

# Kerio Control Box

## USB Tools

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### 1 Overview

Kerio Technologies provides a set of tools for solutions in situations where it is not possible to connect to Kerio Control Box via network and administer it via the Kerio Control Administration web interface.

These tools are designed for use from a USB flashdisk. Therefore, they are called USB Tools.

For complete system recovery a USB flasdisk with capacity of at least 1 GB is required, for other tools capacity of 256 MB will do.

All USB tools are designed for a single use to avoid unexpected repetition of the operation upon the next restart in case that the flashdisk has not been dismounted. This implies that once you perform the operation, the disk content cannot be used again and the files can be removed (the case of complete system recovery is a bit more complicated — for details, see section [2.4](#)).

Instructions for the USB Tools are different for:

- [Kerio Control Box 1110, 3110 and 3120](#)
- [Kerio Control Box 1120](#)

#### 1.1 Additional Information

This document describes only how to use USB tools. For in-depth information on the product configuration, see [Kerio Knowledge Base](#).

Should any issue arise (e.g. if Kerio Control Box fails to work even after the complete system recovery) please contact [our technical support](#).

### 2 USB Tools for Kerio Control Box 1110, 3110 and 3120

- [Recovery of a forgotten administration password](#),
- [Recovery of the default configuration \(factory settings\)](#),
- [Updates for the Kerio Control Box device system](#),

- [Complete recovery of the device system](#) (for case where even the default configuration cannot be recovered).
- [Diagnostic tool](#) (for case that even attempts for complete device system recovery fail).

**Warning:**

If Kerio Control Box cannot boot from the USB flashdisk, try another USB flashdisk. There are two formats of USB flashdisks. The first type is formatted as a floppy (it uses [Floppy MS-DOS 5.0 Floppy Disk Boot Record](#)) and you can use it directly for USB Tools. The second type which uses [MBR](#) cannot connect to Kerio Control Box.

## 2.1 Administration password recovery

Forgotten administration password can be recovered by using file [kerio-control-password-reset](#).

Please follow these instructions:

1. Mount the USB flashdisk to your computer.
2. Make sure that only one fragment with file system *FAT16* or *FAT32 (VFAT)* is created on the flashdisk. The USB disk must not be formatted by file system *NTFS* or *ext2 / ext3 / ext4*.
3. Save file [kerio-control-password-reset](#) to the flashdisk.
4. Switch off Kerio Control Box.
5. Plug the USB flashdisk into one of the USB ports of your *Kerio Control Box*.
6. Switch on Kerio Control Box.
7. In your web browser, open the Kerio Control Administration.
8. Activation wizard opens in the browser. As the product has already been activated, the wizard will require a new administration password.
9. Now you can login as user `admin` with a new password.

## 2.2 Restoring default configuration

Factory settings of Kerio Control Box can be recovered by using file [kerio-control-factory-reset](#).

Factory settings recovery includes removal of all configuration data including activation and the statistics database.

Please follow these instructions:

1. Mount the USB flashdisk to your computer.
2. Make sure that only one fragment with file system *FAT16* or *FAT32 (VFAT)* is created on the flashdisk. The USB disk must not be formatted by file system *NTFS* or *ext2 / ext3 / ext4*.

3. Save file [kerio-control-factory-reset](#) to the flashdisk.
4. Switch off Kerio Control Box.
5. Plug the USB flashdisk into one of the USB ports of your *Kerio Control Box*.
6. Switch on Kerio Control Box.
7. For factory settings recovery to take effect, Kerio Control Box will be restarted automatically.
8. Make sure that automatic DHCP configuration is set on your network interface. IP address 10.10.10.11 should be assigned to your computer.
9. In your web browser, enter the following URL:  
`https://10.10.10.1:4081/admin`
10. Activate the product, login to the product administration and configure Kerio Control Box as needed.

### 2.3 System update

In case that it is for any reason not possible or desired to update it via the Kerio Control Administration web interface, Kerio Control Box can be updated from a USB flashdisk.

For this purpose, file [kerio-control-usbupgrade](#) is used.

Please follow these instructions:

1. Mount the USB flashdisk to your computer.
2. Make sure that only one fragment with file system *FAT16* or *FAT32 (VFAT)* is created on the flashdisk. The USB disk must not be formatted by file system *NTFS* or *ext2 / ext3 / ext4*.
3. Save file [kerio-control-usbupgrade](#) to the flashdisk.
4. Switch off Kerio Control Box.
5. Plug the USB flashdisk into one of the USB ports of your Kerio Control Box.
6. Switch on Kerio Control Box.
7. The system of the Kerio Control Box device will be automatically updated. All settings and data will be kept.

