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first**

# **HeartCode BLS Administrator Guide**

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## HeartCode BLS Administrator Guide

This guide contains information about using and installing HeartCode BLS Systems, including Cognitive-only versions and systems that use both Cognitive (Part 1) and Skills (Part 2) portions. For cognitive-only installations, instructions referring to the HeartCode BLS Skills Test program or manikin system are not applicable.

You can find the latest program updates, FAQs and documentation here:

<http://www.laerdal-sophus.dk>. Visit the “Download Center” of the site to check for program updates or newer software versions.

## Installation guide

### System overview

The HeartCode BLS system consists of three elements:

1. The HeartCode BLS Cognitive System CD (Part 1)
  - This application loads the cognitive HeartCode BLS (Part 1) through a Web server using Flash. Users can access the program through Internet Explorer.
2. The HeartCode BLS Skills Test CD (Part 2) (if applicable)
  - This application connects directly to the adult and infant manikins used for the skills test. It must be installed on the PC to which the manikins are connected.
3. The Laerdal License Server CD
  - This program manages licenses and administers users, progress and certifies.

The system can be used in 3 different setups, which are described briefly just below and in more detail on page 14 of this guide.

1. HeartCode BLS Systems (Part 1 + Part 2)

This is the full program including cognitive version and manikin system for skills check.

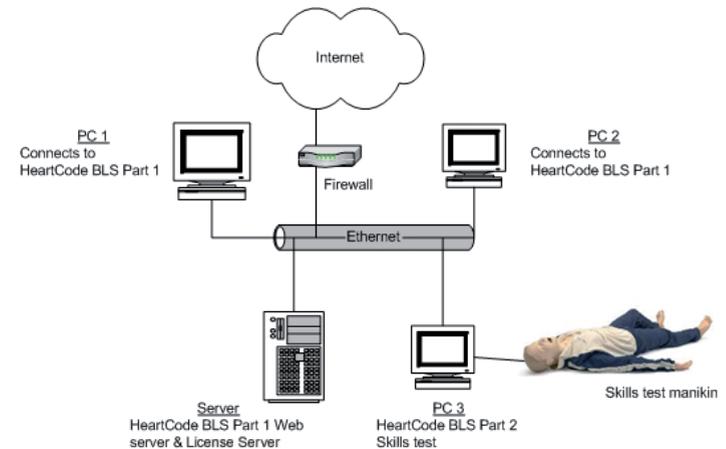
2. HeartCode BLS Part 1 Cognitive only

This setup gives the user access to the cognitive portion only. A manual skills test would need to be completed with an AHA certified BLS Instructor.

3. HeartCode BLS Part 2 Skills only

This setup provides access to the manikin skills check portion of the program.

### Example of a typical installation with both Part 1 Cognitive and Part 2 Skills



## Minimum requirements

### HeartCode BLS server:

- OS: Windows 2000, Windows XP 32bit, Windows 2003 32bit, Windows Vista\*
- CPU: Pentium 3 or Equivalent
- RAM: 256 MB
- HD: 150MB free
- Internet Access recommended
- IIS or Apache (installed automatically)
- ASP.Net (installed automatically)

**Important: Non-server versions of Win2000, WinXP and WinVista running IIS have a limit on 5 concurrent users.**

\* IIS is only supported on Home Premium and above

### PCs connecting to the HeartCode BLS server (individual users):

- OS: Windows 98, Windows 2000, Windows XP, Windows Vista
- CPU: Pentium 4 or equivalent
- RAM: 128 MB
- HD: 30MB free
- Flash player 8.0 or higher
- Internet Explorer 6 or higher

### HeartCode BLS Skills Test application:

- OS: Windows 2000, Windows XP 32bit, Windows 2003 32bit, Windows Vista
- CPU: Pentium 4 or equivalent
- RAM: 128 MB
- HD: 50MB free
- Flash player 8.0 or higher

- Serial port (required by some manikins)
- USB port
- Internet Access recommended

### Laerdal License Server:

- OS: Windows 2000, Windows XP 32bit, Windows 2003 32bit, Windows Vista
- CPU: Pentium 4 or Equivalent
- RAM: 128 MB
- HD: 30MB free
- Internet Access (required for sending AHA reports)
- Internet Explorer 6 or higher

## License Server installation

We recommend installing the License Server software before starting the HeartCode BLS installation.

