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1 NAME

slxconfig-demuxer - OpenSLX configuration demultiplexer

2 SYNOPSIS

slxconfig-demuxer [options] [<system-name> ...]

Script Options

<code>--dry-run</code>	avoids writing anything, for testing
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General Options

<code>--help</code>	brief help message
<code>--man</code>	full documentation
<code>--version</code>	show version

3 DESCRIPTION

slxconfig-demuxer will read information about all systems, clients and groups from the OpenSLX configuration database, mix & match the individual configurational attributes and then demultiplex the resulting information to a set of configuration files. These files are used by any OpenSLX-client during boot to find out which systems to offer for booting.

If you invoke the script with one or more system names, only these systems will be demuxed. All other systems (which are expected to have been demuxed before) will just be linked into the bootloader menu.

The resulting files will be put into the OpenSLX-tftpboot-path.

FILE CREATION

The following set of files will be created:

Basic PXE Setup

The basic PXE files (*menu.c32*, *pxelinux.0*) will be copied into *\$SLX_PUBLIC_PATH/tftpboot* to make them available to any PXE-client via tftp.

PXE Client Configurations

For each client, a PXE configuration file will be generated and written to *\$SLX_PUBLIC_PATH/tftpboot/pxelinux.cfg/01-<MAC-of-client>*. This file will contain information about the systems this client shall offer for booting. For each of these systems, the kernel cmdline options required for that particular system setup is specified (via PXE's APPEND option).

Any client that is not known to OpenSLX (so it will not have a specific configuration file) will use the configuration from the default client (appropriately named 'default').

System Kernels and Initialram-Filesystems

For each bootable system, that system's kernel will be copied to *\$SLX_PUBLIC_PATH/tftpboot/<vendor-os-name>/kernel* and an OpenSLX-specific initramfs required for booting that particular system is generated (by means of *slxmkramps*) and put into *\$SLX_PUBLIC_PATH/tftpboot/<vendor-os-name>/initramfs*.

These two files (kernel & initramfs) will be referenced by the PXE client configuration of all clients that offer this specific system for booting.

OpenSLX Client Configurations

For each system, an OpenSLX configuration archive will be generated and written to *\$SLX_PUBLIC_PATH/tftpboot/client-config/<system-name>/default*. Furthermore, every client of that system whose attributes differ from the system's default will get its own configuration archive generated here, too (e.g. *\$SLX_PUBLIC_PATH/tftpboot/client-config/<system-name>/01-<MAC-of-client>.tgz*).

Each of these archives will contain the file *initramfs/machine-setup*, specifying all the attributes of that particular system and/or client (e.g. whether or not it should start the X-server).

Furthermore, each system-specific archive may contain additional system files that are required for that system (e.g. a special PAM-module required for LDAP authentication). These files are copied from *\$SLX_PRIVATE_PATH/config/default* and *\$SLX_PRIVATE_PATH/config/<system-name>*.

On top of that, each client may have its own set of system files, too (e.g. some config files required to install a special kind of hardware available only on that client). These files are copied from *\$SLX_PRIVATE_PATH/config/<system-name>/01-<MAC-of-client>*.

MIXING & MATCHING (THE DEMUXER)

In the OpenSLX configuration database, each system, group and client may have several configurational attributes set to a specific value that will cause a client booting that system to behave in a certain way. The mixing of all these different attributes into one set that is relevant for a specific client booting one specific system is one important task of the *slxconfig-demuxer*.

As an example, let's assume one system setup that is configured to boot directly into a special application that demands a rather low screen-resolution of 1024x768 pixels, as otherwise the text would be unreadable due to very small fonts being used by that app. In order to achieve this, the administrator can set the *hw_monitor*-attribute of the **system** to '1024x768'. Let's say one of the clients, however, is connected to a very old monitor that has problems with this resolution and only supports 800x600 pixels. In that case, the administrator

can set the *hw_monitor*-attribute of that **client** to '800x600'. The mixing & matching process would make sure that this specific client would run that system with a resolution of 800x600, while all other clients would run that system in 1024x768.

So the *slxconfig-demuxer* demultiplexes the individual configurational attributes into a concrete set of configuration settings for specific clients and their offered systems, making sure that each client/system combination uses the appropriate settings.

4 OPTIONS

Script Options

-dry-run

Runs the script but avoids writing anything. This is useful for testing, as you can learn from the logging output what would have been done.

General Options

-help

Prints a brief help message and exits.

-man

Prints the manual page and exits.

-version

Prints the version and exits.

5 SEE ALSO

slxsettings, *slxos-setup*, *slxos-export*, *slxconfig*

6 GENERAL OPENSXLX OPTIONS

Being a part of OpenSLX, this script supports several other options which can be used to overrule the OpenSLX settings:

<code>--db-name=<string></code>	name of database
<code>--db-spec=<string></code>	full DBI-specification of database
<code>--db-type=<string></code>	type of database to connect to
<code>--locale=<string></code>	locale to use for translations
<code>--log-level=<int></code>	level of logging verbosity (0-3)
<code>--logfile=<string></code>	file to write logging output to
<code>--private-path=<string></code>	path to private data

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--public-path=<string>    path to public (client-accessible) data
--temp-path=<string>      path to temporary data
```

Please refer to the `slxsettings`-manpage for a more detailed description of these options.