### 2.4 Complete system recovery

The Kerio Control Box system can be completely recovered by using file [kerio-control-rescue](#). Within the system recovery, all configuration data including activation and the statistics database will be completely rewritten. Therefore the device will have to be reactivated and reconfigured for further use.

**Warning:**

Before applying complete system recovery, it is highly recommended to retest connection to Kerio Control Box after attempting for [restore of the factory settings](#).

**Preparing flashdisk for system recovery**

For complete system recovery, Kerio Control Box first needs to introduce operating system from USB disk. File [kerio-control-rescue](#) is an image of an installation disk and must be saved directly on the physical device (similarly as in case of burning ISO images on CD). Please follow the instructions according to your client system.

**Microsoft Windows**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download and unpack [Image Writer](#) (it does not require installation).
3. Download file [kerio-control-rescue](#).
4. In application Image Writer, look up this file, select your flashdisk and click on *Write*.
5. Remove the disk securely and unplug it from your computer.

**Linux**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-rescue](#).
3. Run the terminal (console) in the super-user mode (e.g. using the `su` or `sudo -s` commands — based on your Linux distribution).
4. Use command `fdisk -l` to detect the USB flashdisk name (e.g. `/dev/sdb`).
5. Save file [kerio-control-rescue](#) on this device by using the following command:

```
dd if=rescue.img of=/dev/sdx bs=1M
```

Replace string `rescue.img` by the real file name and `/dev/sdx` by the real device. It is necessary to enter the physical device (e.g. `/dev/sdx`), not only a fragment (e.g. `/dev/sdx1`).

6. Use command `sync` to guarantee finishing of all disk operations.
7. Unplug the USB disk from your computer.

**Mac OS X**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-rescue](#).
3. Run the terminal (*Applications* → *Utilities* → *Terminal*).
4. Use command `sudo diskutil list` to detect the USB flashdisk name (e.g. `/dev/diskX` or `/dev/DiskY` — watch the letter case).
5. Use command `sudo diskutil unmountDisk /dev/diskX` to unmount the disk.
6. Save file [kerio-control-rescue](#) on the USB disk by using the following command:

```
sudo dd if=rescue.img of=/dev/disk1 bs=1m
```

- Replace string `rescue.img` by the real file name and `/dev/diskX` by the real device.
7. Unplug the USB disk from your computer.

### ***Kerio Control Box device system recovery***

1. Switch off Kerio Control Box.
2. Plug the USB flashdisk into one of the USB ports of your Kerio Control Box.
3. Switch on Kerio Control Box.
4. Make sure that automatic DHCP configuration is set on your network interface. IP address 10.10.10.11 should be assigned to your computer.
5. In your web browser, enter the following URL:  
`https://10.10.10.1:4081/admin`
6. Activate the product, login to the product administration and configure Kerio Control Box as needed.

### ***Recovering USB flashdisk for further use***

For more details, see section [Recovering USB flashdisk for further use](#).

## **2.5 Diagnostic tool**

If running of Kerio Control Box by the above-mentioned methods fails, it is possible to use a special diagnostic tool which elicits crucial information for the Kerio Technologies technical support. For this option, download and use file [kerio-control-usbdiag](#).

### ***Creating diagnostic flashdisk***

File [kerio-control-usbdiag](#) is an image of an installation disk and must be saved directly on the physical device (similarly as in case of burning ISO images on CD). Please follow the instructions according to your client system.

#### **Microsoft Windows**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download and unpack [Image Writer](#) (it does not require installation).
3. Download file [kerio-control-usbdiag](#).
4. In application *Image Writer*, look up this file, select your flashdisk and click on *Write*.
5. Remove the disk securely and unplug it from your computer.

#### **Linux**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-usbdiag](#).

3. Run the terminal (console).
4. Use command `sudo fdisk -l` to detect the USB flashdisk name (e.g. `/dev/sdb`).
5. Save file [kerio-control-usbdiag](#) on this device by using the following command:

```
sudo dd if=usbdiag.img of=/dev/sdx bs=1M
```

Replace string `usbdiag.img` by the real file name and `/dev/sdx` by the real device. It is necessary to enter the physical device (e.g. `/dev/sdx`), not only a fragment (e.g. `/dev/sdx1`).

