



How to create your own distribution



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1 Article purpose

The purpose of this article is to describe the basic steps required to create your own distribution.



2 Prerequisites

OpenSTLinux distribution must be installed and into the board Flash memory(ies).



3 Creating your own distribution

As recommended in Yocto user manual ^[1], you may create your own distribution in order not to alter any original distribution Metadata, while gaining more control over package alternative selections, compile-time options, and other low-level configurations.

The basic steps for creating a distribution are detailed in the below chapter.

More details can be found in *Yocto Mega manual/Creating your own distribution*^[1].

3.1 Creating a layer for a new distro

Please read the [How to create a new open embedded layer](#) article.

3.2 Creating the distribution configuration file

Some configuration examples are provided in ST distribution under: `<path of OpenSTLinux distribution delivery>/meta-st/meta-st-openstlinux/conf/distro/*.conf`

3.3 Providing miscellaneous variables

Some miscellaneous variable examples are provided under : `<path of OpenSTLinux distribution delivery>/meta-st/meta-st-openstlinux/conf/distro/include/st-default-distro*.inc` files

All meta-st-openstlinux distro layer configuration files presented above are located here:

```

distro
├── include
│   ├── exception-gplv3.inc
│   ├── openstlinux.inc
│   ├── st-default-distro-providers.inc
│   └── st-default-distro-rules.inc
├── openstlinux-eglfs.conf
├── openstlinux-weston.conf
├── openstlinux-x11.conf
└── [...]
  
```

3.4 Adding more to the layer if necessary

More add-on component examples:

- recipes for installing distro-specific configuration files
- any image recipes specific to user distribution
- a *psplash append file* for a branded splash screen
- any other append files to make custom changes

Some examples of such add-on components can be found in `<path of OpenSTLinux distribution delivery>/meta-st/meta-st-openstlinux`, you will retrieve some examples of these addons.



ST has already added some recipes (*bbappend) in openstlinux-weston distribution for configuring, patching, ... (non-exhaustive list shown below):

- recipes-benchmark for *glmark2*
- recipes-connectivity for *bluez5*
- recipes-core for *busybox*
- recipes-graphics for *weston-init*

...

Some other added components (*bb) are more specific: images, system services, ... (non-exhaustive list shown below):

- recipes-core for *psplash screen, systemd services*
- recipes-samples for example images
- recipes-security for *OP-TEE userland part*

...

3.5 Use of meta-st-stm32mp with a core image

If you want to use the meta-st-stm32mp layer with a core image (nodistro mode), please apply the following steps to manage the dependencies between layers:

```
PC $> source layers/openembedded-core/oe-init-build-env
PC $> bitbake-layers add-layer ../layers/meta-openembedded/meta-oe
PC $> bitbake-layers add-layer ../layers/meta-openembedded/meta-python
PC $> bitbake-layers add-layer ../layers/meta-st/meta-st-stm32mp
PC $> bitbake core-image-base or bitbake core-image-minimal
```



4 Reference list

- 1.01.1 Yocto Megamannual Creating your own distribution