A short documentation of the concept behind the logic of the file operations functionality.

File operations in a7EBP

The file operation algorithms

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a7EBusiness Platform

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Kowalczyk	2012-05-20	First document version

Kowalczyk	2012-06-03	• Added file states:
		  ○ NewOnServer
		  ○ ConflictNewOnServer
		• Added behaviour for this new file states

1. File state types

- OnlyOnServer – file exists on server and there isn't any local location (for current user and computer) set in the metadata
- OnlyLocal – file doesn't exist on the server, but there is a local location record and the file exists locally (rare situation when f.e. after a download the file was deleted on the server)
- NoLocalNoServer – no file info neither on server nor locally
- ChangedOnServer – The file exists on server, and locally, but since the last download/upload of the file, it was changed on the server and not locally
- NewOnServer – The file exists on server, and locally, but since the last download/upload of the file, a new file was uploaded to the server on this record.
- ChangedLocally - The file exists on server, and locally, but since the last download/upload of the file, it was changed locally but not on the server
- Conflict - The file exists on server, and locally, but since the last download/upload of the file, it was changed on the server and locally
- ConflictNewOnServer - The file exists on server, and locally, but since the last download/upload of the file, it was changed locally and on the server a new file was uploaded on this record.
- Synchronized - The file exists on server, and locally, and is the same on both locations, wasn't changed on neither of them.
- NoRecordSelected – no record is selected.

2. Download behavior

- OnlyOnServer – Popup the folder select dialog and download file
- OnlyLocal – disabled
- NoLocalNoServer – disabled
- ChangedOnServer –"You have the file already downloaded earlier, but on the server is a newer version"

    - Actualize local file
    - Download file to new location
- NewOnServer – “You have the file already locally, but on the server is a new file.”
    - Download file to new location
- ChangedLocally – “Your earlier downloaded file has changed, select what to do:”
    - Upload your file on the server (open/close after finish) (if edit rights)
    - Download file to new location (leave earlier downloaded changed file)
    - Overwrite your file with the server version (Local changes will be lost on file: xxxx)
- Conflict – “You have the file already downloaded earlier, since then, the file has changed both – on the server and locally”
    - Actualize local file (Local changes will be lost on file: xxx)
    - Download file to new location (leave earlier downloaded changed file)
- ConflictNewOnServer - You have the file already locally and changed it, but in the mean time the file was replaced on the server by another one.
    - Download file to new location
- Synchronized – “You have already the file downloaded earlier, and your local file is up-to-date”
    - Open file
    - Download file to new location

3. Upload behavior

- OnlyOnServer –
    - If on OneChildBox: Ask if overwrite file, Popup the file select dialog and upload file
    - If on a normal box:
        - If record selected:
            - Overwrite file on server with a new file (changes on server will be lost) (if edit rights)
            - Create new file on server
- OnlyLocal – Popup the file select dialog and upload file
- NoLocalNoServer – Popup the file select dialog and upload file
- ChangedOnServer –“You have the file already downloaded earlier, but on the server is a newer version”
    - Overwrite file on server with your local file (changes on server will be lost) (if edit rights)
    - Overwrite file on server with a new file (changes on server will be lost) (if edit rights)
    - Create new file on server (if not onechild box)
- NewOnServer – like “ChangedOnServer” only the messages are informing, that on the server is a new file.
- ChangedLocally – “Your earlier downloaded file has changed, select what to do:”
    - Upload your file on the server (open/close after finish) (if edit rights)
    - Overwrite file on server with a new file (changes on server will be lost) (if edit rights)
    - Create new file on server (if not onechild box)
- Conflict – “You have the file already downloaded earlier, since then, the file has

changed both – on the server and locally”
    - Overwrite file on server with your local file (changes on server will be lost) (if edit rights)
    - Overwrite file on server with a new file (changes on server will be lost) (if edit rights)
    - Create new file on server (if not onechild box)
- ConflictNewOnServer - like “Conflict” only the messages are informing, that on the server is a new file.
- Synchronized – “You have already the file downloaded earlier, and your local file is up-to-date”
    - Open file
    - Overwrite file on server with a new file (changes on server will be lost) (if edit rights)
    - Create new file on server (if not onechild box)

