IGEL OS Creator Manual

Technical Preview

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With the IGEL OS Creator, you can install IGEL OS 11 on any device that supports it. Moreover, you can use the IGEL OS Creator for recovering a broken installation of IGEL OS which is not able to boot anymore.

1 IGEL Devices Supported by IGEL OS 11

> ⓘ The following list shows the IGEL devices supported by the Technical Preview for IGEL OS 11 (IGEL OS 11.01.100.tp1).

1.1 IGEL UD (Universal Desktop)

Device type	Main board	IGEL ID	64 bit	RAM	Flash	UEFI support	HW video acceleration
UD2	D220	40	Yes	2 GB	2 GB / 4 GB	Yes	Yes
UD3	M340C	50	Yes	2 GB	2 GB / 4 GB	Yes	Yes
UD5	H830C	50	Yes	2 GB	2 GB / 4 GB	Yes (BIOS/UEFI update may be necessary)	Yes
UD6	H830C	51	Yes	2 GB	2 GB / 4 GB	Yes (BIOS/UEFI update may be necessary)	Yes
UD7	H850C	10	Yes	2 GB	4 GB	Yes	Yes
UD9	TC215B	40 / 41	Yes	2 GB	2 GB / 4 GB	Yes	Yes

2 General Information

The IGEL OS Creator (OSC) software allows the migration of existing PC and thin client hardware to create a functionally standardized IGEL Workspace infrastructure. In the process, the existing operating system is replaced by IGEL OS. The devices can then be administered via the IGEL Universal Management Suite (UMS).

> ⊙ Installing the IGEL OS operating system via OSC destroys all data on the target device's mass storage device (hard disk, flash memory, SSD).

This manual describes the installation of IGEL OS 11 using OSC.

3 Licensing

This Technical Preview of IGEL OS Creator has a pre-installed license that is valid for 30 days, starting on the 23rd of January 2019.

4 Installation

4.1 Installation Requirements

In order to install IGEL OS via OSC, the target device must meet the following requirements:

- 64-bit-capable CPU
- At least 2 GB RAM
- At least 2 GB mass storage space (≥ 4 GB recommended): hard disk, flash memory, SSD, eMMC or NVME.
- Intel, ATI∕AMD or Nvidia graphics chip

> ⓘ For information about supported graphics chip sets, see the IGEL Linux 3rd Party Hardware Database[1].

- USB 3.0 or 2.0 port from which the device can boot (alternatively a DVD drive)
- Ethernet or wireless adapter

> ⓘ Installing IGEL OS via OSC destroys all data on the target device's mass storage device (hard disk, flash memory, SSD).

## 4.2 Create USB installation medium (Windows)

1. Register at https://www.igel.com/os11trial
2. After registration, download the file `OSC_11.01.100.tp1.zip`
3. Unzip its contents into a local directory.
4. Connect a USB memory stick with at least 2 GB capacity to the computer.

> ⓘ All existing data on the USB memory stick will be destroyed.

5. Double-click the `preparestick.exe` file from the unzipped directory.

> ⓘ If you are in the "administrators" group, the program will start after you have confirmed a dialog. If you are not in the "administrators" group, you must enter the administrator password to start the program.

1 https://www.igel.com/linux-3rd-party-hardware-database/
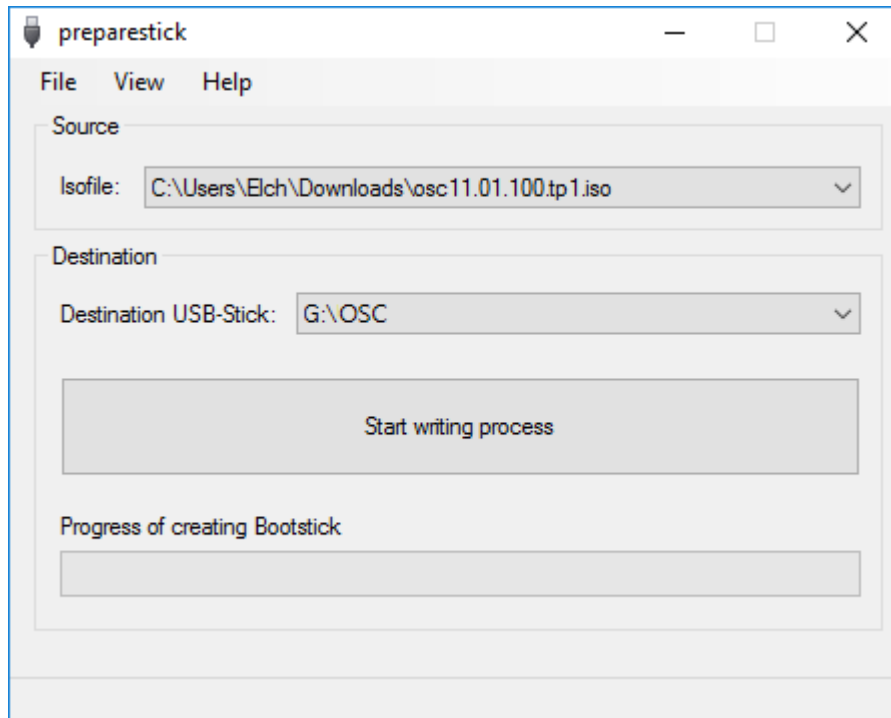
The dropdown menü **Isofile** shows the ISO files contained in the unzipped directory.

