

Feature Profile 42250

Using Enhanced Feature Keys and Configurable Soft Keys on Polycom® Phones

This feature profile provides detailed information on how to set up Enhanced Feature Keys (EFK) and Configurable Soft Keys on Polycom phones with any call server.

This information applies to the following Polycom phones:

- SoundPoint IP running SIP software version 3.1 or later
- SoundStation IP running UC software version 3.3.0 or later
- VVX 1500 running SIP software version 3.1.2. Rev B or later
- VVX 500 running UC software version 4.0.1 or later
- VVX 600 running UC software version 4.1.2 or later

This feature profile contains the following information:

- [Enhanced Feature Keys Overview](#) Understand how Enhanced Feature Keys works.
- [Configuring Soft Keys](#) Configure the soft keys on your phone to suit your needs. Two configuration examples are provided.
- [Testing and Troubleshooting Tips](#) Read these helpful tips before you start your configuration.

This feature profile contains the following attachments:

- For UC software 3.3.0 or later only:
 - UCS_EFK-SoftKey1.cfg, UCS_EFK-SoftKey2.cfg
- For pre-UC software 3.3.0 only:
 - SIP_EFK-SoftKey1.cfg, SIP_EFK-SoftKey2.cfg
- For all software versions:
 - SoftKey1-directory.xml, SoftKey2-directory.xml

To view the attachments, click the paperclip icon on the left-hand side of this document.



Note: Understanding the Attachments

Configuration for UC software 3.3.0 and later versions has changed significantly from the pre-UC software configuration. As a result, the attachments include two versions of the EFK **.cfg** file. The UCS files are for use with UC software version 3.3.0 or later, while the SIP files are for use with SIP version 3.2.x or earlier. The **.xml** directory file is common to all software versions. For more information on the UC software configuration, refer to [Technical Bulletin 60519: Simplified Configuration Improvements in Polycom UC Software 3.3.0](#).

Enhanced Feature Keys Overview

Enhanced Feature Keys provides a method of creating interactive call sequences that can be executed by the phone.

The 'interactivity' consists of the following actions:

- Gather input from the phone's user
- Send SIP signaling requests to a call server (INVITE or REFER)
- Cause the phone to perform certain operations such as hang-up a call or place a call on hold
- Emulate a key press on the phone
- Invoke the phone's microbrowser to access an XHTML URI (for example, set `action.String` to "`http://leo/test/menu.xhtml`")

A macro language is used to define these actions. Details of this macro language are documented in the Configuring Enhanced Feature Keys section of the [Polycom UC Software 4.1.0 Administrators' Guide](#).

These macros may be used in several ways:

- By defining an EFK macro using the `efklist` parameters
- Directly as part of a speed dial entry
- Directly as part of a soft key configuration

Using the `efklist` parameters to define a macro is optional and is useful when defining more than one soft key or speed dial.

The `efkprompt` parameter must be used if interactivity with the user is implemented as part of any macro.



Note: Setting `feature.enhancedFeatureKeys.enabled`

The feature flag `feature.enhancedFeatureKeys.enabled` (`feature.18.enabled` for pre-UC software 3.3.0 versions), must be set to 1 to use the Enhanced Feature Keys and Configurable Soft Keys features.

Configuring Soft Keys

The Configurable Soft Keys feature can be used by the phone's system administrator to customize the use of the soft keys on the phone to suit users' needs.

Soft key configuration involves the following:

- Adding new soft keys that use the Enhanced Feature Keys capability to simplify the operation of common telephony tasks that may need more than one key press with the default configuration.
- Removing certain default soft keys for functions that may be redundant or never used.

Soft Key Configuration Examples

To assist system administrators in configuring common telephony features, some example soft key configuration files are attached to this feature profile.

Example 1: Simplifying Commonly Used Telephony Features

This example applies to administrators who are implementing solutions with Polycom SoundPoint IP, SoundStation IP, and VVX series phones and to users with the following use characteristics:

- Uses the handset predominantly for making phone calls and does not need the **New Call** and **End Call** soft keys
- Uses Call Park, Pick-Up, and Retrieve features using '*' code' sequences
- Frequently sends calls directly to another person's voicemail
- Frequently makes conference calls to a specific bridge number
- Uses Push-to-Talk (PTT)/Intercom communication with close business associates
- Needs easy access to call lists in many call states
- Desires single button Blind Transfer capability

The attached configuration files contain the necessary configuration to implement nine Enhanced Feature Key functions as soft keys and one (Intercom) as a speed dial. The **directory.xml** file is required to configure features as speed dial keys.



