



# Instalación de Fedora 27

## Integración en Directorio Activo

## Habilitar autenticación AD para SSH

<https://www.howtoforge.com/tutorial/fedora-desktop-corporate-workstation/>

ISO-02-12\_Ext\_Fedora27.pptx

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# Installing Fedora 27

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Fedora-Workstation-Live 27

Start Fedora-Workstation-Live 27

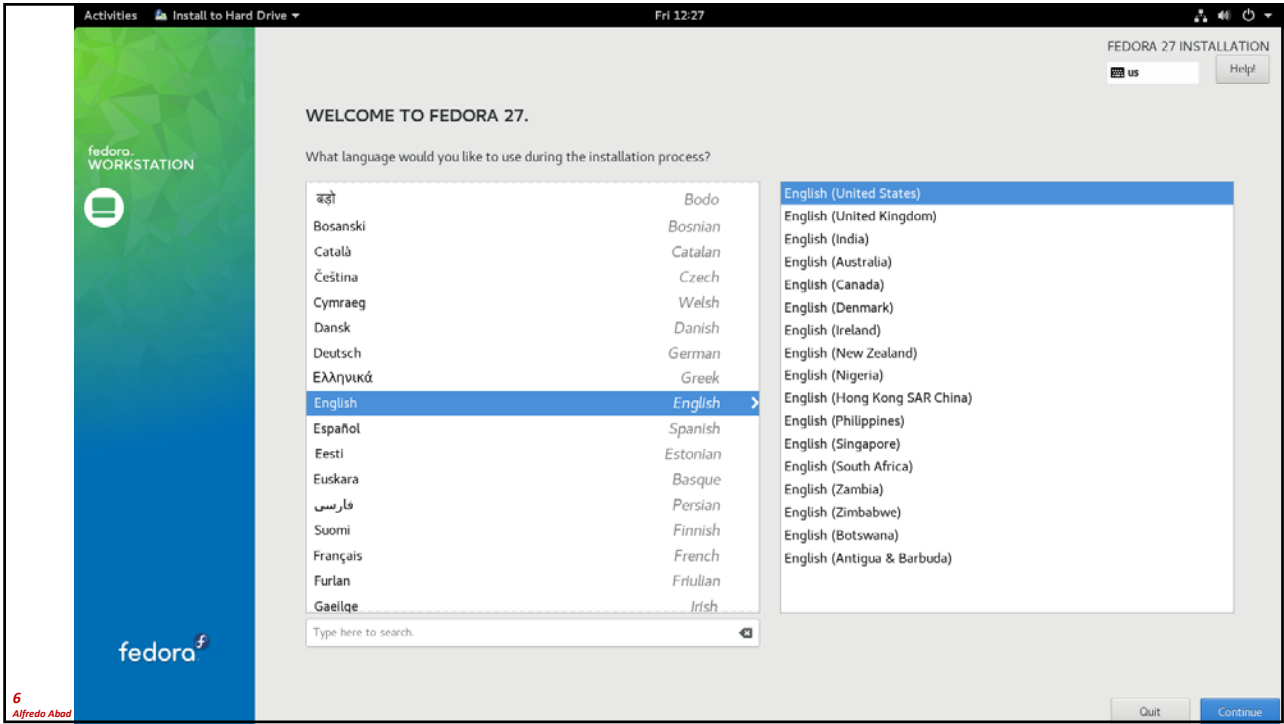
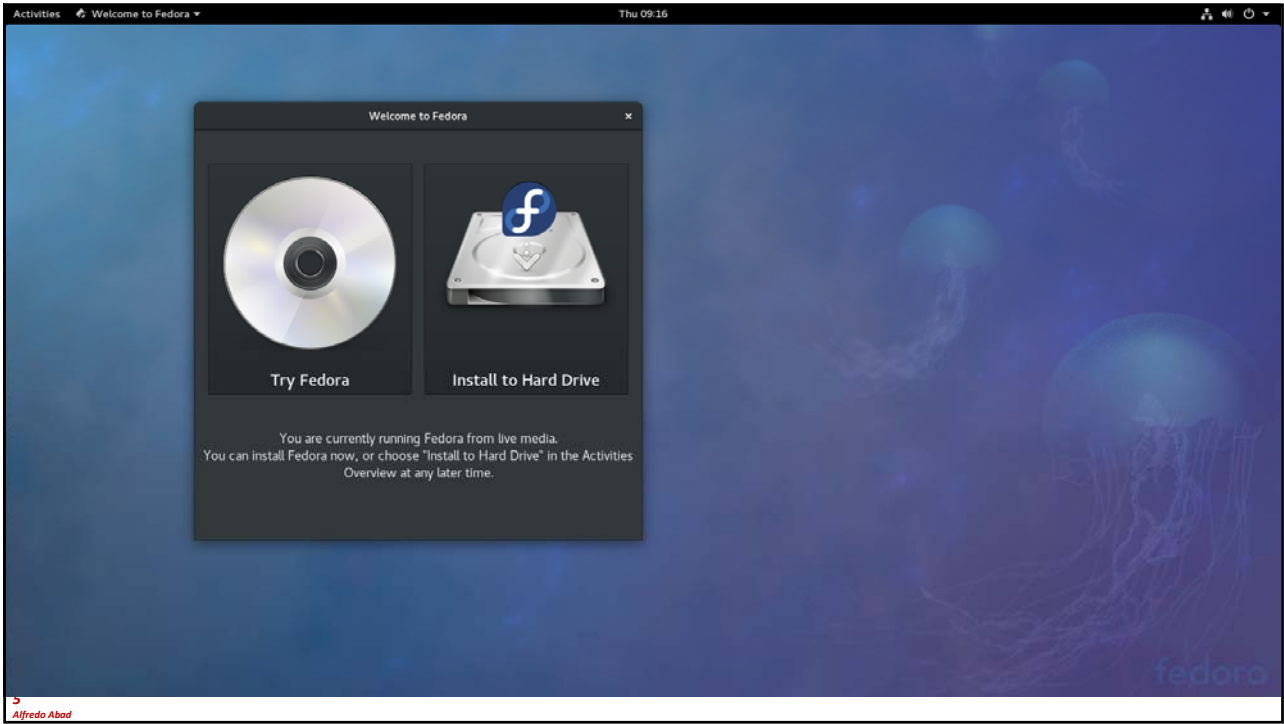
Test this media & start Fedora-Workstation-Live 27

