Tektronix®

**MTS4EAUP License Upgrade for
MTS4EAV7 HEVC / AVC Video and Compressed Audio Analyzer
and MTS4EA Elementary Stream Analyzer**

Instructions

075-1055-01

Contacting Tektronix

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For product information, sales, service, and technical support:

■ In North America, call 1-800-833-9200.

■ Worldwide, visit *www.tek.com* to find contacts in your area.

MTS4EAUP license upgrades

Kit description

This document describes how to perform the following upgrades on the software key (dongle) for these Tektronix products:

- **MTS4EAV7 HEVC / AVC Video and Compressed Audio Analyzer**

  - Add permissions for new product options

  - Add one or more floating user-licenses to existing software

- **MTS4EA Elementary Stream Analyzer**

  - Upgrade existing MTS4EA software version 4.X or higher (node-locked or floating license) to current MTS4EAV7 software with floating license

Kit parts list

The following table lists the part supplied with the upgrade kit.

Quantity	Part number	Description
1 EA	075-1055-01	INSTRUCTIONS; MTS4EAUP LICENSE UPGRADE
1 EA	N/A	CD-ROM; MTS4EA OR MTS4EAV7 LICENSE UPGRADE

Upgrade process overview

When you order an upgrade, you will be asked to provide the dongle number for your existing MTS4EAV7 or MTS4EA software. When you receive the upgrade package, verify that you are upgrading the correct dongle before you start the upgrade procedure. The dongle number will be a 7, 8 or 9 digit number located on the DK2 label affixed to the dongle.

Listed below are the high-level actions required for the various MTS4EAV7 and MTS4EA upgrade scenarios. If you have upgrade problems, see *Troubleshooting the license upgrade process* on page 21.

NOTE. *In order to upgrade from MTS4EA v4.X or higher to MTS4EAV7, the software must be installed on a machine running the Windows 7 operating system.*

Upgrade type	Actions
Adding options, such as HEVC/H.265 support, to your existing MTS4EAV7 software	Perform the steps described in *Options permissions upgrade* on page 3.
Adding one or more floating user-licenses to your existing MTS4EAV7 software	Perform the steps described in *Floating license upgrade* on page 6.
Upgrading your existing MTS4EA v4.X or higher to MTS4EAV7 **NOTE.** *If your existing MTS4EA software key (dongle) supports multiple floating user-licenses, you will have the same number of MTS4EAV7 floating user-licenses after the upgrade.*	1. Perform the steps described in *Options permissions upgrade* on page 3. 2. Perform the steps described in *MTS4EA V4.X or higher to MTS4EAV7 upgrade* on page 12. 3. If your MTS4EA-to-MTS4EAV7 upgrade includes adding more floating user-licenses, perform the steps described in *Floating license upgrade* on page 6.

Options permissions upgrade

These instructions are for personnel who are familiar with the operation of the DESkey tools. If you need further details refer to the appropriate product manual. Contact Tektronix technical support for installation assistance.

NOTE. Each MTS4EAV7 or MTS4EA software key (dongle) contains two sets of permissions: one for the enabled product options, and another for the user (floating) licenses. Since separate processes are used to upgrade the options permissions and the user licenses stored in the dongle, you can upgrade the options permissions and the user licenses in any order.

Options permissions upgrade procedure

The software key (dongle) stores the permissions for the enabled MTS4EAV7 or MTS4EA options. The options permissions are upgraded using an update program and an encrypted data file. Tektronix provides the upgrade files either by CD-ROM with this kit or by email.

NOTE. If you have a multiple-user floating license installation, you need to perform this procedure only on the license server machine.

Perform the following steps to upgrade the options permissions for your MTS4EAV7 or MTS4EA software:

CAUTION. *To prevent an upgrade failure, your computer or Tektronix MPEG instrument must have the associated MTS4EAV7 or MTS4EA software key (dongle) installed.*

Be sure that the dongle you are updating is the one you specified in the upgrade order. The upgrade data file can be applied to the dongle only one time and it will work only with the dongle specified at the time you ordered the upgrade.

1. If you received your upgrade files via email proceed to step 2. Otherwise, insert the CD-ROM supplied with this kit into the appropriate drive on your computer or Tektronix MPEG instrument.

2. Copy the upgrade files from the CD-ROM or from the email to any directory on your computer or Tektronix MPEG instrument.

CAUTION. *If the DESkey server is installed and running on the computer or Tektronix MPEG instrument, you must stop the server service before you run the executable file in step 3 below. If you do not stop the service, you will get an error message when you attempt to run the file.*

To stop the server service, open the Control Panel (Start > Settings > Control Panel) and select the DESkey icon, which opens the DESkey Configuration dialog box. In the dialog box, select the Networking tab. Click the Stop button if the server service is running. The server button will say Start when the service is not running.