6. Use command `sudo sync` to guarantee finishing of all disk operations.
7. Unplug the USB disk from your computer.

## Mac OS X

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-usbdiag](#).
3. Run the terminal (*Applications* → *Utilities* → *Terminal*).
4. Use command `sudo diskutil list` to detect the USB flashdisk name (e.g. `/dev/diskX` or `/dev/DiskY` — watch the letter case).
5. Use command `sudo diskutil unmountDisk /dev/diskX` to unmount the disk.
6. Save file [kerio-control-usbdiag](#) on the USB disk by using the following command:

```
sudo dd if=usbdiag.img of=/dev/disk1 bs=1m
```

Replace string `usbdiag.img` by the real file name and `/dev/diskX` by the real device.

7. Unplug the USB disk from your computer.

## Using diagnostic flashdisk

1. Switch off Kerio Control Box.
2. Plug the USB flashdisk into one of the USB ports of your *Kerio Control Box*.
3. Switch on Kerio Control Box.
4. Approximately after two minutes Kerio Control Box beeps three times. This means that the operating system has been introduced and the diagnostic test has just been started.

If the device does not beep within the following 10 minutes, the test has failed. In such case switch off the device, unplug the USB flashdisk and send diagnostic information the *Kerio Technologies* technical support (see below).

5. The diagnostic test should run for about 60 minutes. Once the test is finished, Kerio Control Box starts beeping every 30 seconds.
6. Switch off Kerio Control Box and unplug the USB flashdisk.

### ***Test results processing***

Plug the USB flashdisk to your computer again. There is a partition called *UsbDiag* on the disk. This partition includes the file with test results.

Please send this file to the Kerio Technologies technical support and possibly provide a description of the non-standard behavior of your Kerio Control Box.

### ***Recovering USB flashdisk for further use***

For more details, see section [Recovering USB flashdisk for further use](#).

## **3 USB Tools for Kerio Control Box 1120**

- [Recovery of a forgotten administration password](#),
- [Recovery of the default configuration \(factory settings\)](#),
- [Updates for the Kerio Control Box device system](#),
- [Complete recovery of the device system](#) (for case where even the default configuration cannot be recovered).
- [Diagnostic tool](#) (for case that even attempts for complete device system recovery fail).

#### ***Warning:***

If Kerio Control Box cannot boot from the USB flashdisk, try another USB flashdisk. There are two formats of USB flashdisks. The first type uses [MBR](#) as a boot sector and you can use it directly for USB Tools. The second type which is formatted as a floppy ([Floppy MS-DOS 5.0 Floppy Disk Boot Record](#)) cannot connect to Kerio Control Box. If you want to use it, format the USB flashdisk according to the steps in section [Formatting USB flashdisk with MBR](#).

### **3.1 Administration password recovery**

Forgotten administration password can be recovered by using file [kerio-control-password-reset](#).

Please follow these instructions:

1. Mount the USB flashdisk to your computer.
2. Make sure that only one fragment with file system *FAT16* or *FAT32* (*VFAT*) is created on the flashdisk. The USB disk must not be formatted by file system *NTFS* or *ext2* / *ext3* / *ext4*.
3. Save file [kerio-control-password-reset](#) to the flashdisk.

4. Switch off Kerio Control Box.
5. Plug the USB flashdisk into one of the USB ports of your *Kerio Control Box*.
6. Switch on Kerio Control Box.
7. In your web browser, open the Kerio Control Administration.
8. Activation wizard opens in the browser. As the product has already been activated, the wizard will require a new administration password.
9. Now you can login as user `admin` with a new password.

### 3.2 Restoring default configuration

Factory settings of Kerio Control Box can be recovered by using file [kerio-control-factory-reset](#). Factory settings recovery includes removal of all configuration data including activation and the statistics database.

Please follow these instructions:

1. Mount the USB flashdisk to your computer.
2. Make sure that only one fragment with file system *FAT16* or *FAT32* (*VFAT*) is created on the flashdisk. The USB disk must not be formatted by file system *NTFS* or *ext2* / *ext3* / *ext4*.
3. Save file [kerio-control-factory-reset](#) to the flashdisk.
4. Switch off Kerio Control Box.
5. Plug the USB flashdisk into one of the USB ports of your *Kerio Control Box*.
6. Switch on Kerio Control Box.
7. For factory settings recovery to take effect, Kerio Control Box will be restarted automatically.
8. Make sure that automatic DHCP configuration is set on your network interface. IP address `10.10.10.11` should be assigned to your computer.
9. In your web browser, enter the following URL:  
`https://10.10.10.1:4081/admin`
10. Activate the product, login to the product administration and configure Kerio Control Box as needed.

