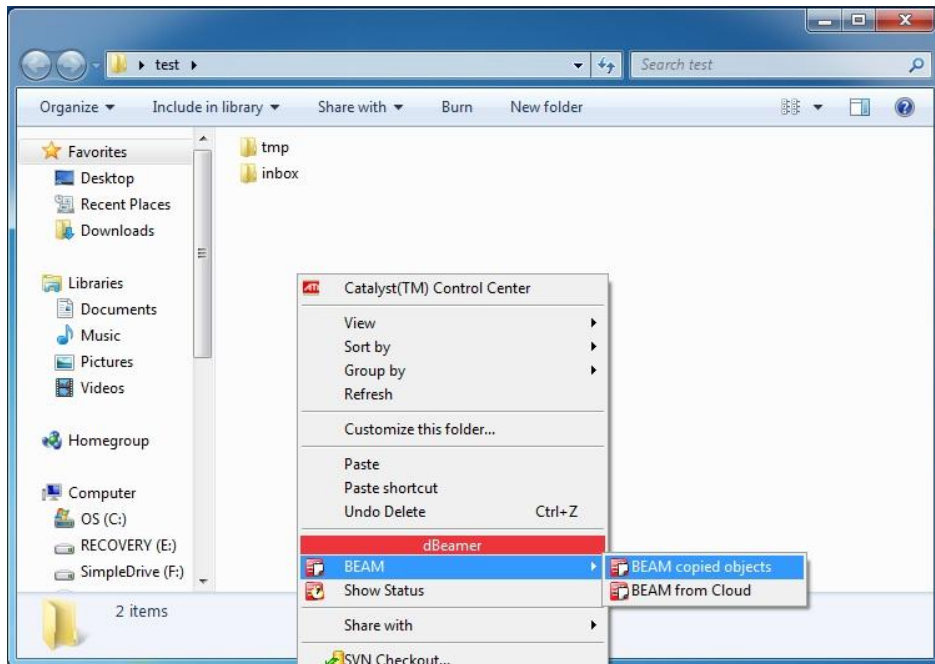
3.3 Quick Test Drive

Instantly copy some large files from (F:) drive to (C:) drive

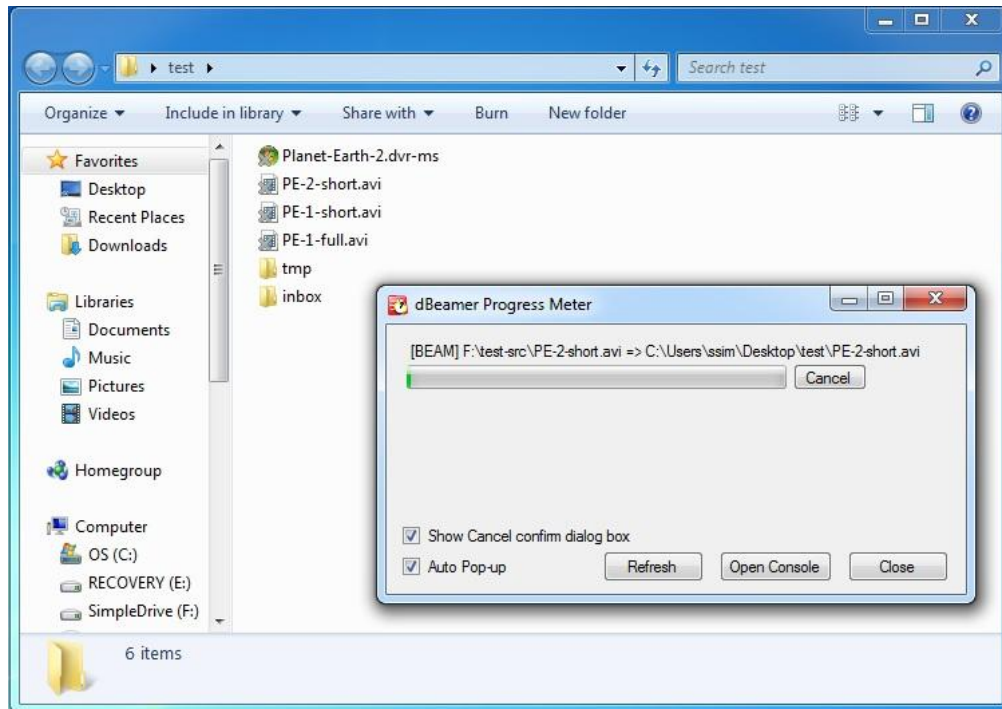
- In Windows Explorer, find the directory that contains the large files to be copied, select the files and/or folders to be copied, and click on “Copy” using the Explorer menu (in the same manner as a conventional file/directory Copy):



- Find the *Target* folder (on C: drive), right click on the folder and select “**BEAM**” (NOTE: Be sure to select “BEAM” rather than “Paste”), then select “**BEAM copied objects**”.



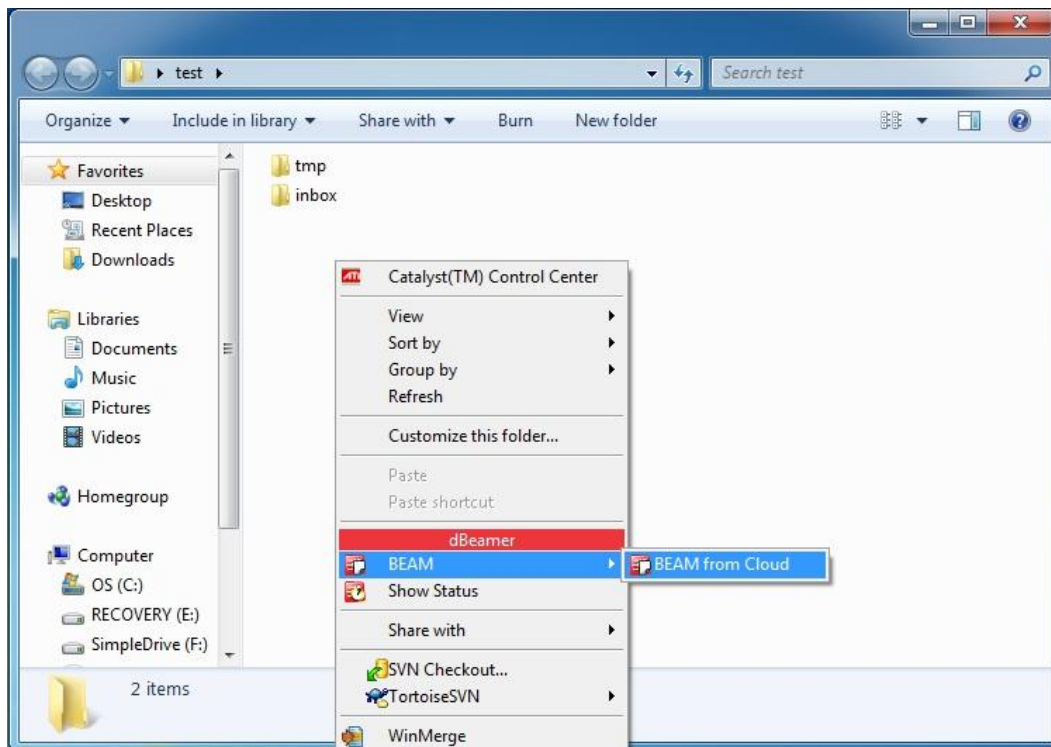
- The selected files are instantly created in the new folder:



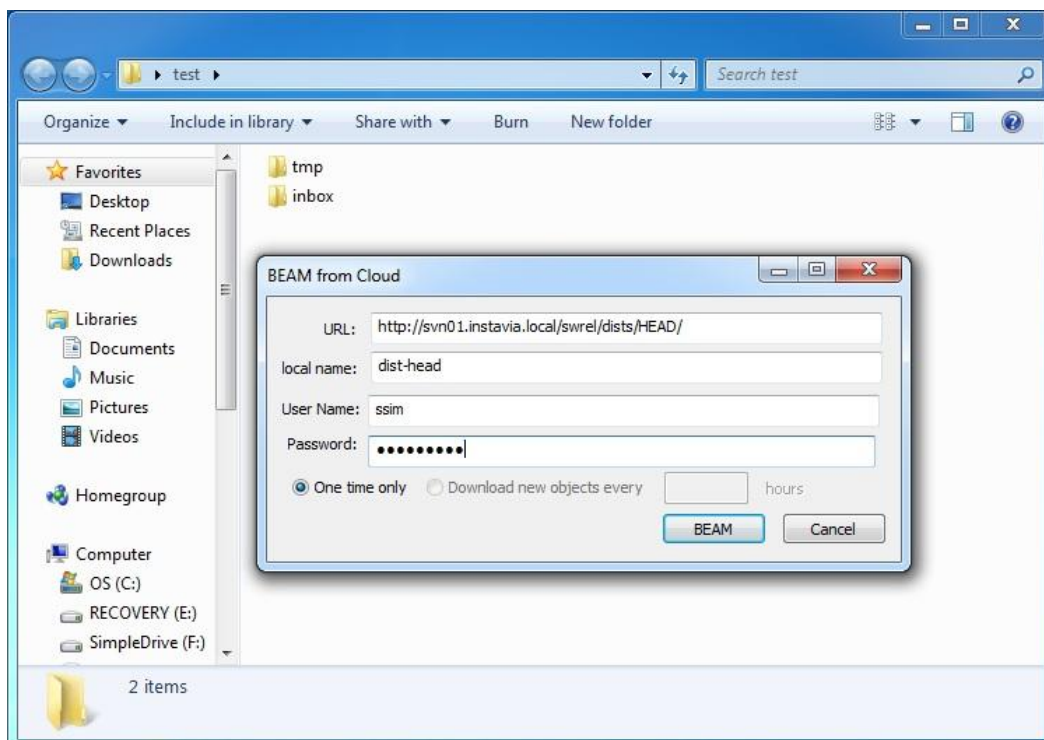
- A **dBeamer Progress Meter** pop-up window will automatically appear (default configuration) and display the progress of the background copy:
- You can begin viewing or editing the BEAMed files at the new location **instantly**:
 - There is NO need to WAIT for the copy to complete – as would be the case during a conventional copy. The newly created files are ready for you to use IMMEDIATELY.
 - NOTE: You can see the file icons marked with an “X” on them (see figure below), indicating that the background copy is still in progress. The normal file icons will be displayed once the background copy is complete. In the meantime, the files are perfectly ready to be accessed by the associated application. For example, you can play the video files immediately. You can also fast forward or rewind to any point in time in the video file while the background copy is in progress.
- Your productivity begins as soon as you initiate the **BEAM** operation. The **dBeamer Progress Meter** will show you the actual progress of the physical background copy. When the progress meter shows a “**Success**” status, it would indicate that the physical copy is complete.

Instantly download files from an HTTP web server

- In Windows Explorer, find the folder where you want to download the files and folders, right click and select “**BEAM**”, then select “**BEAM from Cloud**”.



