Configuring Gnome via Configuration Files

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What is Gnome

gnome:

(nom) 1) One of a legendary species of diminutive beings, usually described as shriveled little old men.... 2) A short pithy statement of general truth.

GNOME:

(Guh-nom) GNU Object Model Environment. A project making an attempt at a desktop environment which:

- is completely free
- is designed for any UNIX platform
- has a user interface consistency across tools
- has easy to use software libraries
- is buzz-word compliant
- sits on top of a GNOME compliant window manager
- is internationalized
- uses CORBA based interfaces (bonobo), and XML
- is XX windows based

GNOME is part of the GNU project, and the GNU acronym stands for ”GNU Not UNIX”, don’t expect too much JLRU.

GNOME was designed to be user friendly, and Bill Gates spent lots of money deciding what user friendly means, expect most tools to act JLRMS.

What is Gnome

The GNOME project was announced via newsgroups in 1997

Release 0.10 was in 1997, 1.0 came in March 1999, 1.2 in May 2000.

Release numbers:
major-release.odd-or-even.minorincrement:
0.3.2 development version, odd=unstable, rev 2
1.4.3 Release one, version 4 (even=stable), rev or patched to 3

GNOME major components:

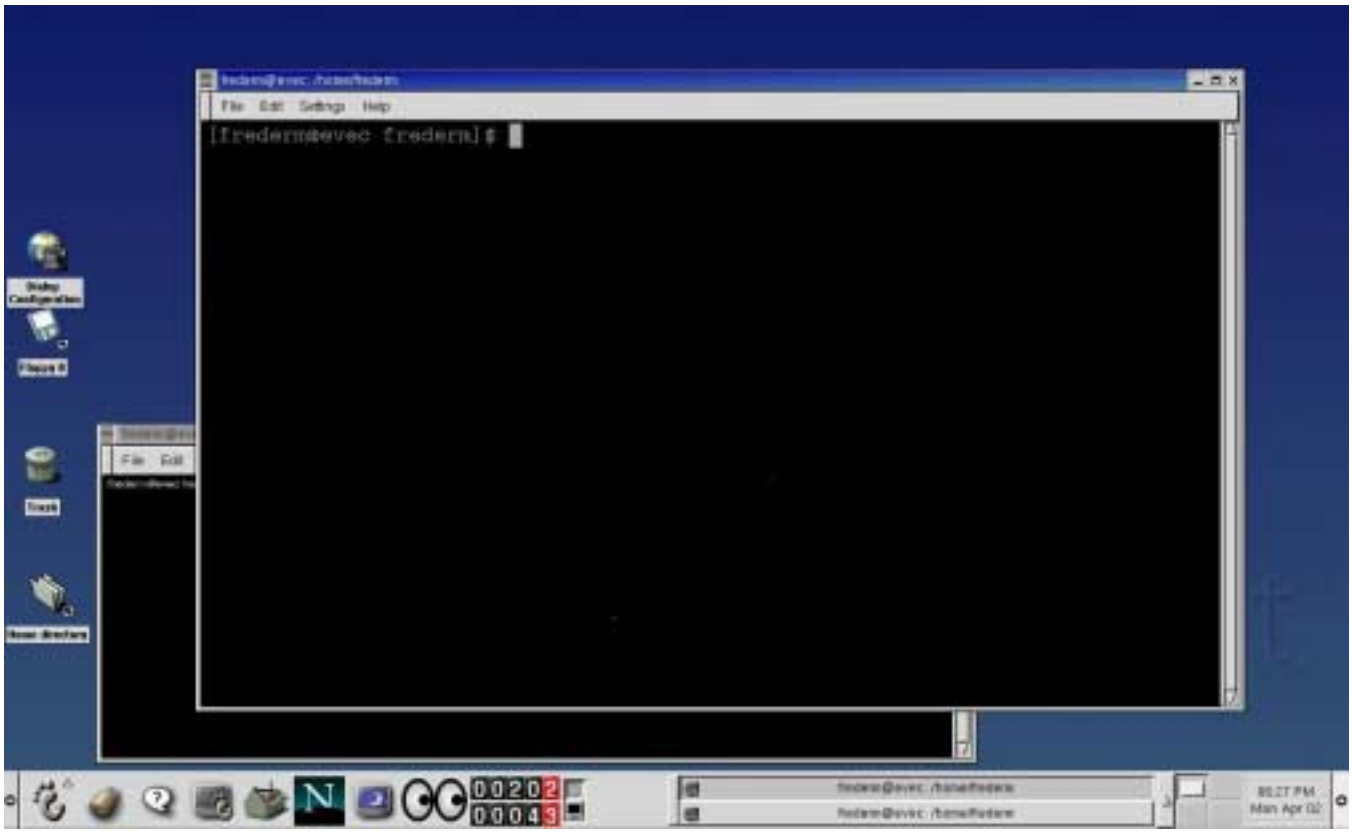
Desktop environment
Development platform (tools and libraries)
GNOME Office