### 3.3 System update

In case that it is for any reason not possible or desired to update it via the Kerio Control Administration web interface, Kerio Control Box can be updated from a USB flashdisk.



For this purpose, file [kerio-control-usbupgrade](#) is used.

Please follow these instructions:

1. Mount the USB flashdisk to your computer.
2. Make sure that only one fragment with file system *FAT16* or *FAT32* (*VFAT*) is created on the flashdisk. The USB disk must not be formatted by file system *NTFS* or *ext2* / *ext3* / *ext4*.
3. Save file [kerio-control-usbupgrade](#) to the flashdisk.
4. Switch off Kerio Control Box.
5. Plug the USB flashdisk into one of the USB ports of your Kerio Control Box.
6. Switch on Kerio Control Box.
7. The system of the Kerio Control Box device will be automatically updated. All settings and data will be kept.

### 3.4 Complete system recovery

The Kerio Control Box system can be completely recovered by using file [kerio-control-rescue](#). Within the system recovery, all configuration data including activation and the statistics database will be completely rewritten. Therefore the device will have to be reactivated and reconfigured for further use.

**Warning:**

Before applying complete system recovery, it is highly recommended to retest connection to Kerio Control Box after attempting for [restore of the factory settings](#).

#### ***Preparing flashdisk for system recovery***

For complete system recovery, Kerio Control Box first needs to introduce operating system from USB disk. File [kerio-control-rescue](#) is an image of an installation disk and must be saved directly on the physical device (similarly as in case of burning ISO images on CD). Please follow the instructions according to your client system.

#### **Microsoft Windows**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download and unpack [Image Writer](#) (it does not require installation).
3. Download file [kerio-control-rescue](#).
4. In application Image Writer, look up this file, select your flashdisk and click on *Write*.
5. Remove the disk securely and unplug it from your computer.

## Linux

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-rescue](#).
3. Run the terminal (console) in the super-user mode (e.g. using the `su` or `sudo -s` commands — based on your Linux distribution).
4. Use command `fdisk -l` to detect the USB flashdisk name (e.g. `/dev/sdb`).
5. Save file [kerio-control-rescue](#) on this device by using the following command:

```
dd if=rescue.img of=/dev/sdx bs=1M
```

Replace string `rescue.img` by the real file name and `/dev/sdx` by the real device. It is necessary to enter the physical device (e.g. `/dev/sdx`), not only a fragment (e.g. `/dev/sdx1`).

6. Use command `sync` to guarantee finishing of all disk operations.
7. Unplug the USB disk from your computer.

## Mac OS X

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-rescue](#).
3. Run the terminal (*Applications* → *Utilities* → *Terminal*).
4. Use command `sudo diskutil list` to detect the USB flashdisk name (e.g. `/dev/diskX` or `/dev/DiskY` — watch the letter case).
5. Use command `sudo diskutil unmountDisk /dev/diskX` to unmount the disk.
6. Save file [kerio-control-rescue](#) on the USB disk by using the following command:

```
sudo dd if=rescue.img of=/dev/disk1 bs=1m
```

Replace string `rescue.img` by the real file name and `/dev/diskX` by the real device.

7. Unplug the USB disk from your computer.

## *Kerio Control Box device system recovery*

1. Switch off Kerio Control Box.
2. Plug the USB flashdisk into one of the USB ports of your Kerio Control Box.
3. Switch on Kerio Control Box.
4. Make sure that automatic DHCP configuration is set on your network interface. IP address `10.10.10.11` should be assigned to your computer.
5. In your web browser, enter the following URL:  
`https://10.10.10.1:4081/admin`
6. Activate the product, login to the product administration and configure Kerio Control Box as needed.

## ***Recovering USB flashdisk for further use***

For more details, see section [Recovering USB flashdisk for further use](#).

### **3.5 Diagnostic tool**

If running of Kerio Control Box by the above-mentioned methods fails, it is possible to use a special diagnostic tool which elicits crucial information for the Kerio Technologies technical support. For this option, download and use file [kerio-control-usbdiag](#).

#### ***Creating diagnostic flashdisk***

File [kerio-control-usbdiag](#) is an image of an installation disk and must be saved directly on the physical device (similarly as in case of burning ISO images on CD). Please follow the instructions according to your client system.

