Resolving TFTP Configuration File Issues

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Purpose:

Resolving TFTP Configuration File Issues

Current TFTP Mechanism

- **The standard currently provides 802.16-standardized fields in the TFTP Config. File which allows the infrastructure to offer the SS a software image upgrade (Section 9.2.2, 11.3.1, 11.3.2)**

TFTP Get
Config File

TFTP Config File (SW
Upgrade Filename, SW Server
IP Address)

TFTP Get SW
File

TFTP Image
File
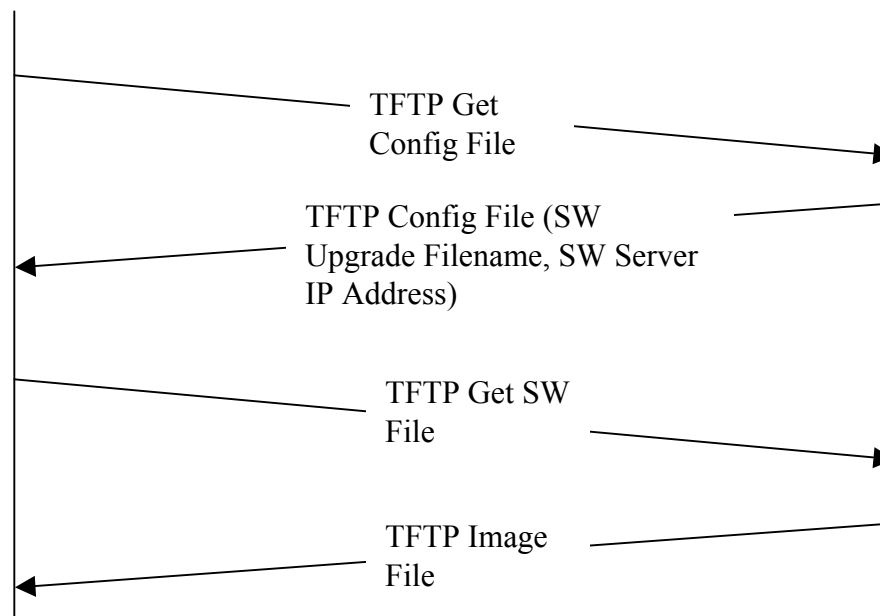
Issues

- No mechanism for the SS to identify the version of the upgrade file being offered.

- No mechanism for the SS to identify the hardware platform for which the upgrade file is intended.

- No mechanism for providing a way to offer different software images for multiple, co-existing SS hardware types.

Proposed Solution

- **Modify Software Upgrade Filename Configuration Setting (11.3.1) to be a compound value. Rename it "Software Upgrade Descriptors".**

- **Add subsections 11.3.1.1, 11.3.1.2, 11.3.1.3, 11.3.1.4 to define the following encapsulated TLV fields:**

Type	Length	Value
9.1	3	Vendor ID
9.2	N	Hardware ID (String)
9.3	N	Software Version (String)
9.4	N	Upgrade Filename (String)

- **All four tags must be supplied in the above order for each available upgrade file.**

- **A BS may choose to make upgrades available for any number of SS hardware platforms by include multiple copies of the above tags.**

Proposed Solution – cont.

- An SS shall ignore filenames which do not have matching Vendor Ids and Hardware Ids
- An SS shall download an upgrade which matches its Vendor ID and Hardware ID when the Software Version differs from the one it is currently executing. The presence of the tags in the TFTP file forces managed SSs to migrate to the specified image upon network entry
- Individual vendors are responsible for managing Hardware Ids for each distinct SS hardware platform which are unique for that vendor
- Individual vendors are responsible for managing Software Versions which are unique for a given Vendor ID/Hardware ID