

MTC200 System Configurator 19VRS

Application Manual

SYSTEM200

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 19VRS

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6 Revisions to this Document

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1 General View of the System Configurator

1.1 Field of Application

The System Configurator is an editor which is used to describe the devices connected to the Control PC. For this the Device Address, the Device Type and the description of the communication path to the device are used. It is the aim to create a 1:1 copy of the device structure connected to the Control PC. This is called System Configuration. The System Configuration is stored on the Control PC.

Furthermore it is possible to assign properties to the devices, for example the connection of a MTC200-P, MTC200-R or MTCNC device to a MTVNC device (virtual MTC) for the creation of a Simulation Pair.

The System Configurator is used by the Function Interface and the User Interface (MUI/GUI/WinHMI) for the organization of the communication with the devices connected to the Control PC.

1.2 Menu Structure and Data Entry

Menu Structure The left side of the screen shows the configured devices in a tree structure. For the device, which is selected in the tree the corresponding data is displayed on the right side of the screen.

Data Entry When entering data e. g. when creating a new device, or when editing an existing device the user will be guided by an assistant. The assistant splits the data entry into several steps.

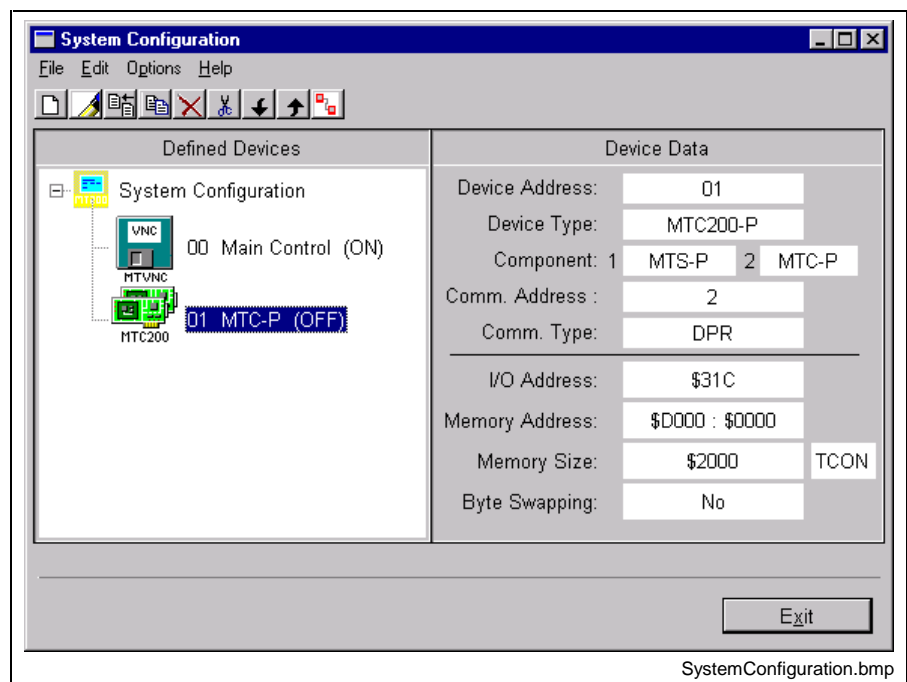


Figure 1-1: System configurator with one device

1.3 Installation and Start of the System Configurator

The System Configurator is installed when installing the MUI/GUI/Win-HMI.

Note: The System Configurator is an independent program and has to be called manually before starting the MUI/GUI. The System Configurator also has to be finished before starting the MUI/GUI.

MUI /GUI version 18V02 and higher

The installation program creates a link to the System Configurator on the desktop. At the same time an entry is added to the program path Indramat. The system configurator is started directly by calling the syscon.exe program for both possibilities.

1.4 Example Scenario

Connect a New Device

If for example an MTC200-R, address 0 selected at the selector switch, is connected via RS232 to COM2 of the Control PC, this configuration has to be entered in the System Configurator. That means a device of the type MTC200-R, Device Address 0, with a Communication Address that includes the settings RS232 and COM2 etc..

Modify an existing device

If the physical configuration of a device is modified, this modification also has to be entered / updated in the System Configurator. If for example the connection of device 0 to the Control PC is modified from COM2 to COM1, the device 0 has to be edited in the System Configurator. This means COM1 has to be selected instead of COM2 as the Channel in the corresponding Communication Address.

