

User Bulletin

GeneMapper® Software Version 4.1

April 2009

SUBJECT: Installation Options

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Overview The full client-server functionality available in the GeneMapper Software v4.1 increases the installation options for Applied Biosystems customers. The purpose of this user bulletin is to clarify these installation options by providing 10 different options, including one for a 30-day demonstration package designed to help you determine if your current computer configuration supports installation of the GeneMapper Software v4.1. This bulletin also provides a variety of scenarios you can use to determine which option or combination of options best suits your needs.

This bulletin does not describe how to install the GeneMapper Software v4.1. For instructions on installing and managing the software, refer to the *GeneMapper® Software v4.1 Installation and Administration Guide* (PN 4403614).

GeneMapper® Software v4.1 Features

Client-Server Functionality When you run the GeneMapper Software client, the client connects to the server, downloads data and methods, performs analysis, and uploads the results back to the server. The GeneMapper server computer only stores data and methods; all analysis is performed on the client computer.

The GeneMapper Software client can connect to any GeneMapper Software server on the same LAN subnet. If you have a GeneMapper Software server already, before purchasing the client, you can use the 30-Day Demo software to confirm that the target computer can connect to the GeneMapper Software server (see [“Using the Demo Software to Test a Client-Server Connection” on page 10](#)).

Oracle® Database GeneMapper Software v4.1 uses an Oracle® 11g database to store all project-related data. In addition to serving as a common data repository, the database provides user authentication, robust and scalable data management, and flexible archive capabilities through the utilities provided with the GeneMapper Software.

GeneMapper Software v4.1 also includes enhancements to SQL*Plus® requests.

Oracle Licensing Table 1 shows which GeneMapper Software products provide Oracle licenses.

Table 1 GeneMapper Software and Oracle licenses

GeneMapper Software product	Number of Oracle licenses	Number of named users allowed to use the database
Version 4.1, full installation	1	5
Version 4.1, server	1	5
Version 4.1, client	None	N/A
Version 4.0, full or server installation	1	5
Version 4.0, client	None	N/A
Upgrade from v4.0 to v4.1 [‡]	No additional licenses	N/A
Version 4.1, 30-day demo	1 (expires after 30 days)	5 (until 30-day license expires)

[‡] After upgrading, keep the old disks and packaging for the GeneMapper Software v4.0 to provide proof of licenses, even though that version of the software is no longer installed.

One Oracle license is provided with each full installation and server installation of the GeneMapper Software v4.1. Each Oracle license allows five named users to use a database (server). For example, if there are 20 named users, four Oracle licenses are required.

A named user is the actual person using the software, not just the user account. Figure 1 shows the following example: one person with four user accounts (gm_1, gm_2, gm_3, gm_4) on the database is counted as only one named user, whereas four people using the one user account (gm), count as four named users.

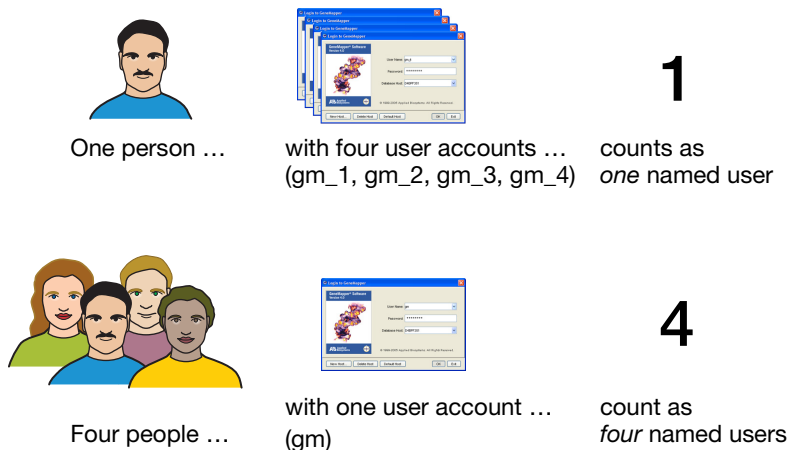


Figure 1 Example of named users and user accounts

The Oracle license provided by the GeneMapper Software is not version-specific between v3.x and v4.1.

For example, two computers running GeneMapper Software v3.7 provide licenses for 10 named users. If you upgrade the GeneMapper Software to v4.1 ([Option 2](#)) on one of the computers, then install the GeneMapper Software client ([Option 9](#)) on the other computer, all ten named users are still allowed to use the software.

Installation Options for the GeneMapper® Software v4.1

This section describes in detail the 10 installation options for the GeneMapper Software. There are eight options for installing or upgrading the GeneMapper Software v4.1, one option for installing a 30-day demonstration version of the GeneMapper Software, and one option for installing the generic updater (which provides minimal GeneMapper functionality without installing the GeneMapper Software).

You can install a combination of different options in order to optimize the workflow in your laboratory. For more information, see [“Upgrade Scenarios for the GeneMapper® Software v4.1” on page 24](#).

Installation DVDs

To support the multiple configuration options, five different installation DVDs are available:

- **Full Installation** ([Options 5 and 8](#)) – The *GeneMapper® Software v4.1 Full Installation DVD* installs both the client (analysis application) and server (software database) on the target computer. You can install the software on any compatible computer (including one running Data Collection Software).
Note: The client and server are installed as a single, integrated package and cannot be installed separately or on separate computers.
- **Upgrade Installation** ([Options 3 and 4](#)) – The *GeneMapper® Software v4.1 Upgrade Software DVD* upgrades version 4.0 of the GeneMapper Software to version 4.1. You can install the software on any compatible computer (including one running Data Collection Software).
- **Client Installation** ([Options 6 and 9](#)) – The *GeneMapper® Software v4.1 Installer for Client DVD* installs the analysis application on the target computer. You can install the client on any compatible computer (including one running Data Collection Software) and can connect to a GeneMapper Software server on the same LAN subnet.

- **Server Installation (Option 10)** – The *GeneMapper® Software v4.1 Installer for Server* DVD installs only the software database on the target computer. You cannot install the GeneMapper Software server on a computer running Data Collection Software. Any client on the same LAN subnet can connect with the server.
- **30-Day Demonstration Installation (Option 1)** – The *GeneMapper® Software v4.1 30-Day Demo Software* DVD installs a fully functional version of both the client (analysis application) and server (software database) on the target computer. You can install the software on any compatible stand-alone computer.

