KNXCONTROL

Project Development Kit (PDK)
User Manual

Version 2.0
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DIVUS
OPTIMA

GENERAL INFORMATION

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Please read the manual before beginning and keep the manual for later use.

The manual has been conceived and written for users who are experienced in the use of PCs and automation technology.

CONVENTIONS

[KEYS]	Keys that are to be pressed by the user are given in square brackets, e.g. [CTRL] or [DEL]
COURIER	On-screen messages are given in the Courier font, e.g. `C:\>`
COURIER BOLD	Keyboard input to be made by the user are given in Courier bold, e.g. `C:\>DIR`
„...“	Names of buttons to be pressed, menus or other onscreen elements and product names are given within double quotes. (e.g. "Configuration").
PICTOGRAMS	In this manual the following symbolic are used to indicate particular text blocks:
	Caution! A dangerous situation may arise that may cause damage to material.
	Hint Hints and additional notes
	New New features

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1 Introduction

1.1 WHAT IS THE PDK

The KNXCONTROL PDK (Project Development Kit) is a useful tool for the creation of projects for KNXCONTROL devices directly on your PC. Thanks to the PDK, projects can be created and edited even without being connected to a KNXCONTROL device over the network.

The projects created with the PDK are compatible with any type of KNXCONTROL device, as long as the software version is the same. For example it is possible to export a project from one KNXSERVER, to edit it through the PDK and to import it from the same KNXSERVER again or from another device, as long as the software versions of the devices and the PDK are compatible.

The PDK is not to be intended as a stand-alone visualisation solution: for example it is not possible to use to PDK to communicate with your KNX system or to use other technologies supported by the KNXCONTROL devices directly without any additional hardware. Rather, the PDK is to be understood as project editor; in order to use the project together with the KNX system, you will always need a KNXCONTROL device.

The PDK allows to start knowing and using the managing and visualisation software *DIVUS OPTIMA* and may later on be used to create full-featured visualisation projects, which can then be transferred to a production device easily.

1.2 SYSTEM REQUIREMENTS

The PDK can be executed on any PC with WINDOWS operating system (32bit and 64bit, XP or higher). In order to use the PDK on other operating systems, please follow the instructions in chapter 2.8.
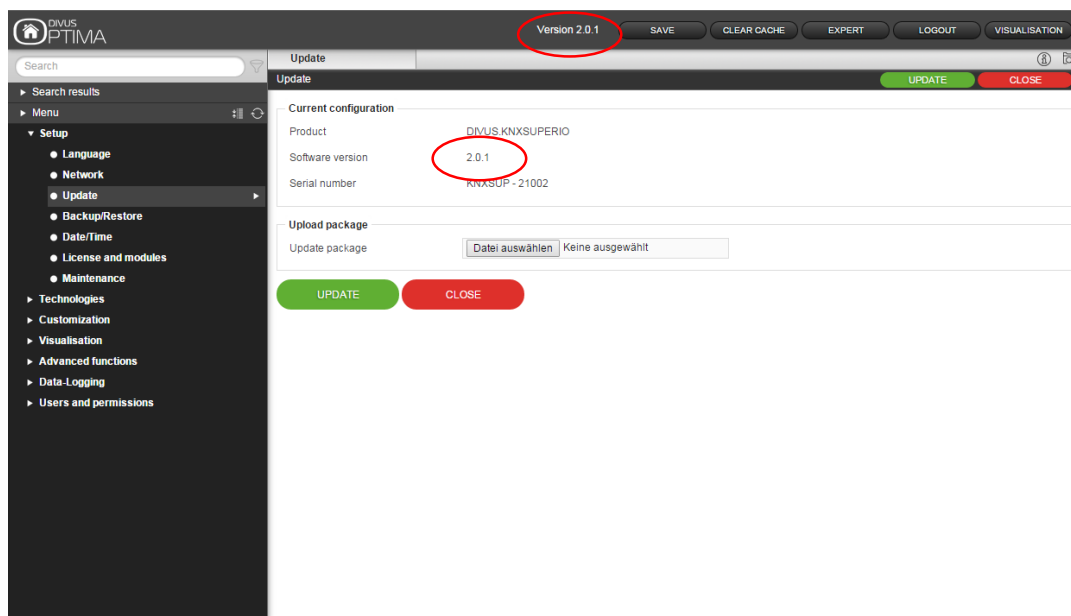
The PDK does not require any installation. Furthermore, no changes to your systems will be applied outside of the PDK folder itself. Therefore it is possible:

- To copy the PDK folder to another PC and to continue to edit the project there

- To clone the PDK folder on your own PC and to work contemporarily on more than one project without having to repeat the export/import steps

1.3 VERSION CHECKING

In order to exchange projects between the PDK and one or more KNXCONTROL devices, the compatibility of the software versions of the single systems must be guaranteed. In general, a project export (backup) can always be imported on a device with a newer software version, but not vice versa! Therefore, both the PDK and the KNXCONTROL devices should always be updated to the most recent software version.