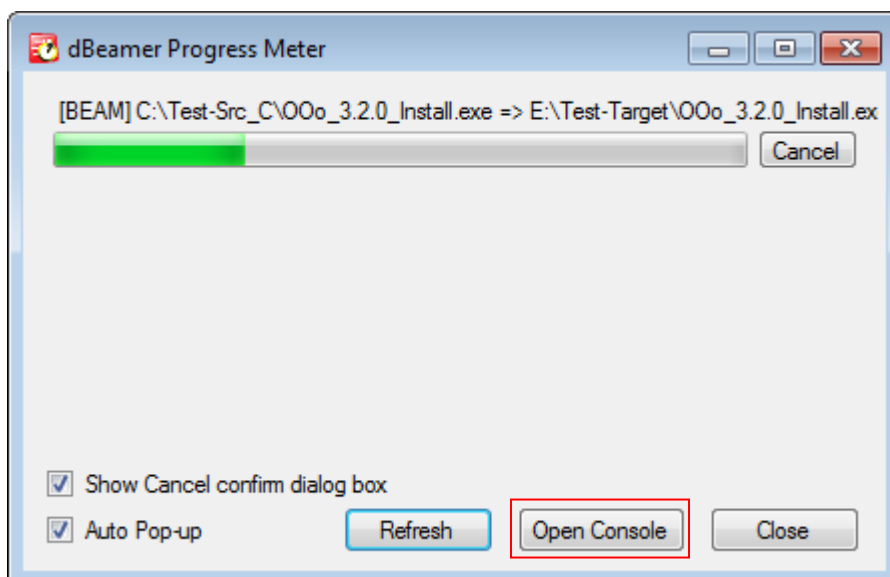
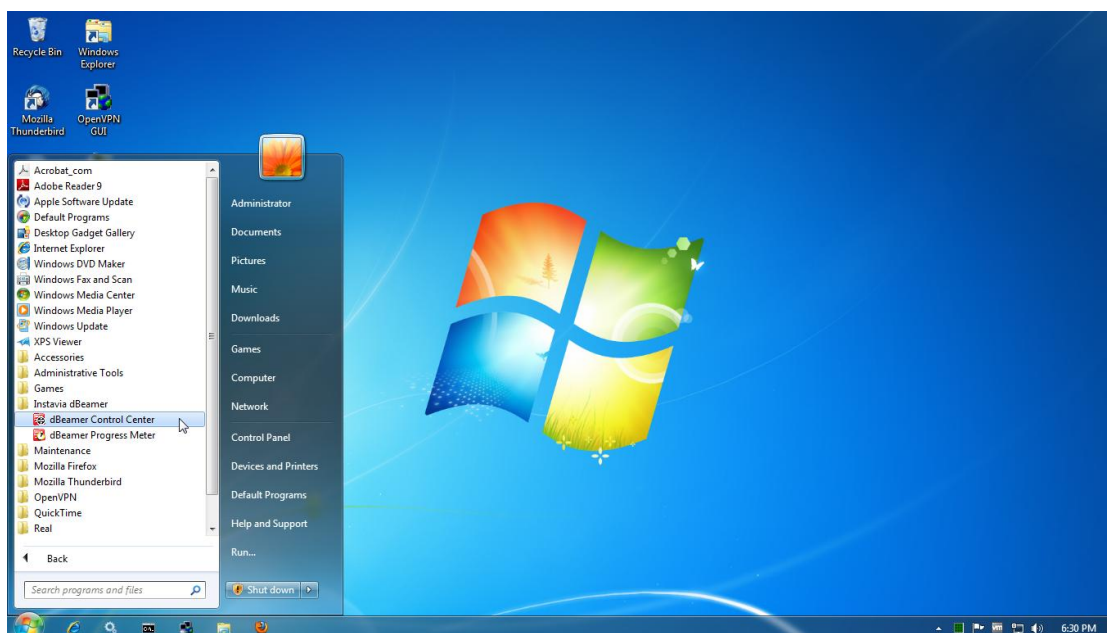
- Fill in the URL, the name of the local file/folder, user identification and password, then click on “**BEAM**”.



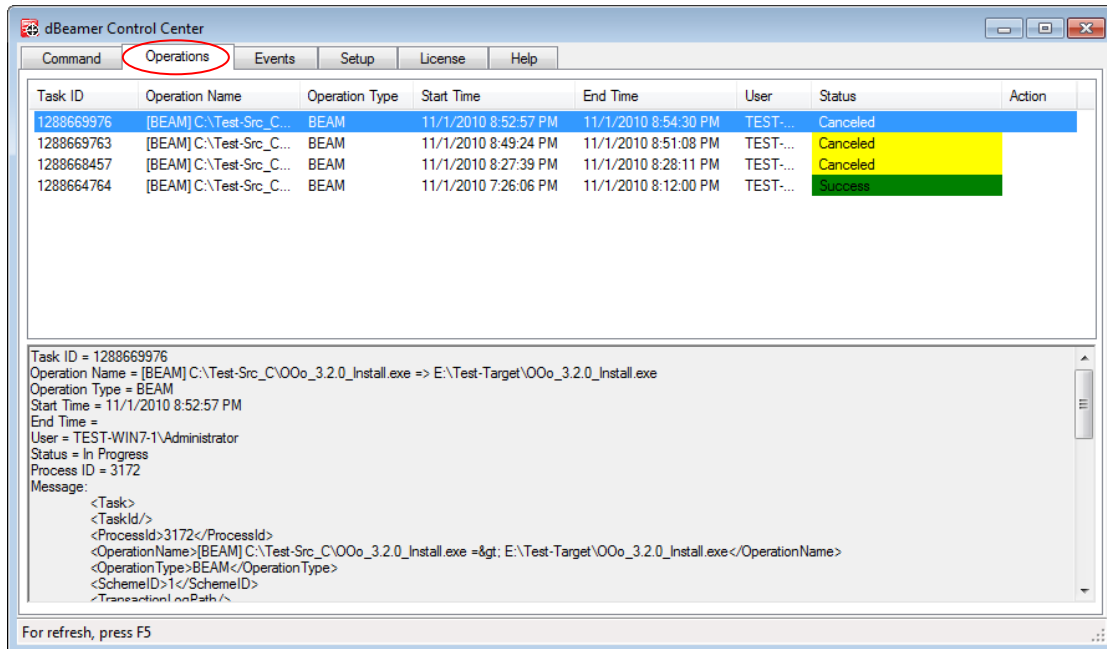
3.4 Getting More Control

You can gain more control of dBeamer by using the dBeamer Control Center.

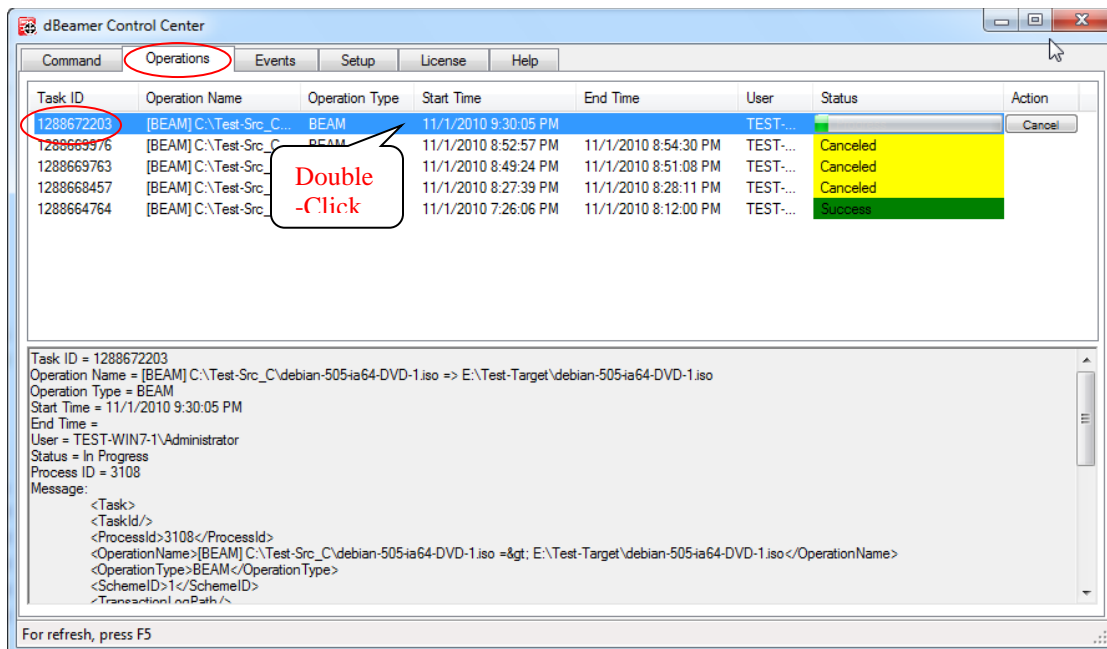
- The dBeamer Control Center can be run either by selecting “**Start→All Programs→Instavia dBeamer→dBeamer Control Center**” or simply by clicking the **Open Console** button from the **dBeamer Progress Meter** window:

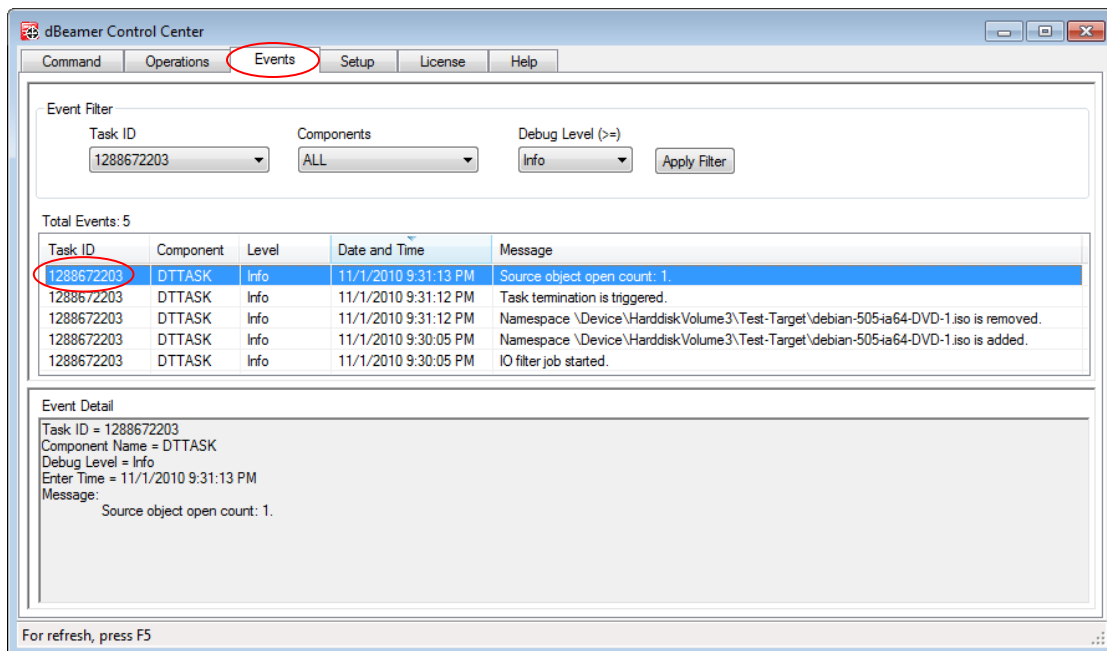


- On the **Operations** tab, you can find more detailed information about the current BEAM job, such as Start Time, End Time, User, etc.



- If you double click a job entry in the table listing, it will automatically show you detailed events related to the job in the **Events** tab. When you are running multiple mission critical jobs, this tab will be very useful for examining the details of each operation.

