

## 🕒 Overview

- Introduction
- Requirements
- Scenarios

## 🕒 Requirements in Detail

- Provisioning Server
- Configuration Parameters
- Setting Files

## 🕒 Scenarios in Detail

- Scenario 1: DHCP
- Scenario 2: Plug&Play
- Scenario 3: Manual Redirection
- Scenario 4: Automatic Redirection
- Scenario 5: Fix Redirection

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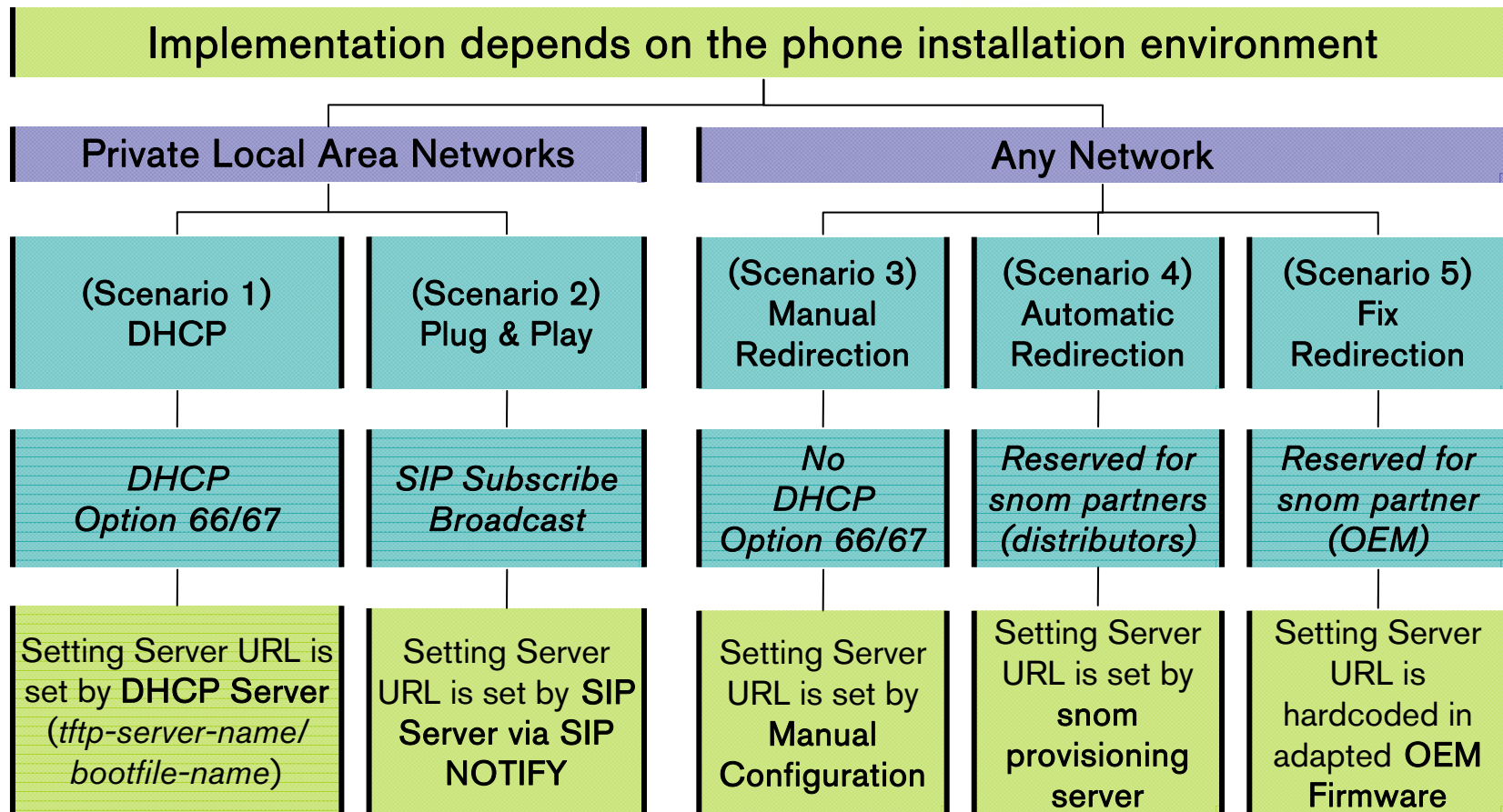
- Provisioning Server
- Configuration Parameters
- Setting Files

## 🕒 Scenarios in Detail

- Scenario 1: DHCP
- Scenario 2: Plug&Play
- Scenario 3: Manual Redirection
- Scenario 4: Automatic Redirection
- Scenario 5: Fix Redirection

- ❶ Mass deployment („Auto Provisioning“) is a feature implemented proprietary in the standard firmware of all snom 3xx VoIP phones and snom m3
- ❷ Mass deployment allows remote administration (configuration and maintenance) of unlimited number of distinct snom phone types (snom3xx, snom m3).
- ❸ Mass Deployment is particularly useful for out-of-the-box scenarios in larger phone installations.
- ❹ Mass Deployment can be used to provide general and specific configuration parameters ("Settings") to the phones and to manage firmware actualization.

- ❶ Mass deployment requires one central provisioning (“setting”) server able to deliver the necessary configuration parameters (“settings”) and firmware updates to each snom phone.
- ❷ Configuration parameters can be stored in individual setting files (phone type/MAC address based) or can be created at runtime by means of scripts (MAC address based). The location of these files is determined in the setting (provisioning) URL.
- ❸ Depending on the phone installation environment five (5) scenarios can be distinguished how to provide the setting (provisioning) URL to the phones:



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- ① The „Provisioning Server” stores the configuration parameter („setting”) files and firmware image files centrally and provides them on request to the snom phone.

	Provisioning of configuration parameter	Provisioning of firmware images
TFTP	Yes	From V7.2: Yes
HTTP	Yes	Yes
HTTPS	Yes (restricted)	No

- Provisioning Server can be hosted on private or public servers depending on the mass deployment method

Scenario	1	2	3	4	5
Server	DHCP	Plug & Play	Manual Redirection	Automatic Redirection	Fix Redirection
Private	Yes	Yes	Yes	No	No
Public	No	No	Yes	Yes	Yes



- ① Input variables for the phone's firmware which determine all functional and operational processes on the phone.
- ① Configuration parameters can be changed via:
  - Phone user interface (keypad/display)
  - Web User Interface (using an external web client/browser)
  - Mass Deployment
  - **NOTE:** Configuration changes can only be reverted by factory reset (resets all parameters to their default values)
- ① Configuration parameters are physically stored on the flash memory of the phone and are loaded on boot-up into the RAM:
  - Before firmware version 7 parameters were stored internally in a dedicated partition using a proprietary format.
  - Since firmware version 7 parameters are stored internally using XML syntax.

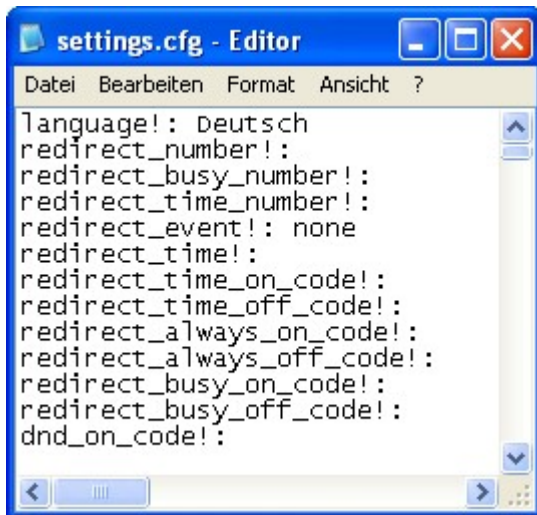
- There are currently more than about 300 configuration parameters available
- Retrieve a complete list from the Web User Interface:
  - Status --> “Settings” page

Settings	
<b>Operation</b>	
Home	
Address Book	
<b>Setup</b>	
Preferences	
Speed Dial	
Function Keys	
Identity 1	
Identity 2	
Identity 3	
Identity 4	

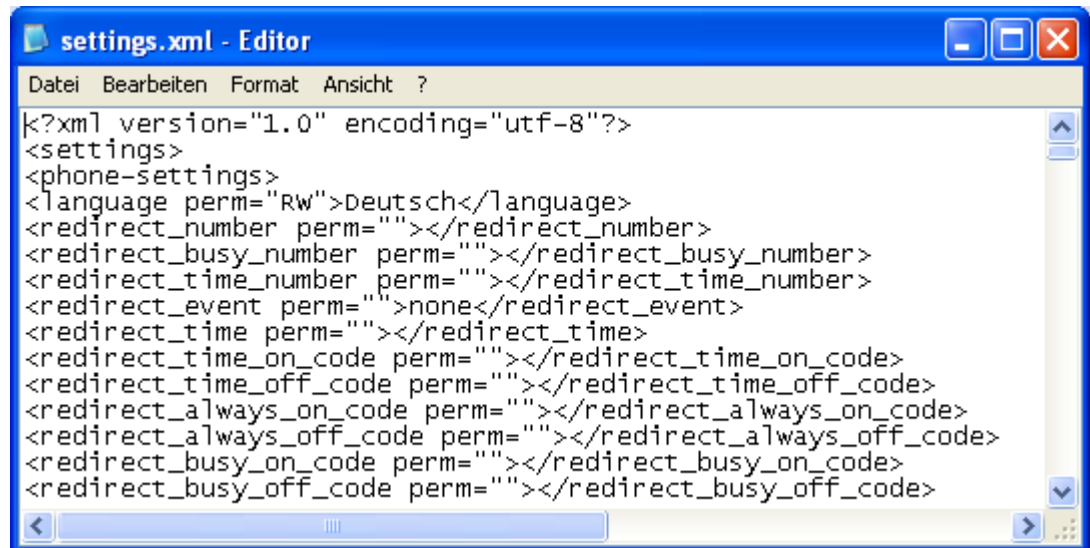
```
language!: English
redirect_number!:
redirect_busy_number!:
redirect_time_number!:
redirect_event!: none
redirect_time!:
redirect_time_on_code!:
redirect_time_off_code!:
redirect_always_on_code!:
redirect_always_off_code!:
redirect_busy_on_code!:
```

Settings		VERSION 7
<b>Operation</b>		
Home		Click <a href="#">here</a> to save the settings.
Directory		Click <a href="#">here</a> to save the settings in XML format.
<b>Setup</b>		
Preferences		language!: English
Speed Dial		redirect_number!: 123
Function Keys		redirect_busy_number!:
Identity 1		redirect_time_number!: 123
Identity 2		redirect_event!: none
Identity 3		redirect_time!: 2
Identity 4		redirect_time_on_code!:
		redirect_time_off_code!:
		redirect_always_on_code!:

- ❶ In firmware versions 3-6 the complete list of configuration parameters could only be saved by copying and pasting the content from the “Settings” page to a plain text file
- ❷ From firmware version 7 onwards the complete list of configuration parameters can be saved either in text or XML format by clicking the appropriate link on the top of the “Settings” page



```
settings.cfg - Editor
Datei Bearbeiten Format Ansicht ?
language!: Deutsch
redirect_number!:
redirect_busy_number!:
redirect_time_number!:
redirect_event!: none
redirect_time!:
redirect_time_on_code!:
redirect_time_off_code!:
redirect_always_on_code!:
redirect_always_off_code!:
redirect_busy_on_code!:
redirect_busy_off_code!:
dnd_on_code!:
```



```
settings.xml - Editor
Datei Bearbeiten Format Ansicht ?
<?xml version="1.0" encoding="utf-8"?>
<settings>
  <phone-settings>
    <language perm="Rw">Deutsch</language>
    <redirect_number perm=""></redirect_number>
    <redirect_busy_number perm=""></redirect_busy_number>
    <redirect_time_number perm=""></redirect_time_number>
    <redirect_event perm="">none</redirect_event>
    <redirect_time perm=""></redirect_time>
    <redirect_time_on_code perm=""></redirect_time_on_code>
    <redirect_time_off_code perm=""></redirect_time_off_code>
    <redirect_always_on_code perm=""></redirect_always_on_code>
    <redirect_always_off_code perm=""></redirect_always_off_code>
    <redirect_busy_on_code perm=""></redirect_busy_on_code>
    <redirect_busy_off_code perm=""></redirect_busy_off_code>
```

## ① (1) Write-protected system parameters

- are used internally and cannot be changed
- factory value is marked by „&“ symbol
- Example: mac&: 0004132YXXXX

## ① Unprotected system parameters

- are used internally and can only be changed via mass deployment
- Example: dst!: 3600 03.05.07 02:00:00 10.05.07 03:00:00

## ① Free configurable parameters

- all those parameters changeable via “Web User Interface” (approx. 90 %).
- Only a part of them is also configurable via “Phone User Interface”
- Example: dhcp!: on

- Each free configurable parameter corresponds to exact one Web User Interface Setting.
- The *relationship* in firmware versions 6 or 7 can be figured out by accessing the updated description for each Web User Interface page on snom's WIKI:
  - [http://wiki.snom.com/Snom3x0/Web\\_Interface/V6/Settings](http://wiki.snom.com/Snom3x0/Web_Interface/V6/Settings)
  - [http://wiki.snom.com/Snom3x0/Web\\_Interface/V7/Settings](http://wiki.snom.com/Snom3x0/Web_Interface/V7/Settings)
- “Web User Interface Settings” are listed by their english names and linked to its corresponding configuration parameter.

### General Information

[edit](#)

Settings	Screenshot
Webinterface Language	<p><b>General Information:</b></p> <p>Webinterface Language: English <input type="button" value="v"/> ?</p> <p>Language: English <input type="button" value="v"/> ?</p> <p>Number Display Style: Name <input type="button" value="v"/> ?</p> <p>Tone Scheme: Germany <input type="button" value="v"/> ?</p> <p>MWI Notification: Silent <input type="button" value="v"/> ?</p> <p>MWI Dial Tone: Stutter <input type="button" value="v"/> ?</p> <p>Use Headset Device: None <input type="button" value="v"/> ?</p> <p>Use Backlight: on <input type="button" value="v"/> ?</p> <p>U.S. date format (mm/dd): <input type="radio"/> on <input checked="" type="radio"/> off ?</p> <p>24 Hour clock: <input checked="" type="radio"/> on <input type="radio"/> off ?</p> <p>Use Flash Plugin: <input type="radio"/> on <input checked="" type="radio"/> off ?</p> <p>Message LED for Dialog State/Missed Calls: <input checked="" type="radio"/> on <input type="radio"/> off ?</p> <p>Active Identity Scrolling: <input checked="" type="radio"/> on <input type="radio"/> off ?</p> <p>Show identity index: <input type="radio"/> on <input checked="" type="radio"/> off ?</p> <p>Show call status info: <input type="radio"/> on <input checked="" type="radio"/> off ?</p>
Language	
Number Display Style	
Tone Scheme	
MWI Notification	
MWI Dial Tone	
Use Headset Device	
U.S. Date Format(mm/dd)	
24 Hour clock	
Use Flash Plugin	
Message LED for Dialog State/Missed Calls	
Outgoing Identity Scrolling on idle	
Show identity index	
(Snom360/370 only) Use Backlight	
(Snom360/370 only) Ringer Animation	
(Snom360/370 only) Redundant Softkeys	

- From firmware version 7 onwards a (configurable) online help button has been added to each "Web User Interface Setting":
  - By clicking that button the resulting URL ("documentation link" + "configuration parameter name") will be requested and the description page of that configuration parameter will be opened - by default snom's WIKI knowledgebase.
  - [http://wiki.snom.com/Settings/configuration\\_parameter\\_name](http://wiki.snom.com/Settings/configuration_parameter_name)