The current software version is always shown in the MENUBAR of the configuration area and in the *Update* page under *Setup*, as visible in the screenshot below:

In order to update your KNXCONTROL device, please go to the following URL of our website: http://www.divus.eu/en/divus-documentation-to-download where you will always find the latest version of Optima for KNX Server, KNX Superio and PDK.

In order to be able to work also offline on the latest software version, please download the latest PDK version from http://www.divus.eu/en/divus-documentation-to-download . Before doing so, please export your project from the old version of the PDK, in order to have the backup file ready to be imported into the new version of the PDK. Both procedures will be explained in the further chapters of this manual.

1.4   RECOMMENDED DOCUMENTATION

Before using the PDK, it is recommended to take a look at the OPTIMA USER MANUAL and the OPTIMA ADMINISTRATOR MANUAL. The menu structure and functionality of the PDK is the same as the one of OPTIMA; therefore, all descriptions and hints can be found in the OPTIMA USER-MANUAL. You may find all the manuals on our website www.divus.eu.

Attention! Changing the network settings of the PDK can make the PDK no more accessible; the project created in the PDK and all the related information won't be accessible anymore and be perma-nently lost!

2   Usage of the PDK

2.1   CONTENTS OF THE PDK-FOLDER

The PDK is available in form of a folder that contains all files necessary for its execution. No separated installation is required, all important data is present in the subfolders of the PDK. The KNXCONTROL-Stick contains a copy of the PDK, which can be copied on a PC or be launched directly from the KNXCONTROL-Stick. On our homepage the PDK will be available in zipped format. Just extract the main folder of the PDK once you have downloaded the zip file to your PC.

In order to be able to save the projects within the PDK, its main folder must have read-write permissions. Generally this is done automatically when copying the PDK to a hard disk (or another mass storage with write permissions). If the PDK is launched from a CD (or another data support without write permission), you can normally use it, but all your changes will be lost when terminating the PDK.

The PDK folder can also be copied more than once on your own PC, for example using different names for the main folder. This brings the advantage that more instances of the PDK can be started independently from each other, which means that you can handle more than one project contemporarily.

2.2   EXECUTION OF THE PDK

To start the PDK, the file START_KNXCONTROL_PDK.exe in the main folder of the PDK must be launched by double-clicking it. In the connection, the virtual environment that hosts the PDK will be created automatically. The start of this virtual machine can take some minutes, depending from the performance of your PC. In any case a loading bar will inform you of the progress of the PDK launch, as visible in the screenshot on the next page.
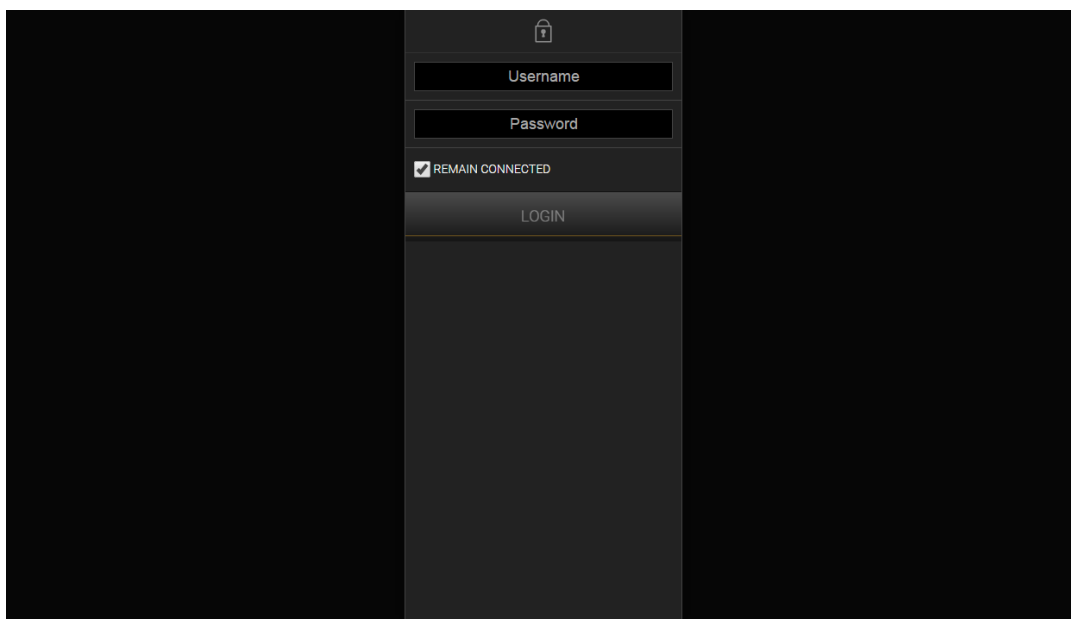
Note: during the first execution of the PDK it can be possible that the Windows Firewall will show a warning message regarding the connectivity of the PDK. In this case please allow the execution of the PDK in order to continue the loading procedure.