6. Unter **Isofile**, select the file `osc11.01.100.tp1.iso`
7. Under **Destination USB stick**, select the USB storage medium on which you would like to save the installation data.

> ⓘ It is recommended that you only have one USB storage medium connected during this procedure. If you accidentally select the wrong medium, all data on it will be lost.

> ⓘ Generally speaking, the list of available USB storage media is refreshed automatically. If, however, you would like to refresh it manually, click on **View > Refresh USB Device List.**

8. Click on **Start writing process**.
   In the program window, the progress of the process is shown.
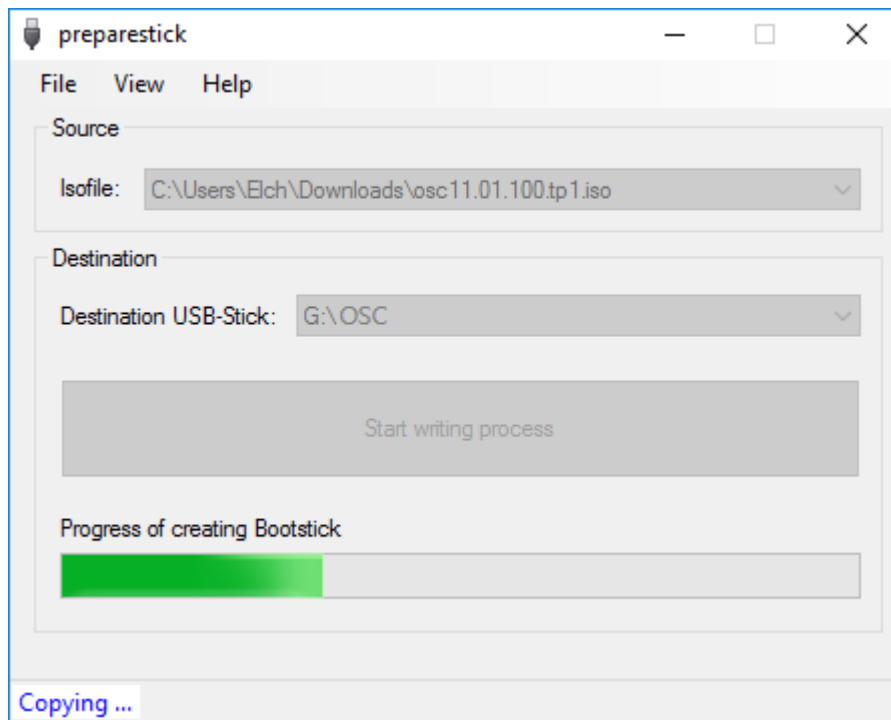
When the process is finished, a message window is displayed.
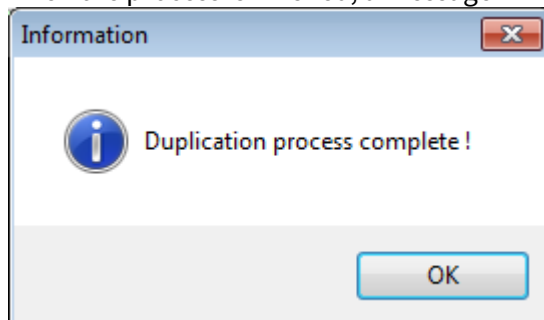
9. Close the message window and the program.
10. After about 3 seconds, remove the USB memory stick.

> ⓘ If you remove the USB memory stick immediately, there is a possibility that the writing process has not been completed. In this case, the data on the memory stick gets corrupted.