NOTE. *The upgrade files to copy are "remoteUpdate.exe" and "adhehent.dat." If you are uncertain about where to copy the files on your PC, or if a temporary directory does not seem to work, copy these files to your C:\ root directory, and then execute step 3 from that location.*

3. From the directory where you copied the upgrade files, run the following executable file **remoteupdate.exe** by right-clicking and selecting **Run as administrator**. The executable file will then use the accompanying data file (adherent.dat) to securely change the contents of the dongle memory to include any new options.

NOTE. *This upgrade process should take less than 5 minutes. Please allow the process to run to full completion.*

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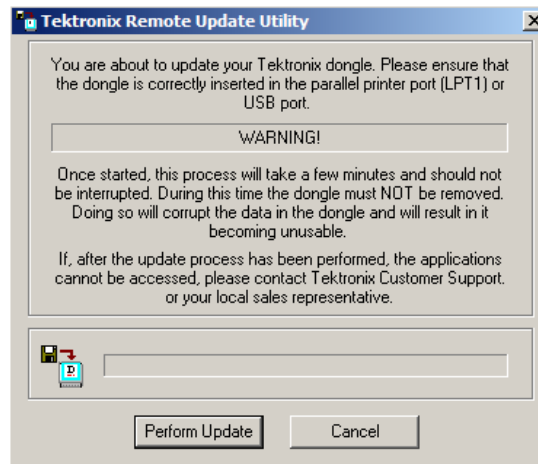
4. If necessary, remove the CD-ROM from the computer or Tektronix MPEG instrument.

Floating license upgrade

The instructions on the following pages describe how to add one or more floating licenses to your MTS4EAV7 software.

Floating license upgrade process

The activities listed below are required to perform the floating license upgrade:

1. You create a Customer Update Request File (CURF) and send that file to Tektronix. The CURF is specific to the dongle on your existing product.

   NOTE. *The instructions for creating the CURF are described in Generating a Customer Update Request File (CURF) on page 7.*

2. Tektronix uses the CURF to create a License Upgrade File (LUF).

3. Tektronix sends you the LUF either on floppy disk or CD-ROM, or by email.

   NOTE. *When you receive the upgrade files from Tektronix, you must copy the files to a single directory on the hard drive of the client server machine which has the software key (dongle) installed that was used to create the CURF.*

4. You apply the LUF to the dongle using the DESkey configuration utility.

   NOTE. *The instructions for applying the LUF are described in Floating license upgrade procedure on page 9.*

   When the dongle has been upgraded, the LUF will become obsolete.

Generating a Customer Update Request File (CURF)

Perform the following steps to generate a Customer Update Request File (CURF) to send to Tektronix:

1. From the client machine, open the Control Panel (Start > Settings > Control Panel) and select the DESkey icon. This will open the DESkey Configuration dialog box.

2. In the DESkey Configuration dialog box, select the **Networking** tab. The server machine should be listed in the upper panel.
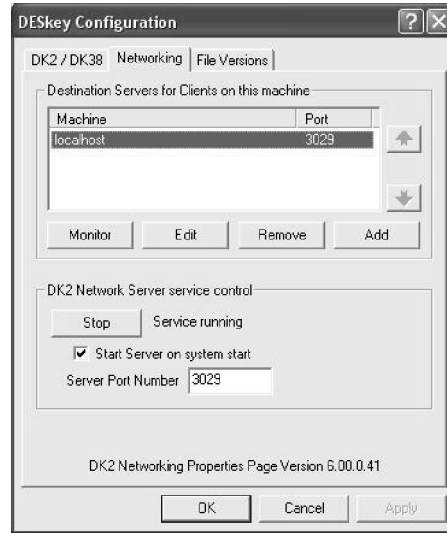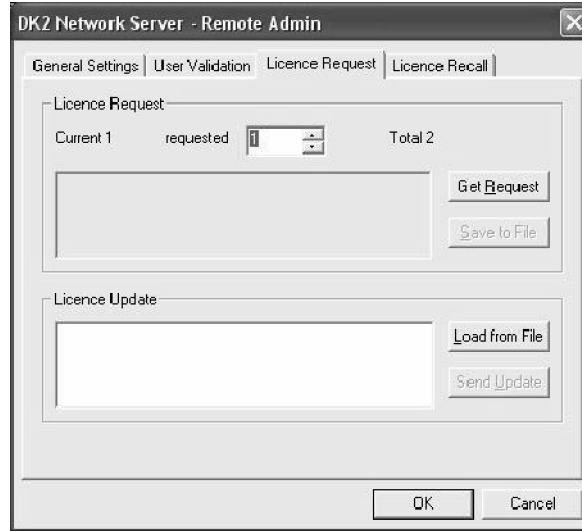