General Information:	
Webinterface Language:	English <input type="button" value="v"/> <input type="button" value="?"/>
Language:	English <input type="button" value="v"/> <input type="button" value="?"/>
Number Display Style:	Name <input type="button" value="v"/> <input type="button" value="?"/>
Tone Scheme:	Germany <input type="button" value="v"/> <input type="button" value="?"/>
MWI Notification:	Silent <input type="button" value="v"/> <input type="button" value="?"/>
MWI Dial Tone:	Stutter <input type="button" value="v"/> <input type="button" value="?"/>
Use Headset Device:	None <input type="button" value="v"/> <input type="button" value="?"/>
Use Backlight:	on <input type="button" value="v"/> <input type="button" value="?"/>
U.S. date format (mm/dd):	<input type="radio"/> on <input checked="" type="radio"/> off <input type="button" value="?"/>
24 Hour clock:	<input checked="" type="radio"/> on <input type="radio"/> off <input type="button" value="?"/>
Use Flash Plugin:	<input type="radio"/> on <input checked="" type="radio"/> off <input type="button" value="?"/>
Message LED for Dialog State/Missed Calls:	<input checked="" type="radio"/> on <input type="radio"/> off <input type="button" value="?"/>
Active Identity Scrolling:	<input checked="" type="radio"/> on <input type="radio"/> off <input type="button" value="?"/>
Show identity index:	<input type="radio"/> on <input checked="" type="radio"/> off <input type="button" value="?"/>
Show call status info:	<input type="radio"/> on <input checked="" type="radio"/> off <input type="button" value="?"/>

- 🕒 Setting files are container for a subset of configuration parameters needed to customize and maintain snom phones remotely.
- 🕒 Do **NOT** use the complete parameter list as starting point, instead:
  - Delete or uncomment unused configuration parameters from the complete parameter list.
  - Specify only those parameters you really want to change --> Check the meaning of each parameter before usage.
  - Finally your setting file should contain only a few parameters



Depending on the firmware version two formats can be distinguished

Firmware Versions 4, 5, 6  
and 7 (restrictions apply)

Firmware Version 7 onwards

Text Format

XML Format

Depending on the firmware version two formats can be distinguished

Firmware Versions 4, 5, 6  
and 7 (restrictions apply)

Firmware Version 7 onwards

Text Format

XML Format

- Full provisioning support in firmware versions 4,5,6
- Limited provisioning support in firmware version 7:
  - **NO multiple language support**
    - Only english phone user/web user interface languages are pre-installed (except snom370)
  - **NO script dial plan**
  - **NO support** of formerly used internal directory entries (Name (tn), Number (tu), Contact Type (tc), Outgoing Identity (to))

## 🕒 ASCII coded:

- lines may end with newline or carriage return/newline pairs
- Comments start with "#" or "<"
- The "<" and ">" characters allow easy integration of HTML tags
- Parameter names may consist of the characters a-z, A-Z, 0-9 and \_

## 🕒 Description

`<html> <pre>` ← The "<" and ">" characters allow easy integration of HTML tags

`#comment` ← comment start with "#" or "<"

`<parameter(1) name><flag>:<value>` ← Parameter names can be retrieved from the WIKI

...

`<parameter(n) name><flag>:<value>` ← Parameter values can be retrieved from the WIKI

`</pre></html>`

- Parameter names can be followed by one specific character called “flag”:
  - A parameter followed by “!” can be changed by the user. However the parameter value will only be stored if that parameter has not been configured yet. Only parameters followed by \$ can be overwritten, DO NOT use “!” in that case.
  - A parameter followed by “&” or no flag becomes write-protected (read only)
  - A parameter followed by “\$” can be changed but will be overwritten on reboot. \$ will appear on the Settings page as ! (available from firmware version 4.2 onwards)

- ① One "general setting file" per **phone type** containing general configuration parameters
  - `<protocol>": // " <IP address or domain> "/ " <phonetype> ".htm" → http://domain/snom360.htm`
- ① One "specific setting file" per **phone** containing phone specific configuration parameters
  - `<protocol>": // " <IP address or domain> "/ " <phonetype> "- " <MAC address> ".htm" → http://domain/snom360-0004132314A4.htm`
- ① One "firmware setting file" per **phone type OR specific phone**, containing firmware related configuration parameters in order to perform automated firmware updates
  - Any URL can be defined → <http://domain/snom360-firmware.htm>

# Setting Files | Text Format | Example (1)

Mass Deployment

snom360.htm

```
snom360.htm - Editor
Datei Bearbeiten Format Ansicht ?
<html>
<pre>
# example snom settings file
# Language and Time settings
language: English
web_language: English
timezones: CET-1
tone_streams: GER
date_us_format: off
time_24_format: on

# in order to perform auto
# define the firmware setting file URL
# where you specify the final firmware URL
firmware_status: http://10.0.0.2/snom360-firmware.htm

#define also the update policy here
update_policy: auto_update

</pre>
</html>
```

General

snom360-firmware.htm

snom360-0004132314A4.htm

```
snom360-0004132314A4.htm -...
Datei Bearbeiten Format Ansicht ?
<html>
<pre>
# example snom settings file
# First account
#Account
user_name1: test
#Password
user_pass1: test
#Registration
user_host1: proxy.net
#Displayname
user_realname1: D test
#Ringtone
user_ringer1: Ringer4

# You may add up to 12 accounts

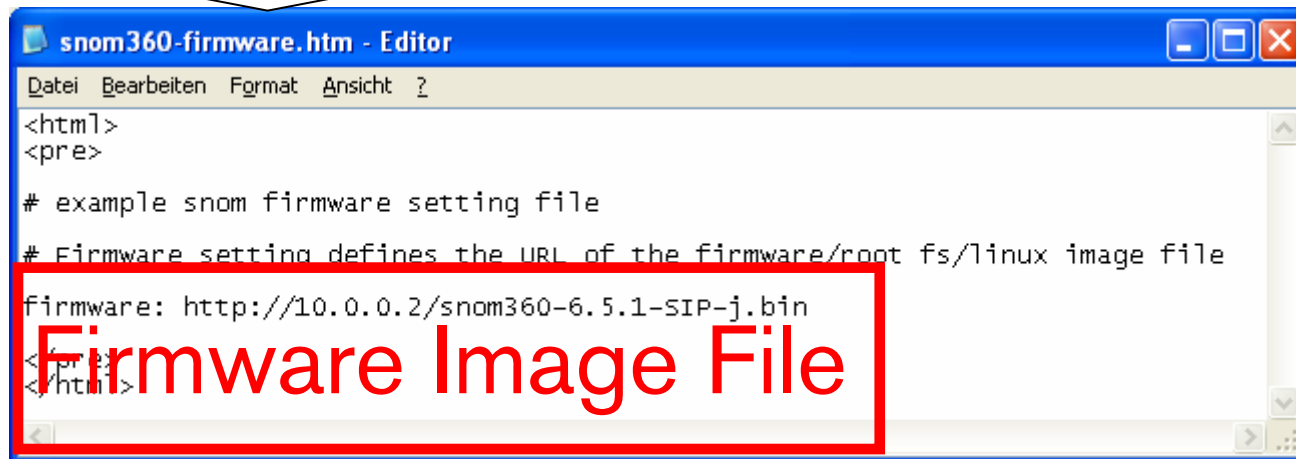
</pre>
</html>
```

Specific

# Setting Files | Text Format | Example (2)

Mass Deployment

snom360-firmware.htm



```
snom360-firmware.htm - Editor
Datei Bearbeiten Format Ansicht ?
<html>
<pre>
# example snom firmware setting file
# Firmware setting defines the URL of the firmware/root fs/linux image file
firmware: http://10.0.0.2/snom360-6.5.1-SIP-j.bin
</pre>
</html>
```

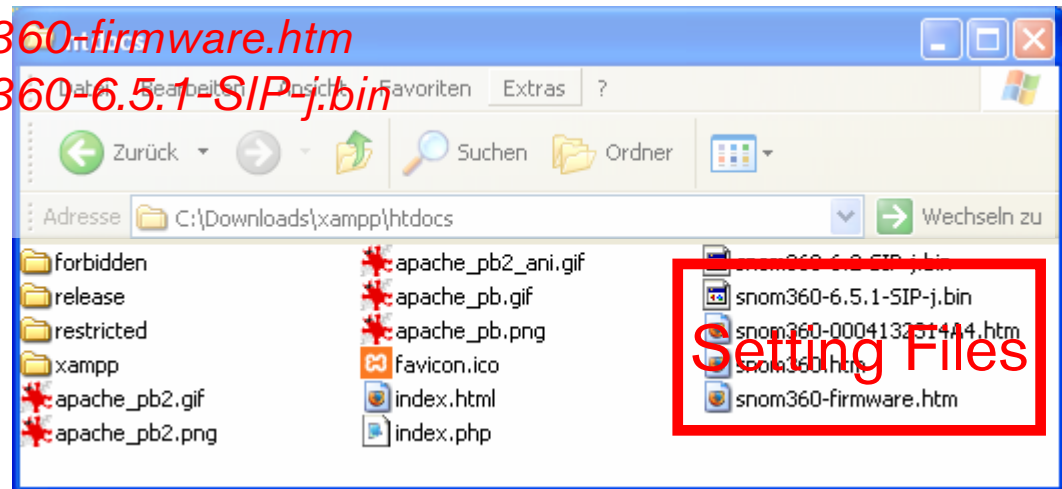


## Provisioning server „Apache“

- HTTP protocol



- Copy files into „Apache“ root directory
  - „c:\...\xampp\htdocs“
- Start „Apache“ and access the files from any web browser:
  - <http://domain/snom360.htm>
  - <http://domain/snom360-0004132314A4.htm>
  - <http://domain/snom360-firmware.htm>
  - <http://domain/snom360-6.5.1-SIP-j.bin>



Depending on the firmware version two formats can be distinguished

Firmware Versions 4, 5, 6  
and 7 (restrictions apply)

Firmware Version 7 onwards

Text Format

XML Format

- ❶ **NOT APPLICABLE** in firmware versions 4,5,6
- ❷ Full provisioning support in firmware version 7:
  - Default phone configuration support
  - Automatic firmware update support
  - Multiple language support
    - Only applicable to snom300/320/360
  - Script dial plan support
  - Directory provisioning support

## XML tagged UTF-8 coded files

- XML header is required
  - `<?xml version="1.0" encoding="utf-8"?>`
- The following XML tags are supported
  - `<phone-settings>`, `<functionkeys>`, `<tbook>`, `<dialplan>`, `<firmware-settings>`, `<setting-files>`, `<settings>`, `<gui-languages>`, `<phrases>`, `<web-languages>`, `<w_phrases>`

```
<?xml version="1.0" encoding="utf-8"?>
<phone-settings>
  <language perm="">English</language>
  <redirect_number perm="$">253</redirect_number>
  <setting_server perm="">http://.../snom.php?mac={mac}</setting_server>
  ...
  <user_realname idx="1" perm="">...</user_realname>
  <user_realname idx="12" perm="">...</user_realname>
  ...
</phone-settings>
```

Configuration parameter

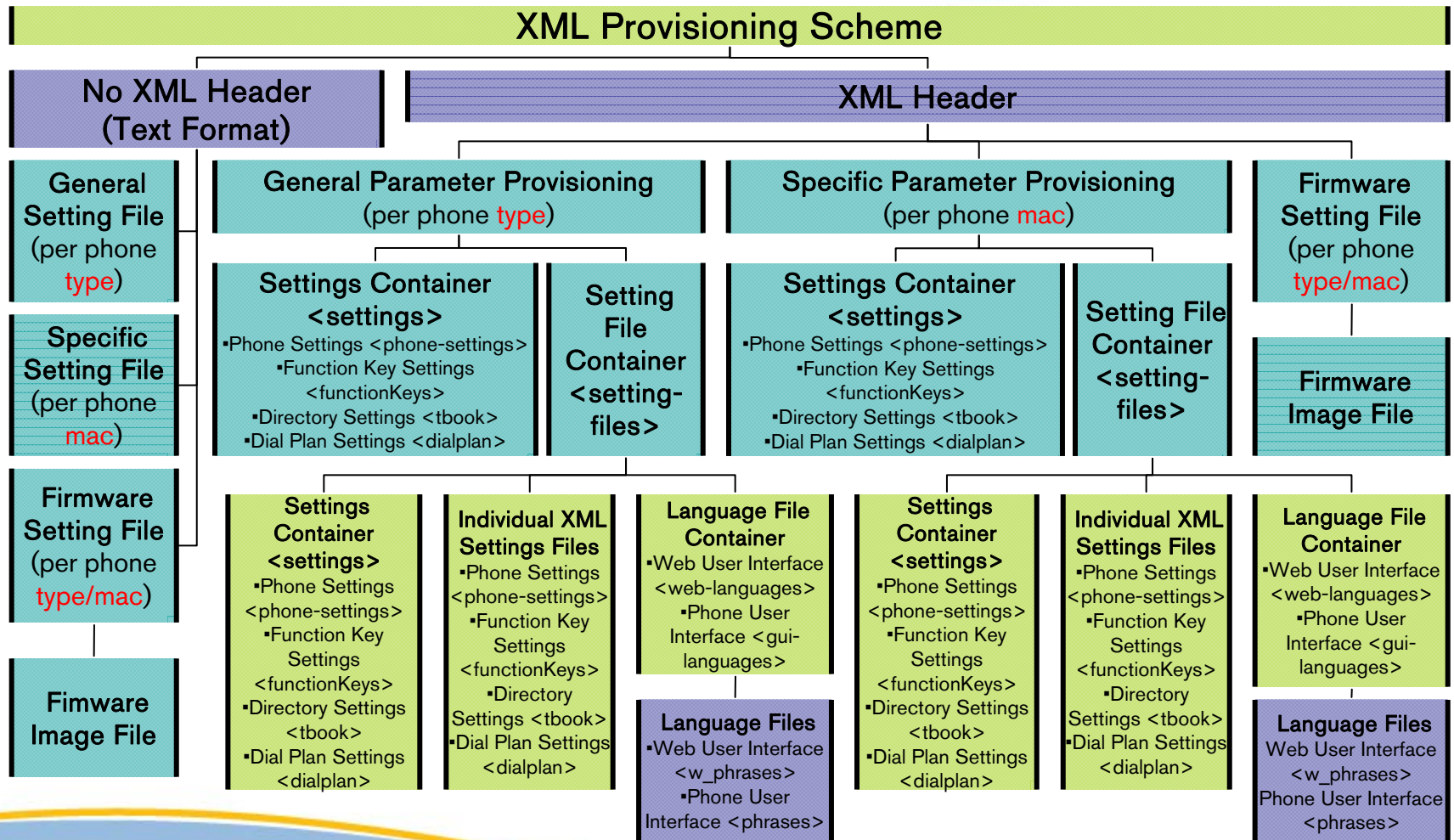
Identity  
Index

Flag

Value

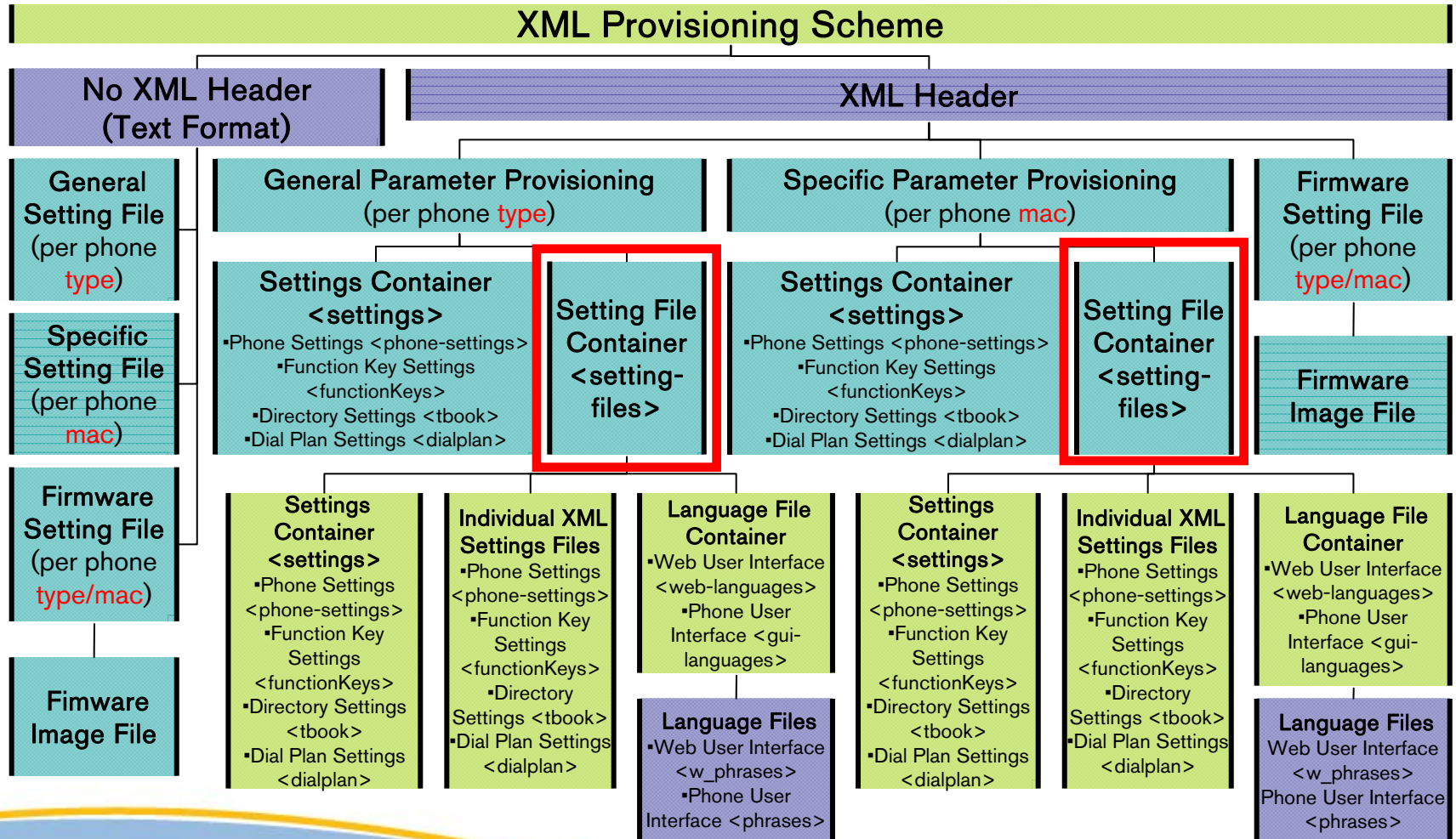
# Setting Files | XML | Provisioning Scheme