At conclusion of the loading procedure, the window of the PDK will become entirely black. Please minimize this window now (don't close it, since it contains the PDK environment) and use your browser to access the following URL:

http://127.0.0.1:8080

After a short loading period, the following login screen will appear:
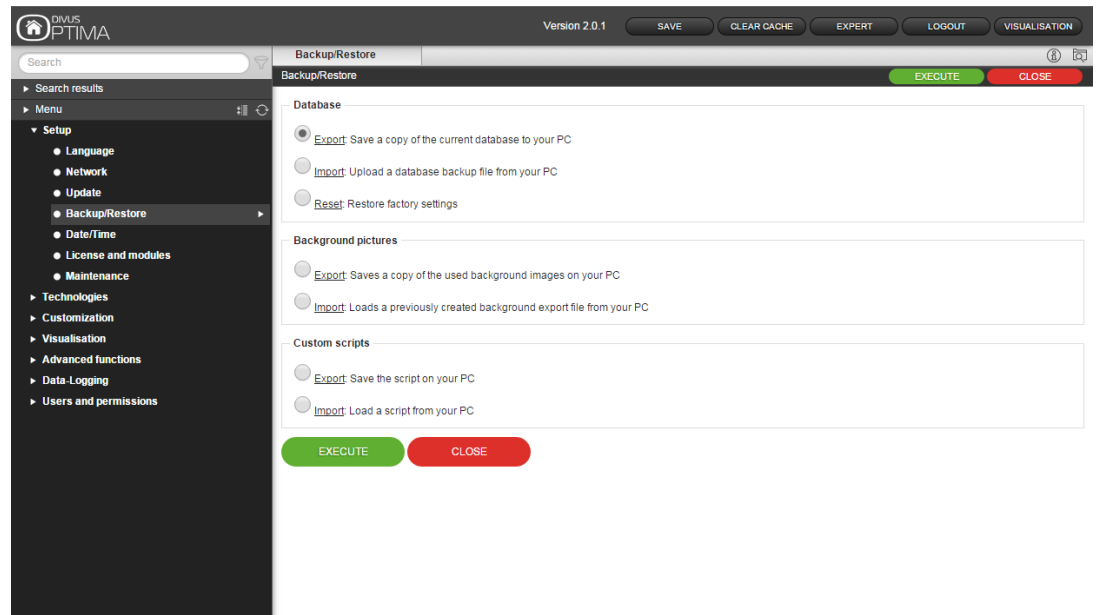

Hint: it is recommended to use GOOGLE CHROME in order to work with the PDK. In alternative, also the APPLE SAFARI browser is supported by the PDK.

To successfully login to the PDK, the following pre-configured user accounts can be used:

- System administrator

    o   User name: *admin*, Password: *admin*

- System manager

    o   User name: *manager*, Password: *manager*

- Base user

    o   User name: *user*, password: *user*

2.3   EXPORTING A PROJECT

In order to export a project from the PDK or any other KNXCONTROL device, please follow the steps below:
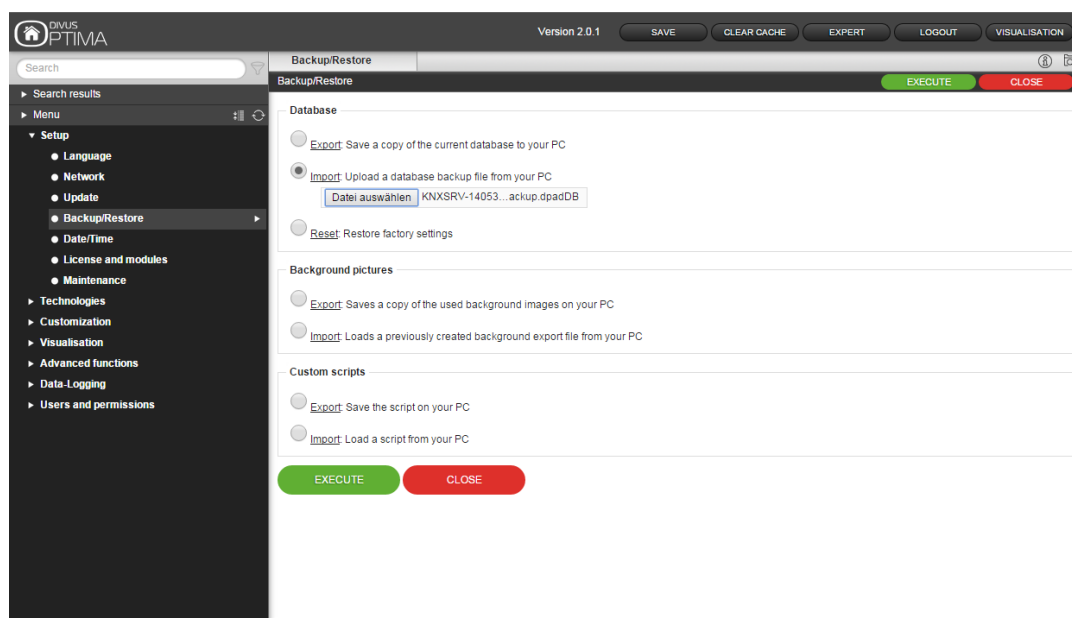

- Start the PDK (or connect to the KNXCONTROL device) and login as administrator; then click on the "ADMIN" button in the lower right corner (only displayed when the navigation menu is opened) to reach the administration part of Optima.

- Select the main entry *SETUP* in the left menu and then click on *BACKUP/RESTORE*

- Select the *Database - EXPORT* option and click on *EXECUTE* in order to download the export file to your PC.

You can use the resulting project file to import it into a KNXCONTROL device or another copy of the PDK.

2.4   IMPORTING A PROJECT

To import an existing project into the PDK, please follow the steps below:

- Export the project from the desired KNXCONTROL device using the corresponding menu in the configuration area (SETUP – BACKUP/RESTORE)

- Start the PDK and login as administrator; then click on the ADMIN button in the lower right corner (only displayed when the navigation menu is opened)

- Please select the main entry SETUP and then click on BACKUP/RESTORE

- Select the IMPORT option and browse for the previously created backup file; then click on EXECUTE in order to start the import
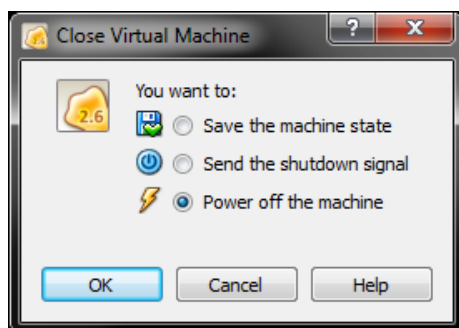

At termination of the import process the project can be edited at will. Further information regarding this topic can be found in the OPTIMA ADMINISTRATOR-MANUAL.

Note: in the same page it is also possible to import or export the image files and the scripts (if you use Optima's scripting module) used within the project into separate files!

2.5   CLOSING THE PDK

In order to close the PDK, please maximize the window of the virtual environment again and close it through the corresponding symbol. A pop up window with 3 options will appear; please select the option "POWER OFF THE MACHINE" and confirm it by clicking on the button "OK" to terminate the PDK.