Issue to think about with free software:

Freedom to improve the software, and redistribute
the improved version. (Freedom rule three)

What is Gnome like?

Talk #107: Gnome on HP-UX should have brought you up to speed on what it looks like, how to use it, HP's plans, and HP-UX specific



features...

GUI Gnome Configuration

There are several aspects here, but the GUI tool *gnomecc* gives GUI access to _most_ areas of configuration.

This tool is often accessable via a toolbox icon on the front panel, or from the main menu (as well as the desktop menu, etc.)

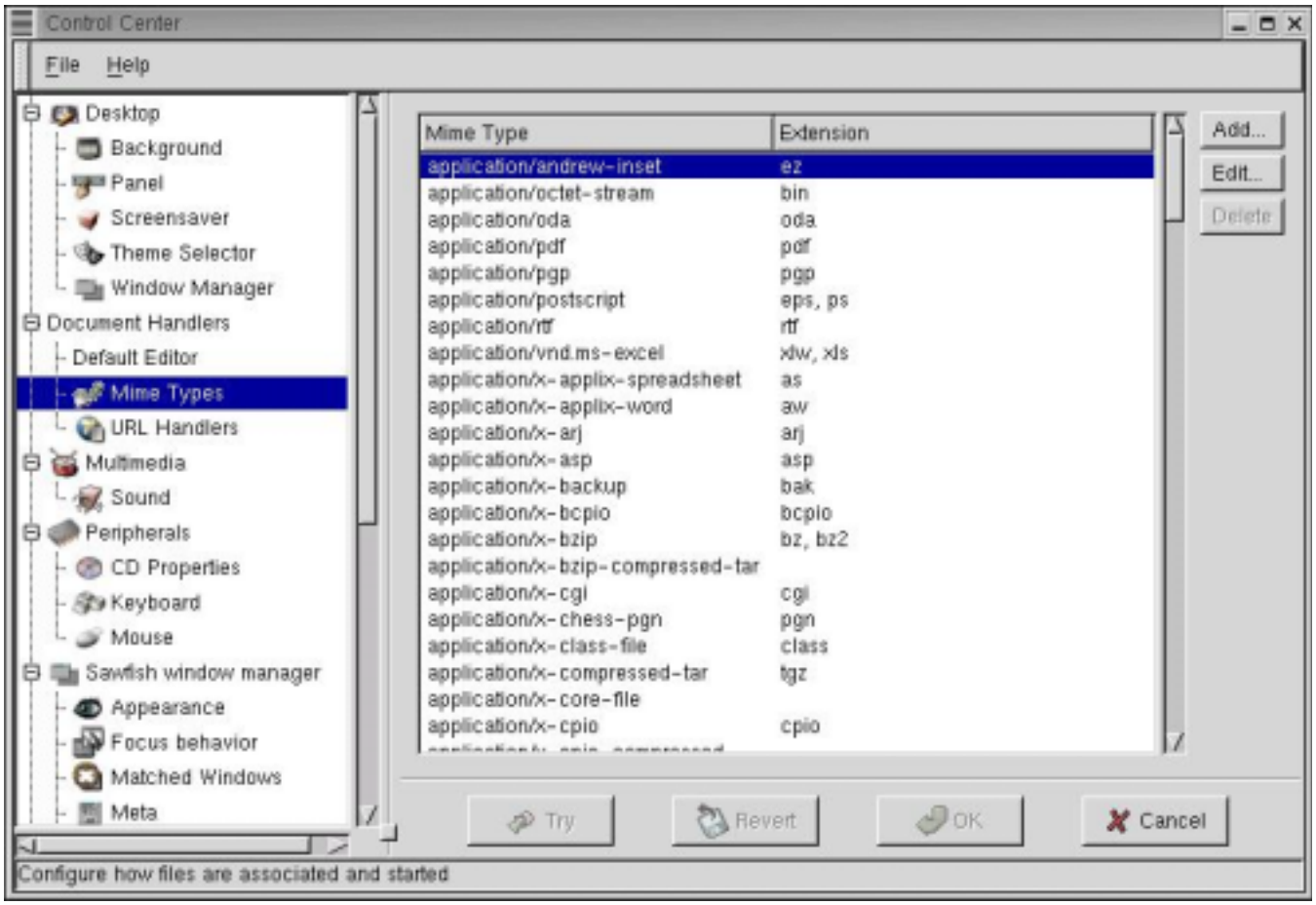
Areas of configuration accessible via *gnomecc* include:

- Desktop
- Document handlers
- Peripherals
- Multimedia
- Window manager
- Sessions
- User Interface

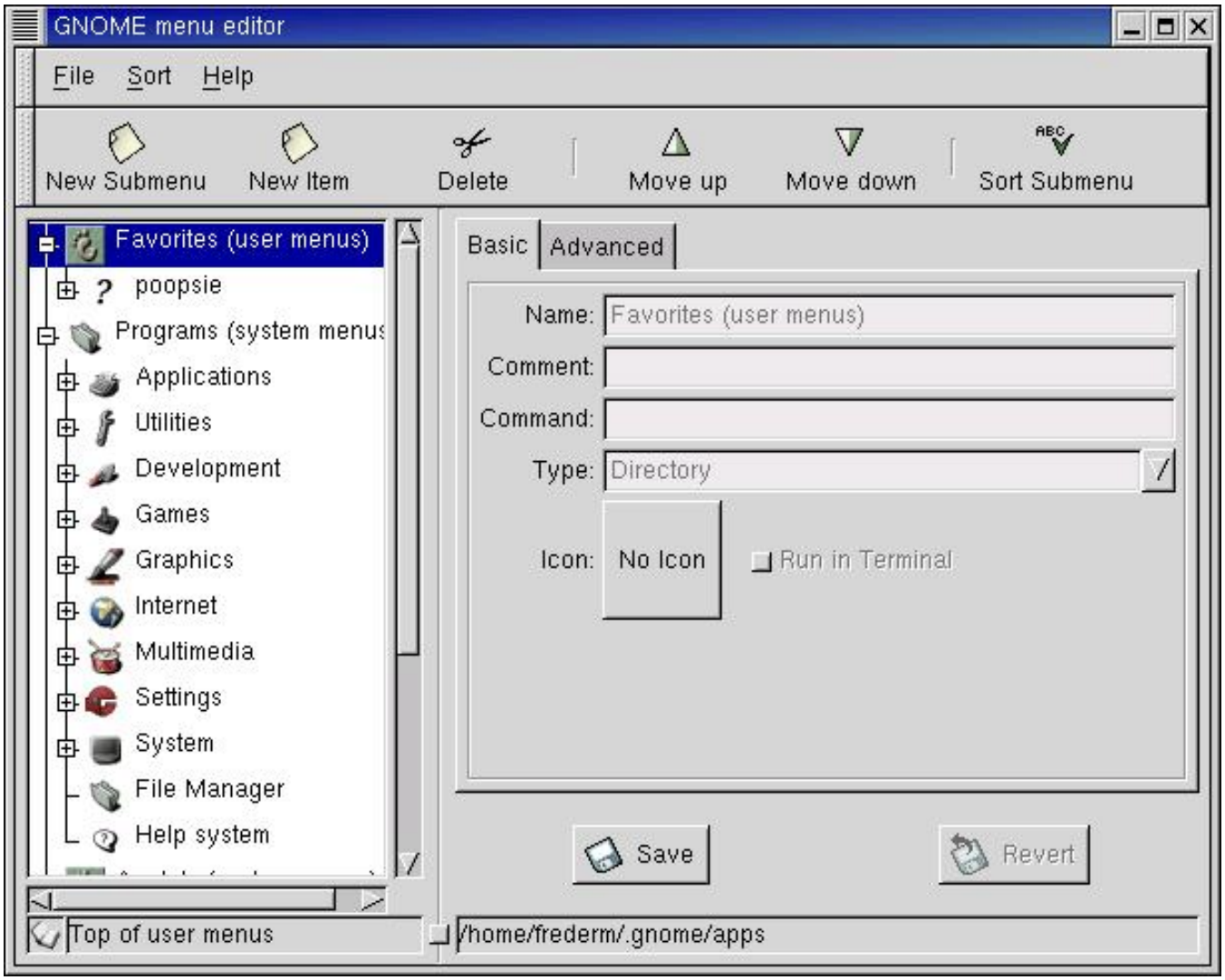
Other GNOME configuration areas include:

- Front Panel (main/panel)
- Menus (main/programs/setting/menu_editor)
- Startup files

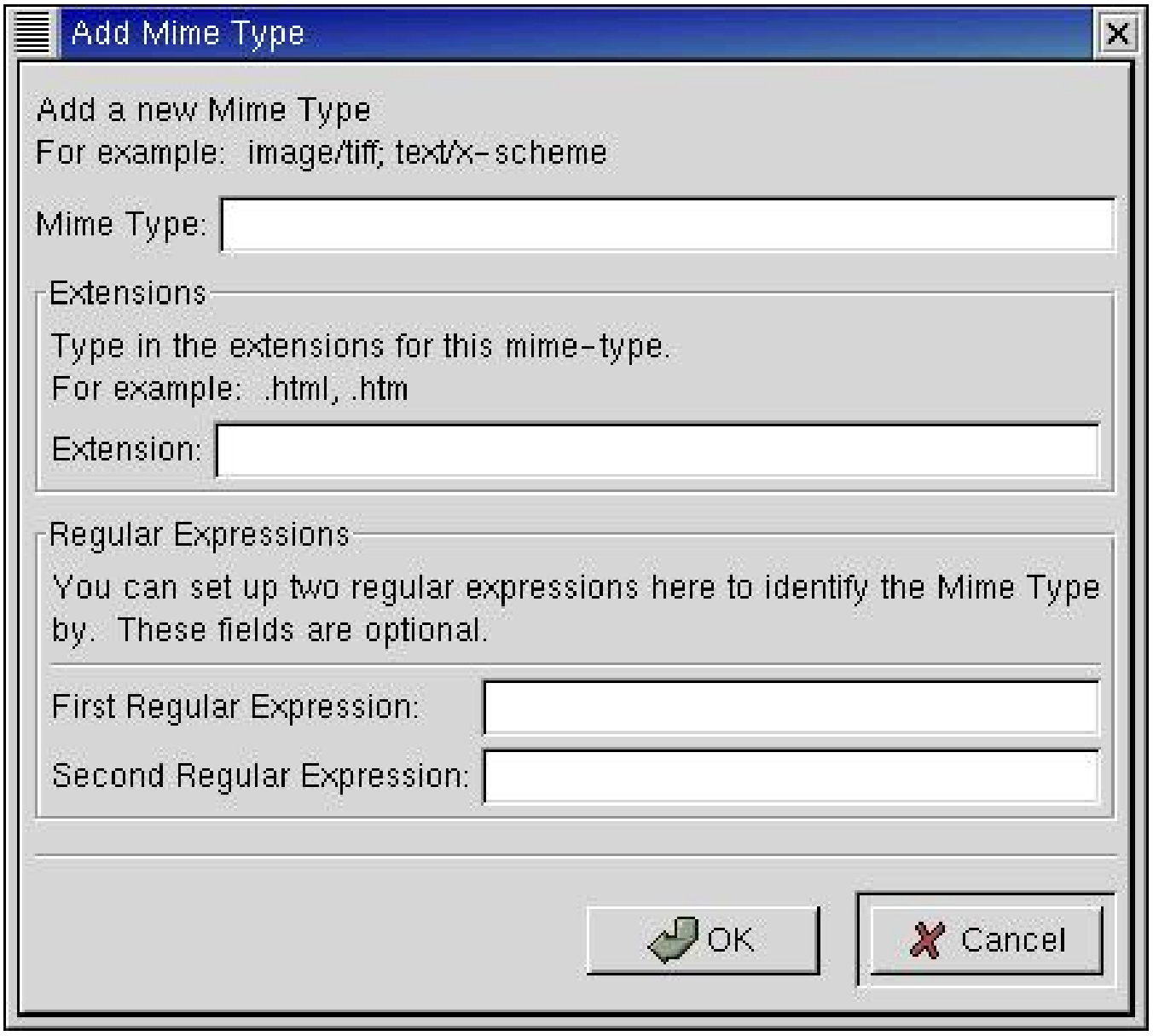
Gnome Configuration Center



Gnome Menu Editor



Gnome Mime type editor



Gnome Startup

Startup is accomplished in a sort of SysV files system manner:

/etc/sysconfig/desktop:

desktop= ″ kde″ ″ GNOME″
″ AnotherLevel″

If your */etc/inittab* file calls run level 5 as default, and the */etc/sysconfig/desktop* file is set to GNOME, */usr/bin/gdm* will be started via the script */etc/X11/prefdm*.

gdm is configured via the file */etc/X11/gdm/gdm.conf*

gdm calls *gdmlogin* and *gdmchooser*, both of which are configured in the *gdm.conf* file.

Gnome Startup

That */etc/X11/gdm/gdm.conf* file is fairly large, here are a few interesting lines from it:

```
[daemon]
Chooser=/usr/bin/gdmchooser --disable-sound --disable-
crash-dialog
DefaultPath=/usr/bin:/bin:/usr/X11R6/bin:/usr/local/bin:/
opt/bin