4.3 Create USB Installation Medium (Linux)

1. Register at https://www.igel.com/os11trial
2. After registration, download the file `OSC_11.01.100.tp1.zip`
3. Unzip the contents of the Zip archive into a local directory.
4. From this directory, you will need the `osc11.01.100.tp1.iso` file to create a bootable medium.
5. Connect a USB memory stick with at least 2 GB capacity to the computer.

> ⚠ All existing data on the USB memory stick will be destroyed.

6. Open a terminal emulator and enter the command `dmesg` to determine the device name of the USB memory stick.
   Example output:
   ```
   [...]
   [19514.742229] scsi 3:0:0:0: Direct-Access JetFlash Transcend 8GB 1100 PQ: 0
   ANSI: 6
   [19514.742805] sd 3:0:0:0: Attached scsi generic sg1 type 0
   [19514.744688] sd 3:0:0:0: [sdb] 15425536 512-byte logical blocks: (7.89 GB/
   7.35 GiB)
   [19514.745370] sd 3:0:0:0: [sdb] Write Protect is off
   [19514.745376] sd 3:0:0:0: [sdb] Mode Sense: 43 (0) 00 00 00
   [19514.746040] sd 3:0:0:0: [sdb] Write cache: enabled, read cache: enabled,
   doesn't support DPO or FUA
   [19514.752438] sdb: sdb1
   ```
   In this example, the device name searched for is `/dev/sdb`.

> ⚠ Ensure that you have determined the correct device name. Use of the `dd` command in the next step can destroy your operating system if you use the wrong device name.

7. The following command writes the installation data to the USB memory stick:
   `dd if=osc11.01.100.tp1.iso of=/dev/sdX bs=1M oflag=direct`
   Replace `sdX` with the device name of the USB memory stick that you have determined.
   When the dd command has terminated, you can see the terminal emulator input prompt again.
8. Wait for about 3 seconds after the `dd` command has terminated, and remove the USB memory stick.

> ⚠ If you remove the USB memory stick immediately, there is a possibility that the writing process has not been completed. In this case, the data on the memory stick gets corrupted.

The USB memory stick for OSC installation is ready for use.

4.4 Create DVD Installation Medium

The ISO file in the installation directory for OSC is a so-called hybrid image. It can not only be copied onto USB storage devices but can also be used to create a bootable DVD.

4.4.1 Burn ISO Image (Windows)

1. In Explorer, open the directory that contains the ISO file.
2. Right-click on the ISO file.
3. Select **Burn disc image**.

4.4.2 Burn ISO Image (Linux)

Under Linux, various burning programs with a graphical user interface or for the command line are available.

The Ubuntu Wiki[2] explains how to burn an ISO image onto a DVD using a number of programs.

4.5 Boot Settings

OSC works on systems with BIOS and UEFI.

It is essential that your system supports booting from USB storage media. This may already be enabled, or you may have to enable it yourself.

> ⓘ IGEL OS 11 supports UEFI Secure Boot. Refer to the manual of your device's manufacturer to learn whether your device supports Secure Boot and how to enable it. Enabling Secure Boot often consists of two steps. First, the boot mode has to be changed to UEFI Boot in the BIOS; after that, Secure Boot can be activated, also in the BIOS. How to check whether Secure Boot has been properly enabled you can learn here.

> ⓘ If IGEL OS fails to boot in UEFI mode, try it in legacy/BIOS mode. IGEL OS will then be installed in legacy/ BIOS mode.

> ⓘ For older devices or if you haven't been able to boot the installer at all (e.g. on Dell Wyse Dx0D), use the legacy installer.

4.5.1 Third Party Devices

The required key presses for this may vary from vendor to vendor. However, here are some hints:

▶ While the device is booting, try pressing [F12] (in general), [F10] (Intel devices) or [F9] (Hewlett-Packard devices) in order to access a list of boot devices and select UD Pocket.

▶ If the above does not work, access the BIOS settings via pressing [Del], [F1] or [F2] during boot and activate booting from USB storage media and/or change the boot order.

▶ See the BIOS/UEFI documentation for your system for details of how to boot from USB storage media.

4.5.2 IGEL Devices

UD6 (H830)

1. Power up the device while pressing the [Del] button repeatedly in rapid succession.
2. Select **SCU**.

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2 https://help.ubuntu.com/community/BurningIsoHowto#Burning_from_Ubuntu

3. If a password prompt is shown, enter the BIOS password.
4. Select the **Boot** tab.
5. Set **USB Boot** to **<ENABLED>**.
6. Save the settings and exit.
7. Connect the USB stick to the device.
8. Reboot the device while pressing the [Del] button repeatedly in rapid succession.
9. Select **Boot Manager**.
10. Select the USB stick as the boot medium and press **Enter**.
11. You can continue with the installation procedure (see page 14).