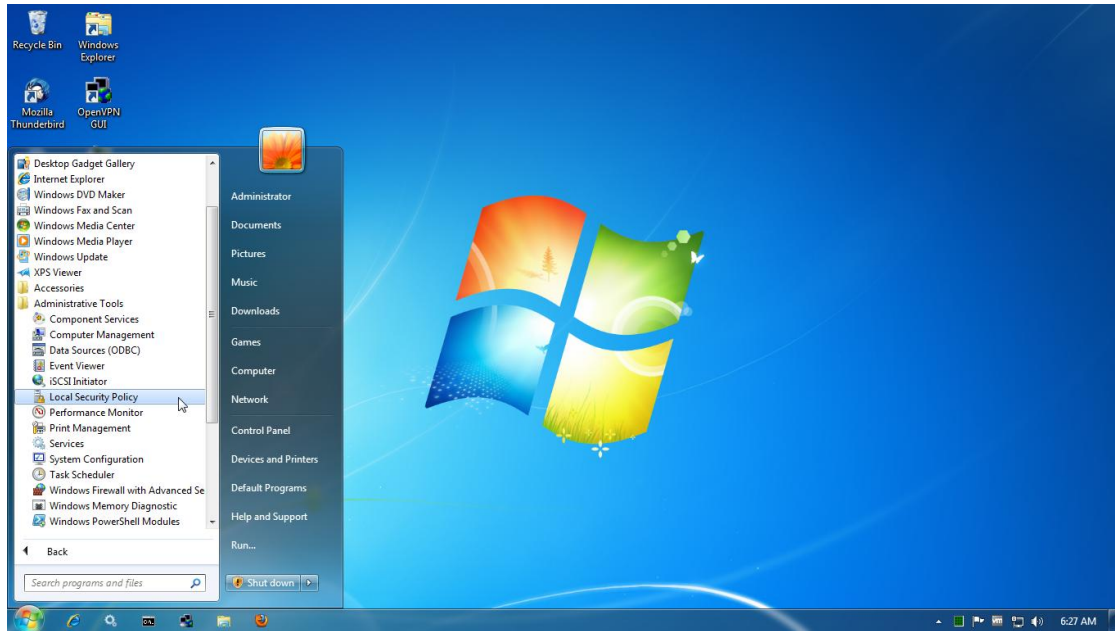




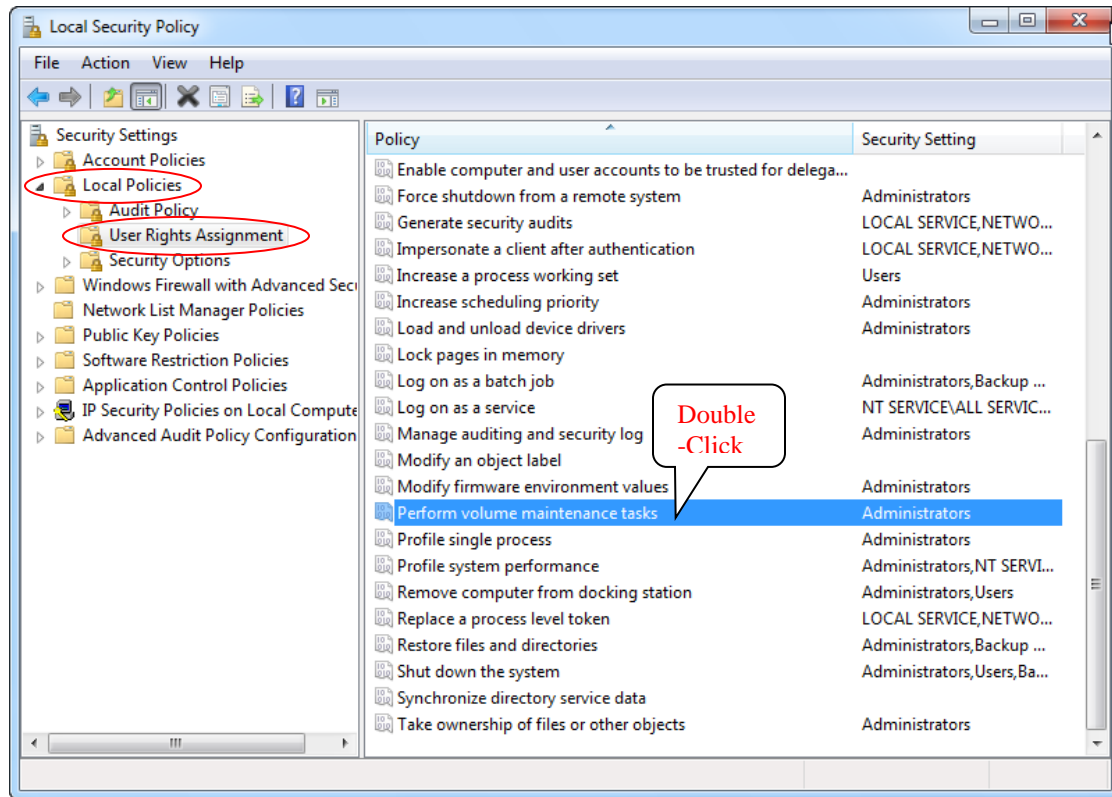
3.5 Simple Setup for Other Users

If you have multiple users that run dBeamer who are not a local or domain Administrator, it is important to make sure they have the required permission before using the product. The following are the steps to validate and/or grant them sufficient permission:

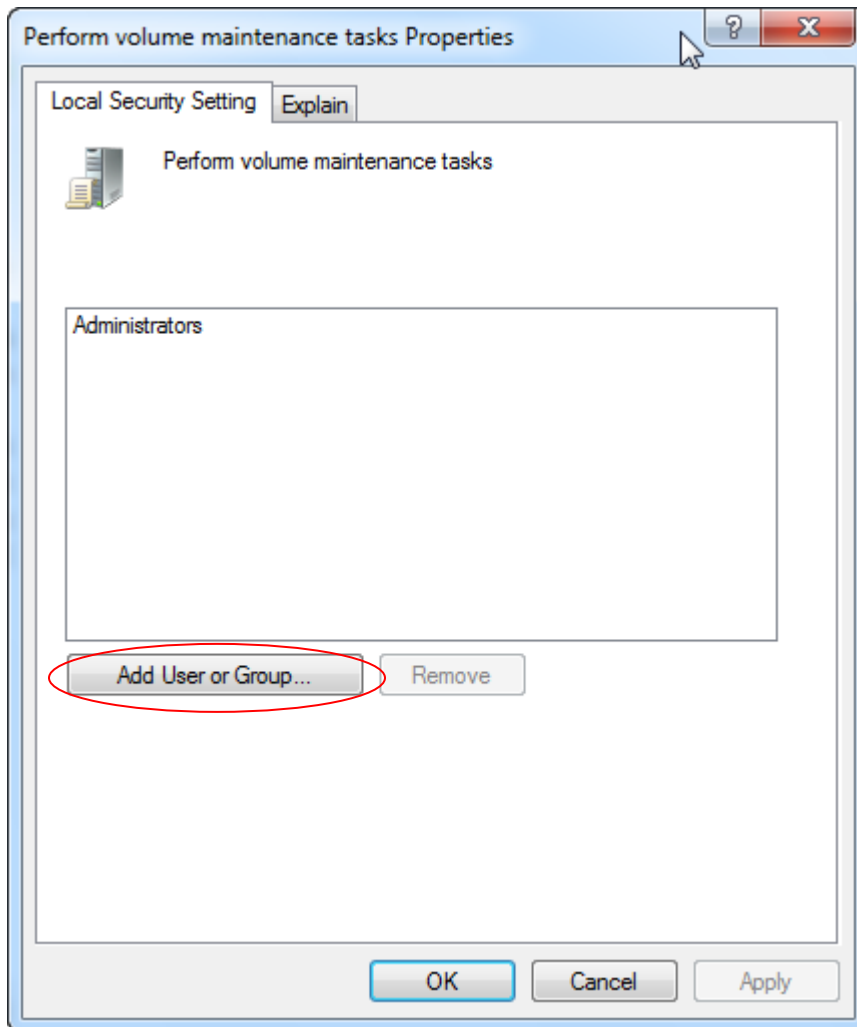
- Select “**Start → Administrative Tools → Local Security Policy**” to start the **Local Security Policy** management tool:



- Browse to “**Local Policies → User Rights Assignment → Perform Volume Maintenance tasks**”.
- Double click on “**Perform Volume Maintenance tasks**” to see if the intended user is in the group and user list:



- If the intended user is not in the list, you can add the desired user by clicking on the **Add User or Group** button:



4. dBeamer!DPM Quick Start

This section of the Quick Start Guide covers the following topics:

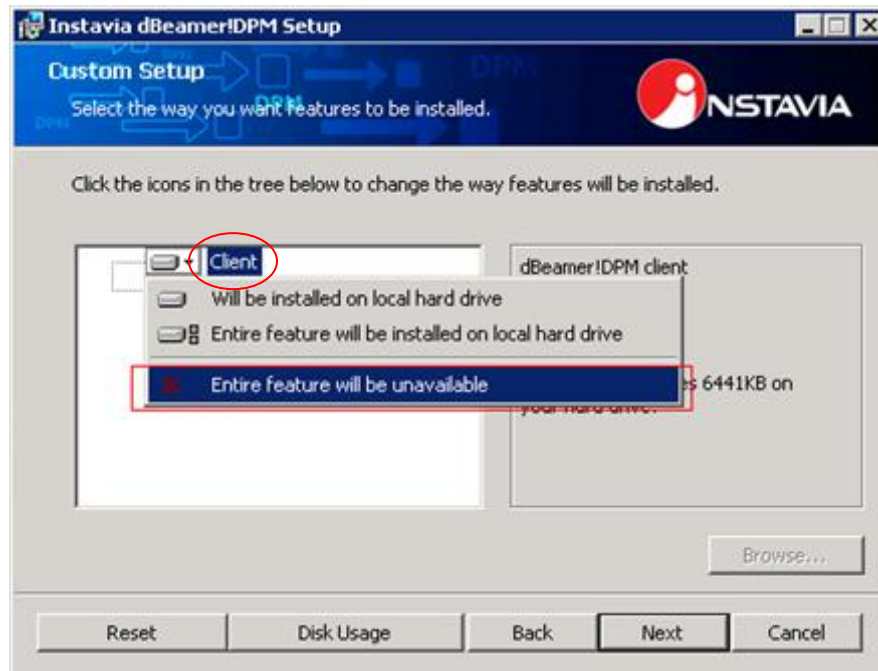
- 4.1 dBeamer!DPM Server Installation
- 4.2 dBeamer!DPM Client Installation
- 4.3 Quick Check of the dBeamer!DPM Installation
- 4.4 Test Drive of an Instant SQL Recovery Fire Drill

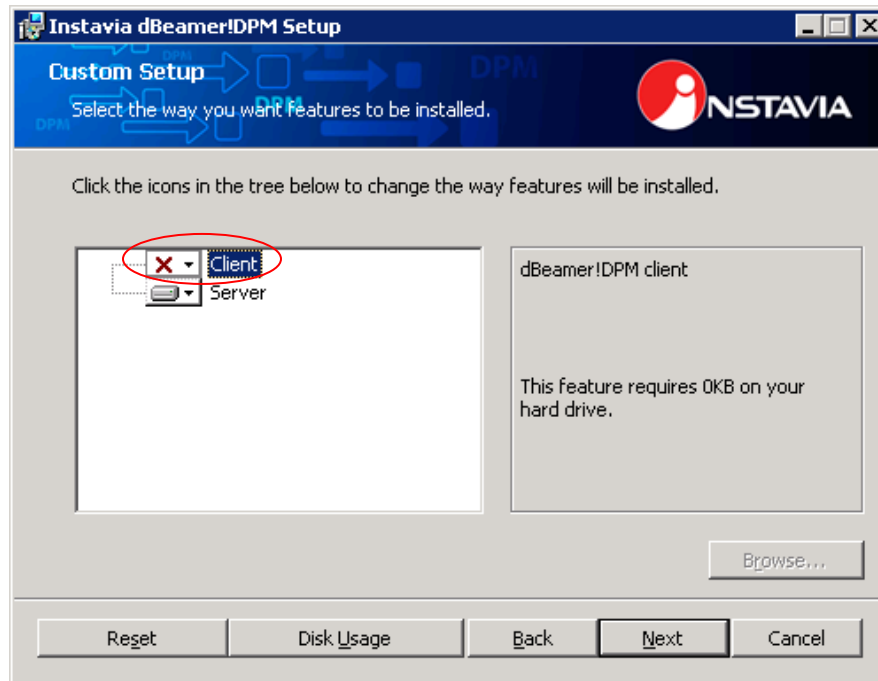
4.1 dBeamer!DPM Server Installation

- dBeamer!DPM software installation begins with the installation of the **dBeamer!DPM Server** software on the Microsoft DPM Server system. Setup requires a domain environment, so please login as a Domain Administrator to the Microsoft DPM Server system to perform the installation of the dBeamer!DPM Server software.
- Please make sure you use a **proper user account and privilege** described in section 2 before proceed.
- Extract the installation files from the downloaded zip files:
 - On a 32-bit Windows Operating System, unzip **dBeamerDPM-win32.zip** to extract:
 - dBeamerDPM-win32.msi
 - dBeamer-win32.msi
 - dBeamer-QuickStart.pdf (this document)
 - dBeamerDPM-ReadMe.txt
 - On a 64-bit Windows Operating System, unzip **dBeamerDPM-x64.zip** to extract:
 - dBeamerDPM-x64.msi
 - dBeamer-x64.msi
 - dBeamer-QuickStart.pdf (this document)
 - dBeamerDPM-ReadMe.txt
- If you are BEAMing a large number of objects and hundreds of GB of data, it is recommended that you use more than 4GB of RAM.
- Review dBeamerDPM-ReadMe.txt
- Run **dBeamerDPM-win32.msi** on a 32-bit Windows Operating System and accept the License Agreement to continue.