4. Sync behavior

- OnlyOnServer – – Popup the folder select dialog and download file
- OnlyLocal – Popup the file select dialog and upload file
- NoLocalNoServer – Popup the file select dialog and upload file
- ChangedOnServer – Actualize local file
- NewOnServer – “On the server is a new file.”
    - Download file to new location
    - Overwrite file on server with your local file
- ChangedLocally – Upload your file on the server (open/close after finish) (if edit rights)
- Conflict – “You have the file already downloaded earlier, since then, the file has changed both – on the server and locally”
    - Actualize local file (Local changes will be lost on file: xxx)
    - Download file to new location (leave earlier downloaded changed file)
    - Overwrite file on server with your local file (changes on server will be lost) (if edit rights)
    - Overwrite file on server with a new file (changes on server will be lost) (if edit rights)
    - Create new file on server (if not onechild box)
- ConflictNewOnServer - The local file was changed since last synchronisation, but in the mean time the file was replaced on the server with another one..
    - Download file to new location
    - Overwrite file on server with your local file
    - Overwrite file on server with a new file
    - Add new file to the server (if not onechild box)
- Synchronized – “You have already the file downloaded earlier, and your local file is up-to-date”
    - Open file

5. Open behavior

- OnlyOnServer – Popup the folder select dialog, download file, open file
- OnlyLocal – display warning, that the file is already only locally existing, ask if upload before opening, and open file
- NoLocalNoServer – disabled
- ChangedOnServer –"You have the file already downloaded earlier, but on the server is a newer version"
    - Actualize local file (and open)
    - Download file to new location (and open)
    - Open your local file (without actualization
- NewOnServer – "You have the file already locally, but on the server is a new file."
    - Download file to new location before open
    - Open your local file (without actualization)
- ChangedLocally – "Your earlier downloaded file has changed, select what to do:"
    - Upload your file on the server and open (open/close after finish) (if edit rights)
    - Download file to new location and open (leave earlier downloaded changed file)
    - Overwrite your file with the server version and open (Local changes will be lost on file: xxxx)
- Conflict – "You have the file already downloaded earlier, since then, the file has changed both – on the server and locally"
    - Actualize local file and open(Local changes will be lost on file: xxx)
    - Download file to new location and open (leave earlier downloaded changed file)
    - Overwrite file on server with your local file and open (changes on server will be lost) (if edit rights)
    - Overwrite file on server with a new file and open (changes on server will be lost) (if edit rights)
    - Create new file on server and open (if not onechild box)
- ConflictNewOnServer - You have the file already locally and changed it, but in the mean time the file was replaced on the server by another one.
    - Download file from server (without your changes) to new location and open it
    - Overwrite file on server with a new file and open it
    - Add new file to the server and open it (if not onechild box)
- Synchronized – "You have already the file downloaded earlier, and your local file is up-to-date"
    - Open file