2 Information about the System Configurator

Figure 3-4: Steps for Insert Device

The Device Types available in the current installation of the System Configuration are shown in the selection box "Device Type" in the first step of the function "New Device" (see Create a New Device step 1).

The following table of Device Types is an example:

Device Type	Class	Description
MTVNC	MTCX	Virtual MTC
MTC200	MTCX	MTC with SPS PC variant (see note)
MTC200-P	MTCX	MTC with SPS PC variant
MTC200-R	MTCX	MTC with SPS PECO variant
MTC200-P-G2	MWCX	MTC with SPS PC variant
MTC200-P-G2	MWCX	MTC with SPS PECO variant
ISP200-P	MISX	Standalone-SPS PC variant
ISP200-R	MISX	Standalone-SPS RECO variant
MTA200-P	MTAX	MTC with SPS PC variant (see note)
MTA200-P-G2	MTAX	MTC with WIN-SPS PC variant (see note)
ISP200-P-G2	MWSX	Standalone-WIN-SPS PC variant
ISP200-R-G2	MWSX	Standalone-WIN-SPS RECO variant
SYNTAX200-P	MSYX	SYNTAX as PC variant
SYNTAX200-R	MSYX	SYNTAX as RECO variant
SERCANS-A	MSCX	SCS A card
SERCANS-P	MSCX	SCS P card
TRA200-R	MTRX	TRA200 as RECO variant
ECODRIVE03	MECX	ECODRIVE03

Figure 2-1: Device types and device classes

Note: The Device Type MTC200 used up to MUI/GUI version 17 is replaced by the Device Type MTC200-P in MUI/GUI version 18. The Device Type MTC200 is compatible with MTC200-P. For device types with the supplement "-G2" the settings for the basic types without supplement are used since these are currently compatible to each other. The device class is displayed shortly in order to document the connection for the further applications.

2.1 Device / Device Address

The term device stands for a control hardware, a drive device or an I/O device.

The Device Address entered in the System Configurator corresponds to the Device Address inside the MUI/GUI. For example, device 0 corresponds to system 0.

The range for the Device Address is 0 to 15. Note that the MUI/GUI always needs a Device 0 .

2.2 Show Only Free Serial Ports

A check of the free serial ports is done. Occupied serial ports (e. g. mouse) will not be offered for editing Communication Addresses in the System Configurator.

The check can be disabled (Menu **Options**, Entry **Show only free COM ports**).

2.3 Communication Address

The Communication Address is a Rexroth Indramat-specific data set which describes the way of communication to the device. The Communication Address has a symbolic identifier which consists of the fix part CommAddr and a number, e. g. CommAddr2. Up to 8 Communication Addresses can be created (CommAddr1 to CommAddr8).

Note: Devices which are connected to the same serial port have the same communication address.

2.4 Update of Device Directories

When saving the system configuration data, an update of the device directories will be executed if necessary. The update of the device directories will only be executed if devices have been deleted or new devices have been added.

Note: If the active device in the MUI/GUI is deleted, device 0 will be selected as the active device. Information is given via MSG-BOX.

2.5 Menu File

The **File** Menu includes the menu items **Save** and **Exit**.

Save This function saves the system configuration. (see Update of Device Directories).

Exit If modifications have been made, you will be asked by a MSG-BOX whether to save and exit or exit without saving.

