# DiscoverStation 5 Upgrade Guide

## Contents

# Preface

**DiscoverStation® 5 Upgrade**

**Warning:** This upgrade will erase everything on the current DiscoverStation hard drive and may require up to two hours for complete installation and configuration *per computer*. This upgrade should be performed during off-hours, preferably after business hours or on a day when your business is closed.

Please read this guide in full before proceeding.

# Considerations Before Upgrading

Upgrading will overwrite the previous version of DiscoverStation that is on the hard disk. This is necessary to ensure that DiscoverStation is installed correctly. Almost all of your settings are stored in Network Personalizer, so there is no data to worry about (other than that mentioned in the "Gathering Current System Information" section below). However, should you need to revert back to an earlier version of DiscoverStation you will need the previous version's install CD.

If you are upgrading an entire branch or location, we strongly recommended testing the upgrade installation on a single machine and using the software for a few days to ensure that all your settings are correct and that everything works as expected before upgrading the rest of your systems.

Below are some other things to check and think about before attempting to roll out your new DiscoverStation 5 systems.

## Minimum System Requirements

To install DiscoverStation 5 Beta, your hardware *must* meet these minimum requirements:

- Memory: 256 MB RAM
- CPU: Pentium 4-class
- Hard Drive: 12 GB
- Other Drives: CD or DVD drive
- Video Card: SVGA, 2 MB of video RAM, supporting at least 1024x768 resolution
- Monitor: SVGA supporting at least 1024x768 resolution
- Input Devices: PS/2 or USB keyboard and mouse

These requirements are sufficient for a basic, *single-station* machine. Multi-station machines will require additional RAM, video card(s), and input devices.

## USB Device Assignment has Changed

There are two ways that a device can be automatically assigned to a station. The device may be plugged into the station's keyboard (if it has an extra USB port), or the device may be plugged into the same powered USB hub that the keyboard is plugged into.

**Considerations for assignment via the keyboard:**

- Some new USB devices require more power than is available from a keyboard. If the USB device is not getting sufficient power, there can be strange and unpredictable side effects.

**Consideration for assignment via a powered USB hub:**

- Each station will require its own powered hub.
- Many powered hubs are of poor design, and either operate poorly or can cause damage to computers. Userful has verified the quality of the DLINK DUB H4, and has negotiated a lower price point for its customers. At this time it is the only hub thoroughly tested and recommended by Userful. Other hubs will not be supported at this time. To purchase these hubs at the Userful customer rate, please contact your Userful Sales Account Manager.

**Do you need powered USB hubs?**

- Starting with DiscoverStation 5, USB devices intended for use at a particular station must be connected to a powered USB hub to which that station's keyboard is connected. Due to the variety of non-standard third-party USB hardware implementations, USB devices such as floppy drives, flash drives and audio devices connected via ports on USB keyboards may work unreliably.
- Some USB devices may work plugged into the keyboard's USB ports, but Userful will no longer provide technical support in these cases.

# DVD or CD: Which to Use for Installation?

Previous DiscoverStation releases were only available on CD-ROM's, however, DiscoverStation 5 is available on *both* DVD and CD. The DVD format is preferred, since it installs all the required software in one step. CDs have far less storage capacity than DVDs, so when you use the install CD there are many software packages that must be downloaded via the Internet which, depending on the speed of your Internet connection, can take quite a long time. However, you can only use the DVD if:

- Your optical drive actually supports DVDs (and not just CDs). (Look for a "DVD" logo on the faceplate of the drive.)
- The computer on which DiscoverStation 5 will be installed is able to boot from the DVD drive.

Please ensure you have and use the correct installation media.

**NOTE:** DiscoverStation software on the DiscoverStation 5 install disc permits both single and multi-station use.

# Brief Overview

The installation process for DiscoverStation 5 is identical to the installation process for DiscoverStation 4. Here is a basic outline of the steps involved, with more detail in the sections below. Unless you are very familiar with DiscoverStation installations, please continue reading the sections below before you begin installing.

1. If your computer is configured to boot from the DVD drive, simply switch the computer on and insert the DiscoverStation 5 Installation DVD into the drive. If the PC does not boot from the DVD, enable the CD/DVD boot device option in the BIOS following the instructions in the next section.
2. After booting from the DiscoverStation 5 Installation DVD, you will be prompted to type in a command. Type the following and press `Enter`:

   `install`

   Installation proceeds automatically if the computer hardware meets the minimum requirements outlined above.