See the Laerdal License Server Guide for details on use and installation.

### Licenses

HeartCode BLS requires licenses for users to be able to use the program. The product shipment should contain one or two license keys depending on which setup was purchased. Full system purchases would include one key for HeartCode BLS Part 1 (cognitive) and one key for HeartCode BLS Part 2 (skills portion). To enter licenses, refer to the section below titled "Installing licenses".

It is important that all the keys are entered into the Laerdal License Server, since each key opens up specific functionality in the program.

## HeartCode BLS server (Part 1) installation

This information is relevant for institutions that purchased either HeartCode BLS Systems or HeartCode BLS Part 1 Cognitive only.

You can install this program on the same server as the Laerdal License Server software.

### Installation steps

Check here for newer versions and the latest news before beginning the installation:

<http://www.laerdal-sophus.dk>. Visit the Download center by clicking “Downloads” in the left-hand navigation menu or “Download center” on the main section of the home page. Once there, click “HeartCode BLS” to check the most recent version.

1. Insert CD (or unzip the file if downloaded from <http://www.laerdal-sophus.dk>) and start Setup.exe.
2. Depending on whether you have IIS or Apache installed, the installer will present different options for installing extra components. \*\*  
You should leave these at the default settings unless your setup demands advanced customized configuration, since the installer automatically detects your setup requirements.
3. Select the installation path.
4. The next screen asks you to “enter the e-mail address of the administrator”. Please enter the e-mail address of the IT contact for your facility or the program administrator.
5. During the installation you will be asked to provide the License Server IP address.

Be aware that you will not be able to use HeartCode BLS if the Laerdal License Server is not available or has run out of licenses.

Enter the IP address and click the “Test connection” button.

- a. If successful, then proceed with the steps below.
  - b. If not successful, consult the “Troubleshooting” section below.
6. You can provide the name of the Virtual directory where users will be able to connect to HeartCode BLS. By default it is set to “HeartCodeBLS”. This means that people can connect by typing the following address in their Internet browser.  
[http://\(ServerAddress\)/HeartCodeBLS](http://(ServerAddress)/HeartCodeBLS)
  7. You will also be asked to enter a SMTP (e-mail) server address. This is not a mandatory field, but if supplied, then the system will be able to supply forgotten password information.
  8. After the installation has finished, you should test that the BLS application is working.
    - a. Go to the program menu and open HeartCode BLS. The Program Website should open up in your Internet browser.

\*\* The BLS Web application requires either IIS or Apache installed on the server to serve the BLS Web application. If you do not already have one of these installed, then the installation program will install Apache and configure it automatically.

If the server already has IIS or Apache installed, then the installation program will configure the existing Web server and setup a virtual directory pointing to the BLS installation.

## The HeartCode BLS Skills Test program (Part 2) installation (if applicable)

This information is relevant for institutions that purchased either full HeartCode BLS Systems or HeartCode BLS Part 2 Skills Test only.

This program must be installed on the PC which connects to the skills test manikins.

### Installation steps

Check here for newer versions and the latest news before beginning the installation:

<http://www.laerdal-sophus.dk>. Visit the Download center by clicking “Downloads” in the left-hand navigation menu or “Download center” on the main section of the home page. Once there, click “HeartCode BLS” to check the most recent version.

1. Insert CD (or unzip file if downloaded from <http://www.laerdal-sophus.dk>) and run Setup.exe.
2. At the “Creating Shortcuts” screen, select the appropriate option and click “next”.
3. Select the installation path.
4. During the installation you will be asked to provide the Laerdal License Server IP address.

Be aware that you will not be able to use HeartCode BLS if the Laerdal License Server is not available or has run out of licenses.

Enter the IP address and click the “Test connection” button.

- a. If successful, then proceed with the steps below.
- b. If not successful, consult the troubleshooting section below.

## Verifying the HeartCode BLS installation

Be aware that the verification described here uses up one license, so be sure to use an actual username. You may test the connection without using a license, but you will receive error messages upon login stating that no licenses are available.