3 Available Functions

3.1 Overview

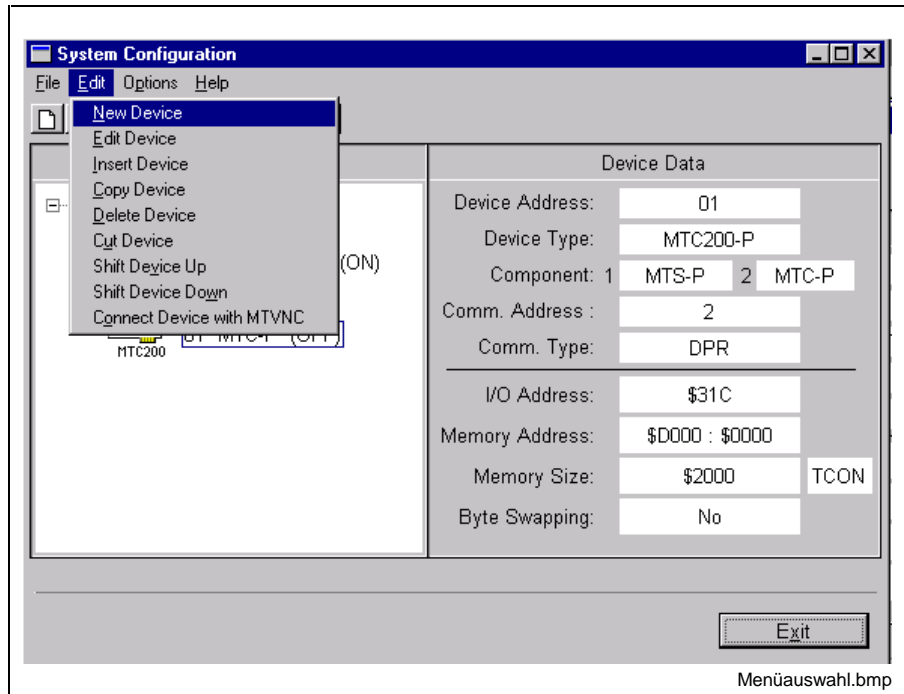


Figure 3-1: Menu selection Edit

The functions can be called in the Edit menu with the entries New, Edit, Insert, Copy, Delete, Cut, Shift Up, Shift Down, Connect with MTVNC or with the symbol bar on the button to which the command has been assigned.

Note: The underlined words correspond to the function designations in the "Edit" menu.

The New command inserts this new device before the device currently marked in the tree.

The contents of the functions Create New Device, Edit Device and Insert device (see 3.2, 3.3 and 3.8) depends on the device type. The following tables provide a short overview:

Create a New Device	MTC200-P, MTC200-R	MTVNC	ISP200-P, ISP200-R
Step 1	Select Device Type	Select Device Type	Select Device Type
Step 2	Select Device Address	Select Device Address	Select Device Address
Step 3	Enter Device Name and Device Status	Enter Device Name and Device Status	Enter Device Name and Device Status
Step 4	Edit Communication Address	Configuration of the MTVNC (Start Mode, Memory Size)	Edit Communication Address
Step 5	Connect with MTVNC	---	---

Figure 3-2: Steps for New Device

Edit Device	MTC200-P, MTC200-R	MTVNC	ISP200-P, ISP200-R
Step 1	Enter Device Name and Device Status	Enter Device Name and Device Status	Enter Device Name and Device Status
Step 2	Edit Communication Address	Configuration of the MTVNC (Start Mode, Memory Size)	Edit Communication Address
Step 3	Connect with MTVNC	---	---

Figure 3-3: Steps for Edit Device

Insert Device	MTC200-P, MTC200-R	MTVNC	ISP200-P, ISP200-R
Step 1	Select Device Address	Select Device Address	Select Device Address
Step 2	Enter Device Name and Device Status	Enter Device Name and Device Status	Enter Device Name and Device Status
Step 3	Edit Communication Address	Configuration of the MTVNC (Start Mode, Memory Size)	Edit Communication Address
Step 4	Connect with MTVNC	---	---

Figure 3-4: Steps for Insert Device

3.2 Create a New Device

The function can be called in the **Edit** Menu, via the menu item **New Device**, or via the toolbar button for **New Device**. The new device is inserted ahead of the device currently marked in the tree.

When entering data the user will be guided by an assistant. The assistant splits the data entry into several steps. The creation of a new device will be finished using the button **Finish** in the last Step.