3. Once DiscoverStation 5 is installed on the hard drive, you will be prompted to eject and remove the DiscoverStation 5 DVD and reboot the computer. Ensure that the computer is connected to the Internet prior to restarting the computer.
4. Before permitting public use, configure the BIOS to prevent booting from a CD/DVD and password protect the BIOS. This ensures that a malicious user cannot boot his own CD/DVD and overwrite your hard drive. Enter your computer's BIOS configuration as described below, then go to the "Security" or "Passwords" page in the BIOS and select the "Set Supervisor Password" or similar option. Press `Enter` and type in the password you want and press `Enter`, then type it in again for confirmation. Record the password somewhere secure for future reference. Save the new BIOS settings and exit the BIOS configuration screen.

# Detailed Upgrade Procedure

The subsections below will provide detailed instructions to help you make your upgrade a success.

## Gathering Current System Information

### Easy Method

Before proceeding, there is some information you should print out and keep a copy of to simplify reconfiguring your system after the upgrade.

To print out your network information:

1. Start a session.
2. Go into Administrator Mode.
3. Double-click on the `System Information` icon on the Desktop.
4. Click on the `Print` button.

To print out your printer configuration information:

1. Start a session.
2. Open a Web browser (for example, through `Start Here > Internet`).
3. In the address bar, type in the following and then press `Enter`:

   `127.0.0.1:631`

   The Common UNIX Printing System (CUPS) page should display.
4. Click on the `Printers` tab/button. The printers available to this computer should be displayed, along with their configuration data.
5. From the browser's menu at the top, select `File > Print`.

### Manual Method

If you have problems printing either of the above you can copy and paste the contents into the word processor. If you don't have access to a printer, you can copy down the information using the form below. If you are unsure of any of the settings, please consult your organization's IT Department or Network Administrator.

If you are unable to print out the data, the critical items you should record are:

```
System/Configuration ID (needed for re-licensing):

    _____

NETWORK CONFIGURATION

Protocol used to get IP address (check one):

    [ ] static     [ ] DHCP

DiscoverStation IP address (if using static IP):

    ____.____.____.____

Subnet Mask IP Address (if using static IP):

    ____.____.____.____

Default Gateway IP Address (if using static IP):

    ____.____.____.____

Domain Name Server (DNS) IP Address:

    ____.____.____.____

Proxy server settings (if applicable):

    ____.____.____.____ : ____

PRINTER INFORMATION

Description:  _____

Location:    _____

Make/Model:  _____

Driver:      _____

Device URI:  _____
```

# Preparing to Upgrade Your DiscoverStation

To upgrade the DiscoverStation, first, ensure that the computer is set to boot from the optical drive (CD or DVD). You can verify this by:

1. Placing the new DiscoverStation disc in the CD/DVD drive.
2. Turn off the computer using the power switch.
3. Wait for 10-30 seconds, then turn the computer back on.
4. Watch the screen (at boot time, not all of the monitors will display information on a multistation system). After a few seconds, a splash screen with a large "Userful" logo should appear prompting you to type in the `install` command.
   - If this does not appear, then your system is not configured to boot from the optical drive (this is usually for security purposes). Continue at the "Changing the Boot Device" subheading below.
5. If this screen does appear, then skip down to the "Beginning the Upgrade" subheading below. (You will have 60 seconds to type in a command before the program will automatically start testing memory. If the memory test begins, simply turn off the computer, then turn it back on to get the install splash screen to appear again.)

### Changing the Boot Device

Changing boot device priority enables your computer to boot from the DiscoverStation 5 Installation CD/DVD. To change boot device priority:

1. Use the power switch to completely turn off the computer (system unit).
2. Switch the computer on, and get ready to press the `Delete` key. Press the `Delete` key as soon as you see the BIOS splash screen (usually the first screen to appear). You may have to press it a few times to make sure the computer picks it up.
   - Note: Some computer BIOS programs use the `F1` key instead of `Delete`. If the `Delete` key does not work, determine the correct key to press for your PC by examining the first screens to appear after switching it on. Usually you will see a "Press ... to change ..." message or something similar.
3. If you see the BIOS configuration screen appear, then you pressed the right key.
4. Your BIOS may have password protection turned on, in which case you will need to enter the password and press `Enter`. Userful hardware typically uses the Administrator password for this purpose. If this does not work, contact your IT staff for the password.
5. In the BIOS configuration screens, navigate using the arrow keys. Press `Enter` to select options and `Esc` to back out of menus and screens. The particular page and name of the boot sequence configuration depends on the computer (these instructions will work on most machines, but yours might differ slightly). On older PCs it could be called "CMOS Setup" under the "Advanced" menu; newer PCs might list it as "Boot Device Priority" on the "Boot" menu. Select the "Boot Device Priority" option and press `Enter`.
   - Due to changes in USB support, the USB BIOS settings should be verified while you are in the BIOS configuration. The USB settings to look for are "USB 2.0" and "USB Legacy". Both of these settings should be set to "enabled". Look for headings such as "Advanced", "USB Configuration", and "Chipset" to find these settings.
6. Select the "1st Boot Device" option and press `Enter`. This will let you choose from a list of possible devices such as hard disk drives, floppy disk drives, CD/DVD drives, and USB and network devices.