To verify that Part 1 Cognitive is working, please follow these steps:

1. Create a user in the Laerdal License Server.\*\*
2. Go to a PC which will be used to connect to HeartCode BLS Part 1.
3. Log in and begin navigating through the program. Log out.
4. Go to a new PC and connect to HeartCode BLS Part 1.
5. Log in and check that you are taken to the same point in the program as you reached before.

To verify that Part 2 Skills is working, please follow these steps:

6. Go to the PC with HeartCode BLS Part 2 skills software and the infant and adult manikins installed.
7. Create a user in the Laerdal License Server (or, if applicable, use the same login as created in step 1).
8. Log in to HeartCode BLS Skills Part 2 and verify that you can access the manikin scenarios.

\*\* Remember that the username must be an e-mail address.

## Using HeartCode BLS Systems

### Before you start

The following information about using the HeartCode BLS system requires that the system has been installed and is up and running correctly.

### Administrating HeartCode BLS with the License Server

It is important to understand that the Laerdal License Server acts as the central user database where all the users and their progress scores are kept. The HeartCode BLS cognitive and skills portions connect to the Laerdal License Server to obtain user and license information.

The Laerdal License Server has its own separate manual. Please read the separate manual before using the License Server.

The following gives a quick overview with excerpts from the Laerdal License Server manual.

### License Server overview

The LS has several purposes:

- It manages and distributes licenses in a multi-user environment.
- It can be used to create users and for basic user administration
- It reports American Heart Association (AHA) related activity over the Internet to a central Laerdal server.

### Installing licenses

Before you can start to use HeartCode BLS, you must install licenses into the Laerdal License Server.

1. Open the Laerdal License Server from the start menu.
2. Click the “+” under “License overview”.
3. Type in or paste the license key (a series of random words or random letters and numbers) and click “OK”.
4. Select “Online” and “Next”.
5. A window should open and tell you that your key has been activated.
6. Repeat steps 2-5 if you received more than one license key.

### User creation / administration

You can create new users in the License Server and manage basic user information such as changing their passwords or granting them access to new licenses.

Steps to create a new user and give them access to a license:

1. Open the Laerdal License Server from the start menu.
2. Click the “+” under the ‘Users’ section.
3. Type in the user’s login (e-mail address).  
Notice that the password will be the same as the e-mail address by default. This can be changed if desired.
4. Select which licenses the user should have access to. To do this you must check the box next to each license. Usually all licenses must be selected.

## Using the 3 different setups of HeartCode BLS Systems

### Using HeartCode BLS Part 1 and Part 2

This is the full program including cognitive version and manikin system for skills check.

The following steps outline usage of the full HeartCode BLS systems program:

- 1) The administrator is informed about a new student, who will complete Part 1 Cognitive and Part 2 Skills portions, and creates the student as a new user in the Laerdal License Server by reserving 1 (one) Cognitive license and 1 (one) Skills license.
- 2) The administrator provides the student with the login information and web address (URL) to complete Part 1 Cognitive on a PC with network access to the HeartCode BLS server.
- 3) The student launches Internet Explorer on the networked PC and types in the web address (URL) for the HeartCode BLS server. An example could be: [http://\(Server Address\)/HeartCodeBLS](http://(Server Address)/HeartCodeBLS).
- 4) The student logs in with the username and password provided by the administrator. Once logged in, the student then enters his/her first and last names exactly how they should appear on an AHA completion card issued by the Laerdal National Training Center (if the Laerdal NTC is handling card processing).
- 5) After successfully completing Part 1 Cognitive portion, the student can view or print the Part 1 certificate.
- 6) The student completes the Part 2 Skills portion by using a designated PC that has both the HeartCode BLS Skills software installed and the voice assisted manikins attached.
- 7) The student logs in with the same username that was used for Part 1. After successfully completing the Part 2 Skills check with the voice assisted manikins, the student can view or print the Part 2 certificate.
- 8) Since the student has now passed both Part 1 Cognitive and Part 2 Skills, the student will also receive the HeartCode BLS completion certificate. Please note that this is not the official AHA course completion card.
- 9) The student is now entitled to an AHA Healthcare Provider card. This can be issued either by an authorized AHA Training Center; or by the Laerdal National Training Center.