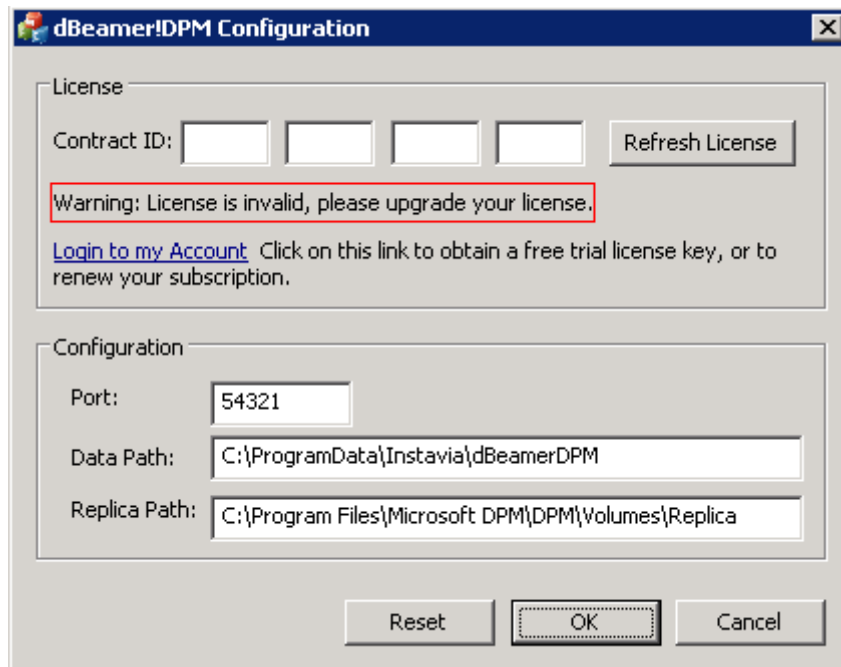
- Run **dBeamerDPM-x64.msi** on a 64-bit Windows Operating System and accept the License Agreement to continue.
- A typical dBeamer!DPM installation on a Microsoft DPM Server system requires only the dBeamer!DPM Server component. Therefore, de-select the dBeamer!DPM Client component (see the installation screens below).

NOTE: Install the dBeamer!DPM Client component only if you will need to perform instant recovery to the Microsoft DPM Server system itself.



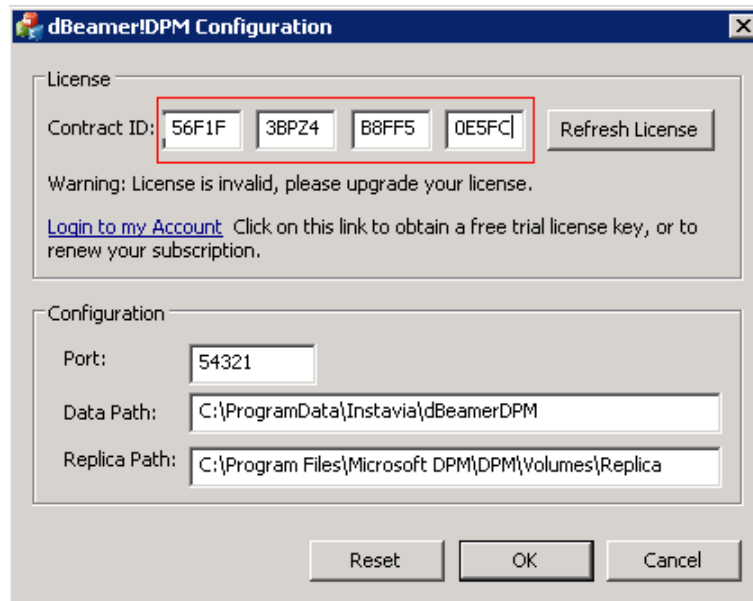


- Please make sure your system has Internet connectivity since all free or purchased licenses require activation via the Internet.
 - *If your IT environment does not allow your system to access the Internet directly, please refer to the “License Activation without Internet Connectivity” section at the end of this guide to activate your license.*
- To activate your dBeamer!DPM license, start the **dBeamer!DPM Configuration** utility by selecting “**Start→All Programs→Instavia dBeamerDPM→dBeamer!DPM Configuration**”. Before the license is activated, you will see the following initial screen:

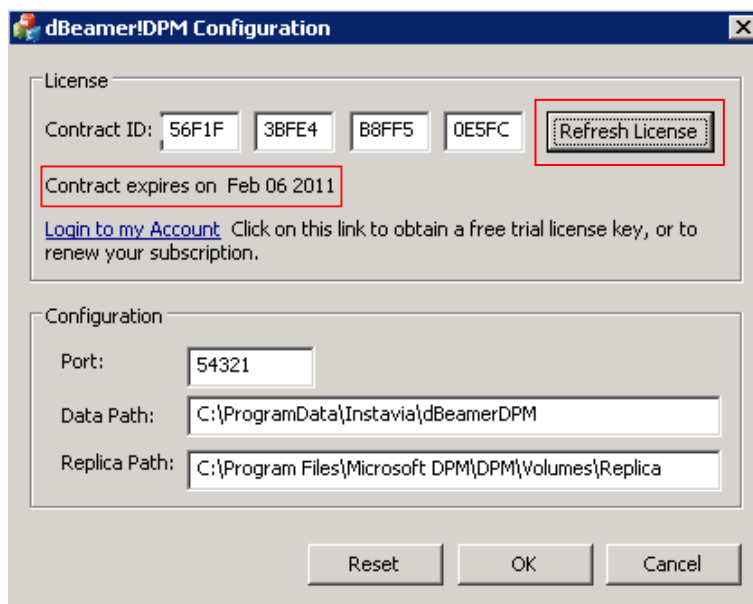


- You must have either of the following dBeamer!DPM **Contract IDs** to activate your license:
 - *To get a Free Trial license:*
 - Please visit software download page at <https://www.instavia.com/istv/lib/download/download.php>
 - Click "Create an account" at the top of the page if you don't have an account.
 - Click "Get Evaluation Key" on the download page and follow the steps.
 - You will receive your free trial Contract ID via an email.
 - *For a Purchased license:*
 - You will receive your purchased Contract ID via an email after the payment is received.

- Once you get your Contract ID, please take the following steps to activate it:
 - Copy the Contract ID from the email, then click in the left-most text field of the “Contract ID” field and paste it.



- Click the **Refresh License** button on the right, and you will see a refreshed expiration date based on your purchase.

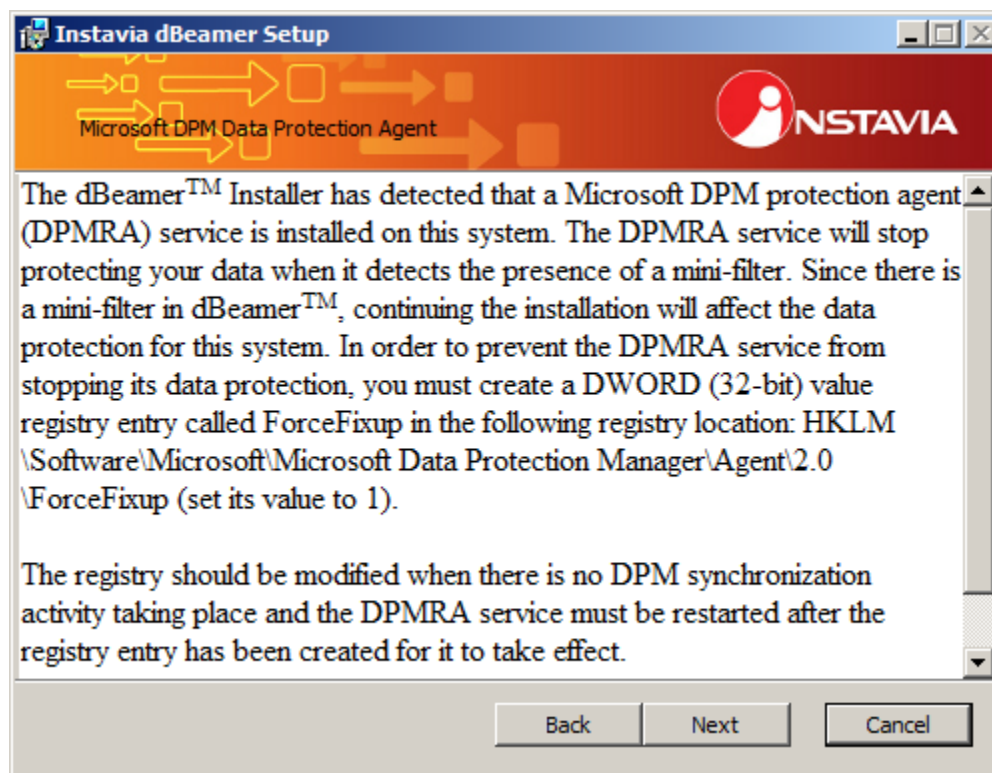


- Congratulations! You have successfully activated your license and may now perform the following dBeamer!DPM tasks.

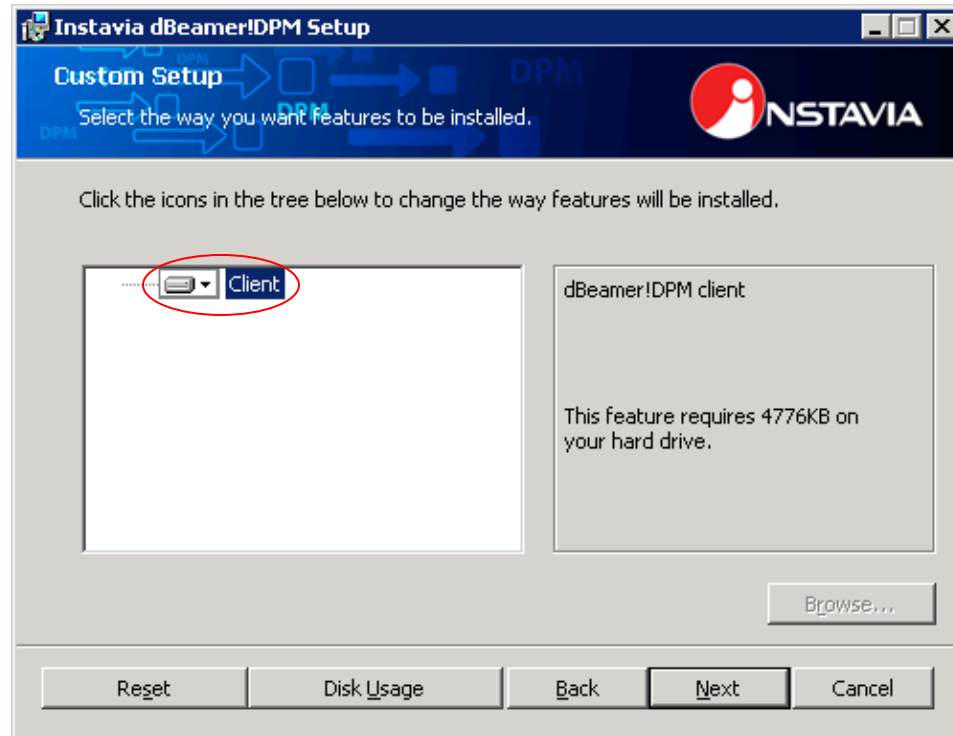
4.2 dBeamer!DPM Client Installation

- The **dBeamer!DPM Client Installation** is performed on Microsoft DPM Client systems and requires the dBeamer base product to be installed first on the Microsoft DPM Client system in order to support instant recovery from the Microsoft DPM Server system to Microsoft DPM Client systems:
 - If this is a 32-bit installation, run **dBeamer-win32.msi** to install dBeamer. Refer to the *dBeamer Quick Installation* and *Review Your dBeamer License* sections above for additional dBeamer installation details.
 - If this is a 64-bit installation, run **dBeamer-x64.msi** to install dBeamer. Refer to the *dBeamer Quick Installation* and *Review Your dBeamer License* sections above for additional dBeamer installation details.