7. Use the arrow keys (or the `+/–` keys on some computers) to highlight the appropriate boot device. To boot from the DiscoverStation 5 disc, choose the DVD drive (or CD drive as appropriate), then press `Enter`.
8. Press `Esc` repeatedly until you reach the Main Menu or main configuration screen.
9. Choose the option allowing you to save the new settings and exit the BIOS configuration program. Press `Enter` to confirm the action. The computer will restart and then boot from the optical drive.

# Beginning the Upgrade

To begin upgrading your system:

1. Insert the DiscoverStation install disc into the CD/DVD drive of the computer.
2. Use the power switch to turn the computer off. (This switch is sometimes located on the back of the computer case near the power cord. Some computers only have one power switch on the front of the case.)
3. Wait for 10-30 seconds, then turn the computer back on.
4. As the computer reboots, a Userful splash screen should appear on one of the monitors asking you to type `install`. If this prompt does not appear, please follow the instructions above in "Preparing to Upgrade the DiscoverStation".
5. Type the following and then press `Enter`:

   install

6. The first part of the installation will complete in 20-30 minutes. Reboot the system when prompted to do so.
7. Next, you'll be prompted to configure the DiscoverStation's video cards. The "Software Configuration" screen lists the video cards that are in the computer and the default screen resolution settings.
   • If you wish to accept the default settings (recommended), press the `Enter` key.
8. If you would like to change the default resolution press `A`, select the number corresponding to the appropriate resolution you wish to use, and then press `Enter`. Press `Enter` again to confirm your choice.
9. **Note:** The resolution you select will affect all monitors; there is currently no way to specify different resolutions for specific monitors.
10. Whichever method you choose, the system may reboot. If your DiscoverStation has any NVIDIA-based video cards, you may need to reboot the system manually by turning the system off and on again using the power switch.
11. Finally, each station's monitor will prompt you to press a function key (`F1-F10`) to assign the keyboards and mice to that monitor. Do each station one at a time.

# Configuration

After agreeing to the End User License Agreement, you will enter the Setup Main Menu. You should go through each option in the order listed (described in more detail below), to ensure that everything is working properly. You can access these settings at any time through DiscoverStation's Administration Mode.

## 1) Network

Use this option to configure Internet access so that DiscoverStation users can access the Internet and so that we can remotely update your DiscoverStation computers from Userful's data center.

1. Input the network settings recorded as suggested in the "Gathering Current System Information" section above, or have an IT staff member assist you with the network configuration.
   - If your network uses static IP addresses, select the "Statically set IP address" option and enter the network information previously recorded.
2. Alternatively, if you use DHCP in your organization, select "DHCP" from the `Automatically obtain IP address settings with` list.
3. When finished, click `OK`.
4. A message dialog should appear. Click `OK` again to proceed with the network settings change.
5. If you use a proxy server for Internet access at your location, click `Config Proxy Server` and enter your proxy information.
6. Finally, click `Yes Test` to ensure that your network settings are all correct. If you click `OK` a second time, you may get an error message saying that the network settings are incorrect. Double check you network settings, and if they are correct, then simply close the window using the `X` button in the the top right of the window. Continue to the next step.
7. If the network test fails, ensure that all of your network settings are correct and verify the network configuration by clicking `Network` in the Setup Main Menu. If, after verifying your network settings, the test still fails, then consult with the network administrator for your organization for assistance, or contact Userful support.

## 2) Customize Settings

Customize Settings registers and links your newly upgraded system to your Network Personalizer account and allows you to restore its previous customizations and settings.

**Note:** Even though your previous DiscoverStation installation may be associated with your Network Personalizer account, the upgrade requires you to register DiscoverStation 5 with our Network Personalizer server to ensure that the stored configurations you had previously are re-applied.