DisplayInitDir=/etc/X11/gdm/Init
Greeter=/usr/bin/gdmlogin --disable-sound --disable-
crash-dialog
HaltCommand=/sbin/shutdown -h now
KillInitClients=1
LogDir=/var/gdm
PidFile=/var/run/gdm.pid
PostSessionScriptDir=/etc/X11/gdm/PostSession/
PreSessionScriptDir=/etc/X11/gdm/PreSession/
RebootCommand=/sbin/shutdown -r now
RootPath=/sbin:/usr/sbin:/usr/bin:/bin:/usr/X11R6/bin:/us
r/local/bin:/opt/bin
ServAuthDir=/var/gdm
SessionDir=/etc/X11/gdm/Sessions/
UserAuthFile=.Xauthority
[greeter]
Exclude=bin,daemon,adm,lp,sync,shutdown,halt,mail,news,..
..
Font=-adobe-helvetica-bold-r-normal-*-*-180-*-*-*-*-*-*
Icon=/usr/share/pixmaps/gdm.xpm
Logo=/usr/share/pixmaps/gnome-logo-large.png
SystemMenu=1
Welcome=Welcome to %n
[chooser]
DefaultHostImg=/usr/share/pixmaps/nohost.png
```

```
HostImageDir=/usr/share/hosts/
```

Gnome Startup

Instead of a graphical login (Display manager), some purists prefer to start X themselves with xinit.

