Update PTU

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Chapter 1: Introduction

1 Motivation

The two main components of a PSA are

- PTU software.
- Device controller (DC) firmware.

While the DC firmware is basically the same for each PSA (even for different customers), the PTU software is highly dependent on customer requirements.

Hence, each customer is assigned an own git-repository, which will be loaded ("cloned") on the PSA when configuring the machine for the first time.

Two special tools, the **UpdateController** (a Qt binary [**up_dev_ctrl**]) and the **UpdateScript** (a bash script [**update_psa**]), work together to finish a PSA installation.

2 PSA: Initial configuration

For the initial configuration, a PSA loads a customer-specific git-repository, which structure is detailed below [**Structure of a customer git-repository**].

The "git clone" for the repository is done by the UpdateScript [**update_psa**]. It updates the file

/opt/app/tools/atbupdate/update_log.csv

which will be interpreted by the UpdateController [**up_dev_ctrl**]. The structure of **update_log.csv** is detailed below [**Structure of "update_log.csv"**].

Each line of **update_log.csv** represents a command for the UpdateController, which will either download certain files to the DC or execute some opkg commands [**The package manager "opkg"**].

3 PSA: Update

Chapter 2: Update-Tool "up_dev_ctrl"

4 up_dev_ctrl

The update-tool is a Qt binary ("up_dev_ctrl") and called by the system-controller application. It is installed under

`/opt/app/tools/atbupdate/up_dev_ctrl`

and has two responsibilities:

- Call update-script "update_psa".
- Update the device controller firmware.

4.1 Calling the update-script "update_psa"

The update-script "update_psa" is about executing all git-commands necessary to clone and pull a customer repository.

Chapter 3: Update-Script "update_psa"

5 update_psa

Inside of such a repository, there are at least the following directories:

- **etc**
- **etc/dc**
  Contains the device controller firmware as binary file.
- **etc/psa_config**
  Contains the printer template files (JSON).
- **etc/psa_tariff**
  Contains the tariff files (JSON).
- **etc/psa_update**
  Contains a single file for opkg-commands.

Chapter 4: Annex

6 Structure of a customer git-repository

7 Structure of "update_log.csv"

8 The package manager "opkg"