Mass Deployment



# Setting Files | XML | Provisioning Scheme

Mass Deployment



- ① “Setting File Container” <setting-files> is a file construct which allows to load more than one file type in one go onto the phone
- ① Should be the first XML file provided to the phone
- ① Contains URL's to all setting files to be provisioned
- ① The files are requested in the given order
- ① **Backwards compatibility:** Setting files encoded in ASCII text format can be included (restrictions apply)



- ① One „General setting file container“ per **phone type** providing a list of setting file URLs
  - <http://domain/snom3x0.htm> (due to backwards compatibility reasons in mixed phone type environments use „htm“ extension instead of „xml“ for automatic phone type recognition)
- ① One “Specific setting file container” per **phone**, i.e. based on the MAC address, providing a list of setting file URLs:
  - <http://domain/snom3x0-mac.htm> (the „-mac“ string is automatically appended by the phone)

<http://domain/snom3x0.htm>

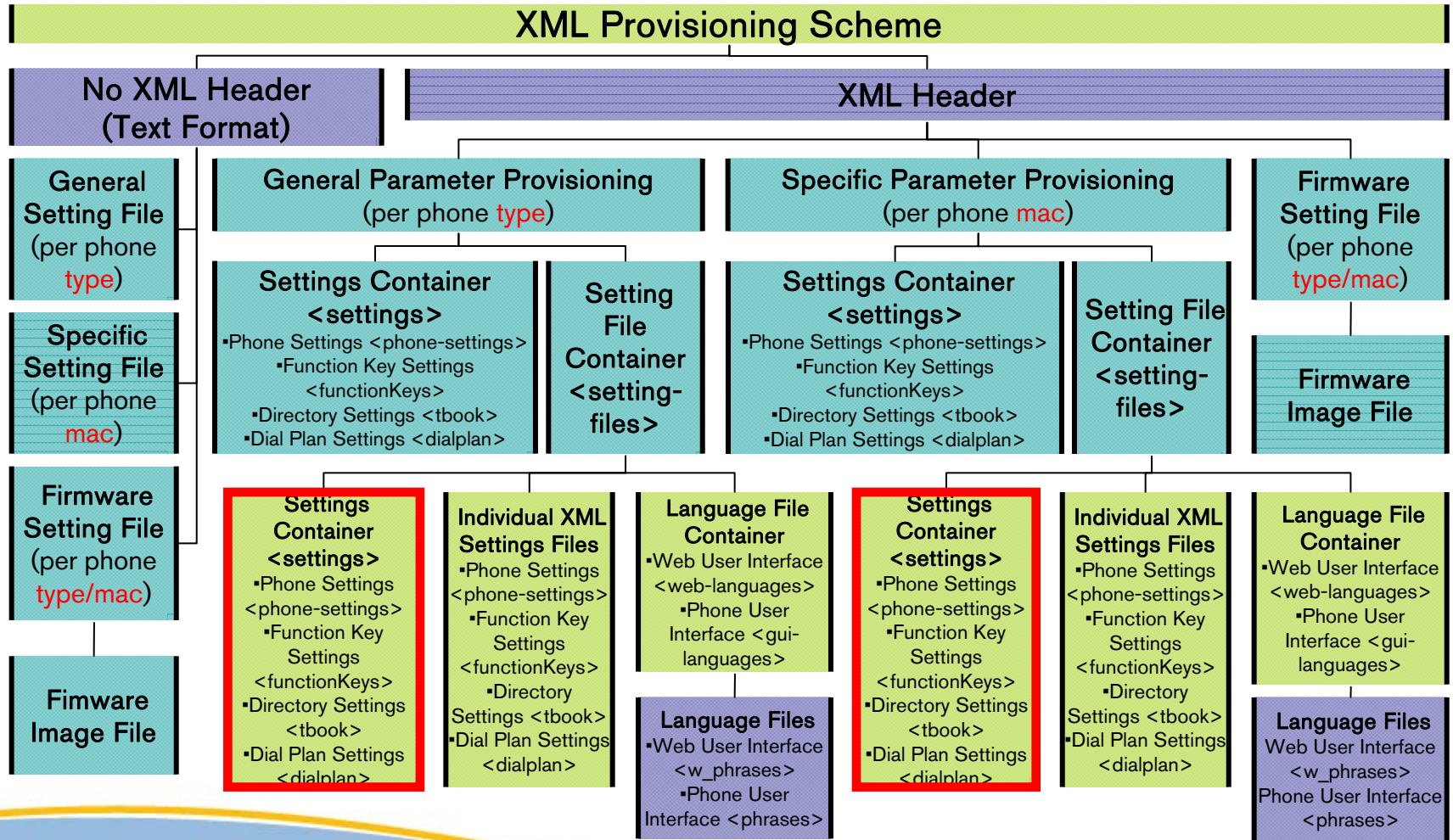
```
<?xml version="1.0" encoding="utf-8" ?>  
<setting-files>  
  
</setting-files>
```

<http://domain/snom3x0-mac.htm>

```
<?xml version="1.0" encoding="utf-8" ?>  
<setting-files>  
  
</setting-files>
```

# Setting Files | XML | Provisioning Scheme

Mass Deployment



- ① “Settings Container” `<settings>`: XML structure to specify a list of XML tags containing configuration parameters:
  - `<phone-settings>`, `<functionKeys>`, `<tbook>`, `<dialplan>`
- ① One „Settings Container“ per phone **type** containing general configuration parameters:
  - <http://domain/3x0/general.xml>
- ① One „Settings Container“ per phone **mac** containing specific configuration parameters:
  - <http://domain/3x0/mac.xml>

http://domain/snom3x0.htm

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/general.xml"/>
</setting-files>
```

http://domain/3x0/general.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<settings>
  <phone-settings>...</phone-settings>
  <function-keys>...</function-keys>
  <phone-book>...</phone-book>
  <dial-plan>...</dial-plan>
</settings>
```

http://domain/snom3x0-mac.htm

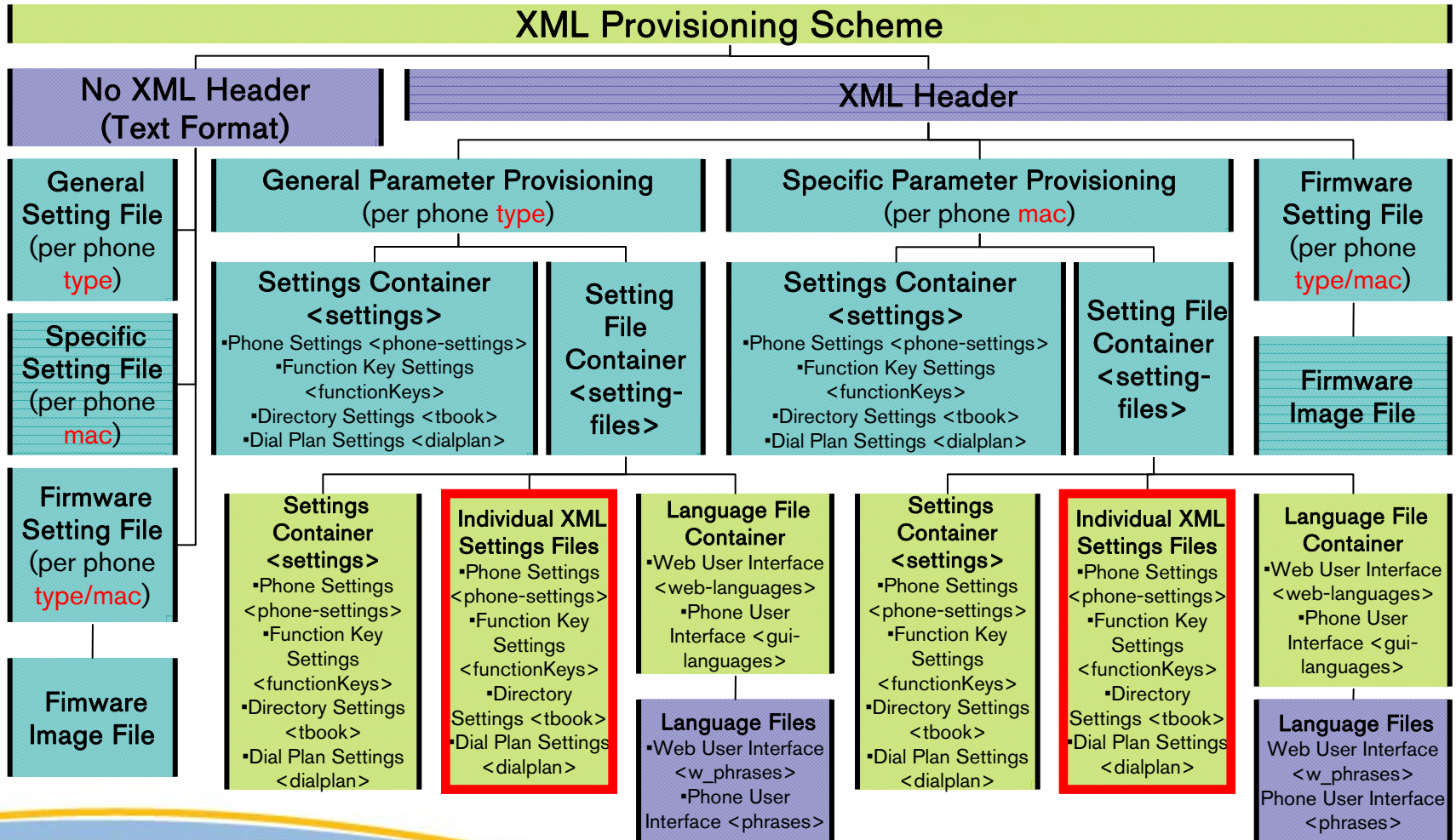
```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/mac.xml"/>
</setting-files>
```

http://domain/3x0/mac.xml

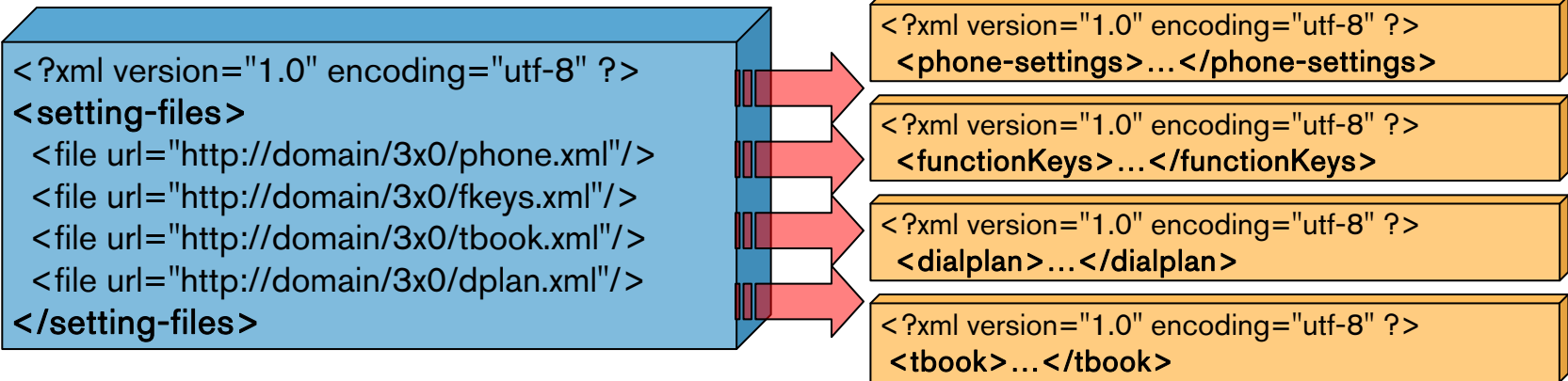
```
<?xml version="1.0" encoding="utf-8" ?>
<settings>
  <phone-settings>...</phone-settings>
  <function-keys>...</function-keys>
  <phone-book>...</phone-book>
  <dial-plan>...</dial-plan>
</settings>
```

# Setting Files | XML | Provisioning Scheme

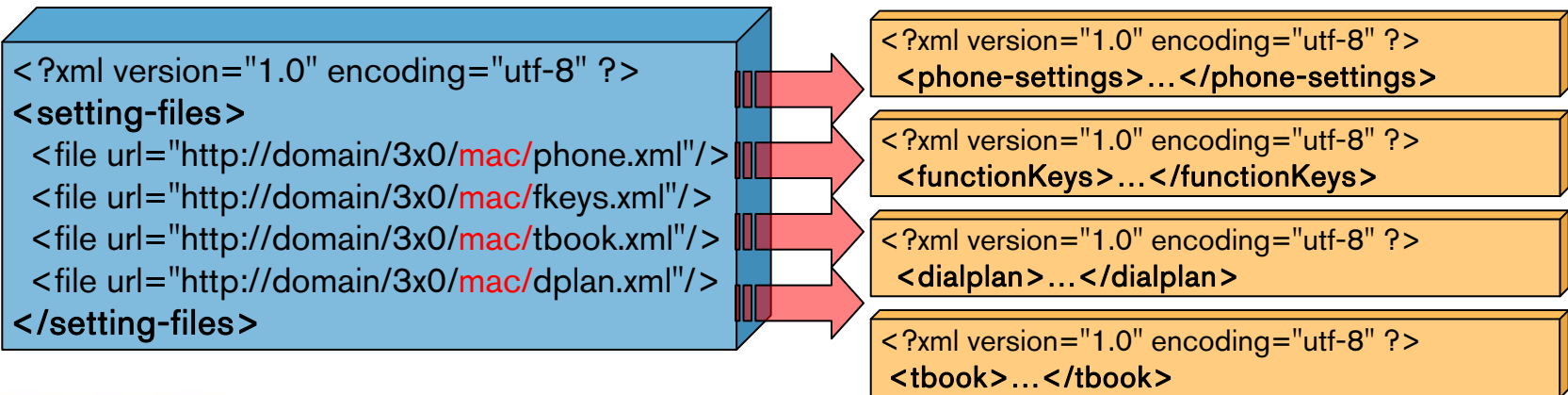
Mass Deployment



http://domain/snom3x0.htm



http://domain/snom3x0-mac.htm



# Setting Files | XML | Phone Settings

Mass Deployment

http://domain/snom3x0.htm

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/phone.xml"/>
  <file url="http://domain/3x0/fkeys.xml"/>
  <file url="http://domain/3x0/tbook.xml"/>
  <file url="http://domain/3x0/dplan.xml"/>
</setting-files>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<phone-settings>...</phone-settings>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<functionKeys>...</functionKeys>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<dial-plan>...</dial-plan>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<phone-book>...</phone-book>
```

http://domain/snom3x0-mac.htm

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/mac/phone.xml"/>
  <file url="http://domain/3x0/mac/fkeys.xml"/>
  <file url="http://domain/3x0/mac/tbook.xml"/>
  <file url="http://domain/3x0/mac/dplan.xml"/>
</setting-files>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<phone-settings>...</phone-settings>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<functionKeys>...</functionKeys>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<dial-plan>...</dial-plan>
```

```
<?xml version="1.0" encoding="utf-8" ?>
<phone-book>...</phone-book>
```