Note: The demo software functions for 30 days from the date it is first used.

Decision Tree [Figure 2 on page 7](#) is a flowchart to help you make decisions about which of the installation options to choose.

Comparing the Options [Table 2 on page 8](#) shows a comparison of the available installation options.

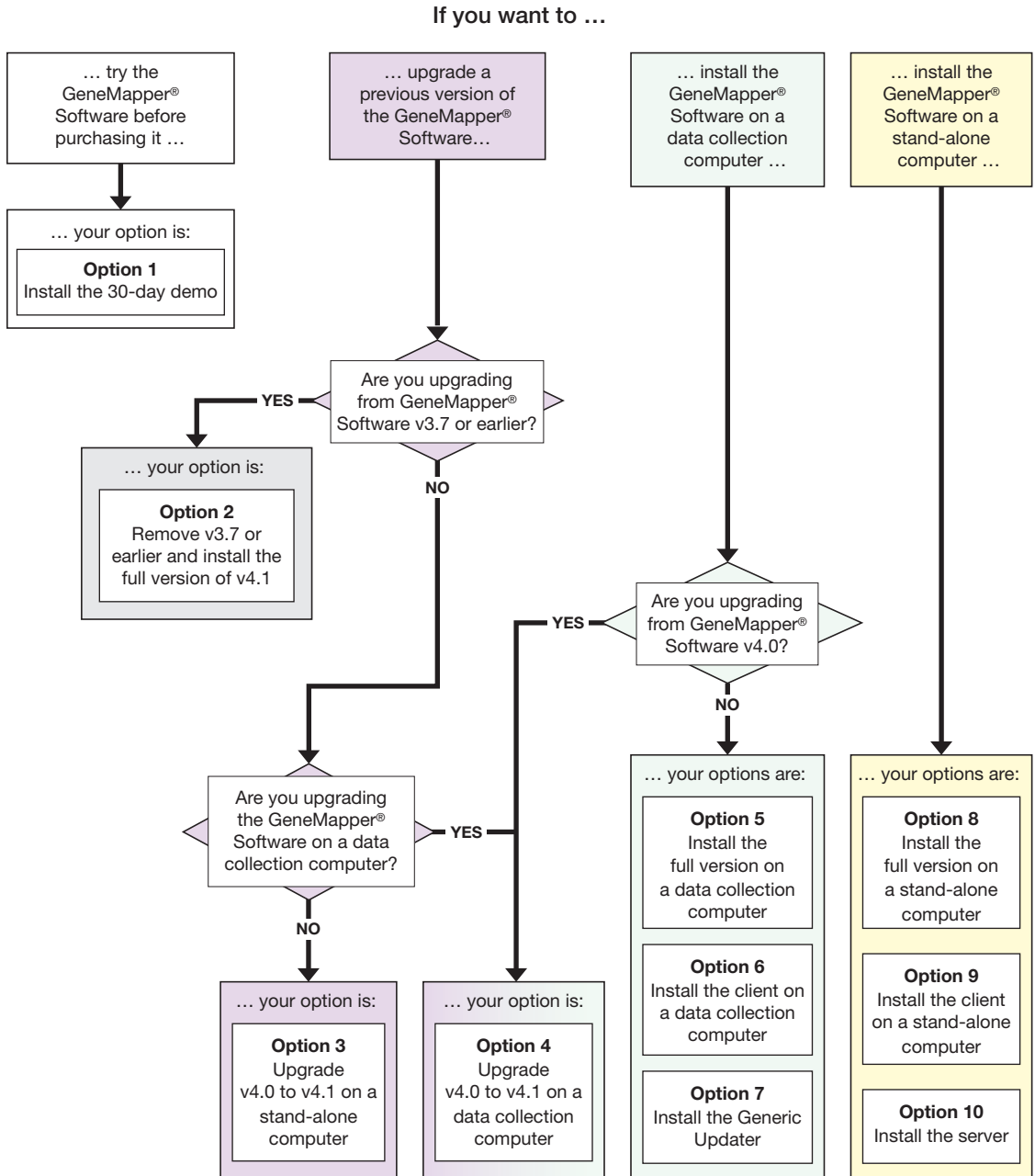


Figure 2 Decision tree

Table 2 Installation options

Option	1	2	3	4	5	6	7	8	9	10
Type of installation	30-day demo	Uninstall earlier version, then install current version	Upgrade	Upgrade	Full	Client	Generic Updater [‡]	Full	Client	Server
Upgrade previous version of GeneMapper Software	No	The GeneMapper Software cannot be upgraded directly from v3.7 or earlier to v4.1; you must uninstall the earlier version of GeneMapper Software, then install the full version of v4.1 (see Option 8).	Yes (v4.0 only)	Yes (v4.0 only)	No	No	N/A	No	No	No
Install on same computer as Data Collection Software	No		No	Yes	Yes	Yes	Yes	No	No	No
Client (analysis application) installed	Yes		Yes [§]	Yes [§]	Yes	Yes	N/A	Yes	Yes	No
Server (software database) installed	Yes		Yes [§]	Yes [§]	Yes	No	N/A	Yes	No	Yes
Number of server connections	1		5 [#]	1 ^{‡‡}	1 ^{‡‡}	N/A	N/A	5 [#]	N/A	N/A
Autoanalysis enabled	No		Yes ^{§§}	Yes ^{§§}	Yes	Yes ^{##}	N/A	Yes ^{##}	Yes ^{##}	N/A

‡ This option does not install the GeneMapper Software.

§ Installed with v4.0.

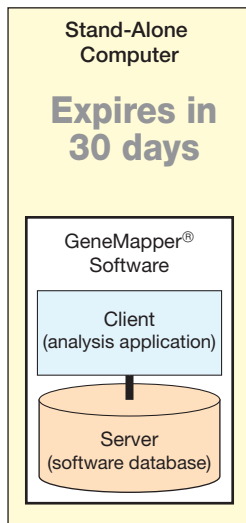
Multiple clients can connect to the server; however, if more than five clients are simultaneously connected, there may be a noticeable decrease in performance.

‡‡ When a server is installed on a data collection computer, only one client can connect at a time. Therefore, Applied Biosystems recommends that you do not use a data collection computer as the central server in a client-server system.

§§ If autoanalysis was enabled in the previous version.

If you enable autoanalysis during installation. You cannot enable autoanalysis after the software is installed.

