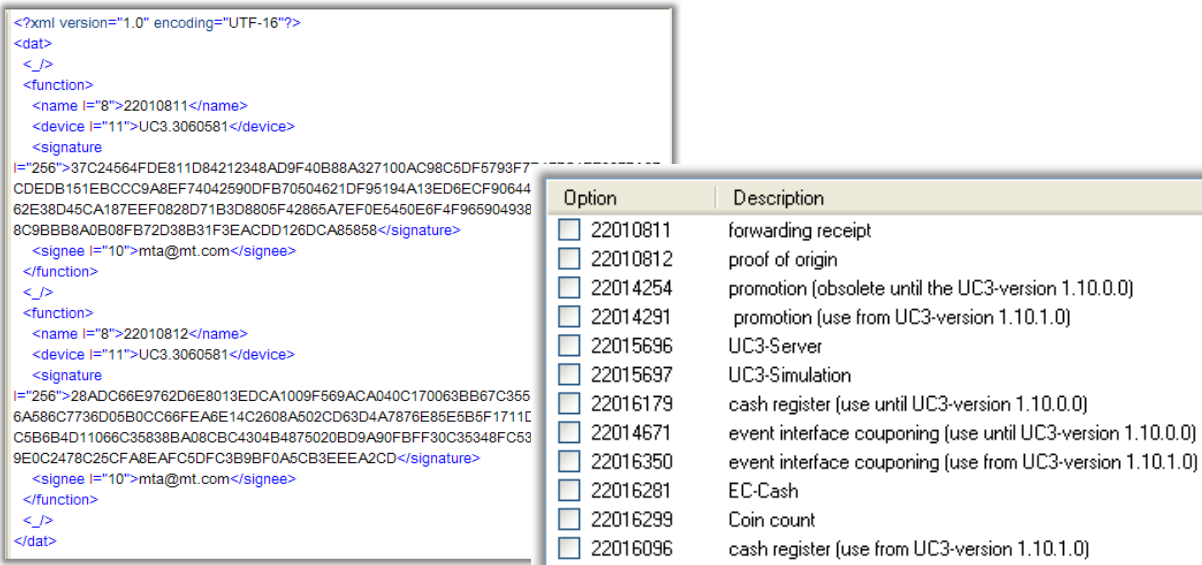


1.1 New handling for file “uc3options.xml” via UC3 database and TransUC3

- ❑ till now the information which additional packages of the UC3 application are activated on a UC3 device (linked with the serial number) was only based on the file uc3options.xml from the folder \Speicherkarte\unicorn for the local UC3 device
- ❑ the file uc3options.xml is keeps the information which option numbers (TAG name) can be used for which device number(s) and who created the file (TAG signee) where this complete information is signed with the TAG “signature”



The screenshot shows the XML content of the uc3options.xml file. The XML structure includes a root element <?xml version="1.0" encoding="UTF-16"?>, followed by a <dat> element. Inside <dat>, there are <_> and </_> elements, and a <function> element. The <function> element contains a <name> element with the value "8", a <device> element with the value "22010811", and a <signature> element. The <signature> element contains a long hexadecimal string. The XML content is signed with the TAG "signature".

Option	Description
<input type="checkbox"/> 22010811	forwarding receipt
<input type="checkbox"/> 22010812	proof of origin
<input type="checkbox"/> 22014254	promotion (obsolete until the UC3-version 1.10.0.0)
<input type="checkbox"/> 22014291	promotion (use from UC3-version 1.10.1.0)
<input type="checkbox"/> 22015696	UC3-Server
<input type="checkbox"/> 22015697	UC3-Simulation
<input type="checkbox"/> 22016179	cash register (use until UC3-version 1.10.0.0)
<input type="checkbox"/> 22014671	event interface couponing (use until UC3-version 1.10.0.0)
<input type="checkbox"/> 22016350	event interface couponing (use from UC3-version 1.10.1.0)
<input type="checkbox"/> 22016281	EC-Cash
<input type="checkbox"/> 22016299	Coin count
<input type="checkbox"/> 22016096	cash register (use from UC3-version 1.10.1.0)