- ① `<phone-settings>` XML tag contains the main part of general or specific configuration parameters and the **URL of the firmware configuration file**

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<phone-settings>
```

```
<language perm="!">English</language>
```

```
<redirect_number perm="$">253</redirect_number>
```

```
...
```

```
<user_realname idx="1" perm="&"></user_realname>
```

```
<firmware perm="">http://domain/3x0/firmware.xml</firmware>
```

```
</phone-settings>
```

Value

Configuration parameter

Identity Index

Flag

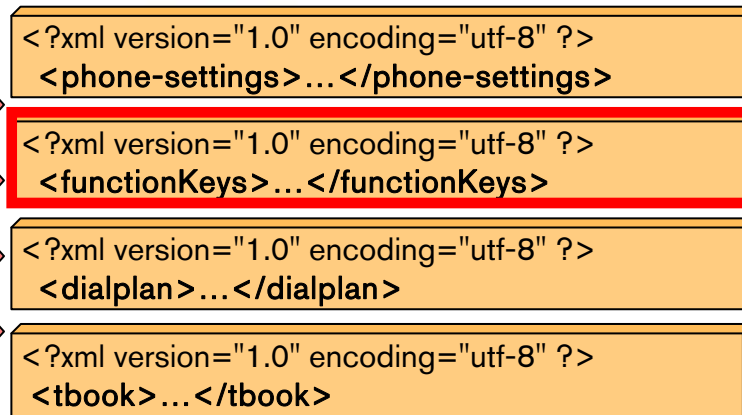
# Setting Files | XML | Function Key Settings

Mass Deployment



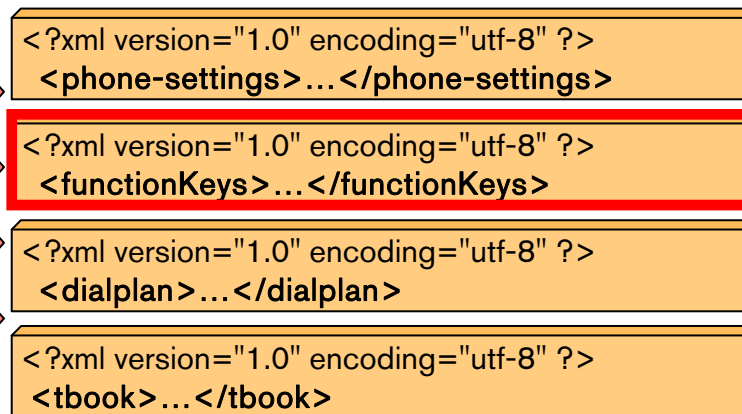
http://domain/snom3x0.htm

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/phone.xml"/>
  <file url="http://domain/3x0/fkeys.xml"/>
  <file url="http://domain/3x0/tbook.xml"/>
  <file url="http://domain/3x0/dplan.xml"/>
</setting-files>
```



http://domain/snom3x0-mac.htm

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/mac/phone.xml"/>
  <file url="http://domain/3x0/mac/fkeys.xml"/>
  <file url="http://domain/3x0/mac/tbook.xml"/>
  <file url="http://domain/3x0/mac/dplan.xml"/>
</setting-files>
```



- ◉ `<functionKeys>` or `<function-keys>` XML tag contains the “free function key” configuration parameters.

```
<?xml version="1.0" encoding="utf-8"?>
  <functionKeys>
    <fkey idx="0" context="active" perm="$">line</fkey>
    <fkey idx="1" context="1" perm="&">dest
    &lt;sip:423@tst.org;user=phone&gt;</fkey>
    ...
    <fkey idx="53" context="12" perm="!">line</fkey>
  </functionKeys>
```

Index

Value

Context

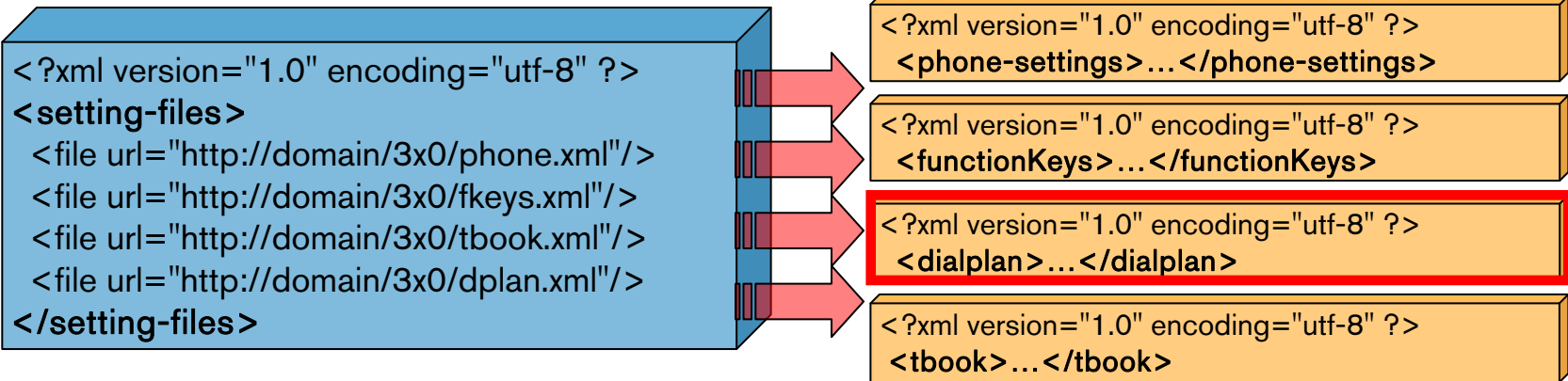
Permission Flag

# Setting Files | XML | Dialplan Settings

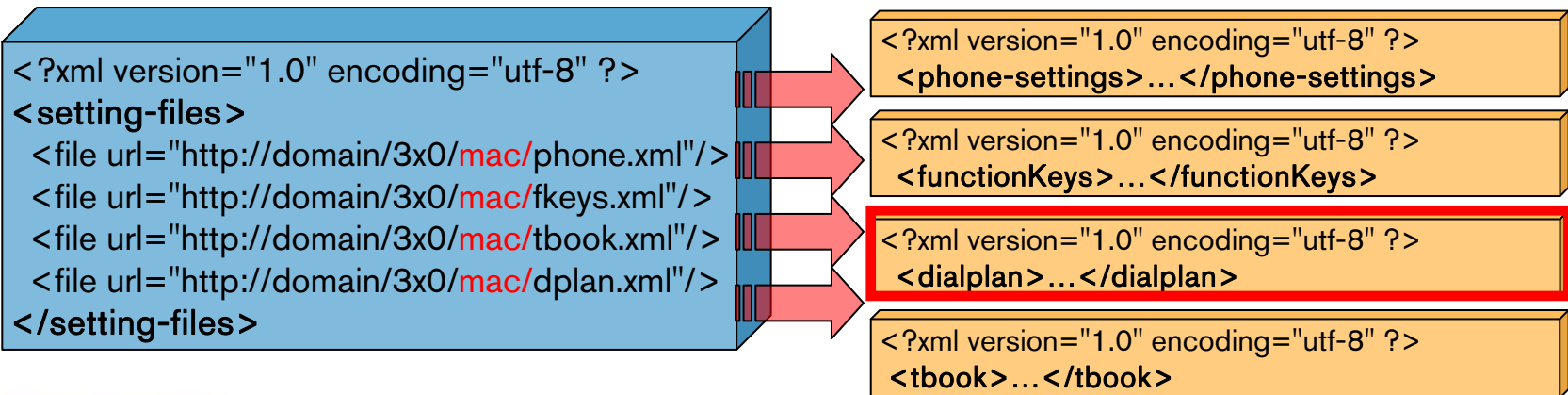
Mass Deployment



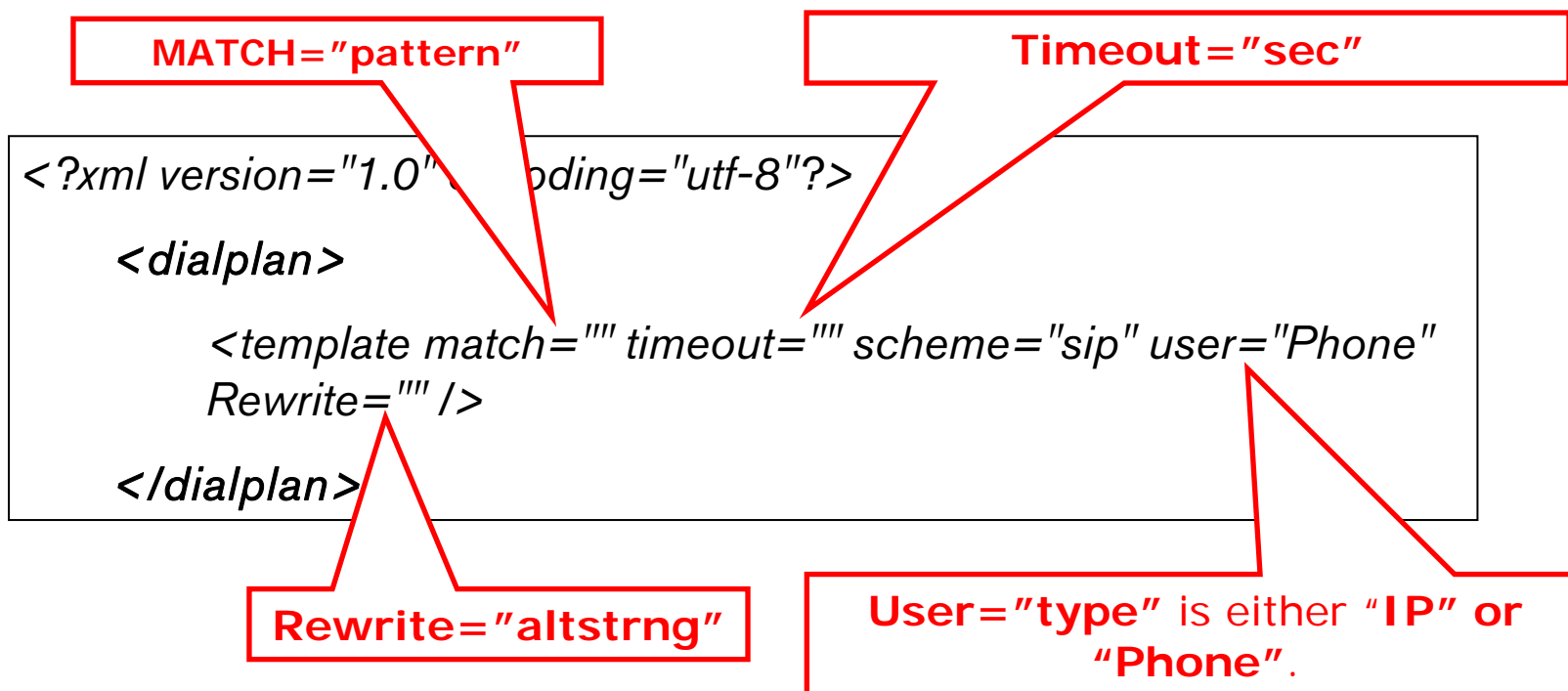
http://domain/snom3x0.htm



http://domain/snom3x0-mac.htm



- ◉ `<dialplan>` or `<dial-plan>` XML tag define global dial plans



## o MATCH="pattern"

- is the **dial pattern** to match. While entering the pattern: use a period (.) to match any character or use an asterisk (\*) to match one or more characters. To have the phone generate a secondary dial tone when the part of the template matches, use a comma (,).

## o Timeout="sec"

- is the **number of seconds before a timeout will occur** and the number will be dialed as entered by the user. To have the number dial immediately, specify 0.

## o Rewrite="altstrng"

- is the **alternate string to be dialed instead of what the user enters**. This field can be left empty.

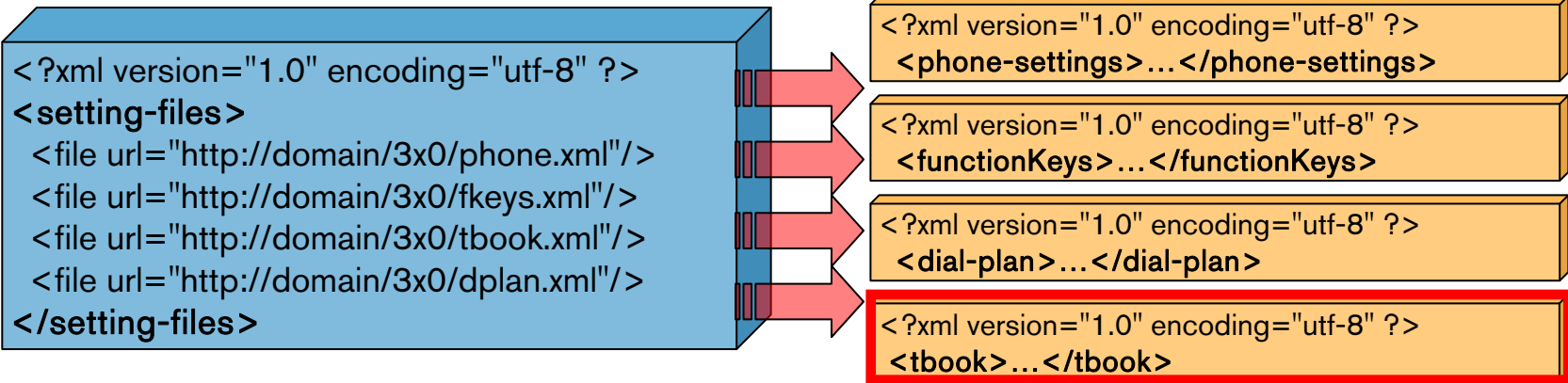
## o User="type"

- is either IP or Phone. Enter User=phone or User=IP to have the tag automatically added to the dialed number. Currently User=phone is supported.

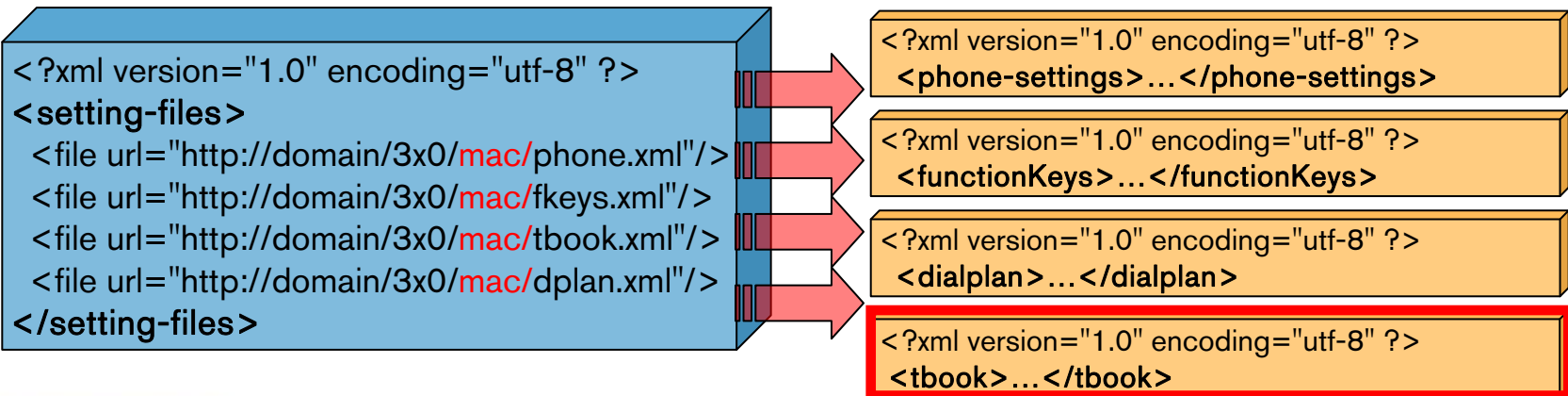
# Setting Files | XML | Directory Settings

Mass Deployment

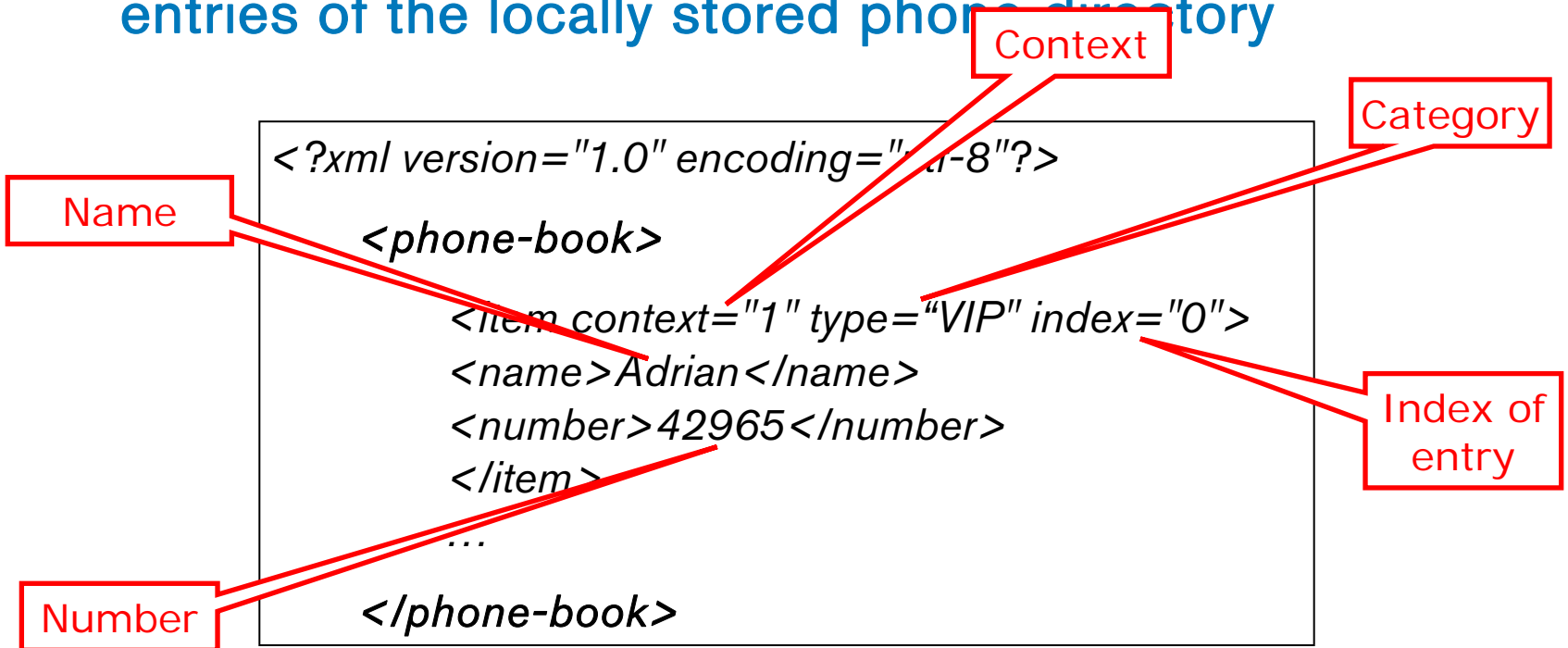
http://domain/snom3x0.htm



http://domain/snom3x0-mac.htm



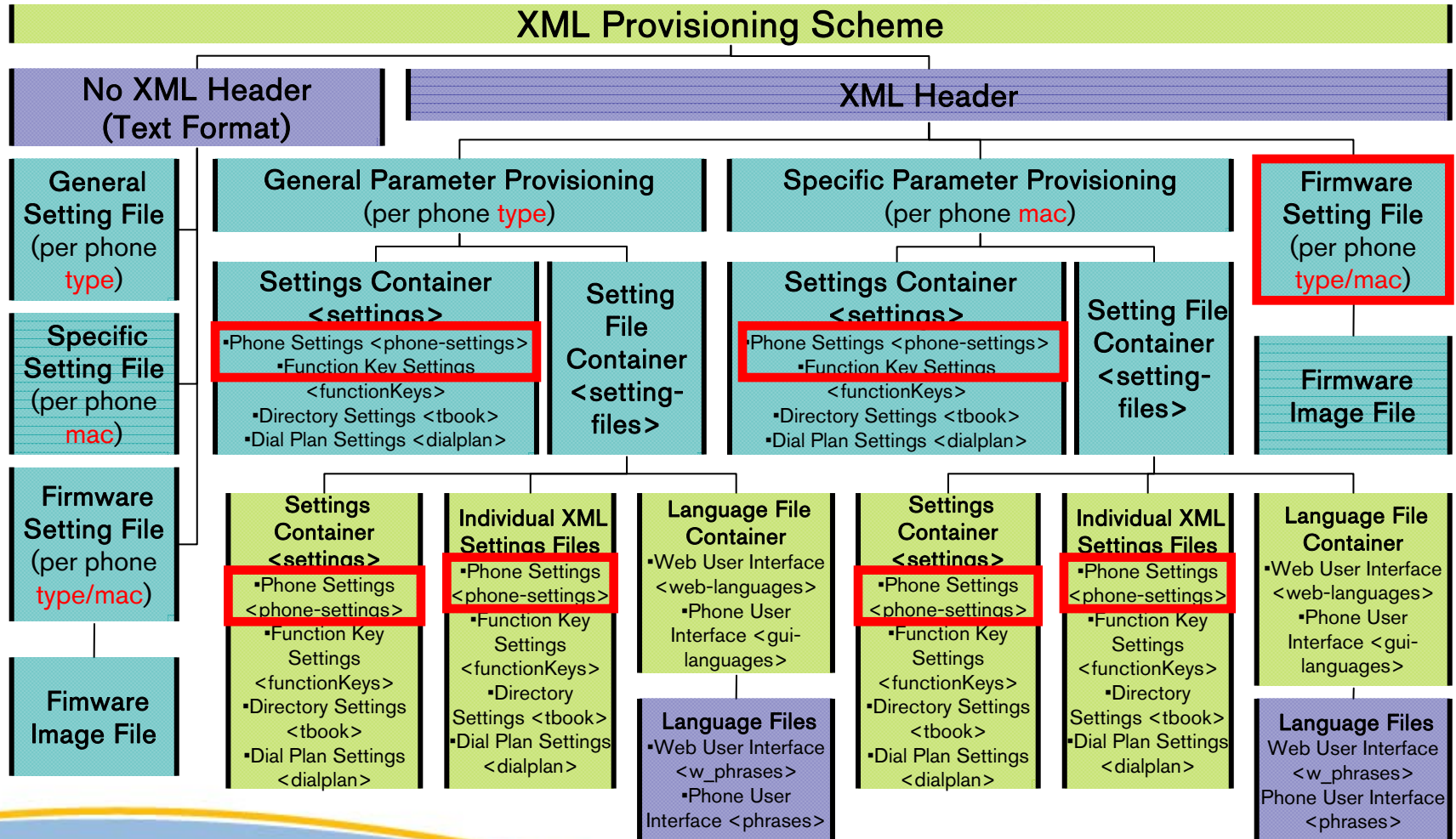
- ⦿ <tbook> or <phone-book> XML tag defines the entries of the locally stored phone directory





# Setting Files | XML | Firmware Setting Files

Mass Deployment



- ① “Firmware setting file” contains a subset of firmware related configuration parameters allowing automated firmware updates
- ① “Firmware setting file” URL must only be specified in the <phone-settings> tag
- ① One “Firmware setting file” per phone **type / mac address** containing „Firmware image file URL“:
  - *<http://domain/3x0/firmware.xml>*
  - *<http://domain/3x0/mac/firmware.xml>*

http://domain/snom3x0.htm

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/general.xml"/>
</setting-files>
```