3. Click the **Monitor** button to display the DK2 Network Server Remote Monitor dialog box.

4. Highlight the server machine in the server list (upper panel) and click the **Admin** button.
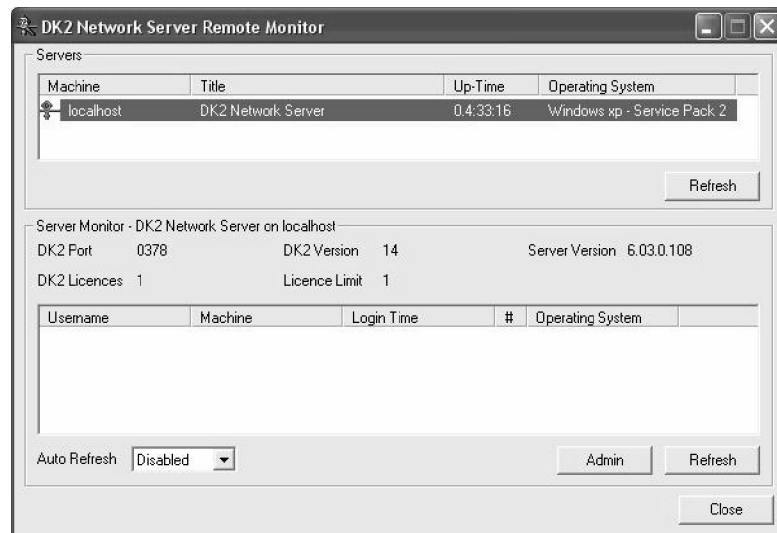
5. Enter the required password. The default password is "deskey".

6. If the password is correct, the DK2 Network Server dialog box is displayed. Select the **License Request** tab as shown below.

7. Enter the required number of additional licenses in the requested edit box. The number of requested licenses plus the current number of licenses cannot exceed 255.

8. Click the **Get Request** button to generate the data for the Customer Update Request File (CURF). The generated data is shown in the panel next to the button and the Save to File button is enabled.
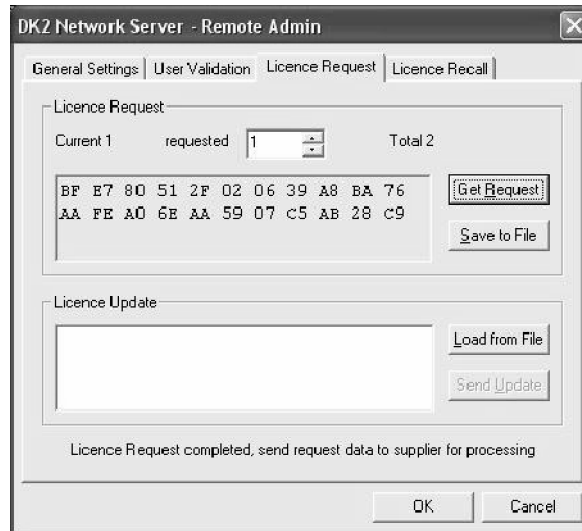
9. Click the **Save to File** button and select a location and filename for the data. Any file name can be used, but the file must have a ".req" extension. The default file name is "update.req".

10. Close the DK2 Network Server, DK2 Network Server Remote Monitor, and DESkey Configuration dialog boxes.

11. Send the generated CURF to your local Tektronix representative.

12. After Tektronix uses the CURF to generate the License Upgrade File (LUF) and sends that file to you, perform the steps described in *Floating license upgrade procedure* on page 9 to complete the upgrade.

Floating license upgrade procedure

Perform the following steps to add user licenses to an existing MTS4EAV7 floating license dongle:

1. Copy the upgrade files from the CD-ROM or from the email, to a single directory on the hard drive of the client server machine.

   NOTE. *The client server machine must have the software key (dongle) installed that was used to create the CURF.*

2. Ensure that the software key (dongle) is installed on the License Server.

3. From the client server machine, open the Control Panel (Start > Settings > Control Panel).

4. Open DESkey application. In the DESkey Configuration dialog box, select the **Networking** tab. The server machine should be listed in the upper panel.