2.6   CREDITS

The PDK is based on the software VIRTUALBOX PORTABLE, a special version of the virtual machine VIRTUALBOX created by ORACLE, which doesn't require any installation on the own PC. Further information regarding VIRTUALBOX and VIRTU-ALBOX PORTABLE can be found on the following web pages:

www.virtualbox.org   www.vbox.me

DIVUS takes no responsibility for hard- or software issues (like e.g. data loss) caused by the use of upstanding software in other terms as in combination with the PDK.
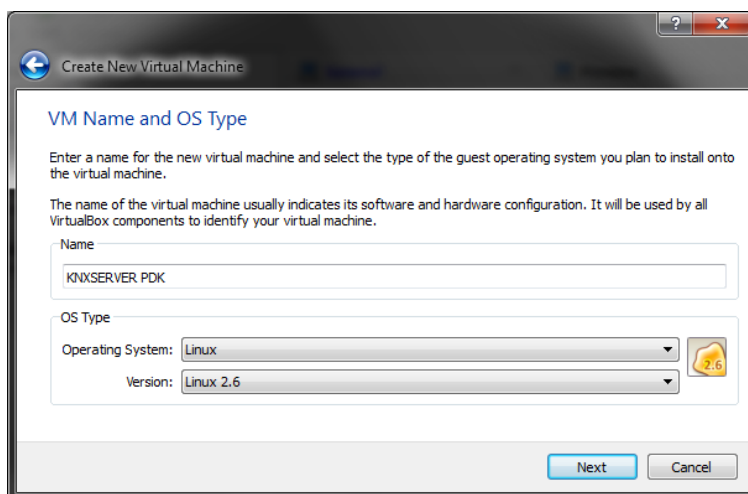
2.7   USAGE OF THE PDK ON OTHER SYSTEMS (MAC, LINUX)

The PDK only on PCs with MICROSOFT WINDOWS (32bit or 64bit) can be used in the form described until now. In order to use the PDK also on other systems, it has to be configured manually. This procedure can also be necessary when you encounter errors on the execution of the PDK or when you already have a version of VIRTUALBOX running on your PC:
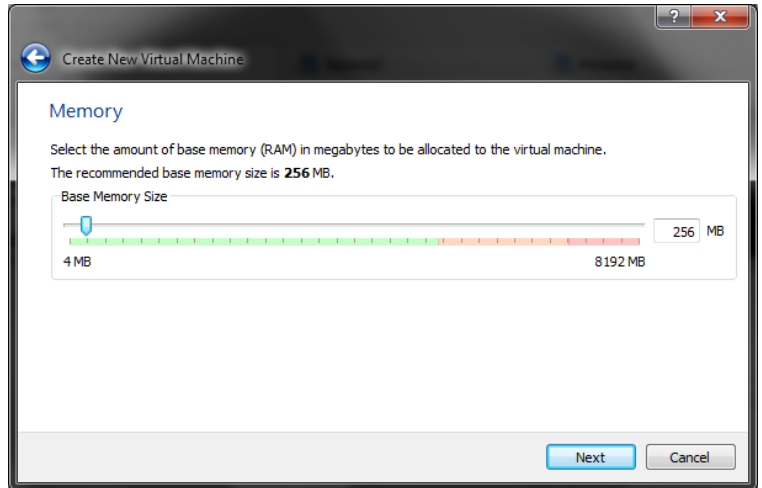
- Install the latest version of the VIRTUALBOX software (version 4.0 or higher) on your PC (please follow the instructions on www.virtualbox.org)

- Create a new virtual machine using the corresponding button in the toolbar. In the appearing configuration menu, please use "KNXCONTROL PDK" as name, "Linux" as operating system and "Linux 2.6" as version (optional, please check out the screenshot A on the next page). Afterwards, click on "Next"

- Assign 256MB of your PCs RAM to the virtual machine and continue (check out Screenshot B)

- In the next menu, please select "Use existing hard disk" and select the image file of the PDK hard disk. This file can be found in the main folder of the PDK under "**data**\.VirtualBox\Machines\KNXCONTROL_PDK**KNXCONTROLPDK.vdi**".

- Please confirm your selection and continue by clicking on the "Next" button

- Terminate the creation process by clicking on "Create" in the next menu

- Now select the created virtual machine in the menu on the left and click on the "SETTINGS" button in the toolbar. In the appearing settings menu, please click on the menu entry "Network"

- Select "NAT" from the "Attached to" menu, click on "Advanced" and type in the following value for the field „MAC Address": 080027C69C34

- Now click on "Port Forwarding", add a new rule and type in the following values:

  o Host Port: "8080"

  o Guest Port: "80"

- Save all the settings and start the virtual machine through the "START" button in the toolbar. At completion of the loading process you will be able to reach the contents of the PDK through the URL http://127.0.0.1:8080, as already mentioned before in this manual.

Screenshot A:

Screenshot B:

Screenshot C:

3   Appendix

3.1   NOTES