http://domain/3x0/general.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<settings>
  <phone-settings>...</phone-settings>
  <function-keys>...</function-keys>
  <phone-book>...</phone-book>
  <dialplan>...</dialplan>
</settings>
```

```
<?xml version="1.0" encoding="utf-8"?>
<phone-settings>
  ...
  <firmware_status perm="">
    http://domain/3x0/firmware.xml
  </firmware_status>
  ...
</phone-settings>
```

http://domain/3x0/firmware.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<firmware-settings>
  <firmware perm="">
    http://domain/3x0/snom3x0-7.X-SIP-f.bin
  </firmware>
</firmware-settings>
```

- ❶ This XML file type **must not** be included in container setting files
- ❷ The phone will download the firmware XML file specified in the URL configured under *firmware\_status*
- ❸ The setting *firmware\_status* can ONLY be defined in the settings file of type <phone-settings>

```
<?xml version="1.0" encoding="utf-8" ?>
```

Value = Firmware Image

```
<firmware-settings>
```

```
<firmware perm="">http://.../snom-7.1.9-SIP-f.bin</firmware>
```

```
</firmware-settings>
```

Do not use any flag

Configuration parameter = firmware

## Multiple language support with Version 7

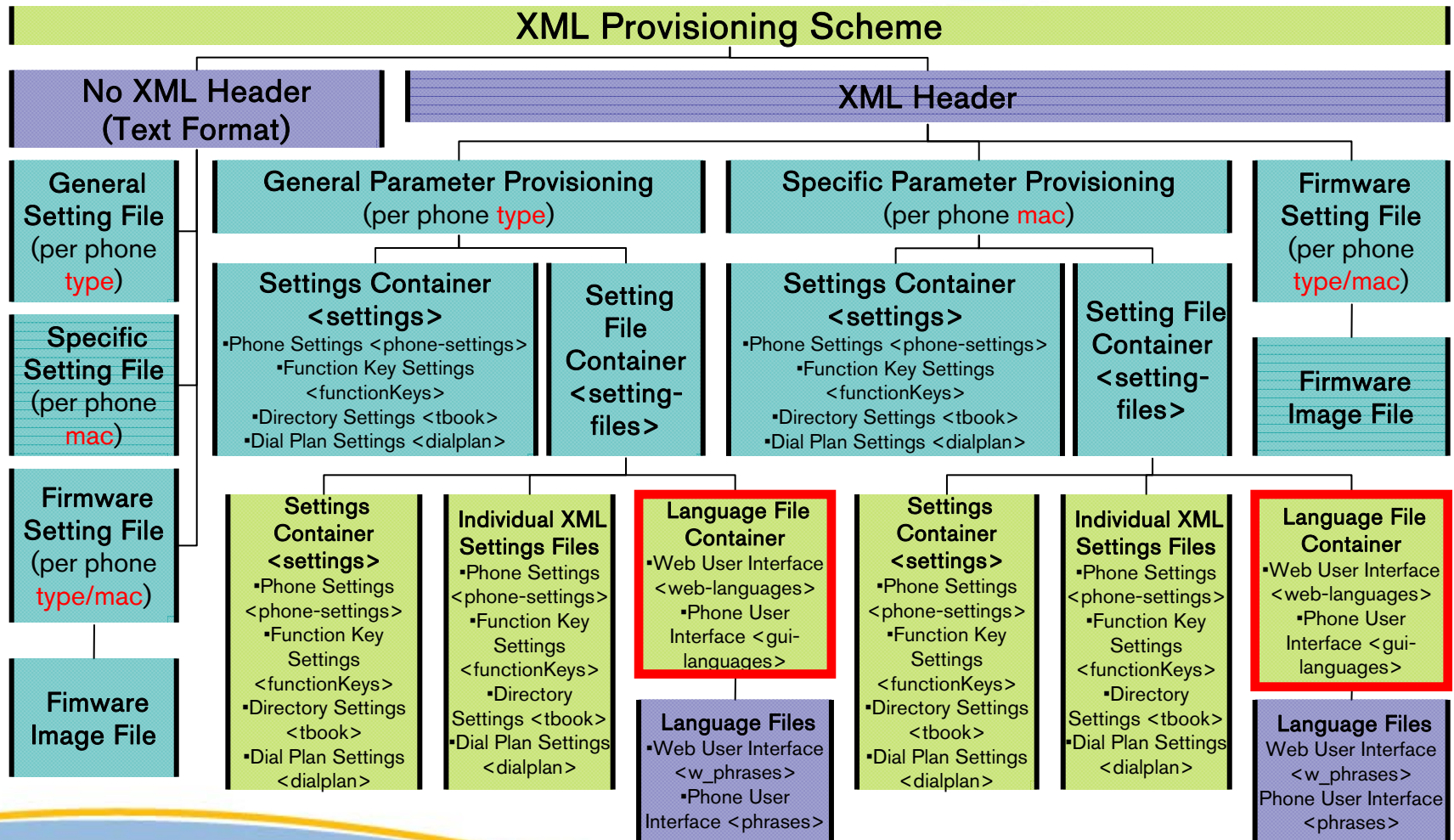
- snom370: *several* languages (default “English”) come pre-installed with the firmware
- snom300, 320, 360: ONLY english language is pre-installed
- multiple languages can ONLY be provided via auto provisioning → the selected language will be loaded on request into the phone’s RAM

## Language files must match the phone’s application firmware

- Download always the **newest language files** from:  
<http://fox.snom.com/config>, e.g. <http://fox.snom.com/config/snomlang-7.1.33.tgz>
- Automatic language provisioning using  
<http://fox.snom.com/config/settings.xml> as Setting Server URL

# Setting Files | XML | Language File Container

Mass Deployment



- ① “Language File Container” are XML files containing a list of language file URLs each one representing a different language:
- ① Phone User Interface Language File Container (<gui-languages> tag)
- ① Web User Interface Language File Container (<web-languages> tag)

- ① One „Language File Container“ per phone **type / mac address** containing general / specific „phone User Interface Language File URLs“
  - *<http://domain/3x0/pui.xml>*
  - *<http://domain/3x0/mac/pui.xml>*
  
- ① One „Language File Container“ per phone **type / mac address** containing general / specific „Web User Interface Language File URLs“
  - *<http://domain/3x0/wui.xml>*
  - *<http://domain/3x0/mac/wui.xml>*



# Setting Files | XML | Language File Container

Mass Deployment

http://domain/snom3x0.htm

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/general.xml"/>
  <file url="http://domain/3x0/pui.xml"/>
  <file url="http://domain/3x0/wui.xml"/>
</setting-files>
```

http://domain/3x0/pui.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<gui-languages>
  <language url=http://domain/lang/gui_de.xml
    name="Deutsch" />
  ...
</gui-languages>
```

http://domain/3x0/wui.xml

```
<?xml version="1.0" encoding="utf-8" ?>
<web-languages>
  <language url=http://domain/lang/web_de.xml
    name="Deutsch" />
  ...
</web-languages>
```

