

G11nInstall module proposal

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Introduction of G11nInstall module

Purpose of G11nInstall (G11n = Globalization) module is to provide data about system languages and locales, and some other Internationalization (I18n) related services.

Including information about packaging of languages and locales, to be able to install and remove them.

Relation to other modules

G11nInstall services will be consumed by installer application via existing orchestrator wrappers. The module can also be used directly by other modules or even other appls running before or after system installation.

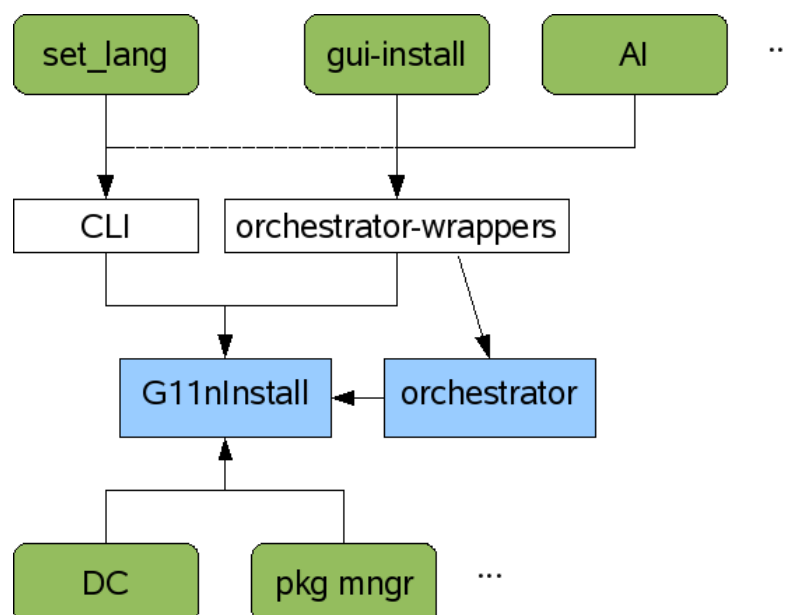
Command-line interface is another way how G11nInstall services will be exposed. CLI can be used by other than C consumers (e.g. set_lang script) as a full-featured API wrapper.

CLI could also be used by QE team as a test driver.

Examples of module consumers follows:

- LiveCD start-up language selection (set_lang script)
- gui-install - language, confirm, and install screens
- AI, e.g. when validating install profile which includes languages list
- DC, needs list of pkgs to support a particular language/locale in the image
- package manager or other OpenSolaris languages install mngmt GUI/UI

Drawing shows where G11nInstall module fits in:



Requirements

G11nInstall module provides following services:

- 1) List languages supported by installer application, including information about:
 - language code, text description, and translated description
- 2) List languages and locales available on the system, including information about:
 - language to locales relation
 - language and locale code, text description, and translated description
 - locale territory/country, code-set, and variant
 - default locale per language
- 3) List languages and locales available at network repository, including the same information as in 2) above.
- 4) Get a list of packages which must be installed/removed on the system, in order to support given language(s) or locale(s).
- 5) Set language or locale.
- 6) Get and Set system default locale.
- 7) Recognize and differ Unicode (UTF-8) and C/Posix locales.

Implementation

G11nInstall module will be implemented as a stand-alone shared C library.

Most of code will be taken from orchestrator locale.c component. That code will be moved to G11nInstall library and re-used. Unused interface functions from locale.c will be deleted, and more comments will be put to locale.c code to make it better maintainable.

Additionally, some new functions will be introduced - requirements #3 and #4. Since no install management service for language/locale bits is currently available, the new functions will be implemented using simple static table (languages, locales, package names).

Ultimately, requirements #3 and #4 will be implemented using a new, IPS-based, languages and locales install management layer. That's another, independent project.

When the new IPS-based layer will be ready, implementation of the G11nInstall module will be most likely overhauled. Moreover, Python wrappers of the C module may be introduced, or furthermore module will be rewritten in Python.