Option 1: Install the 30-Day Demo Software



Upgrade previous version of GeneMapper Software	No
Install on same computer as Data Collection Software	No
Client (analysis application) installed‡	Yes
Server (software database) installed‡	Yes
Number of server connections	1
Autoanalysis enabled	No

‡ The client and server are installed as a single, integrated package and cannot be installed separately or on separate computers.

The demonstration version of the GeneMapper Software v4.1 is a fully functional version of the software. It can connect to any server on the LAN subnet to download data, analyze the data, then upload it back to the server (the co-installed server is the default).

You do not need to uninstall the 30-day demo if you decide to purchase the *full version* of the GeneMapper Software. The Full Installation DVD allows you to register the software without losing any data and analysis results you imported into the demo.

Note: If you decide not to purchase the full version, you can completely uninstall the demo.

Installing the demonstration version of the GeneMapper Software requires that:

- Data Collection Software is not installed on the target computer.
- GeneMapper Software is not installed on the target computer.

The demonstration software installs with the following restrictions:

- The software functions for 30 days from the date it is first used.
- The preset analysis methods are not installed, but are available for importing from one of the installation folders.
- Documentation is provided in PDF format only (no hardcopy documents).

Using the Demo Software to Test a Client-Server Connection

If you already have a GeneMapper Software server, before purchasing the client software, you can use the 30-Day Demo software to confirm that the target computer can connect to the server. If the demo version of the GeneMapper Software can connect to the target server, the client should also be able to connect to the server.

IMPORTANT! Uninstall the demonstration version of the software before installing the *client version* of the GeneMapper Software.

Option 2: Uninstall GeneMapper® Software v3.7 or earlier and Install Version 4.1

The GeneMapper Software cannot be upgraded from v3.7 or earlier to v4.1; you must uninstall the GeneMapper Software from the target computer, then install the full version of the software (see [Option 8 on page 20](#)).

If you want to install version 4.1 on a computer that is running version 3.7 or earlier:

1. Save or export any projects and/or chemistry kits that you wish to use with the GeneMapper Software v4.1.

Note: Any manual calls will be saved and imported along with the project. When saving projects, do not use the Export Reference Data option.

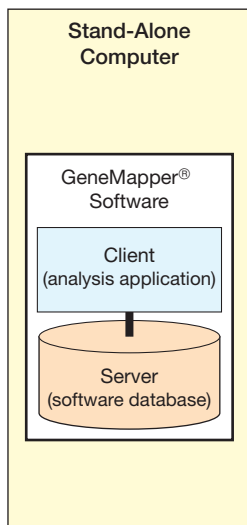
Note: GeneMapper Software v4.1 cannot import the following items from GeneMapper Software v1.0 or v2.0:

- Analysis methods
- Table settings
- Size standard definitions
- Plot settings

Importing these items from GeneMapper Software v3.x and v4.0 has not been tested.

2. Uninstall GeneMapper Software v3.7 or earlier.
3. *If you are installing on a data collection computer:* Upgrade the Data Collection Software to v3.1.
4. Install the full version of GeneMapper Software v4.1.
5. Recreate any analysis methods, table settings, size standard definitions, and/or plot settings that you wish to use with GeneMapper Software v4.1.

Option 3: Upgrade v4.0 of the GeneMapper® Software to v4.1 on a Stand-Alone Computer



Upgrade previous version of GeneMapper Software	Yes (v4.0 only)
Install on same computer as Data Collection Software	No
Client (analysis application) installed	Yes [‡]
Server (software database) installed	Yes [‡]
Number of server connections	5 [§]
Autoanalysis enabled	Yes, if remote autoanalysis is selected during installation. [#]

[‡] Installed with v4.0.

[§] Multiple clients can connect to the server; however, if more than five clients are simultaneously connected, there may be a noticeable decrease in performance.

[#] If you require remote autoanalysis support, you must select the autoanalysis option when you install the GeneMapper Software. You cannot enable autoanalysis after the software is installed without uninstalling and reinstalling the software.

When installed on a stand-alone computer, the GeneMapper Software v4.1 can connect to any server on the LAN subnet to download data, analyze the data, then upload it back to the server (the co-installed server is the default).

When you upgrade the GeneMapper Software to v4.1:

- All projects and data are upgraded in their current locations.
- You can import projects undertaken with earlier versions of the GeneMapper Software.
- Any previously edited genotypes are retained.

Upgrading the GeneMapper Software on a stand-alone computer requires that:

- GeneMapper Software v4.0 is already installed on the target computer.

Note: You cannot directly upgrade version 3.7 or earlier of the GeneMapper Software to version 4.1 (see [Option 2 on page 11](#)).

- You have a new registration code (the new code is attached to the software license agreement).
- You migrate your data from the v4.0 database to the v4.1 database using the GeneMapper® Database Utility Wizard available on the upgrade DVD.

Note: For more information about the GeneMapper Database Utility Wizard, refer to the *GeneMapper® Software v4.1 Installation and Administration Guide*.

Autoanalysis of Data

If autoanalysis was enabled in the previous version of the GeneMapper Software, the upgraded software can also perform automatic analysis of data. During autoanalysis, the GeneMapper Software can save the analyzed data to a server on a different computer from the one performing the autoanalysis (the co-installed server is the default).

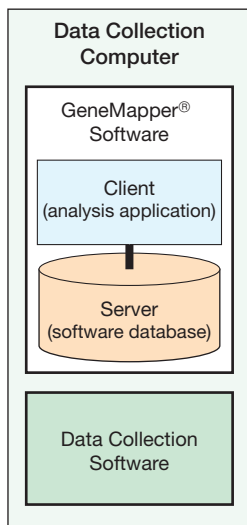
Note: If multiple instruments are available, you can specify only one of them when setting up an autoanalysis run.

Upgrading Multiple Computers

If you are upgrading GeneMapper Software v4.0 on a computer that is part of a client/server configuration, you must upgrade all computers to GeneMapper Software v4.1 in order to maintain client/server functionality.

The upgrade DVD provides an upgrade for one full installation *or* one server installation of the GeneMapper Software. The DVD also provides upgrades for any client installations of the GeneMapper Software v4.0.

Option 4: Upgrade v4.0 of the GeneMapper® Software to v4.1 on a Data Collection Computer



Upgrade previous version of GeneMapper Software	Yes (v4.0 only)
Install on same computer as Data Collection Software (DC v3.1 only)	Yes
Client (analysis application) installed	Yes [‡]
Server (software database) installed	Yes [‡]
Number of server connections	1 [§]
Autoanalysis enabled	Yes

[‡] Installed with v4.0.