### HeartCode BLS Part 1 Cognitive-only

This setup gives the user access to the cognitive portion only. A manual skills test would need to be completed with an AHA certified BLS Instructor.

The following steps outline usage of the HeartCode BLS Part 1 Cognitive portion:

- 1) The administrator is informed about a new student, who will complete Part 1 Cognitive portion, and creates the student as a new user in the Laerdal License Server by reserving 1 (one) Cognitive license.
- 2) The administrator provides the student with the login information and web address (URL) to

- complete Part 1 Cognitive on a PC with network access to the HeartCode BLS server.
- 3) The student launches Internet Explorer on the networked PC and types in the web address (URL) for the HeartCode BLS server. An example could be: `http://(Server Address)/HeartCodeBLS`.
  - 4) The student logs in with the username and password provided by the administrator. Once logged in, the student then enters his/her first and last names.
  - 5) After successfully completing the Part 1 Cognitive portion, the student can view or print the Part 1 certificate.
  - 6) The student is then responsible for successfully completing the required skills tests administered by an AHA BLS instructor to receive an AHA Healthcare Provider card. The student must bring the printed Part 1 certificate and complete the required skills tests within 60 days.

### HeartCode BLS Part 2 Skills only

This setup provides access to the manikin skills check portion of the program.

The following steps outline usage of the HeartCode BLS Part 2 Skills portion:

- 1) The administrator is informed about a new student, who will complete the Part 2 Skills portion using the voice assisted manikins.
- 2) The student has already successfully completed HeartCode BLS Part 1 Cognitive via specifically contracted learning management systems or the

- AHA eLearning portal. The student provides the administrator with the printed HeartCode BLS Part 1 certificate.
- 3) The administrator creates the student as a new user in the Laerdal License Server by reserving 1 (one) Skills license.
  - 4) The student is provided with his/her login information to complete the Part 2 Skills portion by using a designated PC that has both the HeartCode BLS Skills software installed and the voice assisted manikins attached.
  - 5) The student logs in with the username and password provided by the administrator. Once logged in, the student then enters his/her first and last names exactly how they should appear on an AHA completion card issued by the Laerdal National Training Center (if this option is selected).
  - 6) After successfully completing Part 2 Skills check with the voice assisted manikins, the student can view or print the Part 2 certificate.
  - 7) The student is now entitled to an AHA Healthcare Provider card. This can be issued either by an authorized AHA Training Center; or by the Laerdal National Training Center.

### Important

**The student or user must complete the Skills test (Part 2) within 60 days of passing Part 1.**

### AHA Healthcare Provider Card Information

**Users who complete both the cognitive and skills portions of HeartCode BLS are eligible to receive a Healthcare Provider card from the American Heart Association.**

Institutions using HeartCode can choose to have Laerdal process AHA cards through the Laerdal National Training Center. To select this option, the License Server reporting options will need to be set to “Automatic reporting” and “Automatic cards to users” following the instructions below:

1. Open License Server.
2. Click on the menu button above the ‘Users’ field and select ‘Reporting options’.
3. Complete the fields in the “Provider address” screen, including the address to which cards will be shipped. (For Instructor name, an administrator’s name can be inserted, followed by ‘-Admin’.) Please review the instructor or administrator name entered here since it will appear exactly as entered on the AHA completion card issued by the Laerdal National Training Center (if this option is selected).
4. The boxes on the bottom of this screen for “Automatic reporting” and “Automatic cards to users” should be checked as default. You should uncheck the top box, if you will send reports manually. You should uncheck the bottom box, if you do not want the Laerdal Medical Training Center to issue your AHA completion cards.

When the Laerdal National Training Center receives your completed reports, AHA cards will be printed and mailed to you. The normal turnaround time is two weeks. For card inquiries, refer to the contact information below:

E-mail: ahacards@laerdal.com  
 Phone: 877-523-7325, ext 2273 (CARD)  
 Fax: 845-298-1735

## Recertification

Users will be prompted to recertify after a certain period of time. By default the License Server is set to prompt for recertification 9 months after completion of the HeartCode BLS course. The recertification time frame can be changed under “Recertification options” in the License Server.