/etc/X11/xinit/xinitrc:

Loads $HOME/(.Xresources .Xmodmap .Xkbmap)
Loads /etc/X11/(Xresources Xmodmap Xkbmap)
Runs all /etc/X11/xinit/xinitrc.d scripts
Exec's /etc/X11/xinit/Xclients (or some failsafe clients)

/etc/X11/xinit/xinitrc.d:

rxvt.xinitrc xinput

/etc/X11/xinit/Xclients:

Reads /etc/sysconfig/desktop to decide what to exec:

```
if [ -z " $PREFERRED"  ]; then
    GSESSION=gnome-session
    STARTKDE=startkde
    # by default, we run GNOME.
    if which $GSESSION >/dev/null 2>&1; then
        exec 'which $GSESSION'
    fi
    # if GNOME isn't installed, try KDE.
    if which $STARTKDE >/dev/null 2>&1; then
        exec 'which $STARTKDE'
    fi
fi
```

gnome-session is a binary that lives in */usr/bin*, interesting options include: *--help --sm-config-prefix --choose-session*

Gnome Configuration Files

The following are some of the directories used in the GNOME version (1.2.1) shipped with Redhat 7:

```
/etc/gnome
/usr/lib/desktop-links
```

```
$ ls -ld /usr/share/gnome*
drwxr-xr-x 7 root  root 4096 Mar 16 14:12
/usr/share/gnome
drwxr-xr-x 2 root  root 4096 Mar 16 14:12
/usr/share/gnome-about
drwxr-xr-x 3 root  root 4096 Mar 16 14:13
/usr/share/gnome-print
drwxr-xr-x 2 root  root 4096 Mar 16 14:12
/usr/share/gnome-stones
drwxr-xr-x 3 root  root 4096 Mar 16 14:12
/usr/share/gnome-upgrade
drwxr-xr-x 3 root  root 4096 Mar 16 14:18
/usr/share/gnome-xml
```

```
$ ls -ld $HOME/.gnome*
drwxr-xr-x  6 root root 4096 Mar 31 13:23 /root/.gnome
drwxr-xr-x  3 root root 4096 Mar 26 10:01 /root/.gnome-
desktop
drwxr-xr-x  2 root root 4096 Mar 31 13:23 /root/.gnome-
help-browser
drwx------  2 root root 4096 Mar 16 22:36
/root/.gnome_private
```

```
$HOME/.sawfish
```

There are typically two files in the */usr/share/gnome* directory:

```
default.session          default.wm
```

These files are system defaults, used to establish a session for new users. They are

used to start the first session, and saved into the *$HOME/.gnome* directory by gnome-session.

These are the subdirectories in */usr/share/gnome*:

apps help hints html wm-properties

Gnome Configuration Files

The *$HOME/.gnome* directory will usually have at least these subdirectories:

```
apps      accels    panel.d
```

The *$HOME/.gnome* directory will also fill up with per-application files created by the application, such as:

```
[frederm@evec]$ more .gnome/Terminal

[Placement]
Dock=Menubar\\0,0,0,0

[Config]
font=-sony-fixed-medium-r-normal-*-*-170-*-
*-c-*-jisx0201.1976-0
wordclass=-A-Za-z0-9,./?%&#
scrollpos=right
bell_silenced=false
blinking=false
swap_del_and_backspace=true
login_by_default=false
```

Panel

The GNOME front panel can contain various object types:

Menus launchers Applets Drawers Specials

Editing of the panel is typically performed with GUI tools. Though it is easy to see which files are being edited, the documentation for manual manipulation is limited.

The primary tool is the Gnome configuration manager, though you can access portions of this GUI directly from various menus.

The panel settings are in the file *$HOME/.gnome/panel*

These settings include items like icon sizes, panel sizes, menu behavior, speed menu keys, and autoraise.

The directory *$HOME/.gnome/panel.d* contains directories, each of which contains a *panel* file with settings, and probably multiple *Applet_n{_Extern|.desktop}* files. The file *Applet_Config* describes which of the *Applet_n..* files are in use.

From the *$HOME/.gnome/panel.d/default/Applet_8_Extern* file:

```
[another_clock]
sec_needle=true
background=#68228b
hourneedle=#ffffff
```

```
  minneedle=#ffffff
  secneedle=#ff4500
```

From the *$HOME/.gnome/panel.d/default/Applet_Config* file:

```
  [Applet_8]
  id=Extern
  goad_id=another_clock_applet
  position=3
  panel=3
  right_stick=true
```

Session

Gnome can keep backup versions of sessions (instead of using the default session), this session information includes panel modifications and currently executing GNOME clients. (The contents of a *.gnome/panel.d* sub directory).