[§] When a server is installed on a data collection computer, only one client can connect at a time. Therefore, Applied Biosystems recommends that you do not use a data collection computer as the central server in a client-server system.

The GeneMapper Software v4.1 can connect to any server on the LAN subnet to download data, analyze the data, then upload it back to the server (the co-installed server is the default).

When you upgrade of the GeneMapper Software to v4.1:

- All projects and data are upgraded in their current locations.
- You can import projects undertaken with earlier versions of the GeneMapper Software.
- Any previously edited genotypes are retained.

Upgrading the GeneMapper Software on a data collection computer requires that:

- GeneMapper Software v4.0 is already installed on the target computer.

Note: You cannot directly upgrade version 3.7 or earlier of the GeneMapper Software to version 4.1 (see [Option 2 on page 11](#)).

- The Data Collection Software version 3.1 is installed and running on the target computer.
- You have a new registration code (the new code is attached to the software license agreement).

- You migrate your data from the v4.0 database to the v4.1 database using the GeneMapper® Database Utility Wizard available on the upgrade DVD.

Autoanalysis of Data

If autoanalysis was enabled in the previous version of the GeneMapper Software, the upgraded software can also perform automatic analysis of data. During autoanalysis, the GeneMapper Software can save the analyzed data to a server on a different computer from the one performing the autoanalysis (the co-installed server is the default).

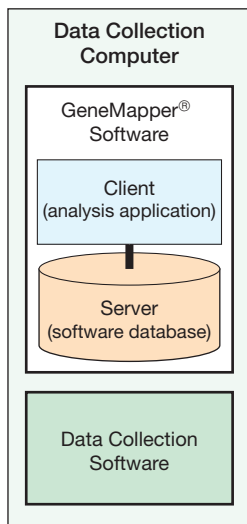
Note: If multiple instruments are available, you can specify only one of them when setting up an autoanalysis run.

Upgrading Multiple Computers

If you are upgrading GeneMapper Software v4.0 on a computer that is part of a client/server configuration, you must upgrade all computers to GeneMapper Software v4.1 in order to maintain client/server functionality.

The upgrade DVD provides an upgrade for one full installation *or* one server installation of the GeneMapper Software. The DVD also provides upgrades for any client installations of the GeneMapper Software v4.0.

Option 5: Install the Full Version of the GeneMapper® Software v4.1 on a Data Collection Computer



Upgrade previous version of GeneMapper Software	No
Install on same computer as Data Collection Software (DC v3.1 only)	Yes
Client (analysis application) installed‡	Yes
Server (software database) installed‡	Yes
Number of server connections	1§
Autoanalysis enabled	Yes

‡ The client and server are installed as a single, integrated package and cannot be installed separately or on separate computers.

§ When a server is installed on a data collection computer, only one client can connect at a time. Therefore, Applied Biosystems recommends that you do not use a data collection computer as the central server in a client-server system.

The GeneMapper Software v4.1 can connect to any server on the LAN subnet to download data, analyze the data, then upload it back to the server (the co-installed server is the default).

Autoanalysis of Data

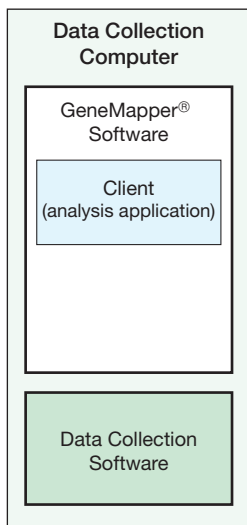
Autoanalysis is enabled automatically when you install the GeneMapper Software on a data collection computer. During autoanalysis, the GeneMapper Software can save the analyzed data to a server on a different computer from the one performing the autoanalysis (the co-installed server is the default).

Note: If multiple instruments are available, you can specify only one of them when setting up an autoanalysis run.

Alternatives to Installing the Full Version of the GeneMapper Software

You do not need to install the full version of GeneMapper Software v4.1 if a previous version of the GeneMapper Software is not installed on the target data collection computer. For more information, see [Option 6 on page 17](#), or [Option 7 on page 18](#).

Option 6: Install the GeneMapper® Software v4.1 Client on a Data Collection Computer



Upgrade previous version of GeneMapper Software	No
Install on same computer as Data Collection Software (UDC v3.1 only)	Yes
Client (analysis application) installed	Yes
Server (software database) installed	No
Number of server connections	N/A
Autoanalysis enabled	Yes

The GeneMapper Software client connects to any server on the LAN subnet to download data, analyze the data, then upload it back to the server.

IMPORTANT! If you are replacing a previous version of the GeneMapper Software with the client, export your data (for example, projects and panels), then uninstall the previous version of the software and install the client. To uninstall the GeneMapper Software on a data collection computer, refer to the instructions in the *GeneMapper® Software v4.1 Installation and Administration Guide*.

Installing the GeneMapper Software client on a data collection computer requires that:

- You have at least one full GeneMapper Software v4.1 installation or upgrade within the client-server network.
- *For autoanalysis only:* A remote server (default host) is available when you install the client.

Autoanalysis of Data

If autoanalysis is enabled during installation of the GeneMapper Software client, the software can perform automatic analysis of data. During autoanalysis, the client saves the analyzed data to a server on a different computer from the one performing the autoanalysis.

Note: If multiple instruments are available, you can specify only one of them when setting up an autoanalysis run.

Option 7: Install the Generic Updater

Even if you do not want to install GeneMapper Software v4.1 on a 3130/3130xl or 3730/3730xl data collection computer, some GeneMapper functionality still is required to generate plate records. You can add this functionality either by installing the generic updater (included on the full installation DVD, upgrade DVD, and client installation DVD) or by setting up a remote client for autoanalysis (see [Option 9 on page 21](#)).

For more information about the generic updater, see the GeneMapper® Updater Readme located on the GeneMapper Software full installation DVD, server installation DVD, demo installation DVD, client installation DVD, or upgrade DVD.

Installing the generic updater on a data collection computer requires that the:

- GeneMapper Software is not installed on the target data collection computer.
- Data Collection Software v3.1 is running.

Note: The following procedures were written for the Microsoft® Windows® XP operating system. For the Microsoft® Windows Vista® operating system, some of the terminology has changed (for example, **My Computer** is **Computer** in Windows Vista).