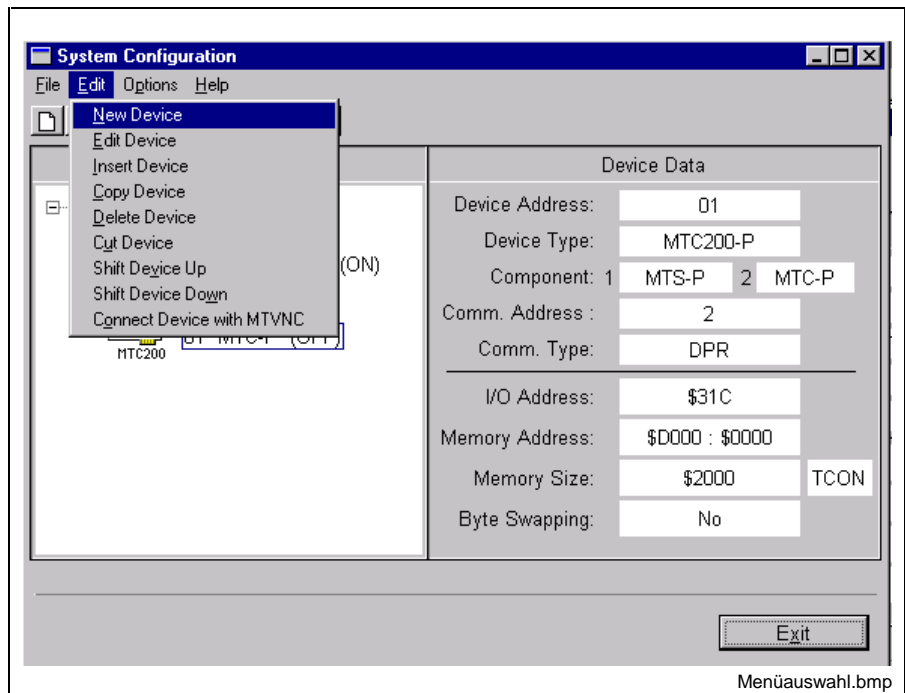


Figure 3-5: Menu selection

New Device, Step 1

The Device Type is selected in this step. The device type must correspond to the device connected to the control PC.

Note: The Device Type cannot be changed after it has been created.

New Device, Step 2

The Device Address is selected in this step.

If the device is connected to the Control PC by a serial connection and has a selector switch, the Device Address has to correspond to the address selected at the device by the selector switch.

Note: The Device Address has to be unambiguous.
The Device Type cannot be changed after it has been created.

New Device, Step 3

The Device Name is entered and the Device State is selected. The device name may include up to 32 characters and should not include special characters.

Note: Set the Device Status to ON if the device exists and is ready, else to OFF.

New Device, Step 4

The component types are selected in this step. ALT + ↓ allows to view the selection list of the allowed combinations.

New Device, Step 5

Devices except MTVNC

A Communication Address is assigned to the device. First a Communication Address has to be selected in the selection box **Comm. Address**.

In the selection box only Communication Addresses will be offered which correspond to the Device Type of the currently edited device and which have not yet been used by other devices. Exceptions are devices which are connected by a serial port. Please refer to the note below.

If no Communication Address exists yet, it has to be created by using the entry **New** in the selection box, or via the toolbar button **New Communication Address**.

The data of the Communication Address depends on the Device Type and is displayed in the corresponding entry fields. The data has to

correspond to the device settings. For further information on the devices please refer to the Technical Documentation of the device.

Note: If devices are connected to the Control PC by a serial connection, it is possible that several devices use the same communication path (the same Communication Address) e.g. when using the RS485 protocol. The devices are addressed by the Device Address selected via the selector switch.

MTVNC For devices of the type MTVNC the configuration of the MTVNC is done in this step.

The Start Modes is selectable:

- ON: The MTVNC is started when starting the MUI/GUI.
- OFF: The MTVNC is not started.

Note: If Device State is ON, the Start Mode of the device is automatically set to ON. The Start Mode of the MTVNC can only be modified if the Device State is OFF.

The Memory of the PC, used by the MTVNC can be modified (from MUI/GUI version 18V01 up):

- Default: 512KB
- Range: 256KB up to 16383KB in steps of 1 KB

The button "Advanced" provides the access to the entry "options" (from MUI/GUI version 18V01 up). The options are not needed under normal use.

Note: For the entry Options, data may only be entered according to prior agreement with Rexroth Indramat personal. Normally no data is entered!

New Device, Step 6

**Devices of the type MTC200-P,
MTC200-R**

Devices of the type MTC200-P or MTC200-R can be connected to a device of the type MTVNC (Virtual MTC). In this way a Simulation Pair is created, also refer to the documentation "NC-Simulation".