#### **Microsoft Windows**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download and unpack [Image Writer](#) (it does not require installation).
3. Download file [kerio-control-usbdiag](#).
4. In application *Image Writer*, look up this file, select your flashdisk and click on *Write*.
5. Remove the disk securely and unplug it from your computer.

#### **Linux**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-usbdiag](#).
3. Run the terminal (console).
4. Use command `sudo fdisk -l` to detect the USB flashdisk name (e.g. `/dev/sdb`).
5. Save file [kerio-control-usbdiag](#) on this device by using the following command:

```
sudo dd if=usbdiag.img of=/dev/sdx bs=1M
```

Replace string `usbdiag.img` by the real file name and `/dev/sdx` by the real device. It is necessary to enter the physical device (e.g. `/dev/sdx`), not only a fragment (e.g. `/dev/sdx1`).

6. Use command `sudo sync` to guarantee finishing of all disk operations.
7. Unplug the USB disk from your computer.

#### **Mac OS X**

1. Mount the USB flashdisk to your computer. If necessary, back up files saved on the disk. The flashdisk data will be rewritten completely!
2. Download file [kerio-control-usbdiag](#).
3. Run the terminal (*Applications* → *Utilities* → *Terminal*).
4. Use command `sudo diskutil list` to detect the USB flashdisk name (e.g. `/dev/diskX` or `/dev/DiskY` — watch the letter case).
5. Use command `sudo diskutil unmountDisk /dev/diskX` to unmount the disk.
6. Save file [kerio-control-usbdiag](#) on the USB disk by using the following command:

```
sudo dd if=usbdiag.img of=/dev/disk1 bs=1m
```

- Replace string `usbdiag.img` by the real file name and `/dev/diskX` by the real device.
7. Unplug the USB disk from your computer.

### ***Using diagnostic flashdisk***

1. Switch off Kerio Control Box.
2. Plug the USB flashdisk into one of the USB ports of your *Kerio Control Box*.
3. Switch on Kerio Control Box.
4. Approximately after two minutes Kerio Control Box beeps three times. This means that the operating system has been introduced and the diagnostic test has just been started.

If the device does not beep within the following 10 minutes, the test has failed. In such case switch off the device, unplug the USB flashdisk and send diagnostic information the *Kerio Technologies* technical support (see below).

5. The diagnostic test should run for about 60 minutes. Once the test is finished, Kerio Control Box starts beeping every 30 seconds.
6. Switch off Kerio Control Box and unplug the USB flashdisk.

### ***Test results processing***

Plug the USB flashdisk to your computer again. There is a partition called *UsbDiag* on the disk. This partition includes the file with test results.

Please send this file to the Kerio Technologies technical support and possibly provide a description of the non-standard behavior of your Kerio Control Box.

### ***Recovering USB flashdisk for further use***

For more details, see section [Recovering USB flashdisk for further use](#).

## **3.6 Recovering USB flashdisk for further use**

Special partitions are now created on the USB flashdisk and part of the space is unused. To reuse the disk again as an external disk for other purposes, remove all disk partitions, create one or more new partitions and reformat the disk by an appropriate file system.

Please follow the instructions according to your client system.

### **Microsoft Windows**

1. Run the Command Line.
2. Enter command `diskpart`. On Windows Vista and Windows 7 confirmation of running the application under administration account can be required.
3. Use command `list disk` to show the list and look up the number of the physical disk.

4. Enter command `select disk 8` (replace number 8 by the number of the corresponding disk).
5. Use command `clean` to remove all created partitions.
6. Create a new disk partition by using the following commands, as listed:

```
create partition primary

select partition 1

format fs=fat32 label="USB Flash" quick

exit
```

### **Linux**

Use graphical tool GParted or command `fdisk`.

### **Mac OS X**

Use system tool Disk Utility (*Application* → *Utilities* → *Disk Utility*).

## **3.7 Formatting USB flashdisk with MBR**

1. Connect the USB flashdisk to a computer with Windows operating system.
2. Run the Command Line.
3. Enter command `diskpart`. On Windows Vista and Windows 7 confirmation of running the application under administration account can be required.
4. Use command `list disk` to show the list and look up the number of the physical disk.
5. Enter command `select disk 8` (replace number 8 by the number of the corresponding disk).
6. Use command `clean` to remove all created partitions.
7. Create a new disk partition by using the following commands, as listed:

```
create partition primary

select partition 1

format fs=fat32 label="USB Flash" quick

exit
```

## 4 Legal Notices

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