5. Verify that the server service is running. As shown below, the server button will say Stop when the service is running. If the server button says Start, click the button to start the service.
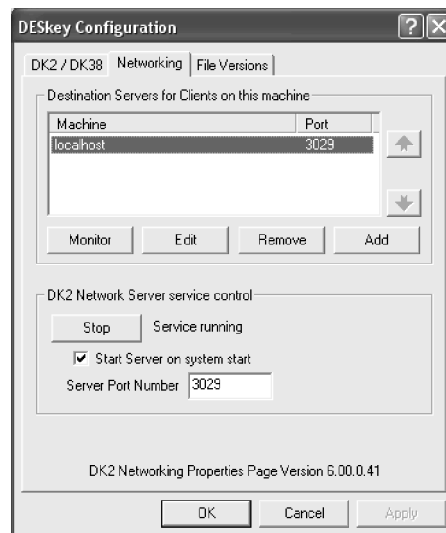
**6.** Select the Monitor button to display the DK2 Network Server Remote Monitor dialog box.
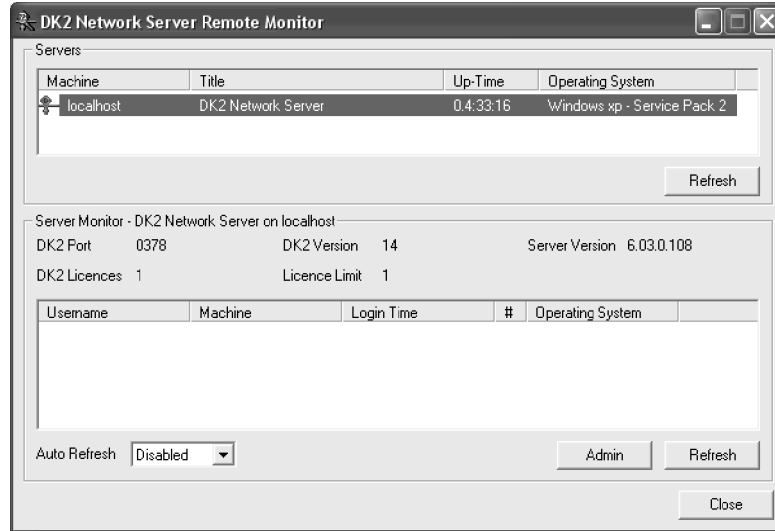
7. Highlight the server machine in the server list (upper panel) and click the **Admin** button. Enter the required password. The default password is "deskey".

8. If the password is correct, the DK2 Network Server dialog box is displayed. Select the **License Request** tab.
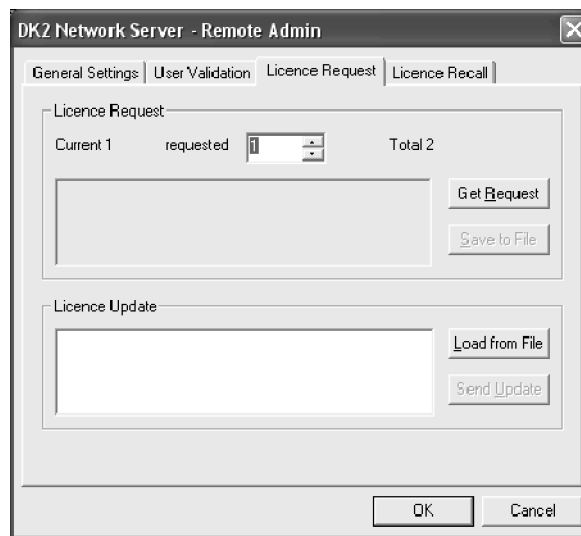
9. Enter the number of additional licenses in the **requested** edit box. For example, enter 3 if you ordered three additional licenses. If you previously had one license, then the total number of licenses after the upgrade is complete will be four.

10. Click the **Load from File** button and locate the License Upgrade File (LUF) on the hard disk. The upload is complete when data is displayed in the License Update window.
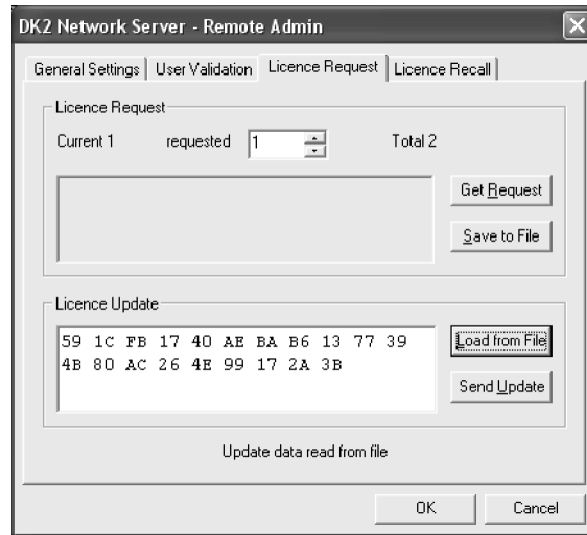
11. Click the **Send Update** button to send the LUF to the server.
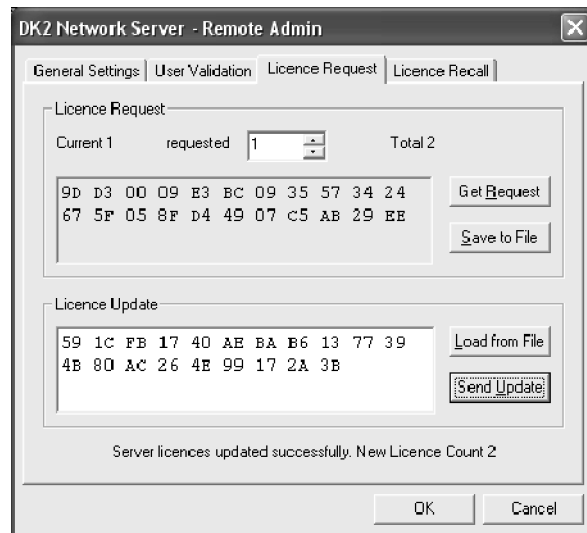
12. Close the DK2 Network Server dialog box.