## o <gui-languages> / <web-languages>

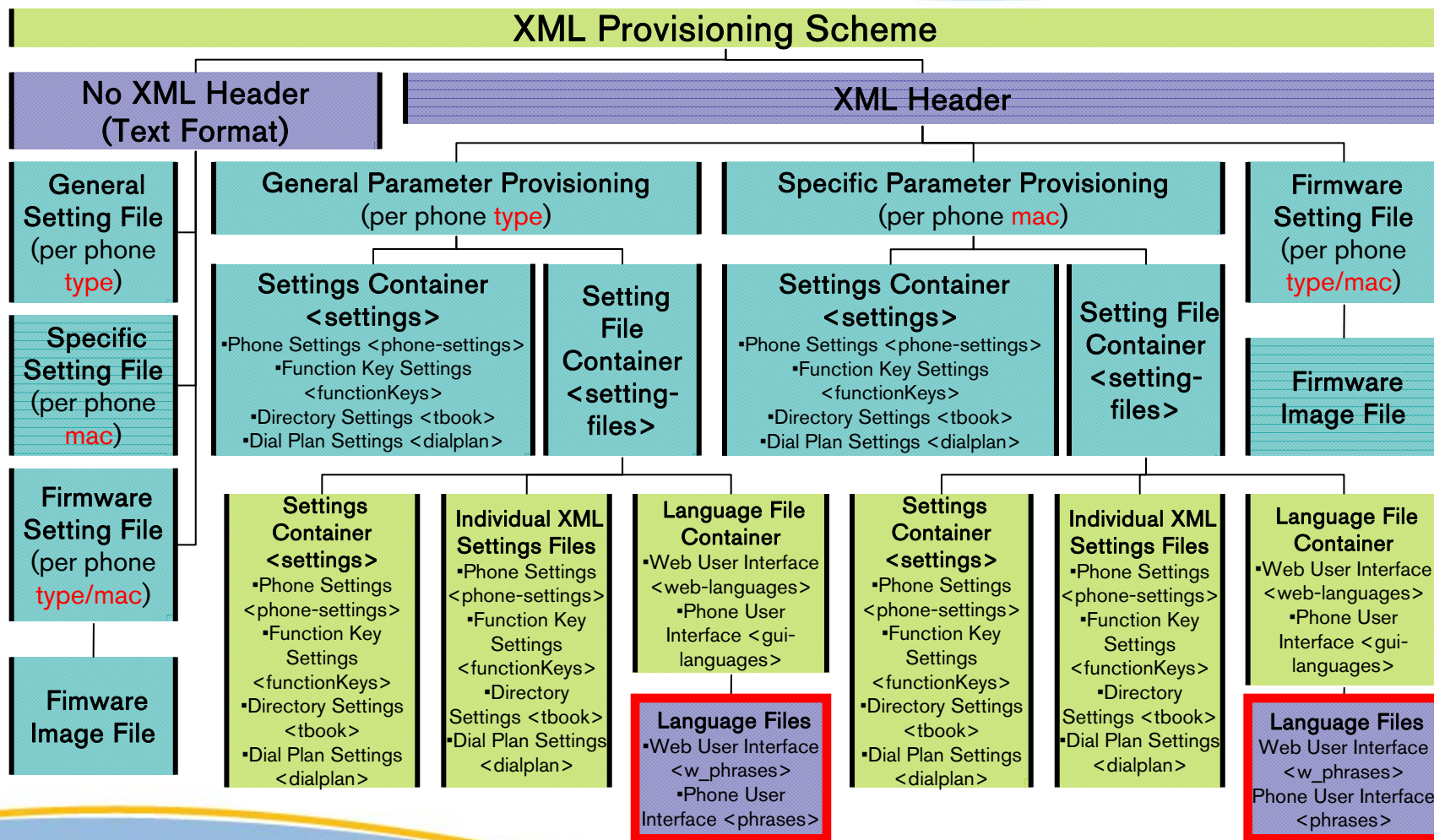
The **URL** specified either links to the **official snom** or to **your own translated XML** language file.

```
<?xml version="1.0" encoding="utf-8" ?>  
  
  <gui-languages>  
    <language url="http://domain/de/gui.xml" name="Deutsch" />  
    ...  
  </gui-languages>
```

The **name** specified will appear in the list of available languages

# Setting Files | XML | Language Files

Mass Deployment



- ① “Language files” are XML files containing the language phrases:
  - Phone User Interface language files (<phrases> tag)
  - Web User Interface language files (<w\_phrases> tag)
- ① When selecting a new language from the phone or web user interface language list the content of the associated file will be stored in the phone’s RAM.
- ① Language files depend on the firmware version
  - each file is unique per firmware version
  - language files of the latest release are always backwards compatible

- Several „Language Files“ <phrases> per phone **type / mac address** contain „Phone User Interface“ languages
  - *[http://domain/3x0/lang/pui\\_de.xml](http://domain/3x0/lang/pui_de.xml)*
  - *[http://domain/3x0/mac/lang/pui\\_de.xml](http://domain/3x0/mac/lang/pui_de.xml)*
- Several „Language Files“ <w\_phrases> per phone **type / mac address** contain „Web User Interface“ languages
  - *[http://domain/3x0/lang/wui\\_de.xml](http://domain/3x0/lang/wui_de.xml)*
  - *[http://domain/3x0/mac/lang/wui\\_de.xml](http://domain/3x0/mac/lang/wui_de.xml)*

# Setting Files | XML | Language Files

Mass Deployment

<http://domain/snom3x0.htm>

```
<?xml version="1.0" encoding="utf-8" ?>
<setting-files>
  <file url="http://domain/3x0/general.xml"/>
  <file url="http://domain/3x0/pui.xml"/>
  <file url="http://domain/3x0/wui.xml"/>
</setting-files>
```

<http://domain/3x0/pui.xml>

```
<?xml version="1.0" encoding="utf-8" ?>
<gui-languages>
  <language url=http://domain/lang/pui_de.xml
    name="Deutsch" />
  ...
</gui-languages>
```

<http://domain/3x0/wui.xml>

```
<?xml version="1.0" encoding="utf-8" ?>
<web-languages>
  <language url=http://domain/lang/wui_de.xml
    name="Deutsch" />
  ...
</web-languages>
```

[http://domain/lang/wui\\_de.xml](http://domain/lang/wui_de.xml)

```
<?xml version="1.0" encoding="utf-8" ?>
<w_phrases>
  <phrase i="0" n="lang_none" t="" />
  ...
</w_phrases>
```

The internal **name** of the phrase.

The **translation** of the phrase.

```
<?xml version="1.0" encoding="utf-8"?>
  <phrases>
    <phrase i="0" n="lang_none" t="" />
    <phrase i="1" n="lang_language_name" t="Deutsch" />
    ...
    <phrase i="892" n="lang_tbook" t="Dir" />
    <language i="0" t="Deutsch" />
  </phrases>
```

The **index** of the phrases.

## 🕒 Overview

- Introduction
- Requirements
- Scenarios

## 🕒 Requirements in Detail

- Provisioning Server
- Configuration Parameters
- Setting Files

## 🕒 Scenarios in Detail

- Scenario 1: DHCP
- Scenario 2: Plug&Play
- Scenario 3: Manual Redirection
- Scenario 4: Automatic Redirection
- Scenario 5: Fix Redirection



## 🕒 Setting Server

- Running TFTP or HTTP(S) Server
- Provide setting files and firmware images

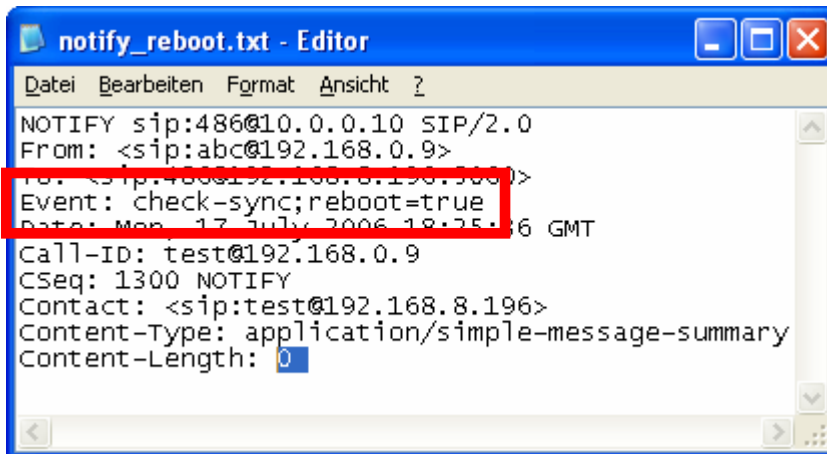
## 🕒 DHCP Server

- Configure sname/ option 66 (tftp-server-name) pointing to setting server URL e.g. http://192.168.1.3
- Optional: Configure file / option 67 (*bootfile-name*) containing setting file path, e.g. snom/snom3xx.htm

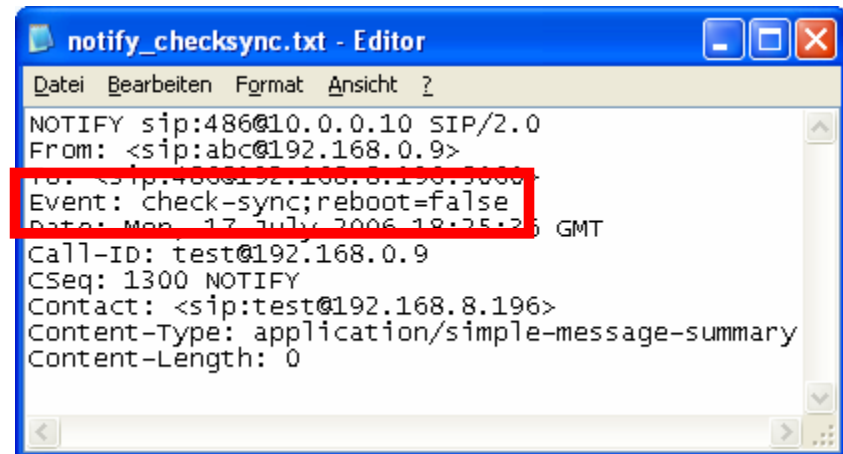
## 🕒 snom3x0

- Make sure the parameter „Setting Server URL“ has not been changed manually before → Reset to factory values

- Out of the box (factory values)/ Factory value reset
- Power up/ Reboot manually or via SIP NOTIFY



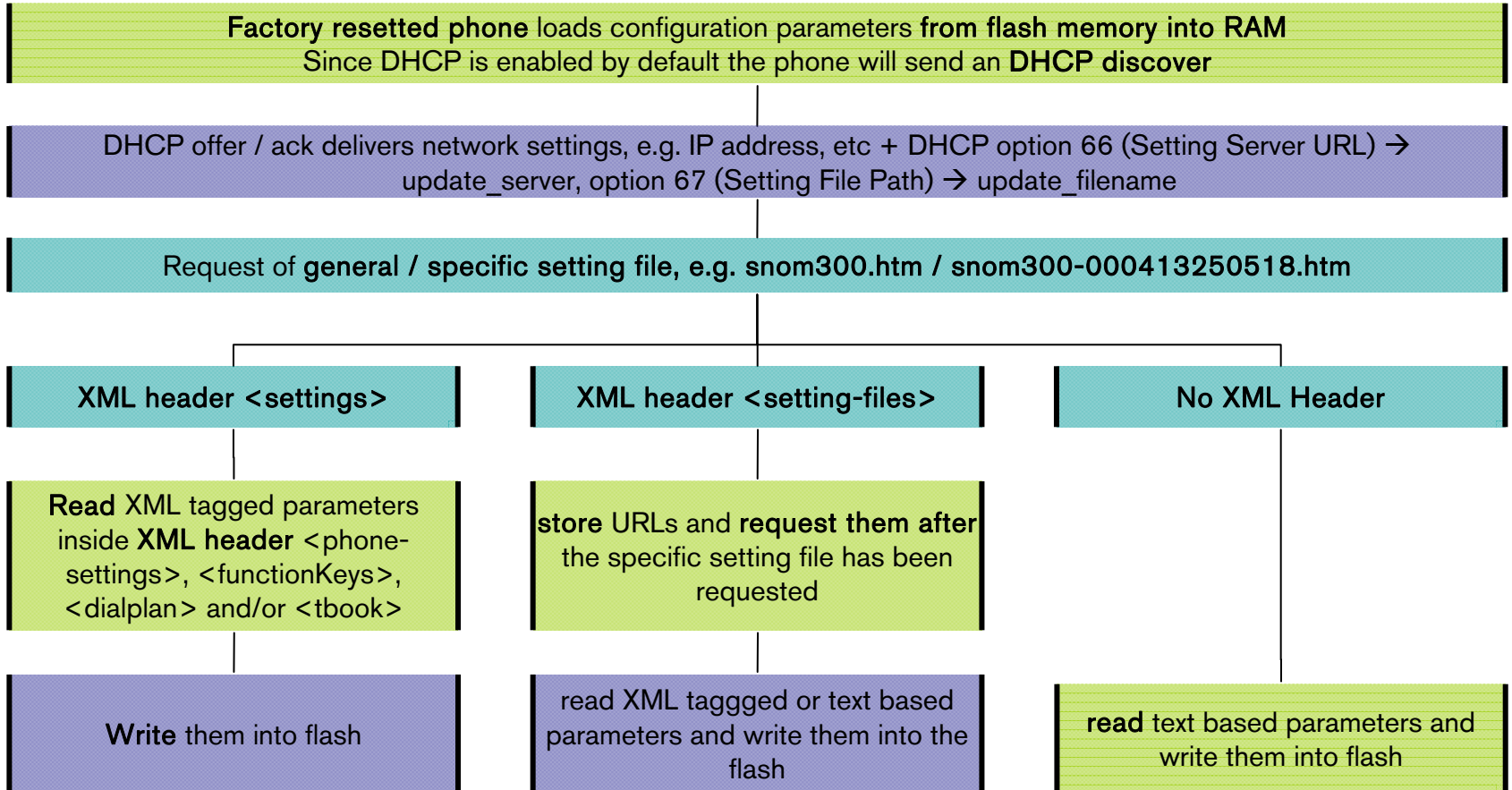
```
notify_reboot.txt - Editor
Datei Bearbeiten Format Ansicht ?
NOTIFY sip:486@10.0.0.10 SIP/2.0
From: <sip:abc@192.168.0.9>
To: <sip:486@192.168.0.198.3000>
Event: check-sync;reboot=true
Date: Mon, 17 July 2006 18:25:36 GMT
Call-ID: test@192.168.0.9
CSeq: 1300 NOTIFY
Contact: <sip:test@192.168.8.196>
Content-Type: application/simple-message-summary
Content-Length: 0
```



```
notify_checksinc.txt - Editor
Datei Bearbeiten Format Ansicht ?
NOTIFY sip:486@10.0.0.10 SIP/2.0
From: <sip:abc@192.168.0.9>
To: <sip:486@192.168.0.198.3000>
Event: check-sync;reboot=false
Date: Mon, 17 July 2006 18:25:36 GMT
Call-ID: test@192.168.0.9
CSeq: 1300 NOTIFY
Contact: <sip:test@192.168.8.196>
Content-Type: application/simple-message-summary
Content-Length: 0
```

# Scenario 1: DHCP | Process Overview

Mass Deployment



# Scenario 1: DHCP | Process Overview

Mass Deployment

Factory resetted phone loads configuration parameters from flash memory into RAM

Since DHCP is enabled by default the phone will send an DHCP discover

## (1) DHCP option 66 contains setting server URL

DHCP offer / ack delivers network settings, e.g. IP address, etc + DHCP option 66 (Setting Server URL) → update\_server\_option\_67 (Setting File Path) → update\_filename

Request of general / specific setting file, e.g. snom300.htm / snom300-000413250518.htm

XML header <settings>

Read XML tagged parameters inside XML header <phone-settings>, <functionKeys>, <dialplan> and/or <tbook>