Installing the Generic Updater

1. Insert one of the following DVDs into the DVD drive:
 - *GeneMapper® Software v4.1 Full Installation*
 - *GeneMapper® Software v4.1 Upgrade Software*
 - *GeneMapper® Software v4.1 Installer for Server*
 - *GeneMapper® Software v4.1 Installer for Client*
 - *GeneMapper® Software v4.1 30-Day Demo Software*
2. If the installer does not start automatically:
 - a. Right-click **My Computer** and select **Explore**.
 - b. Expand the DVD drive, then select the **GeneMapper 4.1 ...** folder to display the contents.
 - c. Double-click **GeneMapper4.1.exe** to start the installer.
3. Click **Software Extras**, then click **GeneMapper® Generic Updater**.
4. Copy the generic updater files to your hard drive:
 - a. Click **Launch Self-extracting Updater**.

- b. Click **Browse**, then select a location for the generic updater files.
 - c. Click **Unzip**. The generic updater files are copied into a folder named “JNDIRegistration.”
5. Remove the GeneMapper Software installation DVD from the DVD drive.
6. Make sure the Data Collection Software is running.
7. Navigate to the JNDIRegistration folder on your hard drive.
8. Open the Deployment-Generic folder, then double-click **RegisterGMGeneric.exe**.
9. Click **OK** when you see the message “GeneMapper-Generic successfully registered with <3130/xl or 3730/xl> Data Collection.”
10. Open the Data Collection Viewer window, then use the Plate Manager to create new GeneMapper®-Generic plate definitions.

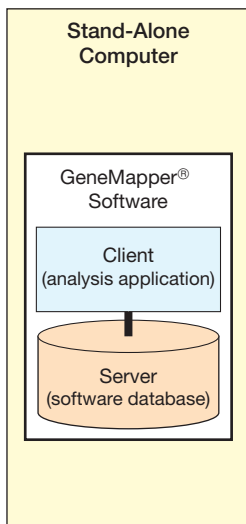
Note: For instructions on creating and using GeneMapper®-Generic plates, see the user guide for your instrument.

Removing the Generic Updater

IMPORTANT! You must remove the generic updater from the data collection computer before you install the GeneMapper Software.

1. Make sure the Data Collection Software is running.
2. Navigate to the JNDIRegistration folder on your hard drive.
3. Open the Deployment-Generic folder, then double-click **UnRegisterGMGeneric.exe** to remove the GeneMapper-Generic option from the Data Collection Software.
4. Click **OK** when you see the message “GeneMapper-Generic successfully unregistered with <3130/xl or 3730/xl> Data Collection.”
5. Confirm that the generic updater was removed:
 - a. Open the Data Collection Viewer window.
 - b. Open the Plate Manager.
 - c. Confirm that the GeneMapper®-Generic option is no longer available as an Application choice.
6. Delete the generic updater files from your hard drive.

Option 8: Install the Full Version of the GeneMapper® Software v4.1 on a Stand-Alone Computer



Upgrade previous version of GeneMapper Software	No
Install on same computer as Data Collection Software	No
Client (analysis application) installed‡	Yes
Server (software database) installed‡	Yes
Number of server connections	5§
Autoanalysis enabled	Yes, if remote autoanalysis is selected during installation. #

‡ The client and server are installed as a single, integrated package and cannot be installed separately or on separate computers.

§ Multiple clients can connect to the server; however, if more than five clients are simultaneously connected, there may be a noticeable decrease in performance.

If you require remote autoanalysis support, you must select the autoanalysis option when you install the GeneMapper Software. You cannot enable autoanalysis after the software is installed without uninstalling and reinstalling the software.

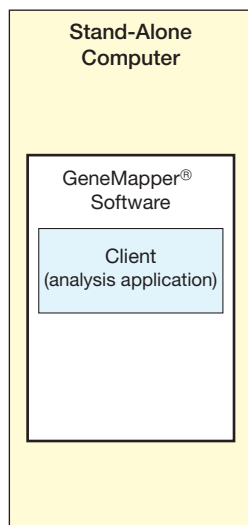
The GeneMapper Software v4.1 can connect to any server on the LAN subnet to download data, analyze the data, then upload it back to the server (the co-installed server is the default).

Autoanalysis of Data

If autoanalysis is enabled during installation of the GeneMapper Software, the software can perform automatic analysis of data. During autoanalysis, the GeneMapper Software can save the analyzed data to a server on a different computer from the one performing the autoanalysis (the co-installed server is the default).

Note: If multiple instruments are available, you can specify only one of them when setting up an autoanalysis run.

Option 9: Install the GeneMapper® Software v4.1 Client on a Stand-Alone Computer



Upgrade previous version of GeneMapper Software	No
Install on same computer as Data Collection Software	No
Client (analysis application) installed	Yes
Server (software database) installed	No
Number of server connections	N/A
Autoanalysis enabled	Yes, if remote autoanalysis is selected during installation.‡

‡ If you require remote autoanalysis support, you must select the autoanalysis option when you install the GeneMapper Software. You cannot enable autoanalysis after the software is installed without uninstalling and reinstalling the software.

The GeneMapper Software client connects to any server on the LAN subnet to download data, analyze the data, then upload it back to the server.

Note: If you are replacing a previous version of the GeneMapper Software with the client, export your data (projects, panels, etc.), then uninstall the previous version of the software and install the client.

Installing the GeneMapper Software client on a stand-alone computer requires that:

- You have at least one full GeneMapper Software v4.1 installation or upgrade within the client-server network.
- If you install the client on a laptop computer, you connect to a GeneMapper Software server in order to view or analyze data.
- *For autoanalysis only:* A remote server (default host) is available when you install the client.

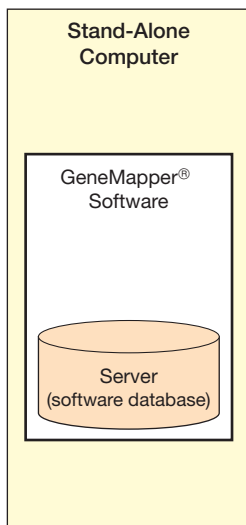
Autoanalysis of Data

If autoanalysis is enabled during installation of the GeneMapper Software client, the software can perform automatic analysis of data. During autoanalysis, the client saves the analyzed data to a server on a different computer from the one performing the autoanalysis.

When setting up an autoanalysis run, if the target data collection computer is not configured for fragment analysis, the generic updater (see [page 18](#)) is installed automatically on that computer

Note: If multiple instruments are available, you can specify only one of them when setting up an autoanalysis run.