Caution: During dBeamer installation on a Microsoft DPM system, please carefully follow the instructions below for modifying the Windows registry when the DPMRA service is installed on the DPM system before proceeding any further. *Protection of your data by the Microsoft DPM software could be silently disabled if these instructions are not followed.*



- After you have completed the registry modification above and completed the dBeamer installation, you're now ready to install the **dBeamer!DPM Client** product. If this is a 32-bit installation, run **dBeamerDPM-win32.msi**. If this is a 64-bit installation, run **dBeamerDPM-x64.msi**. The installer will only offer the dBeamer!DPM Client component for installation on a DPM Client system. Just follow the installation wizard instructions to complete the dBeamer!DPM Client installation.

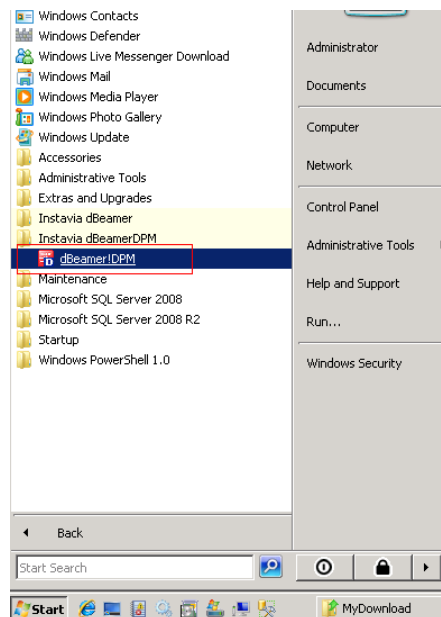


- If you have other dBeamer!DPM Client systems, simply repeat the same installation steps described above on each of them.

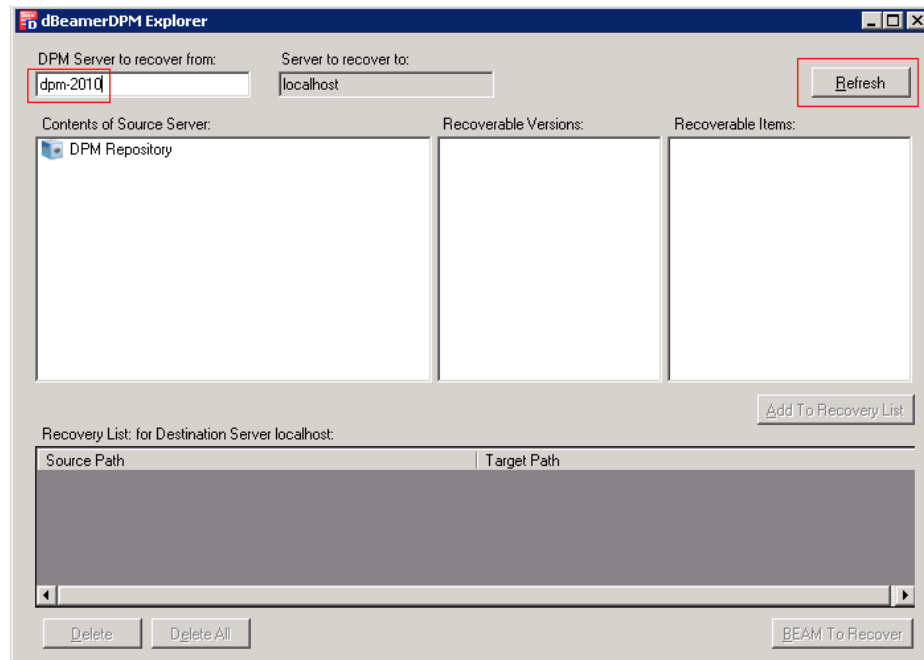
NOTE: dBeamer!DPM supports an unlimited number of clients. Also, an unlicensed dBeamer™ will only function properly in conjunction with a dBeamer!DPM client.

4.3 Quick Check of the dBeamer!DPM Installation

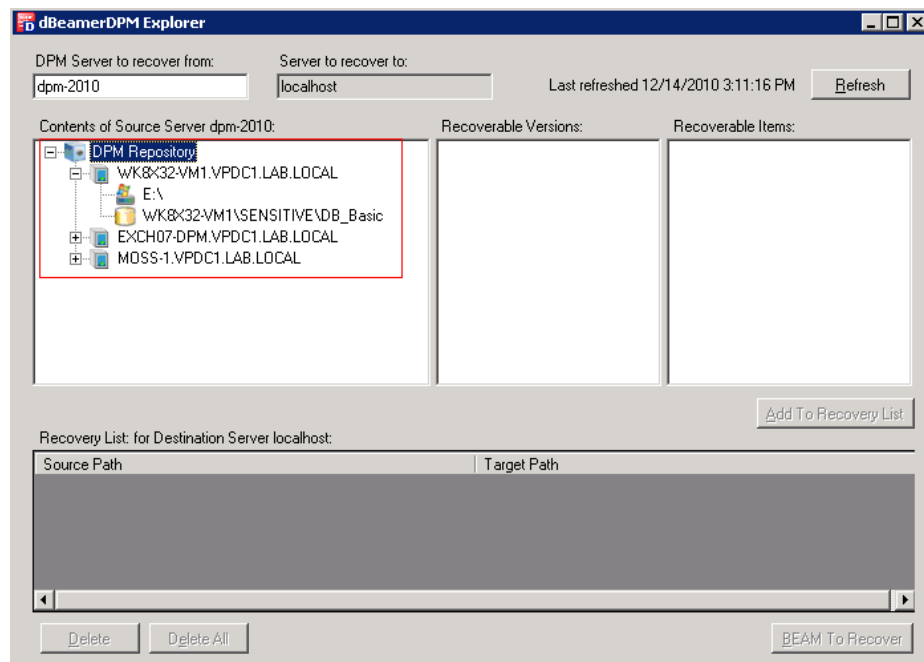
- After the Server and Client installation have been completed, you can check whether the installation is working correctly by bringing up the **dBeamer!DPM Explorer** UI on a **dBeamer!DPM Client** system:
 - “Start ➔ All Programs ➔ Instavia dBeamerDPM ➔ dBeamer!DPM”



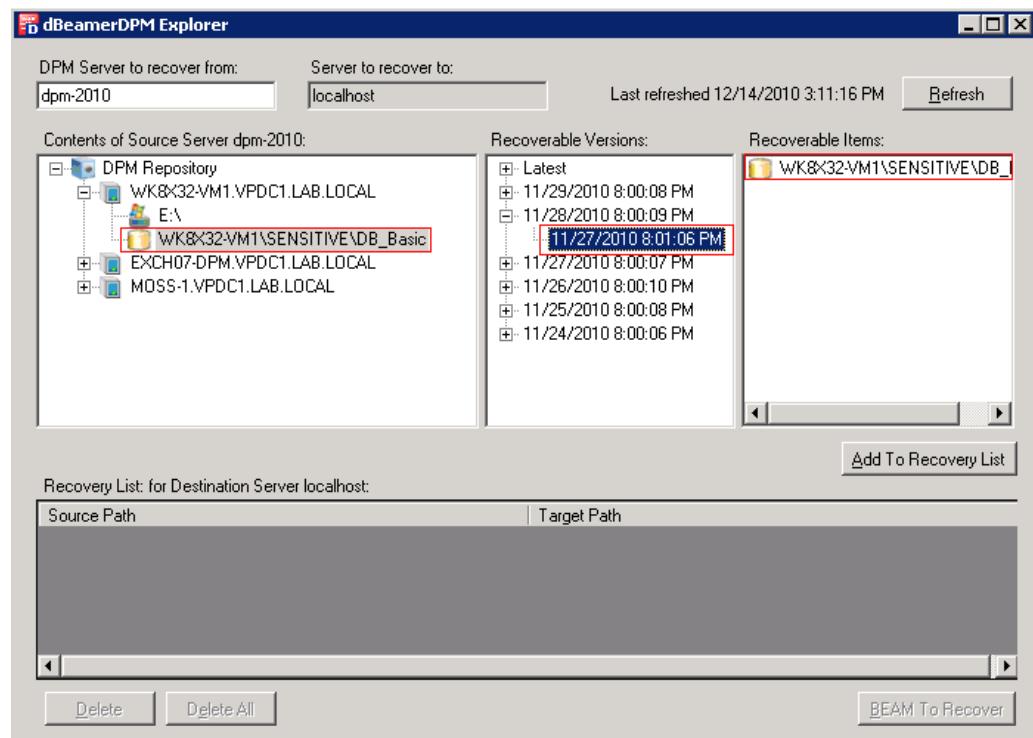
- Type the Microsoft DPM Server system hostname or IP address in the “*DPM Server to recover from*” field and then click on the **Refresh** button.



- In the “*Contents of Source Server <your_dpm_server_name>*” pane, if the Protected Server list is displayed, and clicking on the “+” expands the list of protected data Groups, then the **dBeamer!DPM Client** is communicating with the dBeamer!DPM Server correctly and the installation is working properly.



- To display a list of Recoverable Items:
 - Select a data source such as a SQL database (“WK8X32-*VM1\SENSITIVE\Db_Basic*” in this example).
 - A list of Recovery Points should be displayed in the “*Recoverable Versions*” pane.
 - Click on the “+” next to one of the Recovery Points and select a point-in-time. The associated object will be displayed in the “*Recoverable Items*” pane.
 - If nothing appears in the “*Recoverable Items*” data list box, the IT administrator should verify whether DPM data is accessible through administrator CIFS share. Try entering \\<fully qualified DPM Server name>\C\$ using the **Start → Run** command. If the replica is on a different volume, use that volume label instead of C\$. The **dBeamer!DPM Explorer** should be able to access the Microsoft DPM replica data if the Microsoft DPM Server can be reached.



4.4 Test Drive of an Instant SQL Recovery Fire Drill

User Scenario:

For mission critical SQL Databases, the IT administrator should perform recovery fire drills regularly to ensure that backup data is intact and usable in the event of a failure. To avoid waiting for hours to restore the data from the Microsoft DPM server for testing, dBeamer!DPM can be used to perform the tests immediately.

Environment:

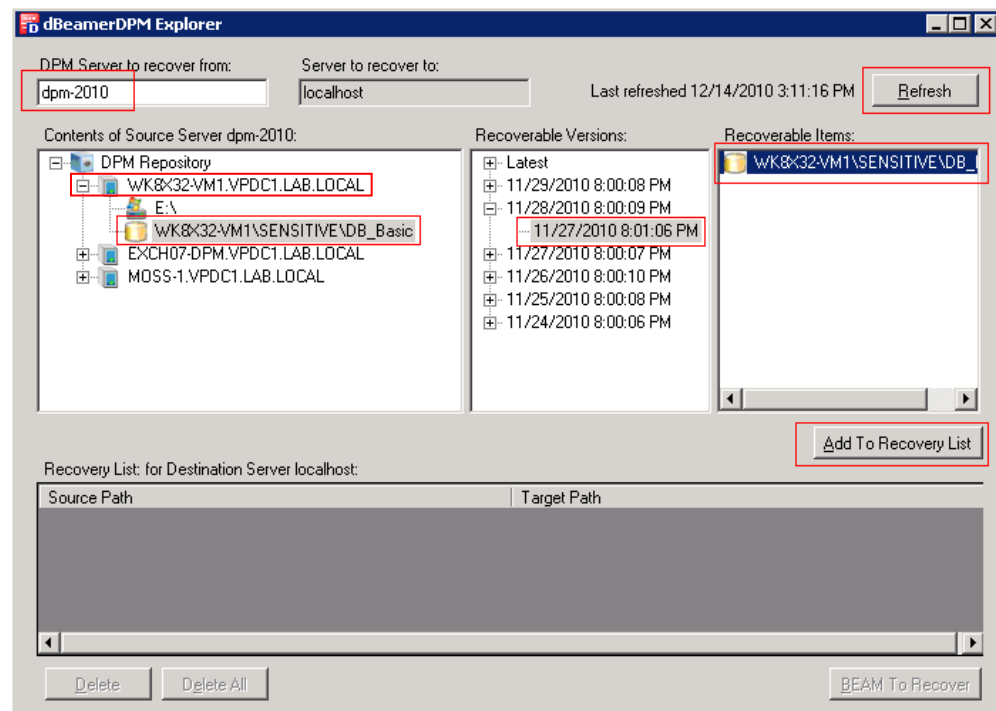
- The Microsoft DPM setup typically runs in a domain environment. This example uses a domain called “**VPDC1.LAB.LOCAL**”. All systems below are members of this domain. Please log in as a Domain Administrator for the test drive.
- “**DPM-2010**” runs Microsoft DPM 2010 management software which protects the SQL server.
 - The dBeamer!DPM Server component is installed (See the **dBeamer!DPM Server Installation** section).
- “**WK8-32-VM1**” is the production SQL 2008 server protected by DPM-2010.
 - There is no need to install dBeamer !DPM on this production machine for performing the recovery test. However, if the IT administrator wants to have dBeamer!DPM ready for future recovery, the **dBeamer!DPM Client** component should be installed here (See the **dBeamer!DPM Client Installation** section).
- “**SQL08-Test-VM**” is the recovery test server.
 - Configure the system similar to **WK8-32-VM1** to test the restored databases.
 - The **dBeamer!DPM Client** component is installed here (See the **dBeamer!DPM Client Installation** section).