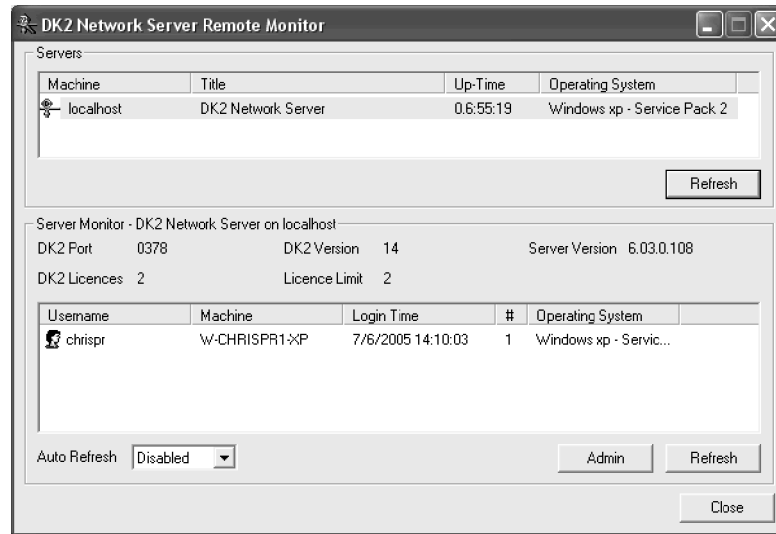**13.** In the DK2 Network Server Remote Monitor dialog box, note that the number of licenses available (sum of the DK2 licenses plus the License Limit) is now updated to show the license additions made in the previous steps.

14. Close all dialog boxes.

The floating license upgrade is now complete.

MTS4EA V4.X or higher to MTS4EAV7 upgrade

You need to perform the steps listed below to convert a MTS4EA node-locked or floating user-license dongle to a MTS4EAV7 floating user-license dongle.

⚠ **CAUTION.** *To prevent an upgrade failure, be sure to perform the upgrade steps in the order listed below.*

1. Perform the steps described in *Options permissions upgrade* on page 3.

2. Perform the steps described in *Install and configure the MTS4EAV7 license server* on page 14.

3. If your MTS4EA-to-MTS4EAV7 upgrade includes adding more floating user-licenses, perform the steps described in *Floating license upgrade* on page 6.

System requirements

The MTS4EAV7 software will work satisfactorily on relatively modest PC systems (for example 800 MHz).

To decode and display CIF (Common Intermediate Format) video streams in real time the following minimum PC configuration is recommended:

- Windows 7 or Windows 8.1, 64-bit operating system

- Processor speed >2.5 GHz

- Memory at least 4 GB RAM

- Screen resolution at least 1152x864

- 250 GB minimum hard disk space

When writing trace information to the hard disk, the limiting factor is the speed of the hard disk (regardless of the video standard), so the faster the better. Also, the video and Trace files can be large (hundreds of MB) so a large hard disk is needed:

- Hard disk speed: at least - 7200 rpm

- Hard disk size: as required for high-speed access to the video files to be analyzed plus Trace information

License server requirements

The floating license uses a software key located on a license server or local machine to provide the license key. Note the following system requirements:

- Depending on the type of software key (dongle) you have, there must be a USB or parallel port connection on the remote server or local machine.

- If installed on a remote server, a license server process must be run on the server machine (this process has modest requirements for CPU load).

- If installed on a remote server, clients require TCP/IP access to the server (this could be provided via VPN between remote sites).

MTS4EAV7 software installation overview

The MTS4EAV7 software installer provides two setup choices: Local machine and Remote server. If you are going to install the software on a remote server, the server that is to host the license software must be set up first.

The MTS4EAV7 floating license system enables a single software key (the DES DK2 dongle) to serve up licenses to multiple users connected over a network.

To install the floating license system on the network, you must:

- Install the DK2 Network Server software on a server (the license server).

- On every client that is to use the floating license, install the MTS4EAV7 software that also installs the DK2 client software.

If you are going to install the MTS4EAV7 software only on a local machine, proceed to *Install the MTS4EAV7 software* on page 16.

Install and configure the MTS4EAV7 license server

The MTS4EAV7 license server hosts the software key, which contains one or more licenses. It is possible to have several license servers on the network, each with their own software key, forming a pool of licenses for the clients to use. It is also relatively easy to have a machine acting as both a server and a client.