- In order to connect a MTVNC, select a Device from the selection box 'Connected MTVNC'. The selection box shows only Devices of the type MTVNC, that are not yet connected. A connected MTVNC is indented to the right in the tree 'System Configuration'.
- An existing connection can be changed by selecting another Device of the type MTVNC or can be removed by selecting 'NONE'.

Note: If there is no device of the type MTVNC available for the connection, the device currently created has to be finished without connection to a MTVNC. Then create a new device of the type MTVNC. This device will then be available for connection (see Connect Device with MTVNC).

3.3 Edit Device

The device to be edited has to be selected in the 'System Configuration' tree.

By pressing **<Enter>** or DOUBLE CLICK on the selected device or in the **Edit Menu**, entry **Edit Device** as well as with the toolbar button for **Edit Device**, the editing of the device can be started.

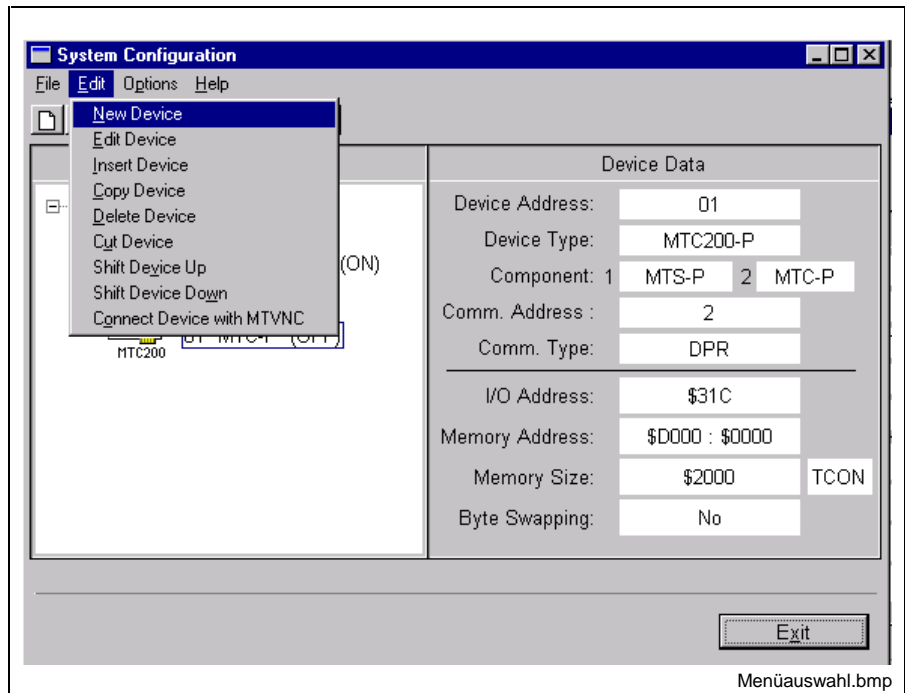


Figure 3-6: Menu selection

The user will be guided by an assistant. The assistant splits the data entry into several steps. The function Edit Device will be finished using the button **Finish** in the last Step.

Note: The Device Address as well as the Device Type cannot be changed.

Edit Device, Step 1

The Device Name is entered and the Device State is selected. The device name may include up to 32 characters and should not include special characters.

Note: Set the Device Status to ON if the device exists and is ready, else to OFF.

Edit Device, Step 2

The component types are selected in this step. ALT + ↓ allows to view the selection list of the allowed combinations.

Edit Device, Step 3

Devices except MTVNC

The Communication Address data can be modified and also a new Communication Address can be created. Furthermore the Communication Address currently assigned to a device can be changed.

The Communication Address selected in the selection box **Comm. Address** is assigned to the device.

In the selection box only Communication Addresses will be offered which correspond to the Device Type of the currently edited device and which have not yet been used by other devices. Exceptions are devices which are connected by a serial port. Please refer to the note below.

The data of the Communication Address depends on the Device Type and is displayed in the corresponding entry fields. The data has to correspond to the device settings. For further information on the devices please refer to the Technical Documentation of the device.

Note: If devices are connected to the Control PC by a serial connection, it is possible that several devices use the same communication path (the same Communication Address) e.g. when using the RS485 protocol. The devices are addressed by the Device Address selected via the selector switch.