Option 10: Install the GeneMapper® Software v4.1 Server on a Stand-Alone Computer



Upgrade previous version of GeneMapper Software	No
Install on same computer as Data Collection Software	No
Client (analysis application) installed	No
Server (software database) installed	Yes
Number of server connections	5 [‡]
Autoanalysis enabled	N/A

[‡] Multiple clients can connect to the server; however, if more than five clients are simultaneously connected, there may be a noticeable decrease in performance.

The GeneMapper Software server stores data, analysis settings, and results. It does not provide analysis capabilities.

Note: The GeneMapper Software server is a software database only. It has not been tested on a computer running server software, such as Microsoft® Windows® Server 2003.

Installing the GeneMapper Software server requires that:

- You have at least one full GeneMapper Software v4.1 installation or upgrade within the client-server network.
- Any previous version of GeneMapper Software has been uninstalled from the target computer before you install the GeneMapper Software v4.1 server.
- Data Collection Software is not installed on the target computer.

Upgrade Scenarios for the GeneMapper® Software v4.1

Standard Upgrade

The standard upgrade DVD upgrades one GeneMapper Software v4.0 license to v4.1 (see [Figure 3](#)).

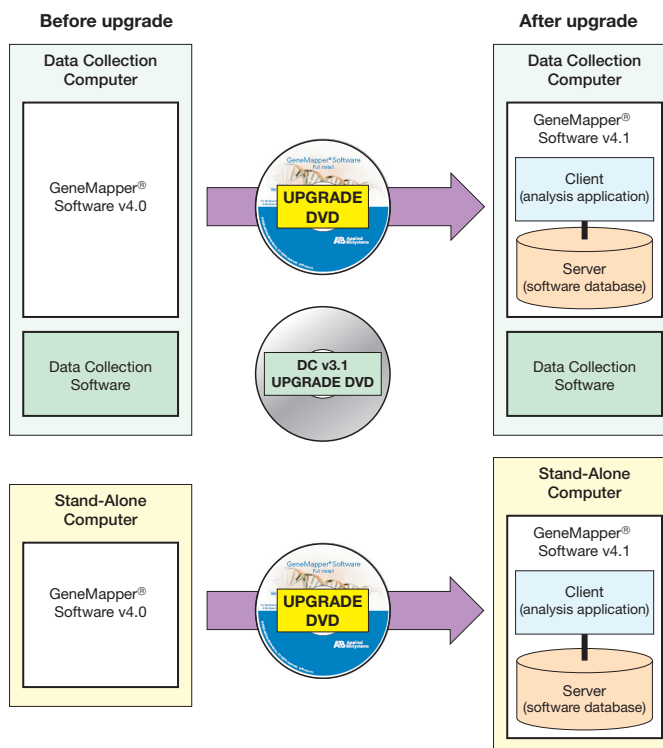


Figure 3 Standard upgrade

The following are example scenarios in which you would perform a standard upgrade:

Example scenario 1: You have a 3130 data collection computer running GeneMapper Software 4.0, and, in the lab, a stand-alone computer that is also running GeneMapper Software 4.0.

Solution:

- Upgrade the data collection computer ([Option 4](#))
- Upgrade the lab computer ([Option 3](#))

Example scenario 2 (solution A): You have an Applied Biosystems 3730 DNA Analyzer data collection computer running the GeneMapper Software v4.0, and, in the lab, three computers also running the GeneMapper Software v4.0.

Solution:

- Upgrade the data collection computer ([Option 4](#))
- Upgrade each of the lab computers ([Option 3](#))

Alternate solution: Perform a multiple capabilities upgrade. See example scenario 2, solution B on [page 26](#) for more information.

Multiple Capabilities Upgrade

If you have multiple computers running the GeneMapper Software, you can combine one or more upgrades and the installation of one or more GeneMapper Software clients and/or servers.

The advantages of performing a multiple capabilities upgrade over performing standard upgrades on all the computers are:

- **Conservation of system resources on the client computers:** The server uses system resources even when the GeneMapper Software is not in use, because it must always be available for a server connection. Installing only a client and connecting to a server on a different computer saves these resources.
- **Easier process flow:** Connecting multiple clients to a single server is an easier process to control in the laboratory. For example, to share panels and bins, you only need to load them once on the server instead of loading them on each of the analysis computers.

The upgrade DVD provides an upgrade for one full installation *or* one server installation of the GeneMapper Software. The DVD also provides upgrades for any client installations of the GeneMapper Software v4.0.

IMPORTANT! If you are upgrading GeneMapper Software v4.0 on a computer that is part of a client/server configuration, you must upgrade all computers to GeneMapper Software v4.1 in order to maintain client/server functionality.

Example scenario 2 (solution B): You have an Applied Biosystems 3730 DNA Analyzer data collection computer running the GeneMapper Software v4.0, and three computers in the lab also running the GeneMapper Software v4.0.

Solution (see [Figure 4 on page 27](#)):

- Upgrade the data collection computer ([Option 4](#))
- Upgrade one of the lab computers ([Option 3](#))
- Install GeneMapper Software clients on the other two lab computers ([Option 9](#))

Alternate solution: Perform a standard upgrade. See “[Standard Upgrade](#)” on [page 24](#) for more information.

Example scenario 3: You have a 3730 data collection computer running GeneMapper Software v3.7, and you want to add analysis capabilities to the four computers in your lab.