To allow a machine to act as a license server, the following procedure should be repeated on each server machine:

⚠ **CAUTION.** *To prevent an upgrade failure, you must upgrade the dongle options permissions before you perform this procedure. See* Options permissions upgrade *on page 3.*

Multiple DESKey dongles on one physical server will not function correctly. Connect only one DESKey dongle to any physical server on the network.

1. Select a server machine or computer that will host the MTS4EAV7 dongle.

2. If your old MTS4EA software is currently installed on the Windows 7 server machine or computer you will use for the new MTS4EAV7 software, uninstall the MTS4EA software:

⚠ **CAUTION.** *To prevent upgrade problems, you need to uninstall both the old MTS4EA software and the old DESkey drivers and reboot the server machine or computer before you install the new MTS4EAV7 software.*

   a. Open the Control Panel (Start > Settings > Control Panel).

   b. Click **Programs and Features**.

   c. Select **MTS4EA** in the programs list, and then click **Uninstall**.

   d. Select **DK2 DESkey Drivers** in the programs list, and then click **Uninstall**.

   e. Reboot the computer or server machine.

3. Install the MTS4EA dongle (on which you upgraded the options permissions) on the server machine or computer that will run the MTS4EAV7 software. Install the dongle either on the USB port or on the parallel port, depending on the type of dongle you have.

4. On the server machine, insert the MTS4EAV7 installation CD-ROM.

   NOTE. *When the CD is inserted, the MTS4EA setup screen will be displayed. Click the* **Close** *button at the bottom of the window to terminate the installation program.*

5. Using Windows Explorer, locate and open the DES directory on the CD-ROM.

6. From the DES directory, run the self-installing program **dnsrv32.exe** by right-clicking and selecting **Run as administrator**. During the installation process, accept the default entries.

7. Reboot the server machine if requested to do so at the end of the installation process.

8. Open the Control Panel (Start > Settings > Control Panel) and select the DESkey icon. This will open the DESkey Configuration dialog box, the first two tabs of which are shown below (the version numbers shown near the bottom of the dialog box may vary).

NOTE. For the server installation, the DK2/DK38 tab and the top half of the Networking tab can be ignored; these refer to the client installation that shares the same configuration dialog.
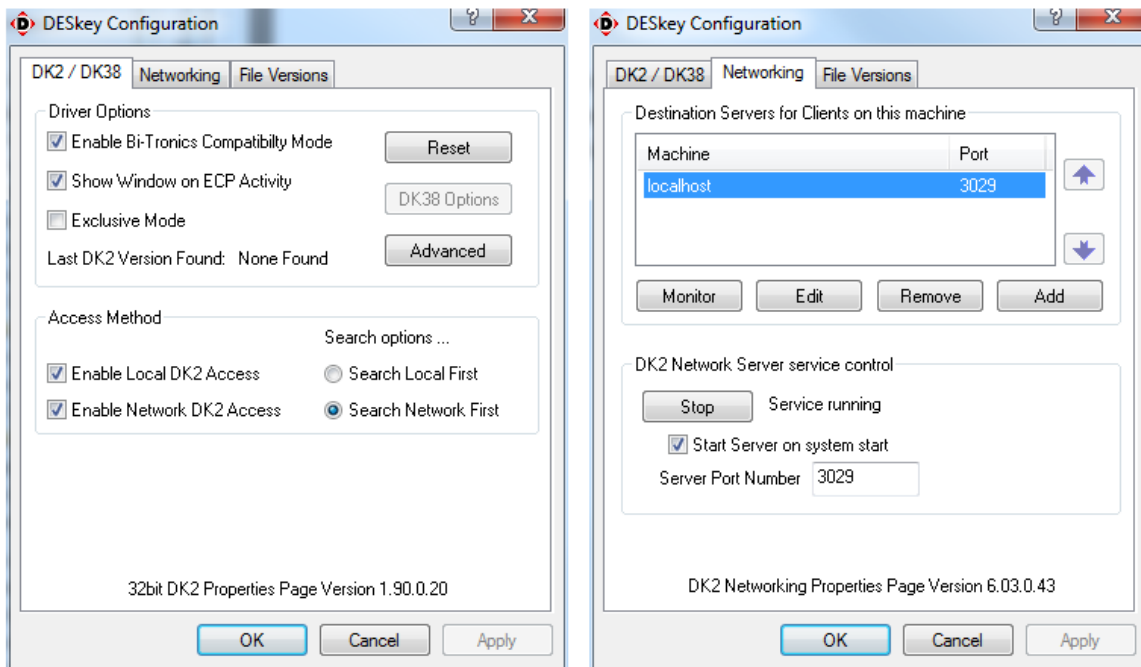
9. In the DESkey Configuration dialog box, select the **Networking** tab.

10. The field at the bottom labeled Server Port Number shows the port to be used for communication with any clients; the default value is 3029. Click the **OK** button to finish.