Test Drive Steps:

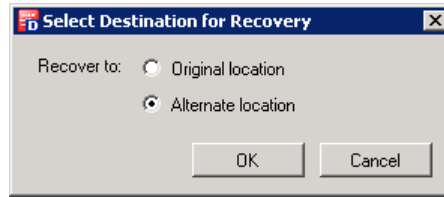
- You should have followed the instructions in the **dBeamer!DPM Client Installation** and the **Quick Check of the dBeamer!DPM Installation** sections above to setup and verify the three systems.
- Logon to **SQL08-Test-VM** as the Domain Administrator and start selecting the SQL data to be restored:
 - Start the **dBeamer!DPM Explorer** UI.
 - Type “**dpm-2010**” in the “**DPM Server to recover from**” field and click the **Refresh** button.
 - Select the “**WK8-32-VM1.VPDC1.LAB.LOCAL**” server in the “**Contents of Source Server <your_dpm_server_name>**” drop-down list, then click through the data

recovery selection panes to choose the desired “*Recoverable Item*” (See the Figures below):

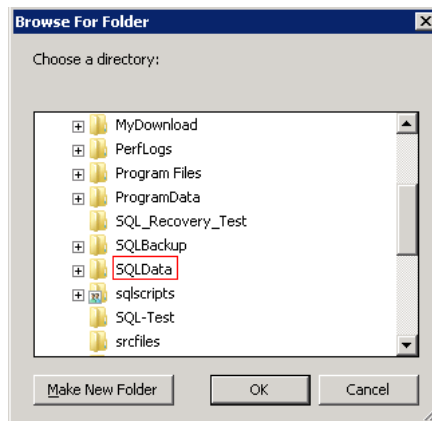
- Under “*Contents of Source Server <your_dpm_server_name>*” select the “WK8X32-VM1\SENSITIVE\DB_Basic\” database.
 - DB_Basic is the SQL Database protected by the Microsoft DPM Server.
 - This automatically displays the recoverable versions (Replica Snapshot Times) for this data source in the “*Recoverable Versions*” list box.
- Select any time below “*Latest*” from the “*Recoverable Versions*” list.
 - We’ve selected “11/28/2010 8:00:09 PM” in this example. By selecting this Recoverable Snapshot Time, the Recovery Point(s) in that replica snapshot will be displayed.
 - **NOTE:** “*Latest*” refers to the current replica volume of the protected data set. Do not use “*Latest*” since you may interrupt the Microsoft DPM backup if it is performing a synchronization.
- Under the “*Recoverable Versions*” list box, click on one of the available Recovery Points (the list of times when a backup occurs). In this example, we will choose the Recovery Point at “11/27/2010 8:01:06 PM”.
 - Once a Recovery Point is selected, the SQL database for that specific point-in-time is displayed in the “*Recoverable Items*” pane. A database object cannot be expanded any further.
- Click on the **Add to Recovery List** button to add the selected SQL database that was protected at the specified time.



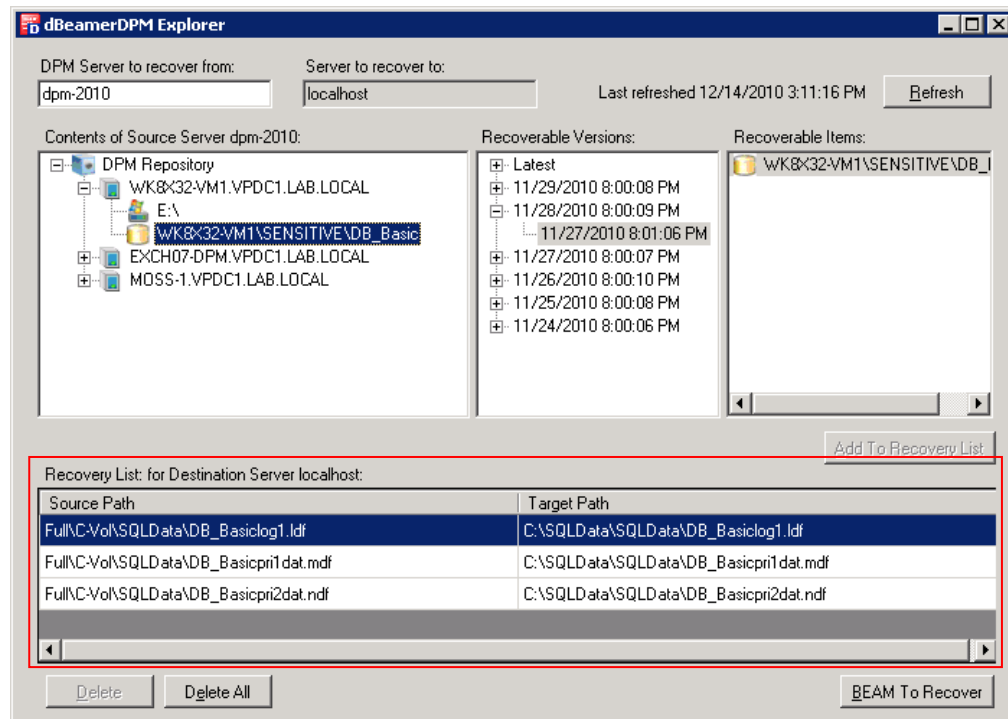
- A “*Select Destination for Recovery*” form will be displayed. For fire-drill or test purposes, we usually select “*Alternate location*”, then click the **OK** button.



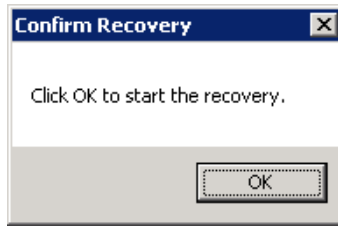
- A “*Browse for Folder*” form will then be displayed to allow you to browse and select the alternate recovery folder location. We will choose C:\SQLData in this example, then click the **OK** button.



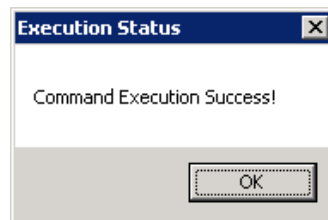
- The “*Recovery List for Destination Server <server_name>*” list box will then show the corresponding *Source Path* and *Target Path* of the data to be recovered.



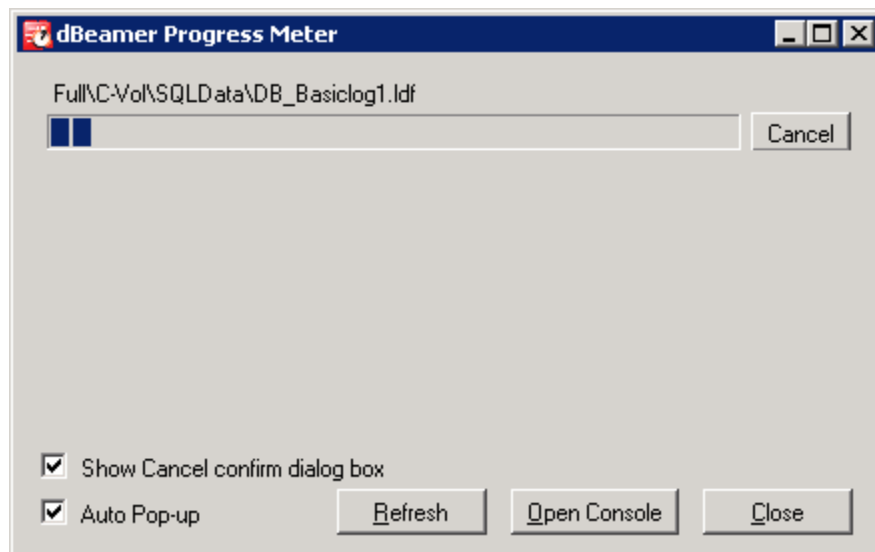
- You are now ready to perform the instant SQL Data Recovery to the *Target* location:
 - Click on the **BEAM to Recover** button. A “*Confirm Recovery*” window pops up to ensure that you are ready to proceed.



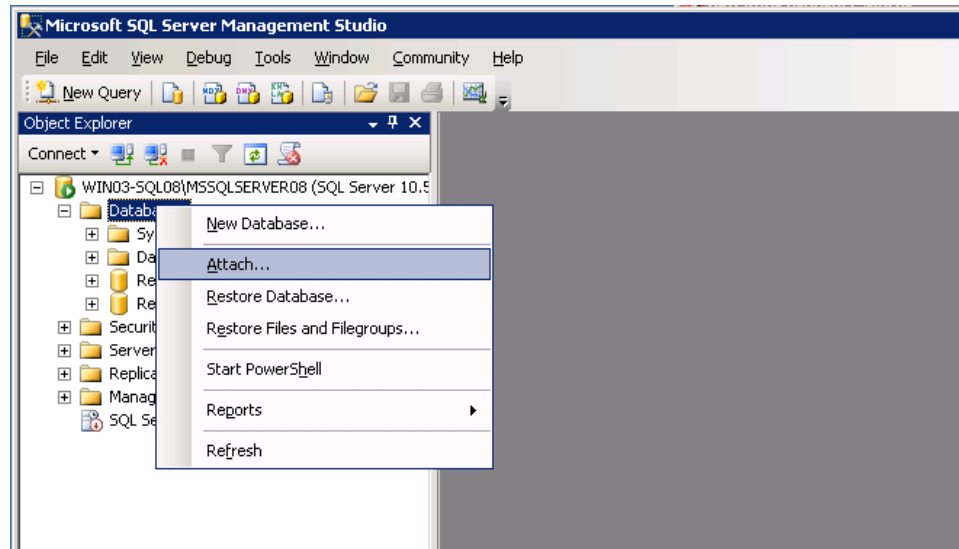
- Click the **OK** button to proceed. The dBeamer job will be executed and confirmed with a “*Command Execution Success!*” popup window.



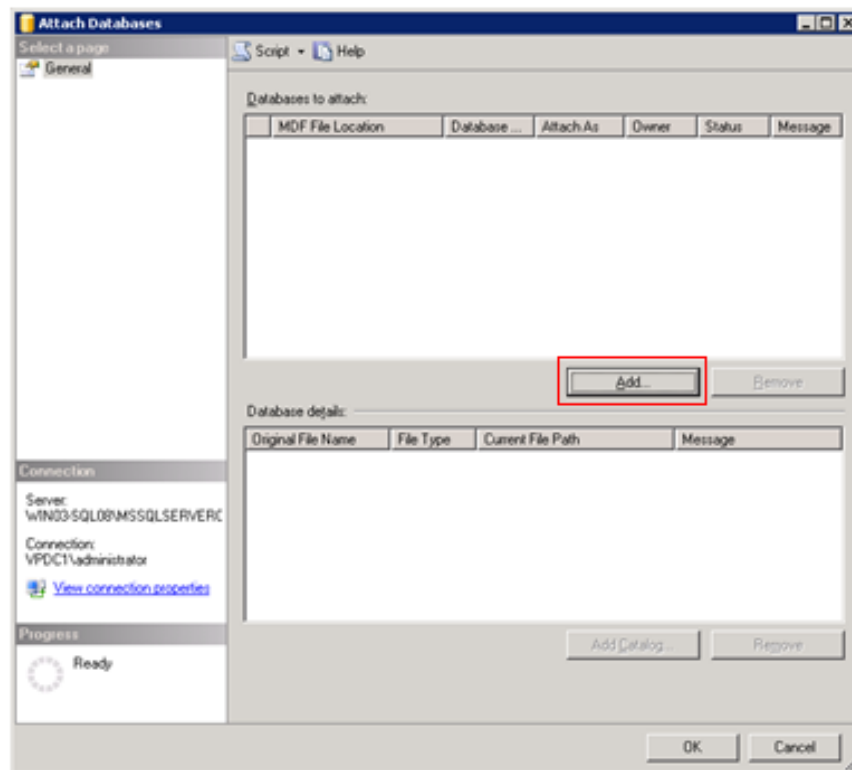
- You can check the job progress and status using the **dBeamer Progress Meter** which can be invoked using “**Start → All Programs → Instavia dBeamer → dBeamer Progress Meter**”.