Network Personalizer will most likely recognize the computer, in which case it will display a page asking you whether you want to "Clone". If it is not possible to automatically recognize the computer, you will be asked to register it. It will also display your System/Configuration ID **Be sure to write this System/Configuration ID down for future reference.** If the account information that Network Personalizer displayed is correct, select `YES` to restore your settings.

### Optional: Changing Settings

Network Personalizer also allows you to modify and store changes that allow you to personalize the look and feel of your DiscoverStation environment. Once you've registered, you'll be offered the choice to "Login to Edit this machine or access your central Control Panel". If you wish to make changes in Network Personalizer now you can:

1. Click the "Login to Edit..." link.
2. Enter your Network Personalizer username and password.
3. Make your changes, and make sure to click the `Save` button at the bottom of any pages you modify.
4. Once you have saved your changes, you will need to find the computer in `My Computers`, and click the `Apply Configuration` button.
5. Once you are finished, close the browser window. This will return you to the Setup Main Menu.

For more detailed help in Network Personalizer visit the Manuals/Network Personalizer User Guide

## 3) CD/Floppy/Audio

This option is currently unavailable, and may be implemented at a future date. Currently device assignment is done automatically. Please refer to the "USB Device Assignment has Changed" section above for more details.

## 4) Date and Time

This makes sure that the computer's clock is set properly.

1. Configure the clock and ensure that the date and time settings are correct.
2. Ensure that your time zone settings are correct for your region.
3. Finally, we encourage customers to use the Network Time Protocol option as this will help ensure that your clock remains synchronized with Daylight Savings Time changes.
    - Select the `Network Time Protocol` tab in the Date/Time Properties screen and check the `Enable Network Time Protocol` option.
4. This option may not work if your Network Administrators block the NTP port. If unsure, please consult with your IT staff or Network Administrator.

## 5) Printers

Printer setup in DiscoverStation 5 is a bit different from printer setup in DiscoverStation 4. DiscoverStation 5's Printer Wizard lets you configure your printer.

1. Make sure that the printer you wish to configure is properly connected, turned on, and has paper.
2. Click on `New Printer` which will launch the Printer Wizard.
3. Enter the Queue Name. The Queue Name will be used to identify the printer and it cannot contain spaces or some other special characters. The name should be meaningful, like "HPColorLaserJet".
4. Enter the Description, which is a short, meaningful description that further identifies the printer. This is the same as the "Description" field listed in the "Gathering Current System Information" section above.
5. Enter the Location, which simply describes where to find the printer. "Lab Room", "Room 123", or "Main Desk" are all valid examples.
6. Click on `Forward` to bring you to the "Select Connection" page.
    - If the printer is connected directly to the DiscoverStation's parallel port, select "Parallel Port..." or "LPT...".
7. If the printer is connected directly to the DiscoverStation's USB port, choose the appropriate "USB..." option.
8. If your printer is a stand-alone printer on the network, most likely you will want to choose "Networked JetDirect". If you choose this, you must enter the printer's IP address into the `Hostname` field (this can be found as part of the "Device URI" information you recorded in the "Gathering Current System Information" section above).
9. If you are unsure of what type of printer you use, refer to the printer documentation and if it is a networked printer, refer to the network administrator in charge of your location for assistance.
10. Click on `Forward` to select the printer make. Choose the printer manufacturer.
11. Click on `Forward` to select the model of the printer. If you are unsure of the printer driver to use, just leave the default driver selection as is.

12. Finally, click `Forward` one last time, confirm that the settings are correct and then click `Apply` to save the printer configuration.
13. When you are returned to the Printer Configuration window, on the left side of the window, you should see your new printer listed. (If not, click the arrow next to "Local Printers" to expand the list of installed printers.)
14. Click on the name of the printer you have just set up.
15. In the Settings tab, make sure that the `Enabled`, `Accepting Jobs`, and `Shared` checkboxes are all checked. Also make sure to click the `Make Default Printer` button.
16. If you wish to test the printer configuration, click on the `Print Test Page` button.
17. If you wish to use DiscoverPrint to help manage your printing, please follow the steps below, otherwise, skip to the last step.
18. Click the `Job Options` tab.
19. Under "Specify default job options", select `job-hold-until` from the drop-down list and click the `Add` button.
20. Next to the new "job-hold-until" option below, select `indefinite` from the drop-down list.
21. Click the `Apply` button at the lower-right corner of the window.
22. Close the Printer Configuration window by clicking on the `X` button.