Note: Example 1 Files

For this example, refer to **UCS_EFK-SoftKey1.cfg** (for pre-UC software 3.3.0 versions, use **SIP_EFK-SoftKey1.cfg**) and **SoftKey1-directory.xml** (rename to <mac- address>-directory.xml to configure).

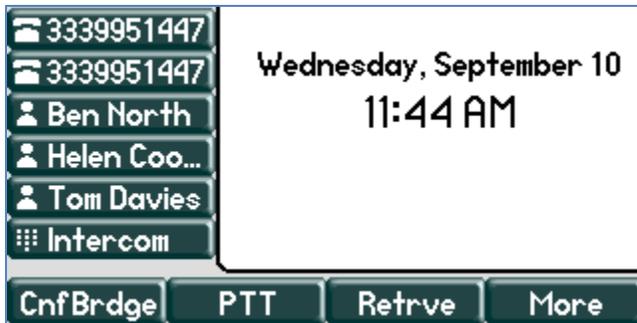
To use these configuration files, change the default star codes such as *68 for Call Park, *88 for Call Park Retrieve, and *50 for PTT to the star codes used by your call server for the appropriate feature.

The following standard Polycom features were disabled for this example:

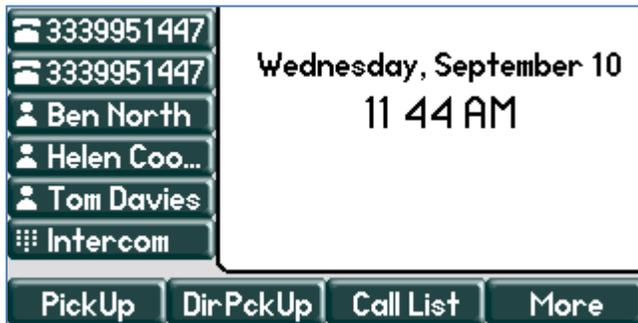
- **Redundant call management keys**
(`softkey.feature.basicCallManagement.redndant="0"`)
- **Buddies** (`softkey.feature.buddies="0"`)
- **Callers** (`softkey.feature.callers="0"`)
- **Directories** (`softkey.feature.directories="0"`)
- **End Call** (`softkey.feature.endcall="0"`)
- **Forward** (`softkey.feature.forward="0"`)
- **My Status** (`softkey.feature.mystatus="0"`)
- **New Call** (`softkey.feature.newcall="0"`)

The following screenshots show the user interface for the SoundPoint IP 670 phone in different call states (idle, active, alerting, dial tone, setup, hold, and proceeding) when configured with the example EFK configuration file:

Idle State



If you press the **More** soft key, the following screen appears:



Active State

One active call:



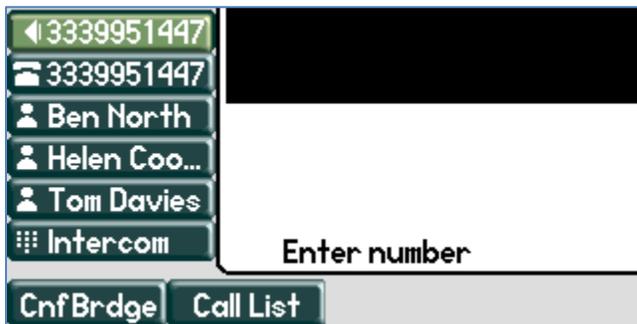
One active call and one call on hold:



Alerting State



Dial Tone State



Setup State



Hold State



If you press the **More** soft key, the following screen appears:



Proceeding State



Example 2: Configuring Soft Keys for Common Administrator Functions

This example applies to administrators who are implementing solutions with Polycom SoundPoint IP, SoundStation IP, and VVX series phones and who frequently need to perform menu-driven functions that require multiple key presses. By defining macros to emulate these key presses, you can configure the phone for single button access to common functions.

In the example, the following Enhanced Feature Key functions are defined and assigned to soft keys and speed dial keys:

- **Admin** single button access to Advanced settings
- **Restart** single button phone restart (to apply configuration changes)
- **Ln1Setup** speed dial key assigned to take the administrator to the SIP Line1 setup menu to view the SIP settings for that line (Note the use of an embedded macro \$MAdminMenu\$ within the Line1Setup EFK)
- **Browser** a soft key available in the active call state to take the user to a specific browser location



Note: Example 2 Files

For this example, refer to **UCS_EFK-SoftKey2.cfg** (for pre-UC software 3.3.0 versions, use **SIP_EFK-SoftKey2.cfg**) and **SoftKey2-directory.xml** (rename to <mac-address>-directory.xml to configure). The **directory.xml** file is required to configure features as speed dial keys.