The *.gnome/session* file lists out which panel is currently in use.

This is on the line containing:

```
8,RestartCommand=panel --sm-config-prefix
/panel.d/default-w4mjgV/ --sm-client-id
11c0a8011400009862497280000017950008
```

There is also usually a *DiscardCommand* line that should remove old sessions at startup.

If the window manager crashes, and you are using customized panels, you can lost that configuration. The solution is to modify the above entries in the sessions file so that it uses the existing *.gnome/panel.d* subdirectory. The specific steps can be found in several FAQ’s and newsgroup posts.

Panel menus

Editing of the main panel menu is typically done with *gmenu*, though it is easily done manually:

The menu is built from the items in: */usr/share/gnome/apps*
$HOME/.gnome/apps

Subdirectories in these directories show up as sub-menus, items in a menu are built from *.desktop* files in those directories:

```
$ more /usr/share/gnome/apps/new/terminal.desktop
[Desktop Entry]
Name=XTerm
Name[en_US.ISO8859-1]=Xterm
Exec=/usr/X11R6/bin/xterm -C
Icon=/usr/share/pixmaps/gnome-term-tiger.png
Terminal=False
MultipleArgs=false
Type=Application
```

If you want to add or remove menu items for all users, edit */usr/share/gnome/apps.*

Note that there are many *apps* directories, both KDE and GNOME use similar files and methods.

Note that items in *$HOME/.gnome/apps* will show up on the main menu in favorites.

Desktop files

These files are very easy to configure manually compared to the rest of gnome's configuration files: (computer written-...-human readable-...-undocumented)

These files determine which icons appear on the desktop.

The directory */usr/lib/desktop-links* is read and utilized when creating a desktop for a new user, at first login time. Any file in that directory that ends in *.links* will be read and utilized. Example:

```
[famece.com]
title=www.famece.com
type=url
url=http://www.famece.com
icon=tuxman.xpm
```

Icon pathnames are relative to /usr/share/pixmap

The example item above will be copied to *$HOME/.gnome-desktop/famece.com* and it will contain:

```
URL: http://www.famece.com
```

Desktop files

You can also put shell scripts in the */usr/lib/desktop-links* directory. The usual purpose is to copy desktop files into a users personal gnome configuration location. Here is an example of RedHats PPP dialup configuration desktop file installation:

```
$  more /usr/lib/desktop-links/rp3-install.sh
#!/bin/sh
target=‘echo $1|sed s/--desktop-dir=//‘
cp -f /etc/X11/applnk/Internet/rp3-config.desktop
$target
```

Which will create:

```
$  more $HOME/.gnome-desktop/rp3-config.desktop
[Desktop Entry]
Name=Dialup Configuration
Name[no]=Ekstern pålogging
Name[da]=Konfigurationsværktøj for opkald
Name[sv]=Konfigurationsverktyg för
uppringare
Comment=Red Hat’s PPP Dialup Configuration
Tool
Comment[no]=Red Hat’s konfigurasjonsverktøy for PPP-
oppringing
Comment[da]=Konfigurationsværktøj for Red Hat’s PPP-
opkalder
Comment[sv]=Konfigurationsverktyg för Red Hats PPP-
uppringare
Exec=rp3-config
Icon=gnome-talk.png
Terminal=0
Type=Application
```

The directory *$HOME/.gnome-desktop* will also contain copies of files created in, or dragged

to the desktop by the user, (or linked to if they are smart enough to do so).

Managing user configurations

To setup new users with a default configuration, one posibility is to take advantage of the */etc/skel* function (The *useradd* command will copy everything in */etc/skel* to the new users home directory).

1) Create a new account, or delete the *.gnome** directory from an existing account

2) Login and edit the panel, background, menus as desired.

3) Copy the *.gnome/{apps,panel,panel.d,Background}* files and directories to */etc/skel/.gnome*.

4) Browse to determine which files have absolute pathnames in them, you could either change them to $HOME, or write a Perl script to be run after creating new accounts to replace these.

As mentioned earlier, you can also edit */ussr/lib/desktop-links* and */usr/share/gnome/apps* for more new user configurations.