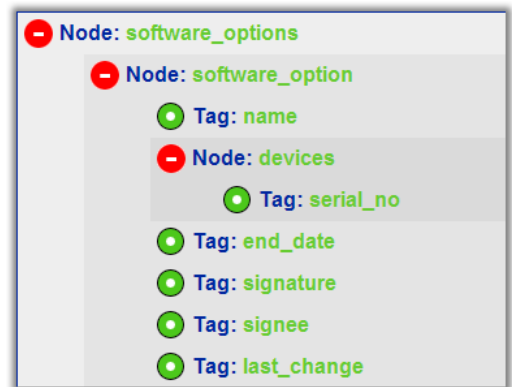
- ❑ starting with UC3 application version 1.12.0 this information will also be stored in a dedicated table into the UC3 database as a record which contains the serial numbers of the devices for which for software option is valid including the signature info

1.1.1 Merging the file uc3options.xml to the UC3 database

- ❑ when the UC3 application starts-up and finds a uc3options.xml file in the local folder \Speicherkarte\unicorn, then the information from this file is merged into a UC3 database table (but only selling options which have a number, not beta or debug)
- ❑ when the merging process is completed a new uc3option.xml file is generated with all options existing for this device number in the database
- ❑ in the last step the UC3 application will start up using the content of the new uc3option.xml file

1.1.2 Transmit uc3options with TransUC3 command “software_options”

- ❑ starting with UC3 application V 1.12.0 it's possible to transmit UC3 software options (content of the file uc3options.xml) with the new TransUC3 command “software_options”
- ❑ with this command it's possible to read, write and delete the uc3options data records saved in the UC3 database
- ❑ this XML command has a similar structure like the file uc3options.xml file, meaning that single software options will have attached
 - a list of serial numbers for which that option will be available
 - ⇒ the order of devices in that list is essential because the signature is generated for the content of the data structure representing the software option
 - ⇒ therefore the order in the serialized list must be identical to the order in the original list
 - an end date for availability of the software option
 - a signature for whole content
 - a signee info which show who was the owner of the UC3options-Wizard which was used to create this software option
- ❑ whenever software options data are modified in the UC3 database with a TransUC3 command (write or delete them), those changes are also done in the file uc3options.xml file
- ❑ therefore after receiving a series of changes regarding software options data, the file uc3options.xml will be regenerated to contain actual data from database.



1.1.3 Conflict resolution between uc3option file and software options in database

- ❑ at UC3 application' start-up can be reached one of the following situation regarding software options
 - the file uc3options.xml is not found / software options are present in the UC3 database
 - ⇒ in this case the uc3options.xml file is generated based on the database table
 - ⇒ after that the UC3 application start up will continue using the new uc3options.xml file

- the file uc3options.xml is found and database table for software options is empty
 - ⇒ in this case data from the uc3options.xml file will be inserted into the database table
 - ⇒ after that the UC3 application start up will continue using the still existing uc3options.xml file
- the file uc3options.xml is found and software options exist also in database
 - ⇒ in this case the content of the file uc3options.xml
 - is read for each software option
 - then is verified if it already exists identically in database table
 - if not it's inserted as a new record to the database table
 - when the procedure for verifying all options read from the file uc3options.xml is finished, the complete set of software options for this UC3 device (serial number) exists in the UC3 database table
 - ⇒ in the next step based on the options listed in the UC3 database table the file uc3options.xml will be regenerated
 - ⇒ finally the UC3 application starts up using the new, complete uc3options.xml file
- because the information which options will be activated for a device are merged in both directions (file ⇒ database / database ⇒ file) it may be not possible to remove options only by deleting the complete file uc3options.xml or parts of it, because with the next restart of the UC3 application the "old" uc3options.xml file will be regenerated again
 - to delete all options or only some of them which exist in the UC3 database and/ or the file uc3options.xml is only possible with this steps
 - ⇒ delete all or some of the options from the UC3 database by using the TransUC3 command (first read all record from the database and then delete this one which are no longer needed)
 - if the UC3 application is active on this device in this moment this options are also deleted in the file uc3options.xml
 - if the UC3 application is NOT active on this device in this moment you must delete the file uc3options.xml manually before the UC3 application is restarted next time with a connection to the MDD
 - after the file is deleted connect the device to the MDD and restart the UC3 application
 - now the database table of the device is synchronized with the database table of the MDD (where the old options record for the device are deleted)
 - based on the new database table the new uc3options.xml file is generated
- the big advantage of this handling for options data is, that if the file uc3options.xml of a device is missing in the local folder \Speicherkarte\unicorn (may be because a damaged hard disk was replaced) it will be generated with the first reboot of the application automatically (if the synchronization to the MDD was successful) based on the database info for this device (linked to the serial number)