The following standard Polycom features were disabled for this example:

- **Buddies** (`softkey.feature.buddies="0"`)

- **Callers** (`softkey.feature.callers="0"`)
- **Directories** (`softkey.feature.directories="0"`)
- **Forward** (`softkey.feature.forward="0"`)
- **My Status** (`softkey.feature.mystatus="0"`)

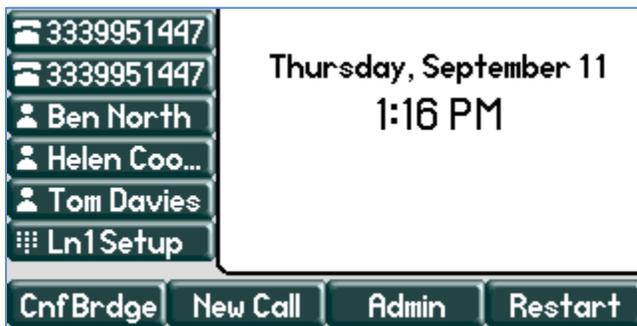


Note: Configuration Dependency on Software Versions

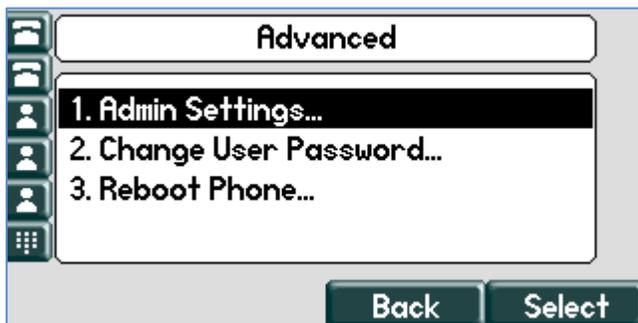
Menu order, function placement, and the key sequences to these functions change with software version releases. Therefore, any macros that depend on these elements also depend on the software version. In Example 2, the macros to configure the Admin, Restart and Ln1Setup keys have this dependency.

The following screenshots show the phone user interface when configured with the example EFK configuration file:

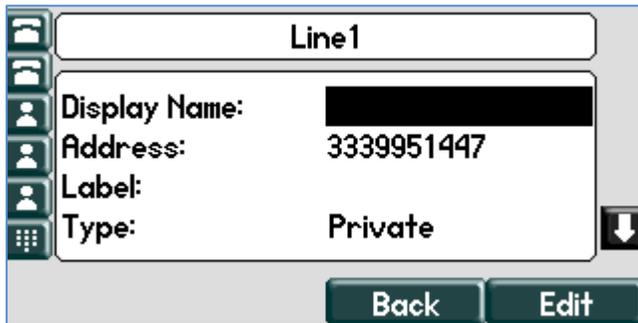
Idle State



If you press the **Admin** soft key on the Idle screen, the following screen appears:



If you press the **Ln1Setup** speed dial key on the Idle screen, the following screen appears:



Active State

The second page of soft keys in the Active state has the **Browser** soft key as shown in the following screen:



Pressing the **Browser** soft key will take the user to a configured XHTML page.

Testing and Troubleshooting Tips

Note the following when working with Enhanced Feature Keys:

- Phones do not give a user-visible error message if something is not correct. If a function is executed that contains incorrect macros, the function may implement partially or not at all. The phone log files will log a message if an invalid Enhanced Feature Keys operation is attempted. Common causes of errors are:
 - EFK macros/actions are case-sensitive (Note: see Internal Functions).
 - If implementing key press emulation macros, it may be necessary to enter a pause between operations.
- It is recommended that configuration files created and edited with an XML editor be used for prototyping features.
 - Use of speed dials to prototype the macros can be useful to avoid having to re-boot the phone to test changes. In this case, the macro can be entered directly into the speed dial Contact field and edited from the phone keypad.
 - The web interface cannot be used to configure Enhanced Feature Keys.
- The administrator needs to consider soft key and menu differences between certain models of phones when designing any custom soft key features. In particular, the SoundPoint IP 301, 320, and 330 phones have only three soft keys. The other SoundPoint IP phones are very similar in soft key designation and usage.
- The administrator must take care not to implement soft key features that might hide commonly used functions from users. Given the level of configurability of the keys, it may be possible to define a soft key configuration or operation that results in a dead end or improper behavior of the phone user interface. Careful prototyping and testing is strongly encouraged before a new soft key design is implemented in a phone system.
- The parameters for UC software 3.3.0 and later are different from pre-UC software parameters. Check that you are using the correct sample configuration files if you experience unexpected behavior.

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