Solution (see [Figure 5 on page 28](#)):

- Uninstall GeneMapper Software v3.7, upgrade the data collection computer, then install GeneMapper Software v4.1 ([Option 2](#))
- Perform a server installation on one of the lab computers ([Option 10](#))
- Install clients on the other three lab computers ([Option 9](#))

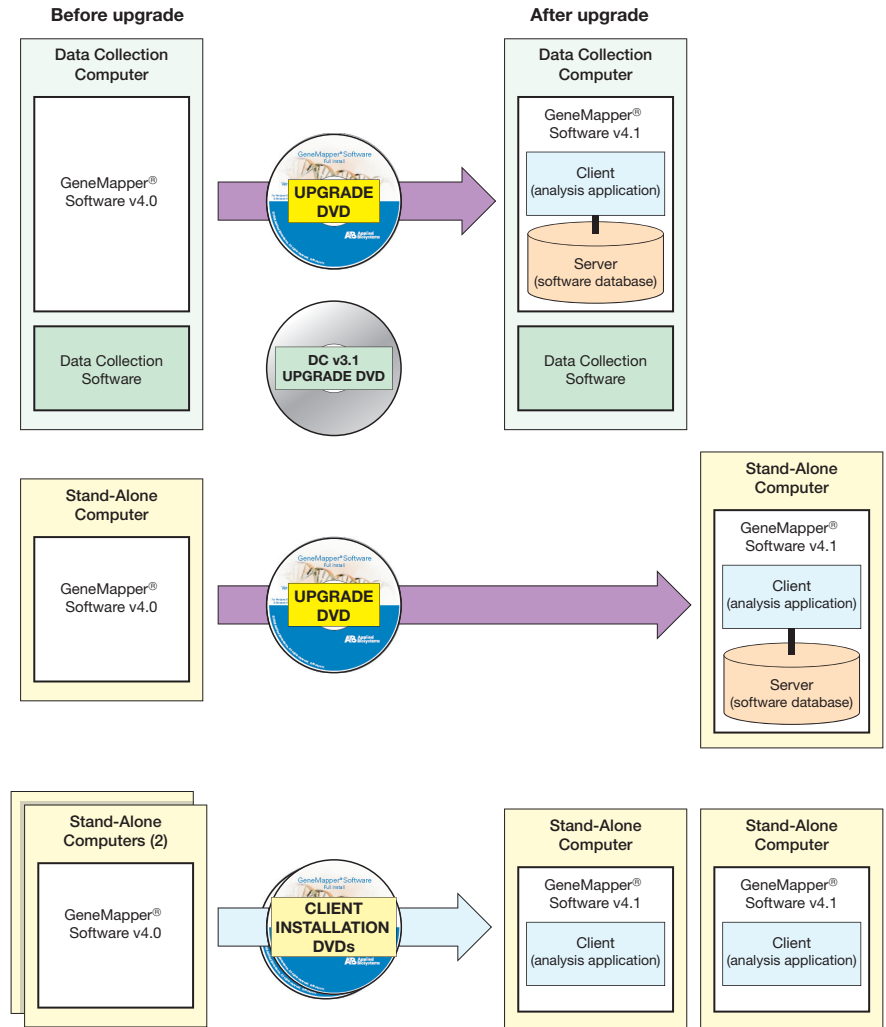


Figure 4 Example scenario 2B (page 26)

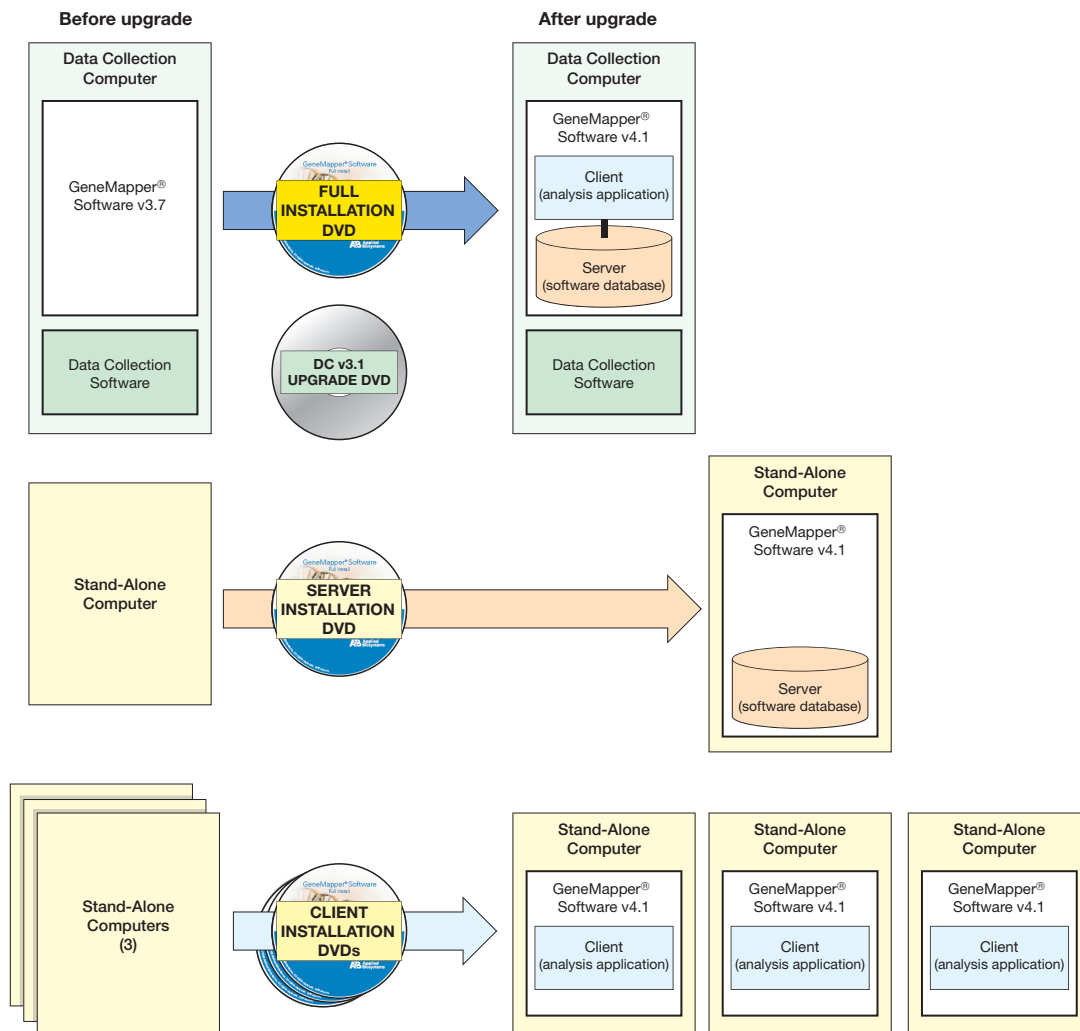


Figure 5 Example scenario 3 (page 26)

Example scenario 4: You want analysis capabilities on each of the 20 computers in your lab.

For this scenario, you must address two issues:

- **System performance** – If more than five clients are connected simultaneously to the database, you may notice a degradation in performance. If all 20 clients will connect to the server simultaneously, you may want multiple servers.
- **Oracle licensing** – This scenario requires four licenses for 20 named users.