NOTE. Depending on the policy of your IT department, port 3029 may be blocked by the network firewall. If this is the case, perform the following steps:

a. *Consult your network administrator for another unrestricted port.*

b. *Enter the new port number in the DESkey Configuration dialog box and click the **Apply** button.*

c. *If you get a prompt asking about restarting the server, select **Yes**. This will stop and start the Network Server Service using the new port.*

d. *When the port has been applied, click the **OK** button to finish. This restarts the license server but does not cause the server to reboot.*

Install the MTS4EAV7 software

If the MTS4EAV7 software was installed on a remote server, ensure that the following information is available (you set these parameters during the installation of the license server):

- The network identity of the floating license server
- The server port number

Perform the following steps to install the MTS4EAV7 software:

1. Insert the MTS4EAV7 installation CD-ROM into the computer.

NOTE. If the installation process does not start automatically, run setup.exe from the root directory of the installation CD-ROM.

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2. At the bottom of the window showing the readme file, click the **Install** button to start the installation.

3. Select the desired software setup option (Local machine or Remote server).
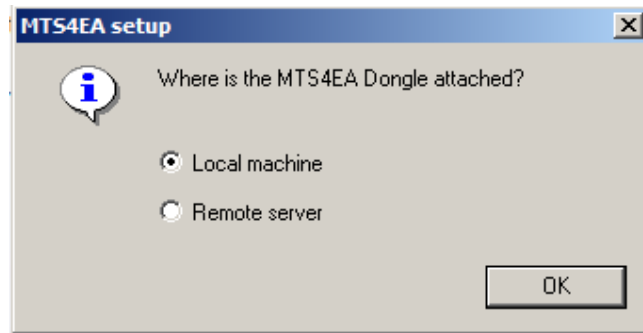
   a. Click **OK** to continue.

   b. If you selected the Local machine option, proceed to step 8.

   c. If you selected the Remote server option, proceed to the next step.

4. An initial dialog box is shown. Click **Next**. The DK2 software key driver is installed.

NOTE. If you have installed the license server on this machine, launching the client installation may show a dialog box titled DK2 Driver/Server Object that asks if you want to start the DK2 Network Server - attach the software key and select Yes.

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5. At the end of the driver installation setup, a Network Configuration dialog box will appear (shown below).
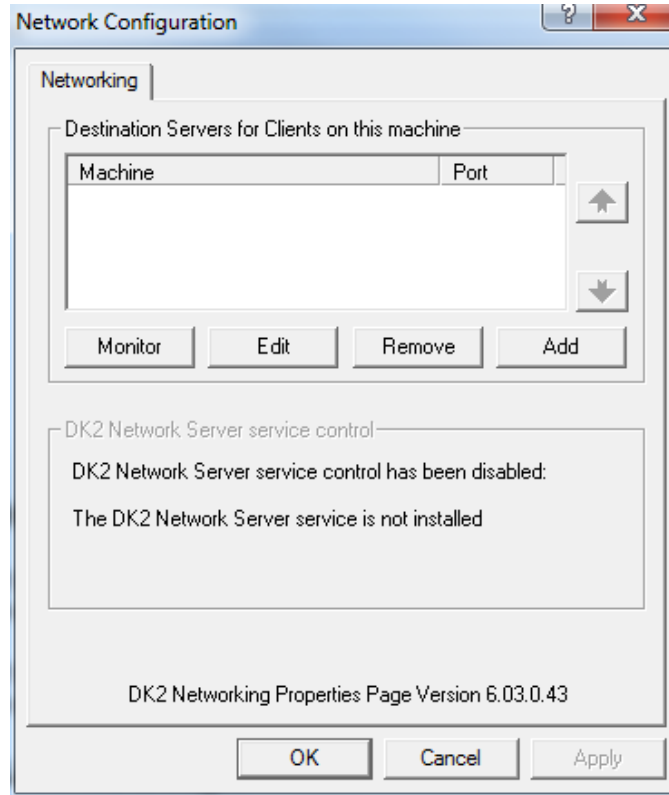
6. This enables the server(s) installed in the previous section to be added to the list of machines to query for licenses. If the required license server identity is not already listed, select **Add** and enter the required license server network identity and port number.

NOTE. If the DK2 installer detects a previous installation of the DK2 driver on this machine, the Network Configuration dialog box will not appear. In this case, allow the installation to proceed and complete. After installation, open the DESkey Networking Configuration dialog box (Start > Settings > Control Panel > DESkey > Networking tab) and proceed as described below.