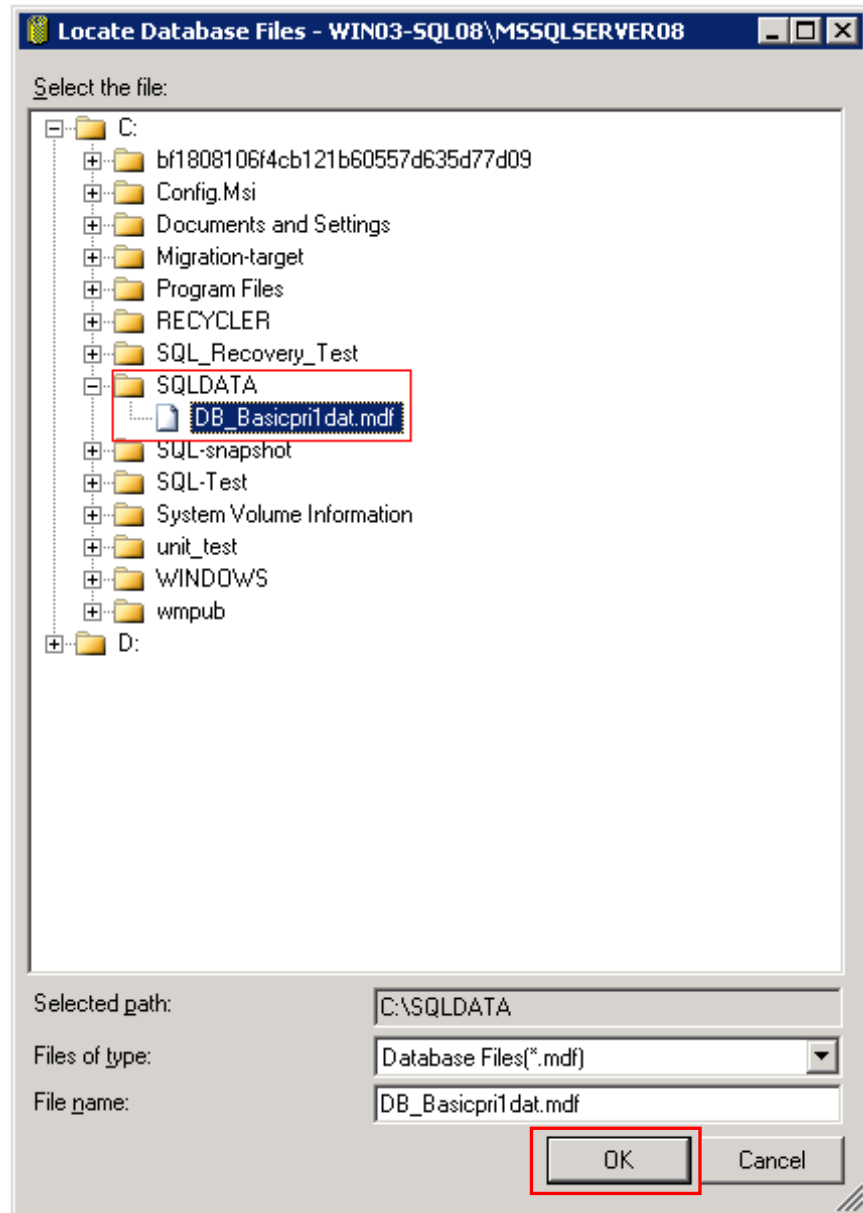
- As soon as the BEAM operation has started, you can use the “**Microsoft SQL Server Management Studio**” to attach to the restored SQL database to test it:
 - Right click “*Database*” and select “*Attach...*”



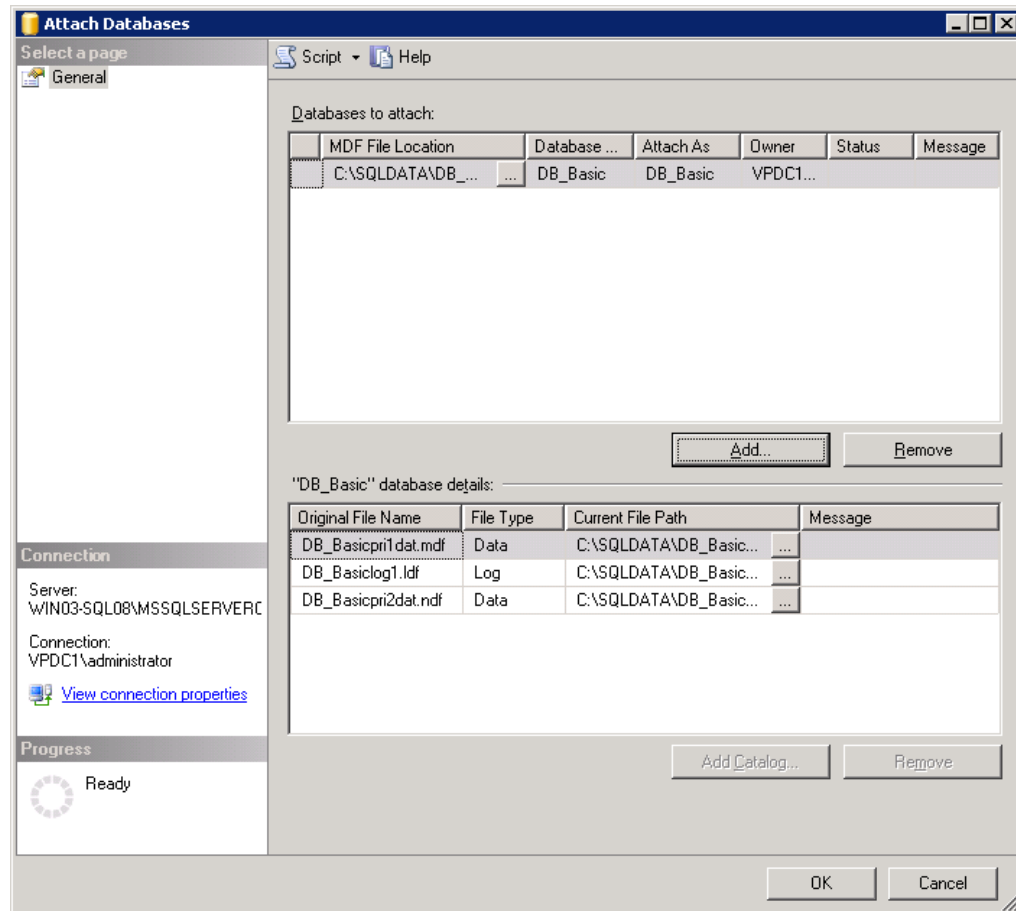
- The “**Attach Databases**” wizard is displayed:



- Clicking on the **Add** button will display a folder browser (See the next Figure). Select the Recovery *Target Path* shown in the dBeamer!DPM Explorer. In this example, it is C:\SQLDATA. Select the database “DB_Basicpri1.dat.mdf” and then click the **OK** button.



- You can see in the figure below that the Database is INSTANTLY attached and restored, and it is ready for your database transaction test.

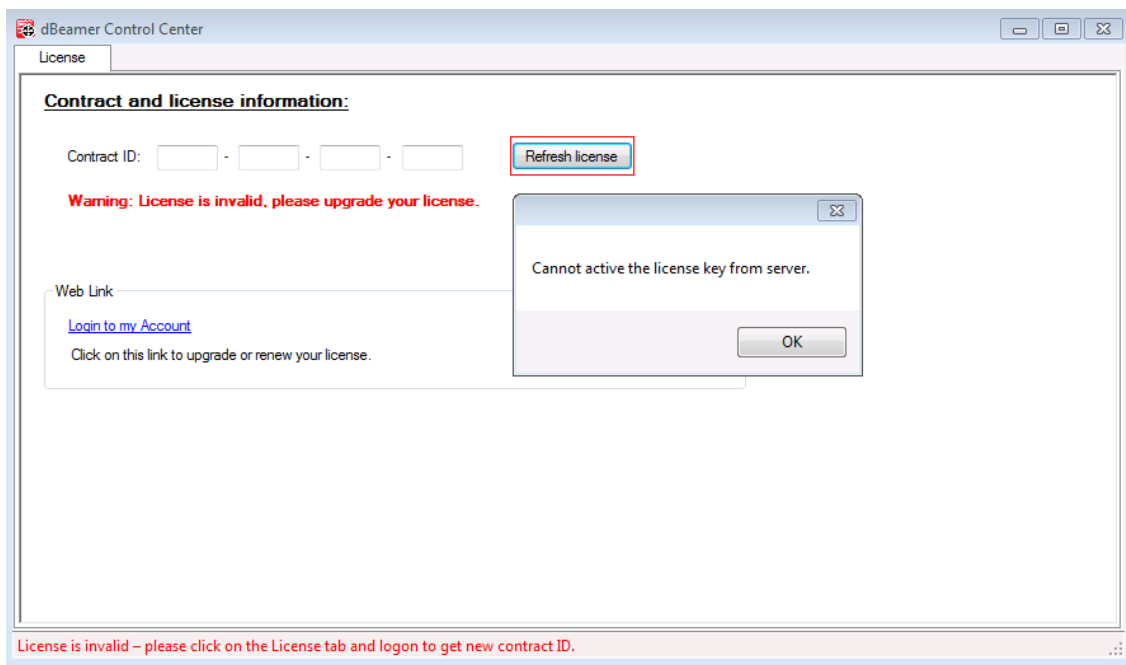


5. License Activation without Internet Connectivity

The following sections describe procedures for license activation for dBeamer and dBeamer!DPM when internet connectivity is not available.

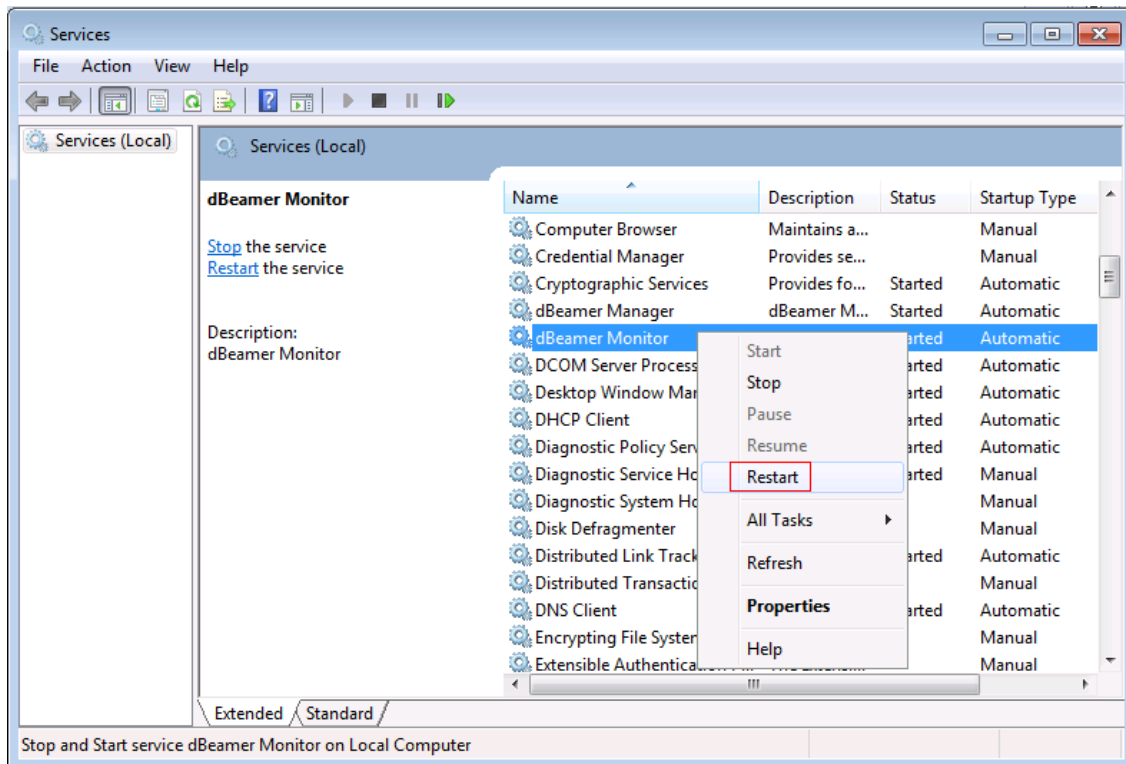
5.1 For dBeamer

- If internet connectivity is not available, the following message pop-up will be displayed when the **dBeamer Control Center** is started and the “**Refresh License**” button is clicked: “*Cannot activate the license key for this server.*”