6. Check Out behavior

Like open only before open the check out flag is set on the file record

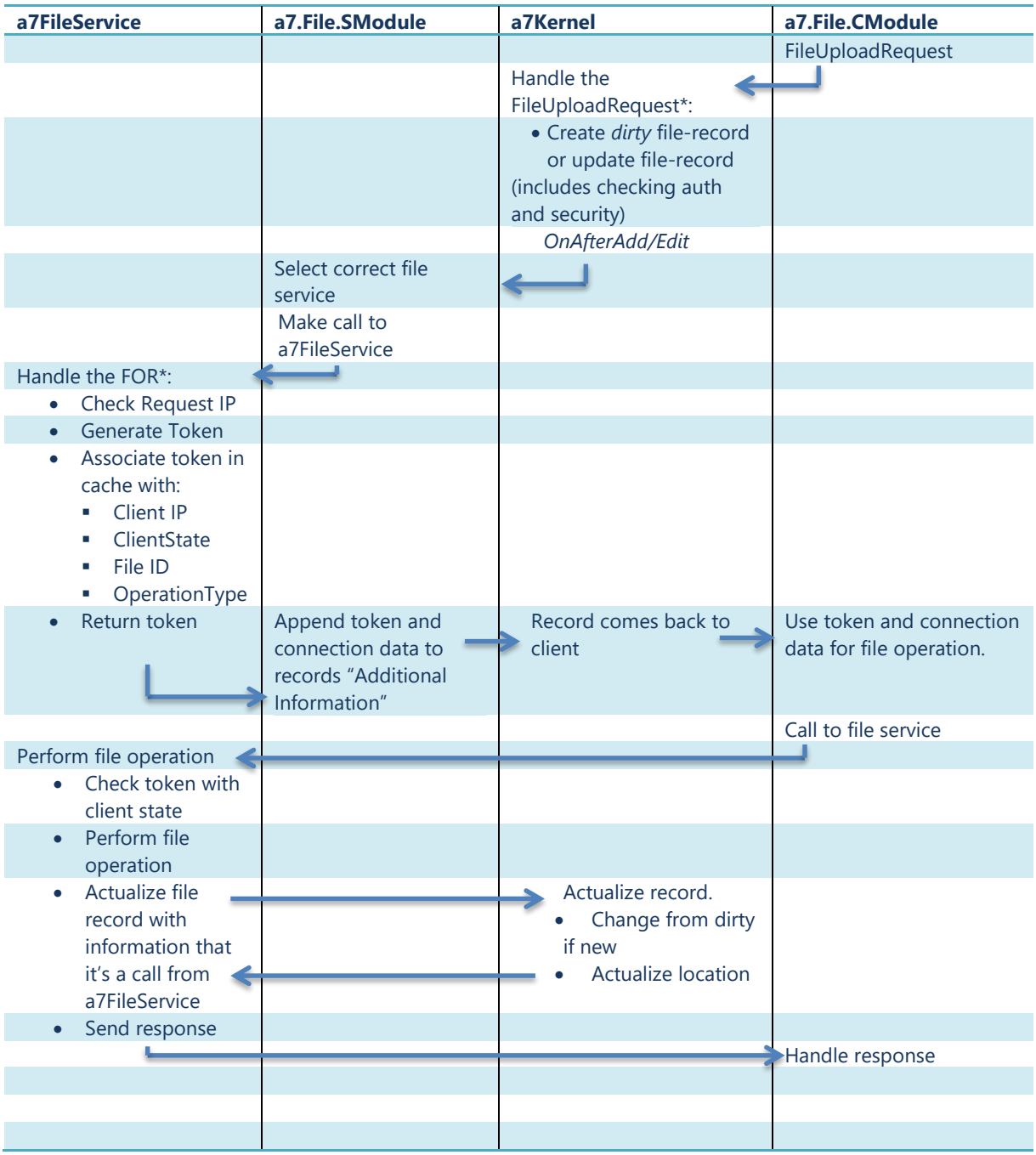
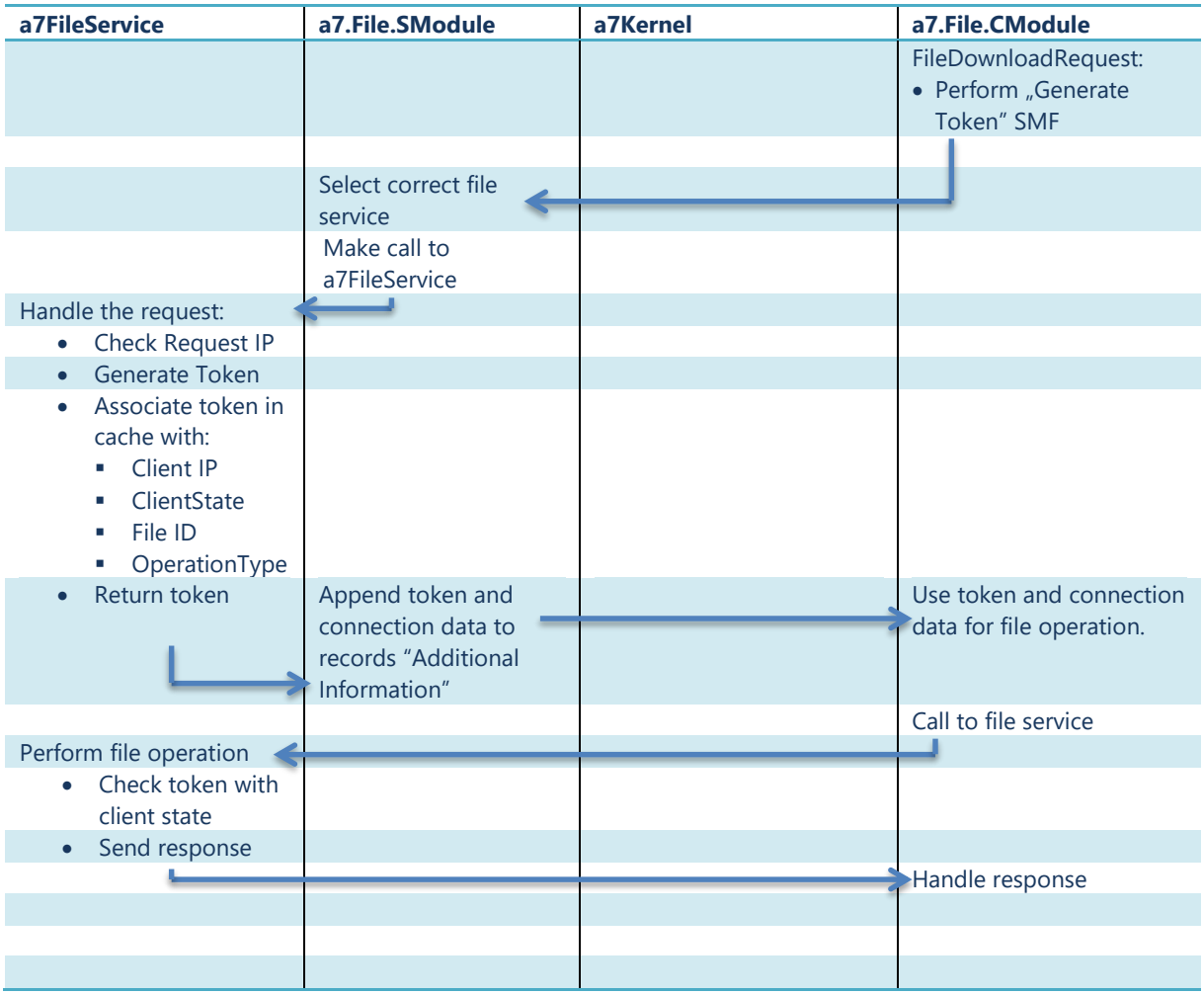
7. Cancel check out behavior

Check out flag is set to false

8. Check In behavior

- OnlyOnServer – disbled (message)
- OnlyLocal – Popup the file select dialog and upload file, set check-out flag to false
- NoLocalNoServer – Popup the file select dialog and upload file, set check-out flag to false
- ChangedOnServer –“You have the file already downloaded earlier, but on the server is a newer version”
    - Ask if overwrite file on server with your local file (changes on server will be lost) (if edit rights) and set check-out flag to false
- NewOnServer – like “ChangedOnServer” only the messages are informing, that on the server is a new file.
- ChangedLocally – “Your earlier downloaded file has changed, select what to do:”
    - Upload your file on the server set check-out flag to false
- Conflict – “You have the file already downloaded earlier, since then, the file has changed both – on the server and locally”
    - Ask Overwrite file on server with your local file (changes on server will be lost) (if edit rights) set check-out flag to false
- ConflictNewOnServer - like “Conflict” only the messages are informing, that on the server is a new file.
- Synchronized – “You have already the file downloaded earlier, and your local file is up-to-date”
    - set check-out flag to false

9. File upload algorithm



10. File download algorithm