## 6) Enable System

Once you are finished with the initial setup of the machine, use this option to activate your DiscoverStation. Confirm your decision to enable the system and your DiscoverStation will become active.

# Further Configuration

Once your DiscoverStation is set up and running, you can customize your system further by one of two methods:

- Access Network Personalizer at http://np.userful.com to further configure how your DiscoverStations will look and operate.
- If you wish to configure the hardware on your DiscoverStation or install more software, you can do that through Administrator Mode. Tools are available in Administrator Mode to change any of the settings described above in the "Configuration" section.

# Cleaning Up

Once installation is completed, you should go back into the BIOS Setup Menu to change the boot device priority back so that the hard drive has first priority. This will prevent malicious users from booting the system with CD-ROMs of their own. Follow the steps in the "Changing the Boot Device" section above, except make sure that you select "hard drive" or some equivalent (sometimes the model of the hard drive is listed instead) as the first boot device.

## Licensing your Newly Registered System

If you were able to clone your old system during registration, then your license key should automatically have been downloaded and installed. However, if for some reason you are seeing the "Trial License" warning nag screen after upgrading, your system may need to be re-licensed by Userful, please complete the online "Upgrading your DiscoverStation" form to submit your licensing request, or call Userful Support.

# Reporting Bugs and Suggestions

Support requests and comments pertaining to DiscoverStation 5 should be addressed to http://userful.com/support/issue . Please be sure to include the following in your bug report or suggestion:

- A short description of the bug or feature request.
- Steps to reproduce the bug.
- The undesired result/behavior.
- A description of the expected behavior.
- Complete contact information including customer number.
- The machine's System/Configuration ID.

# Contact Userful

If you require assistance, feel free to contact Userful Support at 1-866-873-9119 during our normal business hours (Monday-Friday, 8:30 a.m. - 5:30 p.m. MST). Userful's contact addresses and phone numbers are as follows:

**Website:**          userful.com/support/issue  ( http://userful.com/support/issue )

**Documentation:**  support.userful.com  ( http://support.userful.com/ )

**Email:**             support@userful.com

**Phone:**            403-289-2177 ext. 2

**Toll-Free:**         1-866-873-9119

# Glossary

**Admin Mode:** Administrator mode on the DiscoverStation. Hardware device and network configuration can be done from here, as well as initiating reboot and shutdown sequences. Please contact Userful support if you do not know how to access this mode.

**BIOS Menu:** A menu that accesses the first software that gets activated when the computer is powered on. To access this menu, press F2 or the Delete key a few times about a second after the computer is powered on.

**Boot:** Short for "bootstrap", from the curious idea of trying to lift yourself off the ground by your bootstraps. In computing it refers to starting the computer from a powered off state (or equivalent), requiring all software to be loaded into RAM (memory) from scratch.

**Boot Device:** A device that the computer can use to load an operating system after it is powered on. Examples of boot devices are hard drives, CD/DVD drives, and floppy drives.

**Boot Device Priority:** The sequence of devices which the computer will attempt to boot from. If one device is unavailable, the computer will try to use the next device in the sequence. This sequence can be specified in the BIOS menu.

**Default Gateway:** The device responsible for allowing computers on an internal network to interface with networks on the outside.

**DHCP (Dynamic Host Configuration Protocol):** Used to automatically assign IP addresses to computers without having to manually specify IP address, netmask, gateway and DNS information.

**DNS (Domain Name Server):** Responsible for translating names (for example, "userful.com") into IP addresses (for example, "64.34.209.69").

**IP Address:** An identifier for a computer or device on a network. Usually takes the form of XXX.XXX.XXX.XXX where XXX can be any number between 0 to 255.

**Network Personalizer:** Userful's Web application used to configure DiscoverStations.

**Organizational Account:** A Network Personalizer account for Organizations (for example, your company). Network Personalizer User accounts are linked to Organizational accounts.

**Optical Drive:** Used to access optical discs. Examples of optical discs are CDs and DVDs.

**Proxy Server:** A machine that sits between computers in an internal network and the outside world. Primarily used for filtering Internet content.

**Static IP Address:** IP addresses that are specified manually and therefore never change.

**Subnet Mask:** Used to determine which local network a computer belongs to.

**User Account (Network Personalizer):** An account a person uses to interface with Network Personalizer. Can be linked to one or many Network Personalizer Organizational accounts.