Write them into flash

XML header <setting-files>

store URLs and request them after the specific setting file has been requested

read XML tagged or text based parameters and write them into the flash

No XML Header

read text based parameters and write them into flash

# Scenario 1: DHCP | DHCP offer | PCAP

Mass Deployment

(Untitled) - Ethereal

File Edit View Go Capture Analyze Statistics Help

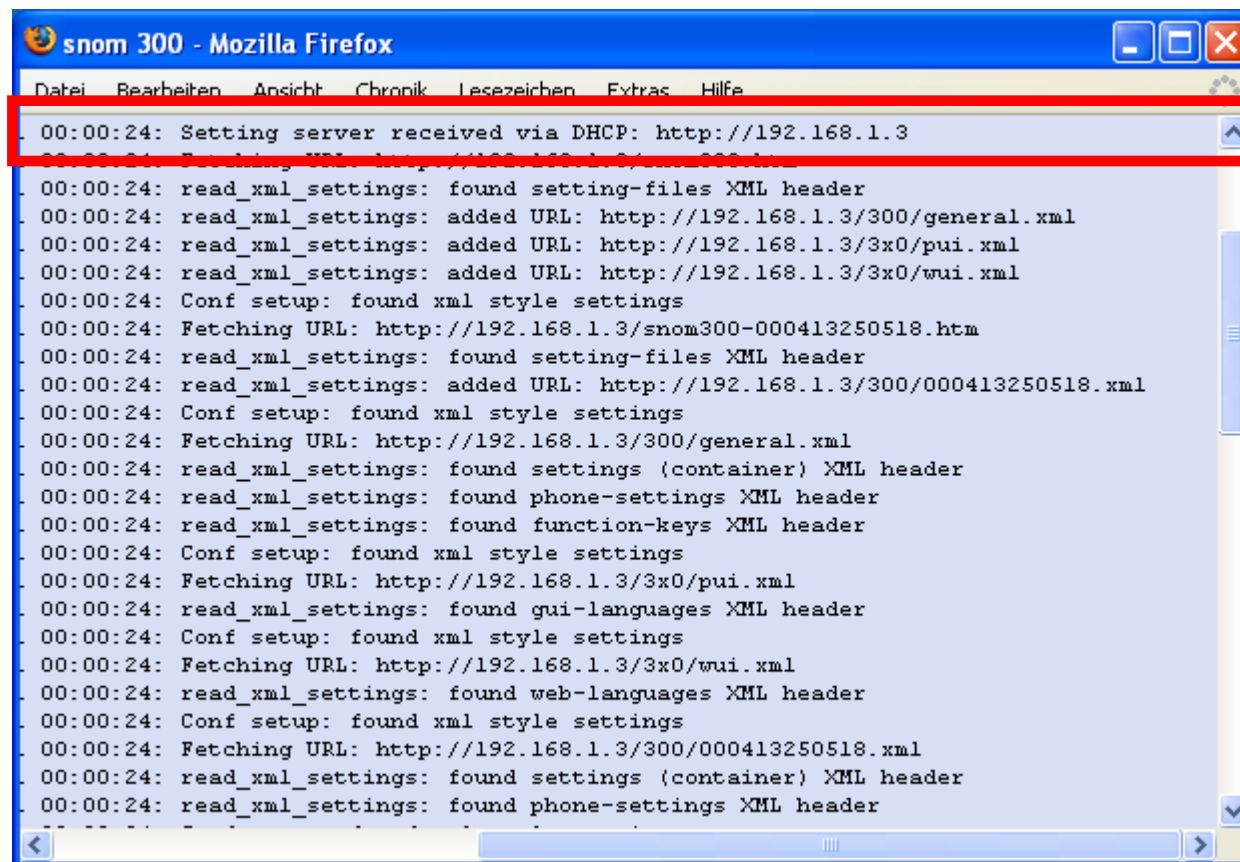
No. -	Time	Source	Destination	Protocol	Info
1	0.000000	0.0.0.0	255.255.255.255	DHCP	DHCP Discover - Transaction ID 0xf30890d
2	0.004421	10.0.0.2	255.255.255.255	DHCP	DHCP offer - Transaction ID 0xf30890d
3	0.144263	0.0.0.0	255.255.255.255	DHCP	DHCP Request - Transaction ID 0xf30890d
4	0.150457	10.0.0.2	255.255.255.255	DHCP	DHCP ACK - Transaction ID 0xf30890d

Option 53: DHCP Message Type = DHCP Offer  
Option 54: Server Identifier = 10.0.0.2  
Option 1: Subnet Mask = 255.0.0.0  
Option 3: Router = 10.0.0.1  
Option 6: Domain Name Server = 10.0.0.2  
Option 7: Log Server = 0.0.0.0  
Option 44: NetBIOS over TCP/IP Name Server = 10.0.0.2  
Option 51: IP Address Lease Time = 2 days  
Option 58: Renewal Time Value = 1 day  
Option 59: Rebinding Time Value = 1 day  
Option 66: TFTP Server Name = "http://10.0.0.2"  
Option 67: Bootfile name = "snom360.htm"

File: "C:\DOKUME~1\FELDTA~1\TEN\LOKALE~1\temp\etherXXXXX09H..." 1613 KB U... | P: 1563 D: 1563 M: 0 Drops: 0

# Scenario 1: DHCP | DHCP offer (1) | Log

Mass Deployment



```
snom 300 - Mozilla Firefox
Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe
00:00:24: Setting server received via DHCP: http://192.168.1.3
00:00:24: Fetching URL: http://192.168.1.3/snom300.htm
00:00:24: read_xml_settings: found setting-files XML header
00:00:24: read_xml_settings: added URL: http://192.168.1.3/300/general.xml
00:00:24: read_xml_settings: added URL: http://192.168.1.3/3x0/pui.xml
00:00:24: read_xml_settings: added URL: http://192.168.1.3/3x0/wui.xml
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/snom300-000413250518.htm
00:00:24: read_xml_settings: found setting-files XML header
00:00:24: read_xml_settings: added URL: http://192.168.1.3/300/000413250518.xml
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/300/general.xml
00:00:24: read_xml_settings: found settings (container) XML header
00:00:24: read_xml_settings: found phone-settings XML header
00:00:24: read_xml_settings: found function-keys XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/3x0/pui.xml
00:00:24: read_xml_settings: found gui-languages XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/3x0/wui.xml
00:00:24: read_xml_settings: found web-languages XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/300/000413250518.xml
00:00:24: read_xml_settings: found settings (container) XML header
00:00:24: read_xml_settings: found phone-settings XML header
```

1

# Scenario 1: DHCP | Process Overview

Mass Deployment

Factory resetted phone loads configuration parameters from flash memory into RAM  
Since DHCP is enabled by default the phone will send an **DHCP discover**

DHCP offer / ack delivers network settings, e.g. IP address, etc + DHCP option 66 (Setting Server URL) → update\_server, option 67 (Setting File Path) → update\_filename

Request of **general / specific setting file**, e.g. snom300.htm / snom300-000413250518.htm

## (2) General / (3) Specific Settings File Container

XML header <settings>

XML header <setting-files>

No XML Header

Read XML tagged parameters inside **XML header** <phone-settings>, <functionKeys>, <dialplan> and/or <tbook>

store URLs and request them after the specific setting file has been requested

Write them into flash

read XML tagged or text based parameters and write them into the flash

read text based parameters and write them into flash

## (2) General / (3) Specific Settings File Container

No.	Time	Source	Destination	Protocol	Info
21	37.455660	192.168.1.110	192.168.1.3	HTTP	GET /snom300.htm HTTP/1.1
22	37.456539	192.168.1.3	192.168.1.110	HTTP	HTTP/1.1 200 OK (text/html)
31	37.539958	192.168.1.110	192.168.1.3	HTTP	GET /snom300-000413250518.htm HTTP/1.1
32	37.540780	192.168.1.3	192.168.1.110	HTTP	HTTP/1.1 200 OK (text/html)
41	37.619952	192.168.1.110	192.168.1.3	HTTP	GET /300/general.xml HTTP/1.1
43	37.620979	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
53	37.700013	192.168.1.110	192.168.1.3	HTTP	GET /3x0/pui.xml HTTP/1.1
55	37.701048	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
65	37.779973	192.168.1.110	192.168.1.3	HTTP	GET /3x0/wui.xml HTTP/1.1
67	37.781126	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
77	37.860009	192.168.1.110	192.168.1.3	HTTP	GET /300/000413250518.xml HTTP/1.1
79	37.861174	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
89	40.027671	192.168.1.110	192.168.1.3	HTTP	GET /300/firmware.xml HTTP/1.1
90	40.028795	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
99	40.177147	192.168.1.110	192.168.1.3	HTTP	GET /lang/pui_de.xml HTTP/1.1
100	40.177485	192.168.1.110	192.168.1.3	HTTP	GET /lang/wui_de.xml HTTP/1.1

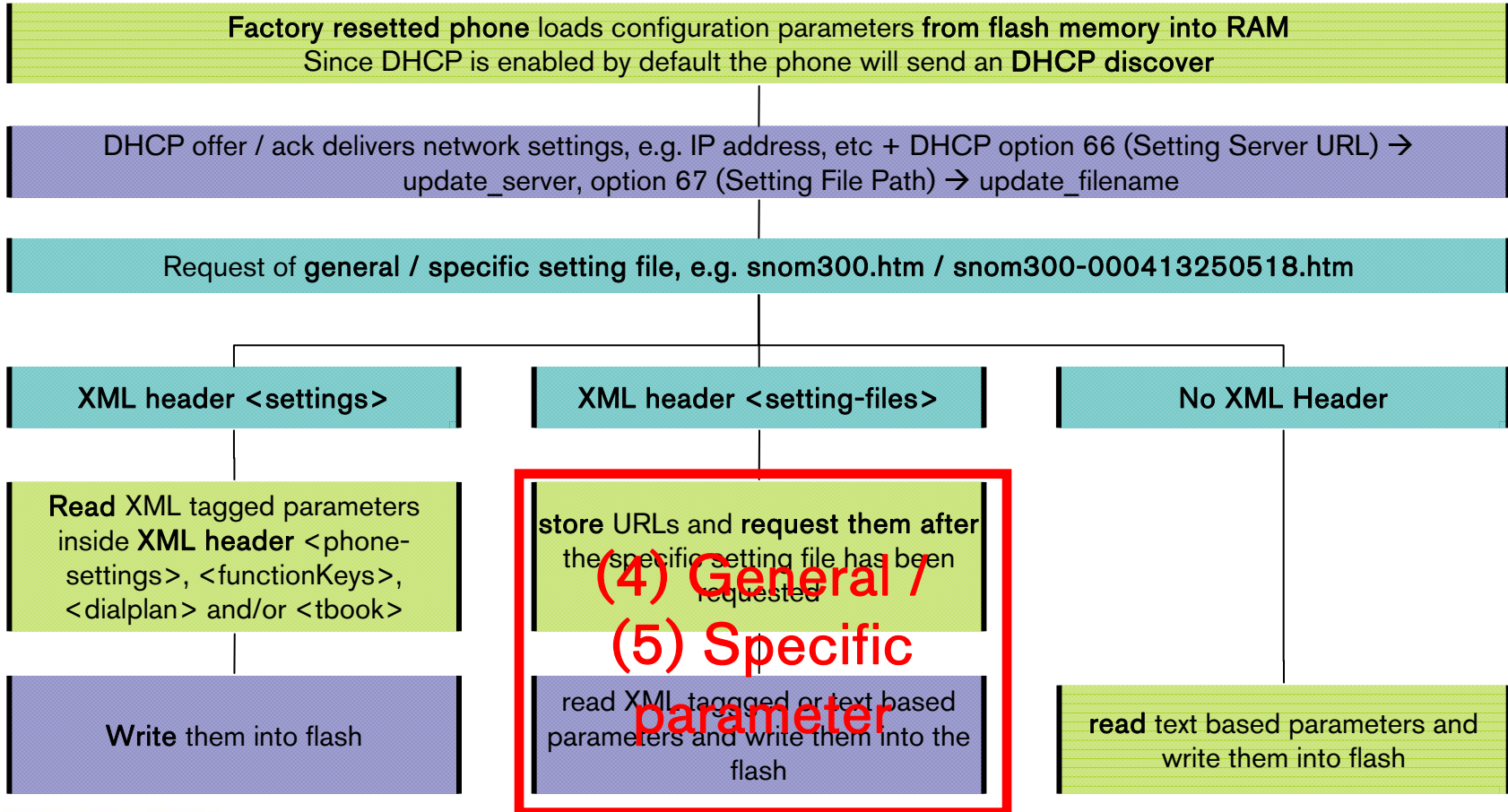


## (2) General / (3) Specific Settings File Container

```
snom 300 - Mozilla Firefox
Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe
00:00:24: Fetching URL: http://192.168.1.3/snom300.htm
00:00:24: read_xml_settings: found setting-files XML header
00:00:24: read_xml_settings: added URL: http://192.168.1.3/300/general.xml
00:00:24: read_xml_settings: added URL: http://192.168.1.3/3x0/pui.xml
00:00:24: read_xml_settings: added URL: http://192.168.1.3/3x0/wui.xml
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/snom300-000413250518.htm
00:00:24: read_xml_settings: found setting-files XML header
00:00:24: read_xml_settings: added URL: http://192.168.1.3/300/000413250518.xml
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/300/general.xml
00:00:24: read_xml_settings: found settings (container) XML header
00:00:24: read_xml_settings: found phone-settings XML header
00:00:24: read_xml_settings: found function-keys XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/3x0/pui.xml
00:00:24: read_xml_settings: found gui-languages XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/3x0/wui.xml
00:00:24: read_xml_settings: found web-languages XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/300/000413250518.xml
00:00:24: read_xml_settings: found settings (container) XML header
00:00:24: read_xml_settings: found phone-settings XML header
```

# Scenario 1: DHCP | Process Overview

Mass Deployment



## (2) General / (3) Specific parameter

No. -	Time	Source	Destination	Protocol	Info
21	37.455660	192.168.1.110	192.168.1.3	HTTP	GET /snom300.htm HTTP/1.1
22	37.456539	192.168.1.3	192.168.1.110	HTTP	HTTP/1.1 200 OK (text/html)
31	37.539958	192.168.1.110	192.168.1.3	HTTP	GET /snom300-000413250518.htm HTTP/1.1
32	37.540780	192.168.1.3	192.168.1.110	HTTP	HTTP/1.1 200 OK (text/html)
41	37.619952	192.168.1.110	192.168.1.3	HTTP	GET /300/general.xml HTTP/1.1
43	37.620979	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
53	37.700013	192.168.1.110	192.168.1.3	HTTP	GET /300/pui.xml HTTP/1.1
55	37.701048	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
65	37.779973	192.168.1.110	192.168.1.3	HTTP	GET /300/wui.xml HTTP/1.1
67	37.781126	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
77	37.860009	192.168.1.110	192.168.1.3	HTTP	GET /300/000413250518.xml HTTP/1.1
79	37.861174	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
89	40.027671	192.168.1.110	192.168.1.3	HTTP	GET /300/firmware.xml HTTP/1.1
90	40.028795	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
99	40.177147	192.168.1.110	192.168.1.3	HTTP	GET /lang/pui_de.xml HTTP/1.1
100	40.177485	192.168.1.110	192.168.1.3	HTTP	GET /lang/wui_de.xml HTTP/1.1