If a user logs into the system after 9 months have passed, a screen will display indicating that it is time to recertify. If desired, the user can still log in to view old progress.

If the administrator wants to allow the user to recertify, then a new license must be granted for this user in the License server,

After a new license is made available to the user, the user can select to recertify the next time he/she logs in. If a user chooses to recertify, old progress will be reset and the user can take the HeartCode BLS course again.

## Advanced technical information

### Add “Create account” button

You may want to add a “Create account” button to the login screens. This enables users to create their own accounts. If this is enabled, then a policy to allow users to get their own licenses must be set up in the License Server.

### Adding a “Create account” button in the HeartCode BLS system

You can edit the file “Web.config” found in <BLS program folder>\html\

Find where it says “allowCreateUser” and edit the value to “True” and save the file.

### Adding a “Create account” button in the HeartCode BLS Skills

You can edit the file “config.ini” found in the program folder. You must add a line that says: AllowCreateUser:true  
Save the file.

### Configuration of server address

During installation, the URL to the HeartCode BLS server was specified. By default, the URL for the HeartCode BLS system is [http://\(ServerAddress\)/HeartCodeBLS/](http://(ServerAddress)/HeartCodeBLS/)

### Change the Laerdal License Server IP address

If your Laerdal License Server IP address changes, you will need to configure HeartCode BLS to the new IP address.

### HeartCode BLS system

You must edit the file “licenseServer.config” found in <BLS program folder>\html\  
Change the value for “LicenseServer=” to reflect the new IP address of the Laerdal License Server.

### HeartCode BLS Skills

You can edit the file “LSE.txt” found in the program folder. Change the value for “LicenseServer=” to reflect the new IP address of the Laerdal License Server.

### Backup

All user and course data is stored in the Laerdal License Server. To perform backups to all data, simply backup the Laerdal License Server installation folder.

The manikin raw performance data\* is stored locally on the Skills Test PC. If you wish to back up these as well, then you must also backup the Skills Test installation folder.

\*This can be interesting for later research.

## Manikin Troubleshooting

### Adult

Manikin will not connect:

- o Check that the manikin is completely turned off before searching. The program will turn it on.
- o Check cable or if possible, change the cable.
- o Try to disconnect other devices or programs using the serial / USB ports.

Ventilation feedback doesn't correspond to evaluation:

- o Check that the lungs are installed correctly.
- o Try to change the lungs.
- o Check that the face is connected properly to the lung tubes.

Need to hyper extend the neck when performing ventilations:

- o Check the technique by consulting the introduction videos.
- o Check the airway tubes in the neck.

### Infant

Manikin will not connect:

- o We recommend connecting it through a powered USB hub to avoid data noise and insufficient voltage.
- o Check cable.
- o Try to disconnect other devices or programs using the USB ports.

Feedback during scenarios is off:

- o Make sure the infant manikin is lying level and unobstructed when connecting to the program.
- o Check that the lungs are installed correctly.

## Troubleshooting

### No connection to License Server:

Please check the items below before calling HeartCode Support.

- Has the Laerdal License Server been installed correctly?
  - o Is the service running?
  - o Are there licenses available in the Laerdal License Server?
  - o If yes, have these licenses been made available to a user either by giving access while creating the user or by creating a license policy?
- Is there a Firewall blocking the Laerdal License Server?
  - o The Laerdal License Server must be able to communicate on port 56246 with the HeartCode BLS system and HeartCode BLS Skills Test applications.

### Web site won't start correctly on Windows 2003:

- In Windows 2003 the default setup will prohibit the .NET server extension from running.

This is a short guide on how to allow it to be used:

1. Open Control Panel (Start -> Settings -> Control Panel).
2. Under Control Panel double-click "Administrative tools".

3. An option should then be available labeled: "Internet information services (IIS) manager".
4. Double-click "Internet information services (IIS) manager".
5. In the left tree select "Web Service Extensions".
6. On the right hand side select the "ASP .NET v1.1.4322" option.
7. Press the "Allow" button.

## Support

### Online support (FAQs, manuals and updates)

<http://www.laerdal-sophus.dk>

### Customer support

Laerdal Help Desk: 1-800-594-9259



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