MTVNC For devices of the type MTVNC the configuration of the MTVNC is done in this step.

The Start Modes is selectable:

- ON: The MTVNC is started when starting the MUI/GUI.
- OFF: The MTVNC is not started.

Note: If Device State is ON, the Start Mode of the device is automatically set to ON. The Start Mode of the MTVNC can only be modified if the Device State is OFF.

The Memory of the PC, used by the MTVNC can be modified (from MUI/GUI version 18V01 up):

- Default: 512KB
- Range: 256KB up to 16383KB in steps of 1 KB

The button "Advanced" provides the access to the entry "options" (from MUI/GUI version 18V01 up). The options are not needed under normal use.

Note: For the entry Options, data may only be entered according to prior agreement with Indramat personal. Normally no data is entered!

Edit Device, Step 4

Devices of the type MTC200-P, MTC200-R

Devices of the type MTC200-P or MTC200-R can be connected to a device of the type MTVNC (Virtual MTC). In this way a Simulation Pair is created, also refer to the documentation MTC200/MT-CNC NC-Simulation.

- In order to connect a MTVNC, select a Device from the selection box 'Connected MTVNC'. The selection box shows only Devices of the type MTVNC, that are not yet connected. A connected MTVNC is indented to the right in the tree 'System Configuration'.
- An existing connection can be changed by selecting another Device of the type MTVNC or can be removed by selecting 'NONE'.

Note: If there is no device of the type MTVNC available for the connection, the device currently created has to be finished without connection to a MTVNC. Then create a new device of the type MTVNC. This device will then be available for connection (see Connect Device with MTVNC).

3.4 Connect Device with MTVNC

Devices of the type MTC200-P, MTC200-R

The device for which a connection to a MTVNC is to be created or edited, has to be selected in the tree 'System Configuration'.

In the **Edit** Menu, with entry **Connect Device with MTVNC** or with the toolbar button for **Connect Device with MTVNC** the last step of the function Edit Device can be called directly (see New Device, Step 3).

3.5 Delete Device

The device which is to be deleted has to be selected in the tree 'System Configuration'.

In the **Edit** Menu, with entry **Delete** Device or with the toolbar button for **Delete** Device, as well as with the **** key on the keyboard the selected device is deleted. Then a confirmation prompt appears.

Note: When deleting a device, also the data in the device directories will be deleted.

3.6 Cut Device

The device which is to be cut has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Cut** Device or via the toolbar button for **Cut** Device the selected device will be deleted, (also refer to Delete Device) and copied into a temporary buffer. Then a confirmation prompt appears.

For inserting the device, refer to 'Insert Device'.

3.7 Copy Device

The device which is to be copied has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Copy** Device or via the toolbar button for **Copy** Device the selected device will be copied into a temporary buffer.

For inserting the device, refer to 'Insert Device'.

3.8 Insert Device

If a device is saved in the temporary buffer, it can be inserted via the function Paste Device. The device will be inserted ahead of the device currently selected in the 'System Configuration' tree. (see Copy Device and Cut Device).

The function Insert Device is available via the Edit Menu, entry Insert Device or via the toolbar button for Insert Device. When inserting a device the user has to enter a Device Address. Other settings can be modified if needed. The user will be guided by an assistant. The following steps are executed:

- In Step 1 the Device Address has to be assigned (refer to Create a New Device).

From Step 2 on, the Steps as known from the function Edit Device are used

- In Step 2 the Device Name and the Device State can be edited (refer to Edit Device, Step 2).
- In Step 3 the Communication Address or the configuration of a MTVNC can be edited (refer to Edit Device, Step 2).
- In Step 4 a connection with a MTVNC can be established (refer to Edit Device, Step 3).

Note: Copy/Cut/Insert includes the System Configuration data of the device (Device Type etc.). It does not include data like NC-programs, message texts etc. which are located in the device directories.

3.9 Shift Device Up

The device which is to be shifted has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Shift Device Up** or via the toolbar button for **Shift Device Up**, the selected device is shifted one entry up in the tree.

3.10 Shift Device Down

The device which is to be shifted has to be selected in the tree 'System Configuration'.

Via the **Edit** Menu, entry **Shift Device Down** or via the toolbar button for **Shift Device Down**, the selected device is shifted one entry down in the tree.

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