If you are installing the MTS4EAV7 client software on the license server, the server name to add is localhost. This is shown in the Networking Tab diagram of the DESkey Configuration dialog box in the License Server section above. The actual name of the machine can be used if preferred.
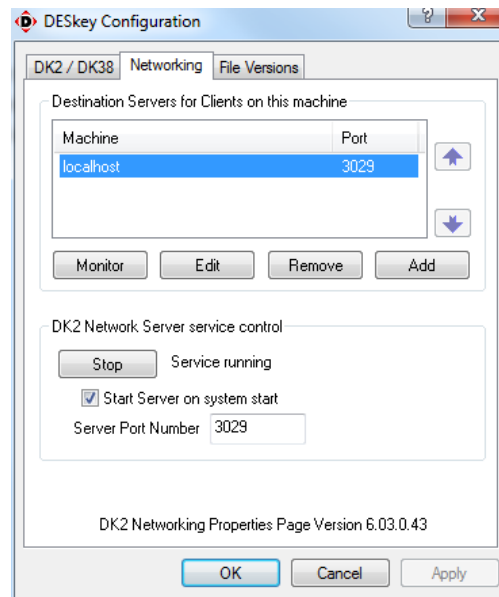
NOTE. Changes made to the Server list on the Networking tab will only take effect when the Apply button is clicked.

7. Add all the servers that are to be accessible to this client, and then click the **OK** button to close the Network Configuration dialog box.

CAUTION. At this stage, depending on the history of the machine, a prompt may ask to reboot. Select No, otherwise the MTS4EAV7 installation will not complete correctly and need to be rerun.

8. The MTS4EAV7 installation will continue. When finished, reboot the machine.

9. Perform the steps in *Test the license server* on page 20.

10. If your MTS4EA-to-MTS4EAV7 upgrade includes adding more floating user-licenses, perform the steps described in *Floating license upgrade* on page 6.

Test the license server

To ensure that the previous installations were successful, perform the following steps:

1. If the MTS4EAV7 software was installed on a remote server, remove any Tektronix DK2 software keys from the client machine and ensure the server machine has a suitably programmed software key connected.

2. Run the MTS4EAV7 application using the desktop icon. If it starts, the license server is functioning correctly. If it does not start or displays the error message "DESkey dongle failure. Please see the manual for troubleshooting advice," then check the following:

   On the server machine, ensure the software key is inserted correctly and the DK2 Network Server service is running. The latter can be checked by opening the DESkey Configuration dialog box from the Control Panel. The Networking tab shows the status of the service - if it is not running, then start it and try the MTS4EAV7 application again.

Troubleshooting the license upgrade process

The following table lists some common license upgrade problems and lists possible solutions. If these solutions do not solve your upgrade problem, contact Tektronix customer support.

Upgrade problem	Possible solution
The required license server machine is not listed on Networking tab	Add the server name using the Add button.
A license server machine is listed on Networking tab but is not listed in DK2 Network Server Remote Monitor dialog	Has the server that is entered in the client's list of servers been "applied"? Click Apply on the DESkey configuration dialog box and refresh the DK2 Network Server Remote Monitor dialog box. Is the Server service running on the server? If not, start the service. Is the port number the same on both client and server, and is not blocked by the network firewall? Select a suitable port number and apply it to both client and server.
The new server port number is not being accepted by the Networking tab	Stop the Server service by clicking the Stop button. Change the port number and click Apply. Start the Server service.
Clicking the "Get Request" button on the Licence Request tab causes "Error 8000 calling server"	Ensure that there is a dongle installed on the server machine.
Clicking the "Send Update" button on the Licence Request tab causes "Error 4012 occurred sending update to server"	Ensure that the upgrade file (LUF) is for the dongle installed on the server machine. Ensure that the upgrade file (LUF) has not already been applied to the dongle. The LUF will work only for the first upgrade attempt.
The license server service will not start	Reboot the machine and try again. If it still does not work, it may be a faulty or disabled port. For a USB software key, check the Device Manager for a DESkey entry. (Open the Windows Control Panel, select the System icon, on the Hardware tab click the Device Manager button. Any problem will show up as a yellow triangle next to the DESkey entry.) For a parallel port software key, check that the port is enabled in the machine's BIOS settings. Try a different port connection if more than one is available. It could also be a faulty software key, try connecting the software key to the client machine and run the MT4EA software again (ensure the Enable Local DK2 Access checkbox is selected in the DK2/DK38 tab of the DESkey configuration dialog box). If this works, the software key is working, so try another server machine. If this does not work, contact Tektronix Customer Support.
The license server service starts but the MTS4EAV7 software will not run	Check with the network administrator that the port being used is not being blocked by a firewall. If it is either get it unblocked or choose another port, changing it in both the server and all clients; remember to click Apply in the associated dialog boxes before closing them. On the client machine, check the machine name entered in the client server list is present and correct. If you entered it manually, try navigating to it using the Browse feature to confirm that it is correct. Check that the port number specified by the server is the same as the port number specified in the client's server list. On the client machine, ensure the Enable Network DK2 Access checkbox is ticked on the DK2/DK38 tab of the DESkey Configuration Dialog.