UD5 (H830)

1. Power up the device while pressing the [Del] button repeatedly in rapid succession.
2. If a password prompt is shown, enter the BIOS password.
3. Select the **Boot** tab.
4. Select **Boot Options Priorities**.
5. Select the entry for the USB stick and move it to the first position using the [+] key.
6. Save the settings and exit.
7. You can continue with the installation procedure (see page 14).

UD3 (M340)

1. Power up the device while pressing the [Del] button repeatedly in rapid succession.
2. If a password prompt is shown, enter the BIOS password.
3. Select the **Boot** tab.
4. Set **USB Boot** to **<ENABLED>**.
5. Select **Legacy > Boot Type Order**.
6. Select **USB** and move it to the first position using the [+] key.
7. Save the settings and exit.
8. You can continue with the installation procedure (see page 14).

UD2 (D220)

1. Power up the device while pressing the [F2] (older devices) or [Del] (newer devices) button repeatedly in rapid succession.
2. Select **SCU**.
3. If a password prompt is shown, enter the BIOS password.
4. Select the **Boot** tab.
5. Set **USB Boot** to **<ENABLED>**.
6. Save the settings and exit.
7. Connect the USB stick to the device.
8. Reboot the device while pressing the [F2] or [Del] (newer devices) button repeatedly in rapid succession.
9. Select **Boot Manager**.
10. Select the USB stick as the boot medium and press **Enter**.

11. You can continue with the installation procedure .

UD9 (TC215B)

1. Power up the device while pressing the [F2] button repeatedly in rapid succession.
2. If a password prompt is shown, enter the BIOS password.
3. Select the **Boot** tab.
4. Select **Boot Option Priorities**.
5. Select the entry for the USB stick and move it to the first position using the [+] key.
6. Save the settings and exit.
7. You can continue with the installation procedure .

4.6 Installation Procedure

1. Connect the prepared USB memory stick to the target device and switch the target device on.
2. Select one of the following options from the boot menu:
   - **Standard Installation + Recovery**: Boots the system with just a few messages from the USB memory stick and launches the installation program. (Default)
   - **Verbose Installation + Recovery**: Boots the system from the USB memory stick and shows the Linux boot messages in the process.
   - **Failsafe Installation + Recovery**: Fallback mode to be used if the next dialog (language selection) is not displayed properly. In fallback mode, the VESA graphics driver is used instead of the native graphics driver.
   - **Memory Test**: Memory test, only available in legacy/BIOS mode. This option does not carry out an installation.
   - **EFI debug shell**: Available only in UEFI boot mode. If the hardware in use is EFI capable, boot problems can be analyzed with that.
3. **Please choose your language**: Select the language for the installation process and click **OK**.

   > ⓘ If this dialog is not displayed properly, boot the device again and select **Failsafe Installation + Recovery** in the boot menu.

4. Accept the **EULA** by clicking **I agree**.
5. Review the installation settings.

   > ⚠ Check the **Target drive** to ensure that the system is installed on the desired drive. The installation will destroy all existing data on the target drive.

   The following options are available:
   - **Force legacy installation** (only available after UEFI boot)

☑ The legacy/BIOS version of IGEL OS will be installed, even if the system was booted in UEFI mode.

> ⓘ Remember to set the system to legacy/BIOS mode after installation.

☐ UEFI booting results in a UEFI installation, and legacy/BIOS booting in a legacy/BIOS installation. (Default)

- **Force MS-DOS Partitioning**
  ☑ Use a MS-DOS partition table instead of a GPT partition table.
  ☐ Use a GPT partition table. (Default)
- **Migrate Old Settings**
  ☑ Carries over the settings from a previously installed IGEL OS system. (Default)
  ☐ You can change settings by clicking **Edit**.
- **Edit**: Open the IGEL Setup where you can configure settings for the system to be installed.
- **Reset**: Resets all changes to the setup made with the IGEL Setup.
- **Install firmware**: Starts the installation process.
- **Cancel**: Cancels configuration for the installation and shuts down the device.

6. Click on **Install firmware**.
   The installation program will set up IGEL OS 11 on the target drive. If you see the message **IGEL OS Creator build finished successfully**, the installation is complete.
7. Click on **Reboot** at the bottom of the installation window.
8. Remove the USB memory stick.
9. Close the message window.
   The system will shut down and then boot IGEL OS 11.