The solution depends on how many copies of GeneMapper Software you own. See [Table 3 on page 30](#).

Alternate solution: If you do not require analysis capabilities on all 20 computers in the lab, you could install a GeneMapper Software server on one or more of the computers. [Figure 6 on page 31](#) shows a solution in which you have:

- One copy of GeneMapper Software v4.0, which is upgraded to v4.1
- Two full installations of GeneMapper Software v4.1
- One installation of the GeneMapper Software server v4.1
- Sixteen installations of the GeneMapper Software client

This solution provides analysis capabilities on 19 computers and leaves one computer as a GeneMapper Software server.

Table 3 Solutions for example scenario 4 (20 analysis computers)

Number of copies of GeneMapper Software you own	Solution [‡]	Oracle licenses
No previous version	- Perform full installations on four computers (Option 8) - Install clients on the 16 other computers (Option 9)	The four full installations provide Oracle licenses for 20 named users.
	- Perform a full installation on one computer (Option 8) - Install clients on the 17 other computers (Option 9) - Purchase three copies of the GeneMapper Software server	The one full installation provides Oracle licenses for 5 named users. The three servers, although not installed at this time, provide Oracle licenses for the other 15 named users.
1	- Upgrade the one computer running GeneMapper Software (Option 2, 3, or 4) - Perform full installations on three computers (Option 8) - Install clients on the other 16 computers (Option 9)	The one copy of GeneMapper Software provides Oracle licenses for 5 named users. The three full installations provide Oracle licenses for the other 15 named users.
2	- Upgrade the two computers running GeneMapper Software (Option 2, 3, or 4) - Perform full installations on two computers (Option 8) - Install clients on the 16 other computers (Option 9)	The two copies of GeneMapper Software provide Oracle licenses for 10 named users. The two full installations provide Oracle licenses for the other 10 named users.
3	- Upgrade the three computers running GeneMapper Software (Option 2, 3, or 4) - Perform a full installation on one computer (Option 8) - Install clients on the 16 other computers (Option 9)	The three copies of GeneMapper Software provide Oracle licenses for 15 named users. The full installation provides Oracle licenses for the other five named users.
4 or more	- Upgrade four computers running GeneMapper Software (Option 2, 3, or 4) - Install clients on 16 other computers (Option 9)	The four copies of GeneMapper Software provide Oracle licenses for 20 named users.

[‡] Multiple clients can connect to each server in a full installation or upgrade; however, if more than five clients are connected to one server simultaneously, there may be a noticeable decrease in performance.

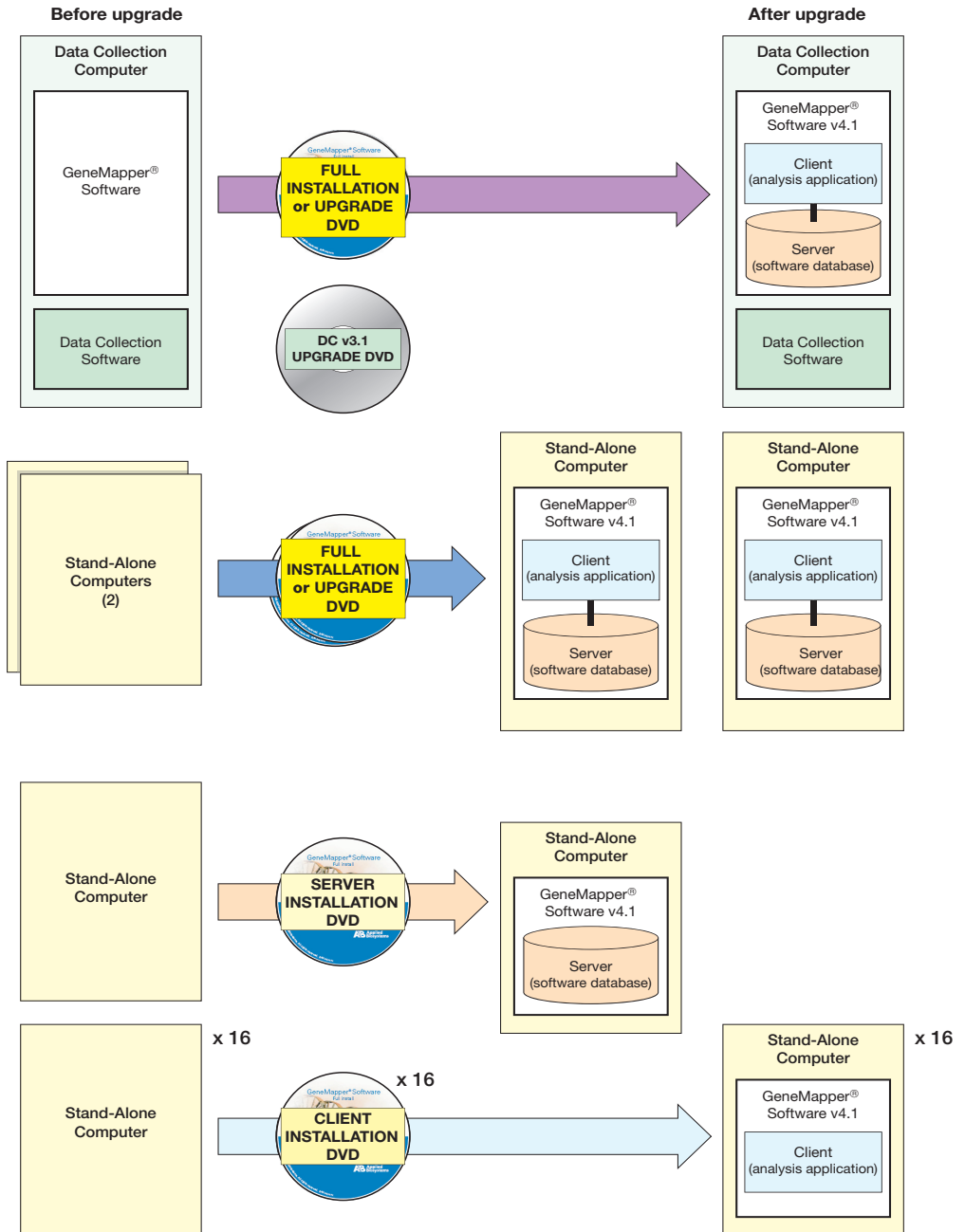


Figure 6 Alternate solution for example scenario 4:
19 analysis computers, one server-only computer ([page 29](#))

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