## (4) General / (5) Specific parameter

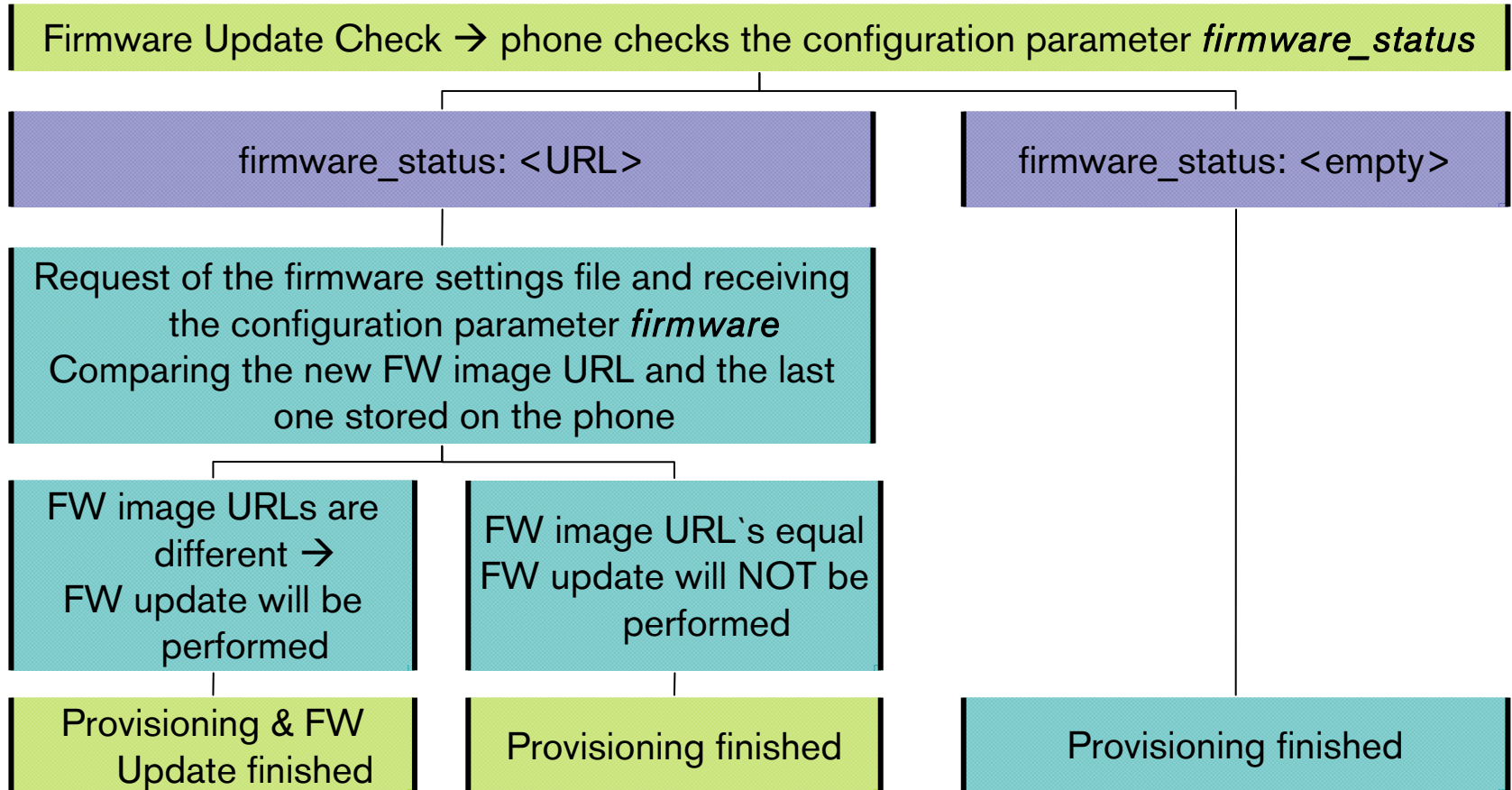
```
snom 300 - Mozilla Firefox
Datei Bearbeiten Ansicht Chronik Lesezeichen Extras Hilfe
00:00:24: Setting server received via DHCP: http://192.168.1.3
00:00:24: Fetching URL: http://192.168.1.3/snom300.htm
00:00:24: read_xml_settings: found setting-files XML header
00:00:24: read_xml_settings: added URL: http://192.168.1.3/300/general.xml
00:00:24: read_xml_settings: added URL: http://192.168.1.3/3x0/pui.xml
00:00:24: read_xml_settings: added URL: http://192.168.1.3/3x0/wui.xml
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/snom300-000413250518.htm
00:00:24: read_xml_settings: found setting-files XML header
00:00:24: read_xml_settings: added URL: http://192.168.1.3/300/000413250518.xml
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/300/general.xml
00:00:24: read_xml_settings: found settings (container) XML header
00:00:24: read_xml_settings: found phone-settings XML header
00:00:24: read_xml_settings: found function-keys XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/3x0/pui.xml
00:00:24: read_xml_settings: found gui-languages XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/3x0/wui.xml
00:00:24: read_xml_settings: found web-languages XML header
00:00:24: Conf setup: found xml style settings
00:00:24: Fetching URL: http://192.168.1.3/300/000413250518.xml
00:00:24: read_xml_settings: found settings (container) XML header
00:00:24: read_xml_settings: found phone-settings XML header
...
```

4

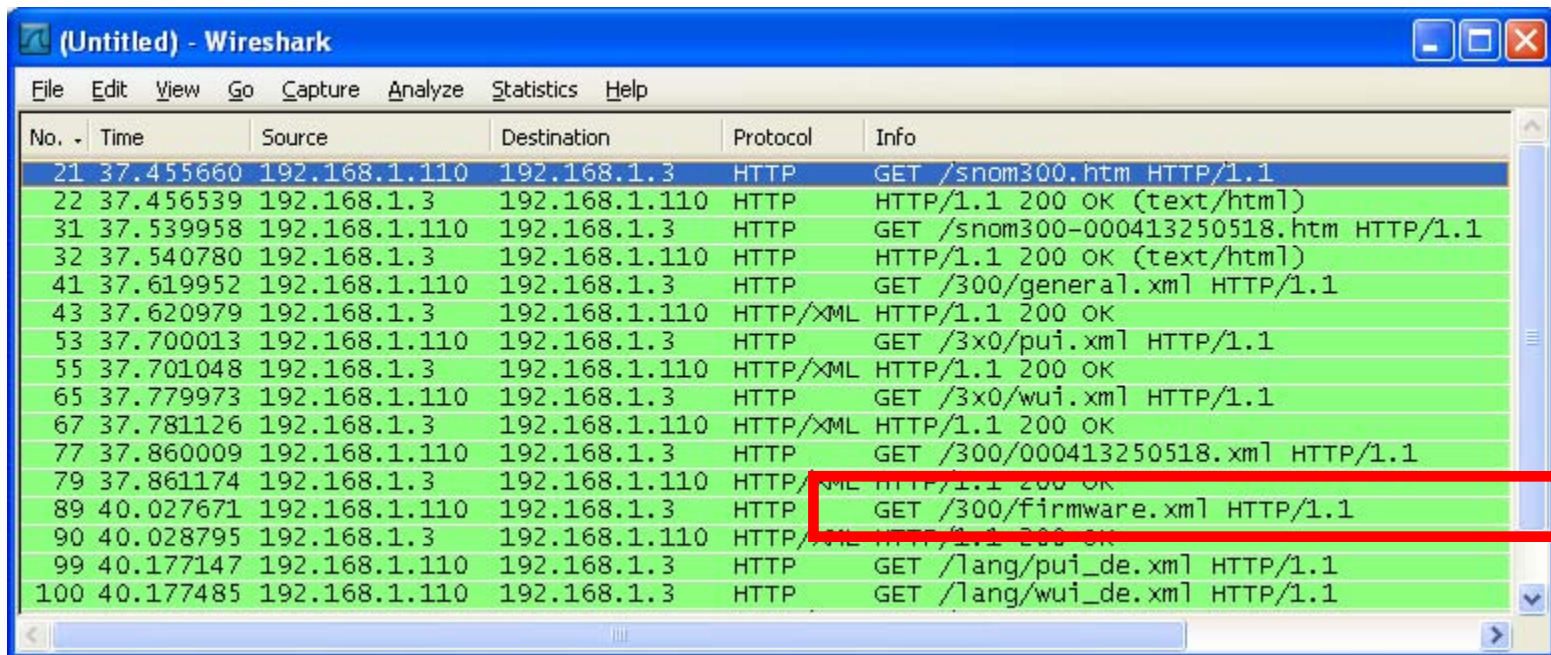
5

# Scenario 1: DHCP | Firmware Update

Mass Deployment



## (6) Firmware Settings File



The image shows a Wireshark capture window titled "(Untitled) - Wireshark". The main pane displays a list of network packets. The columns are: No., Time, Source, Destination, Protocol, and Info. The packets are as follows:

No.	Time	Source	Destination	Protocol	Info
21	37.455660	192.168.1.110	192.168.1.3	HTTP	GET /snom300.htm HTTP/1.1
22	37.456539	192.168.1.3	192.168.1.110	HTTP	HTTP/1.1 200 OK (text/html)
31	37.539958	192.168.1.110	192.168.1.3	HTTP	GET /snom300-000413250518.htm HTTP/1.1
32	37.540780	192.168.1.3	192.168.1.110	HTTP	HTTP/1.1 200 OK (text/html)
41	37.619952	192.168.1.110	192.168.1.3	HTTP	GET /300/general.xml HTTP/1.1
43	37.620979	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
53	37.700013	192.168.1.110	192.168.1.3	HTTP	GET /3x0/pui.xml HTTP/1.1
55	37.701048	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
65	37.779973	192.168.1.110	192.168.1.3	HTTP	GET /3x0/wui.xml HTTP/1.1
67	37.781126	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
77	37.860009	192.168.1.110	192.168.1.3	HTTP	GET /300/000413250518.xml HTTP/1.1
79	37.861174	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
89	40.027671	192.168.1.110	192.168.1.3	HTTP	GET /300/firmware.xml HTTP/1.1
90	40.028795	192.168.1.3	192.168.1.110	HTTP/XML	HTTP/1.1 200 OK
99	40.177147	192.168.1.110	192.168.1.3	HTTP	GET /lang/pui_de.xml HTTP/1.1
100	40.177485	192.168.1.110	192.168.1.3	HTTP	GET /lang/wui_de.xml HTTP/1.1

A red rectangular box highlights the packet at No. 89, which is a GET request for /300/firmware.xml. A red circle with the number "6" is positioned to the right of this row.

## Usage

- This is particularly useful for out of the box setup of devices without using DHCP option 66/ 67

## Configuration

- PnP is enabled by default

### Update:

Update Policy:

Never update, load settings only

Setting URL:

http://provisioning.snom.com/s

Subscribe Config:

on  off

PnP Config:

on  off

```
phone_type!: snom300-SIP
codec_tos!: 160
mac&: 000413250518
setting_server!: http://provisioning.snom.com/snom300/
subscribe_config!: off
pnp_config!: on
ip_addr!: 10.0.0.27
netmask!: 255.255.255.0
update_server!: http://10.0.0.3
dns_domain!: snomtraining
```

- Phone sends a SIP *SUBSCRIBE* message to a multicast address (224.0.1.75)

SIP Trace	
<b>Operation</b>	Clear Reload
Home	
Address Book	
<b>Setup</b>	Sent to udp:224.0.1.75:5060 at 24/12/2001 01:00:11:800 (396 bytes):
Preferences	SUBSCRIBE sip:MAC%3a0004132314A4@VON SIP/2.0
Speed Dial	Via: SIP/2.0/UDP 10.0.0.10:2051;rport
Function Keys	From: <sip:MAC%3a0004132314A4@VON>;tag=1542850995
Identity 1	To: <sip:MAC%3a0004132314A4@VON>
Identity 2	Call-ID: 1333736042@10.0.0.10
Identity 3	CSeq: 1 SUBSCRIBE
Identity 4	Event: ua-profile;profile-type="device";vendor="snom";model="snom360";version="6.5.1"
Identity 5	Expires: 0
	Accept: application/url
	Contact: <sip:10.0.0.10:2051>
	Content-Length: 0



# Scenario 2: Plug & Play | PCAP Trace

Mass Deployment

massdeployment - Ethereal

File Edit View Go Capture Analyze Statistics Help

No. -	Time	Source	Destination	Protocol	Info
5	11.083248	SnomTech_23:14:a4	Broadcast	ARP	who has 10.0.0.1? Tell 10.0.0.10
6	11.188257	10.0.0.10	224.0.1.75	SIP	Request: SUBSCRIBE sip:MAC%3a0004132314A4@VON SIP/2.0
7	14.084998	SnomTech_23:14:a4	Broadcast	ARP	who has 10.0.0.1? Tell 10.0.0.10

Frame 6 (437 bytes on wire, 437 bytes captured)

- Ethernet II, Src: SnomTech\_23:14:a4 (00:04:13:23:14:a4), Dst: 01:00:5e:00:01:4b (01:00:5e:00:01:4b)
- Internet Protocol, Src: 10.0.0.10 (10.0.0.10), Dst: 224.0.1.75 (224.0.1.75)
- User Datagram Protocol, Src Port: 2058 (2058), Dst Port: 5060 (5060)
- Session Initiation Protocol
  - Request-Line: SUBSCRIBE sip:MAC%3a0004132314A4@VON SIP/2.0
  - Message Header
    - Via: SIP/2.0/UDP 10.0.0.10:2058;rport
    - From: <sip:MAC%3a0004132314A4@VON>;tag=1578833677
    - To: <sip:MAC%3a0004132314A4@VON>
    - Call-ID: 891599124@10.0.0.10
    - Cseq: 1 SUBSCRIBE
    - Event: ua-profile;profile-type="device";vendor="snom";model="snom360";version="6.5.1"
    - Expires: 0
    - Accept: application/url
    - Contact: <sip:10.0.0.10:2058>
    - Content-Length: 0

- ❶ SIP servers which have membership to the group can respond to the SUBSCRIBE and send NOTIFY messages with the setting server HTTP URL in the body
- ❷ The phone retrieves its settings from the URL specified.

```
Received from udp:192.168.100.10:5060 at 24/12/2001 00:00:19:293 (868 bytes):
```

```
NOTIFY sip:192.168.10.67:5060 SIP/2.0
```

```
...
```

```
To: <sip:MAC%3a00135E874B49@intern.snom.de>;tag=658512961
```

```
From: <sip:MAC%3a00135E874B49@intern.snom.de>;tag=91955270
```

```
Call-ID: 1930770594@192.168.10.67
```

```
CSeq: 3 NOTIFY
```

```
Content-Type: application/url
```

```
Subscription-State: terminated;reason=timeout
```

```
...
```

```
http://192.168.100.10/sipphone/sipphoneconfig.xml?mac={mac}
```

- Environments with few phones or without DHCP Server option 66 / 67 available
- Change the Setting URL field manually via the web or phone user interface

**Update:**

Update Policy:

**Setting URL:**

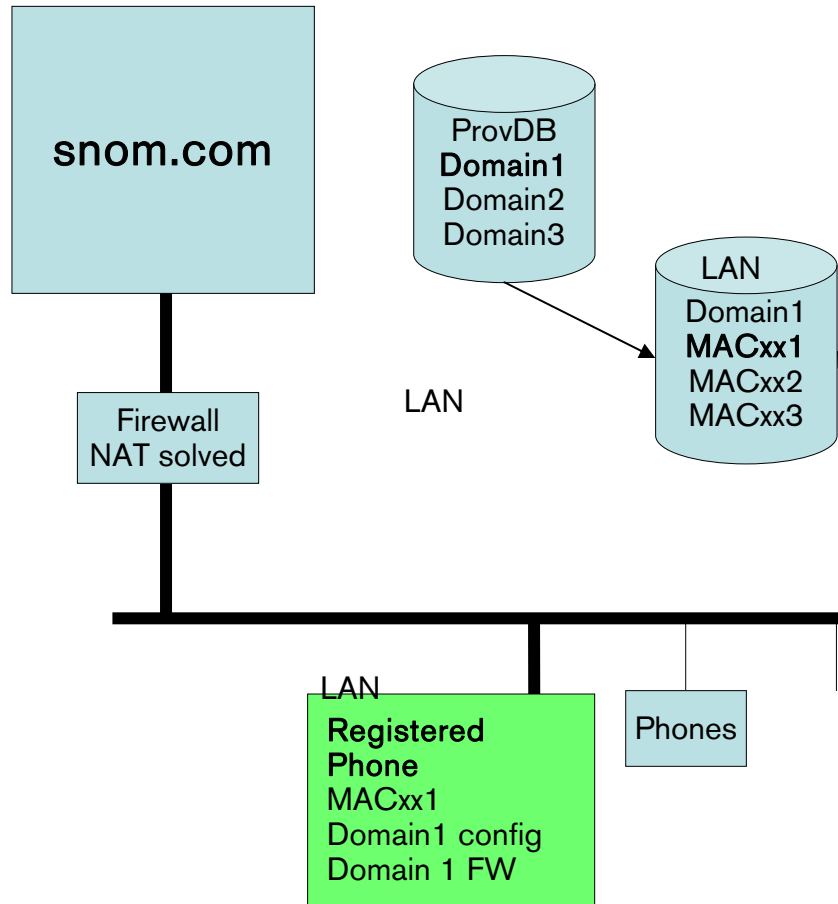
Subscribe Config:  on  on

PnP Config:  on  off

- Snom phones contact snom provisioning server first (hardcoded in FW):
  - *<http://provisioning.snom.com/snom3x0/snom3x0.php?mac={mac}>*
  - Settings script does not deliver any settings back to the phone
- Snom partner may request SSH accounts to redirect the setting server URL to their own setting server
- Redirection is based on MAC address, registered MAC addresses will be redirected

# Scenario 4: Automatic Redirection | Overview

Mass Deployment



## Customer SSH account

```
Welcome, account! Type help for help.  
==> help  
Welcome to the snom configuration tool.  
You may use the following commands:  
  
SHOW <mac> : Show the status of a phone.  
REGISTER <mac> : Register a phone.  
REG <mac> : Same as REGISTER.  
DEREGISTER <mac>: Deregister a phone.  
LIST : List all phones assigned.  
BYE : Leave this tool.
```

A MAC address may be entered as 3 to 6 digit hexadecimal number, case does not matter (e.g. 2e4 --> 0004132202E4)

```
==> list  
000413101214 00041310123C
```

- ① Setting URL can be hardcoded for large scale OEM projects
- ① Assures full control over the phone since each factory reset will point to the designated OEM setting server