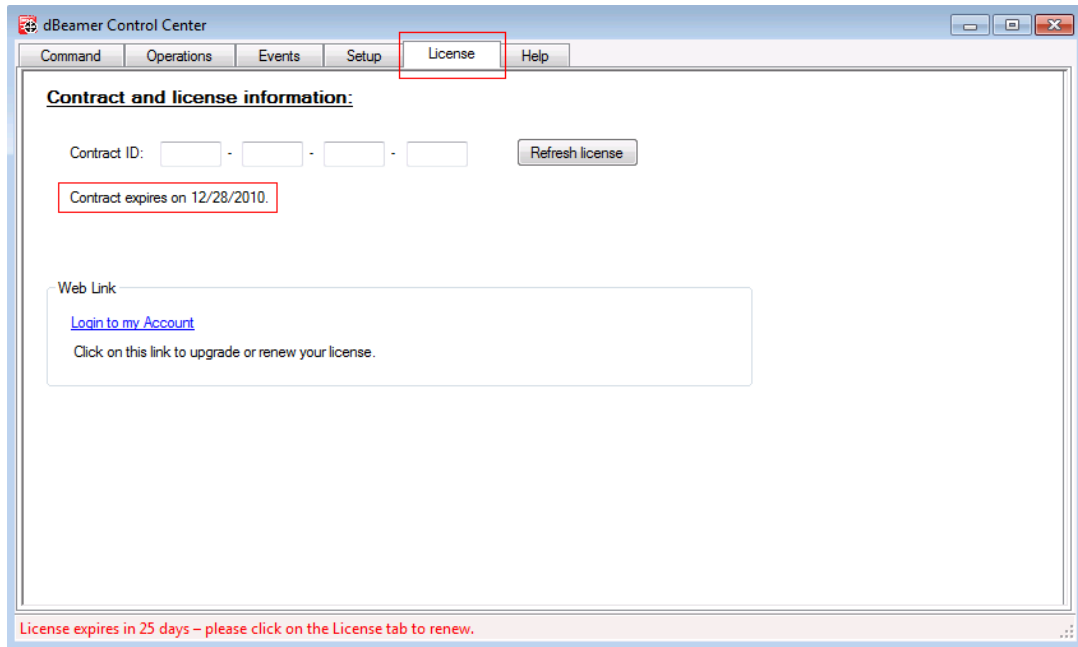


- Click OK and exit the dBeamer Control Center.
- Contact support@instavia.com to obtain a copy of dBeamerAct.exe, or download dBeamerAct.exe directly from the support page at www.instavia.com.
- Using a machine that has access to the internet, activate your dBeamer license using dBeamerAct.exe by typing the following command at a command prompt:
 - If dBeamer is installed on a Windows 2003 system, enter the following command:
 - dBeamerAct.exe `<theHostName>-or-IPaddress>\C$\Documents and Settings\All Users\Application Data\Instavia\dBeamer\dBeamerLicInfo.dat`

- If dBeamer is installed on a Windows 2008 or a Windows 7 machine, enter the following command:
 - dBeamerAct.exe [\\<theHostName>-or-IPaddress>](#)\\C\$\\ProgramData\\Instavia\\dBeamer\\dBeamerLicInfo.dat
- After running dBeamerAct.exe, verify that dBeamer.ini is created in the same location as the dBeamerLicInfo.dat file.
- Start Windows Services by running “**services.msc**” from a command prompt. Right click on “*dBeamer Monitor*”, select “Restart the service”, and click “Yes” to display the next pop-up.



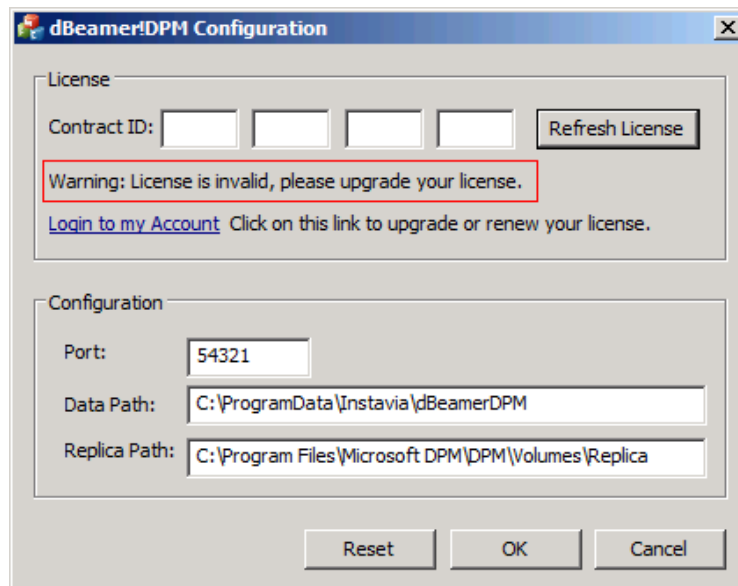
- Start the **dBeamer Control Center** again and click on the **License** tab to see the license expiration date.



- Your dBeamer license is now activated.

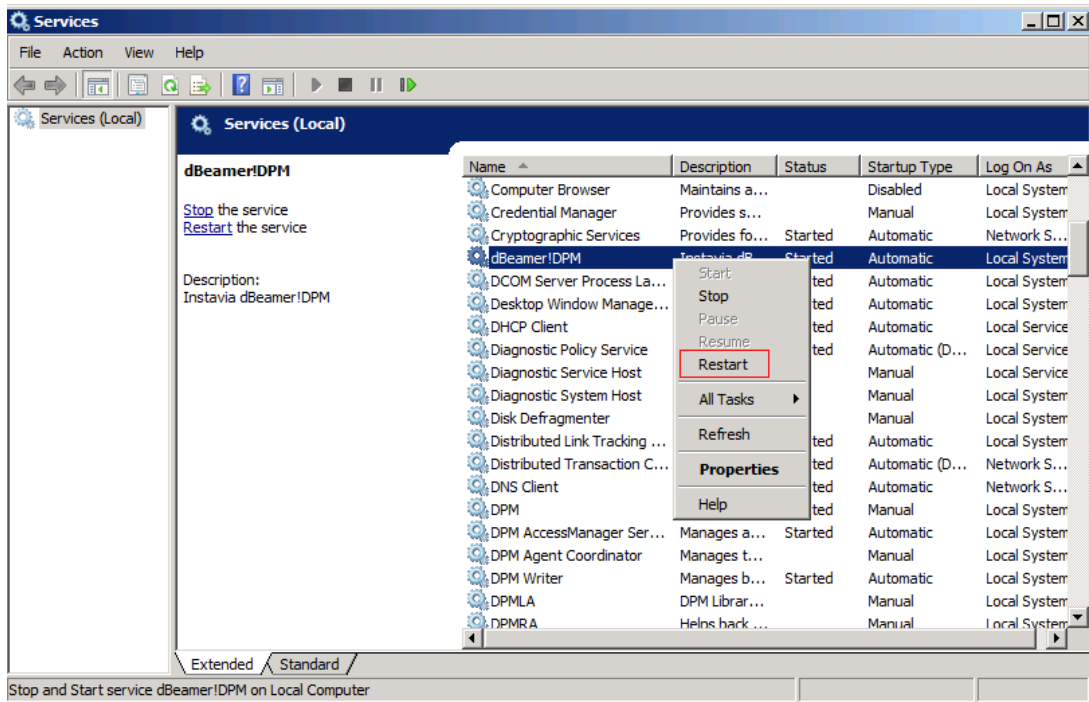
5.2 For dBeamer!DPM

- If internet connectivity is not available, the following message pop-up will be displayed when the **dBeamer!DPM Configuration** application is started: “Warning: License is invalid, please upgrade your license.”

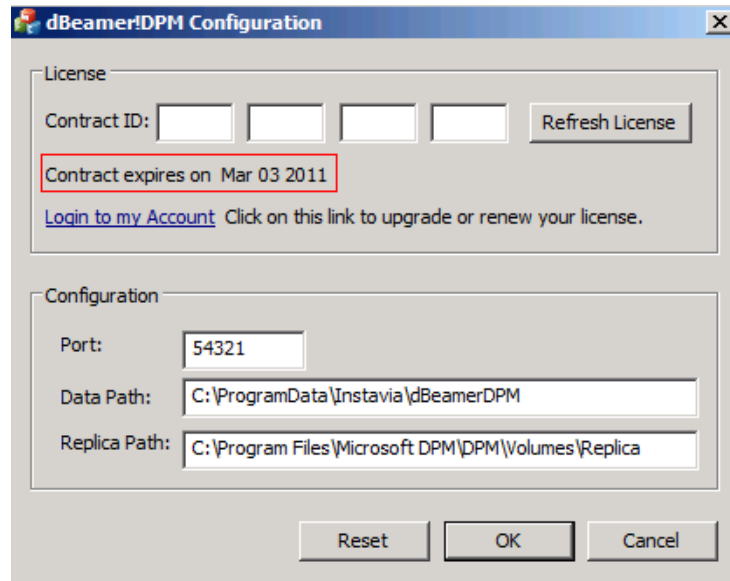


- Click the “**Cancel**” button to exit the **dBeamer!DPM Configuration** application.
- Contact support@instavia.com to obtain a copy of dBeamerAct.exe, or download dBeamerAct.exe directly from the support page at www.instavia.com.
- Using a machine that has access to the internet, activate your dBeamer!DPM license using dBeamerAct.exe by typing the following command at a command prompt:
 - If dBeamer!DPM is installed on a Windows 2003 system, enter the following command:
 - dBeamerAct.exe [\\<theHostName>](#)-or-IPaddress>\C\$\Documents and Settings\All Users\Application Data\Instavia\dBeamerDPM\dBeamerDPMLicInfo.dat
 - If dBeamer!DPM is installed on a Windows 2008 or a Windows 7 machine, enter the following command:
 - dBeamerAct.exe [\\<theHostName>](#)-or-IPaddress>\C\$\ProgramData\Instavia\dBeamerDPM\dBeamerDPMLicInfo.dat
- After running dBeamerAct.exe, verify that dBeamerDPM.ini is created in the same location as the dBeamerDPMLicInfo.dat file.

- Start Windows Services by running “**services.msc**” from a command prompt. Right click on “**dBeamer!DPM**”, select “**Restart the service**”, and click “**Yes**” to display the next pop-up.



- Start the **dBeamer!DPM Configuration** application again to see the license expiration date.



- Your dBeamer!DPM license is now activated.

6. **BEAMing LARGE Numbers of Objects**

NOTE: The number of objects (X) that dBeamer is able to beam at any given time is a direct function of the amount of RAM available to dBeamer (Y) such that $X = Y/700$.

For example, if dBeamer has access to 1GB of RAM, it would be able to BEAM up to 1.4 million objects ($1 \text{ GB}/700 = 1.4 \text{ million objects}$). In order to BEAM a large number of objects, the use of 64bit machines is a must. The minimum RAM requirement for dBeamer is 4 GB. If the number of objects to be BEAMED exceeds 1 million, it is strongly recommended to increase system RAM to 8 GB.

NOTE: Content indexing on the *Target* volume where files are being BEAMED to and database cataloging on the *Target* database files should be disabled. Indexing the BEAMing files will introduce heavy load on the system and may affect application performance.