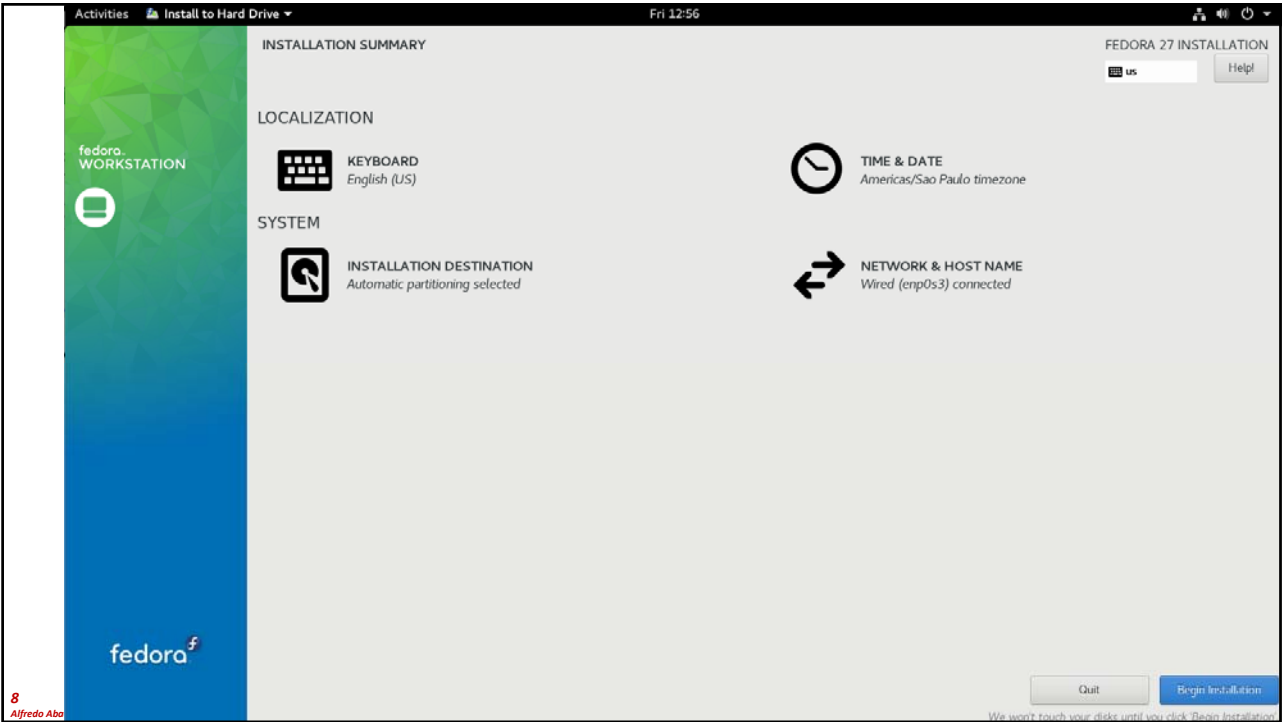
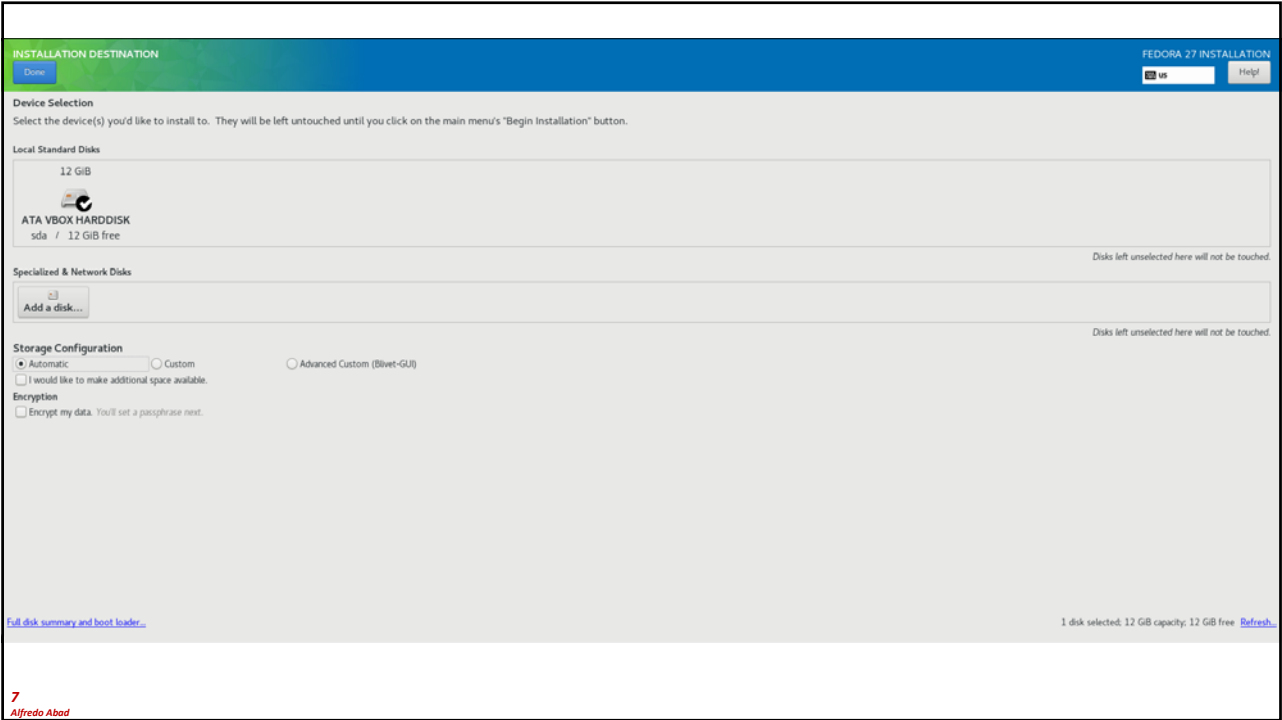
Troubleshooting

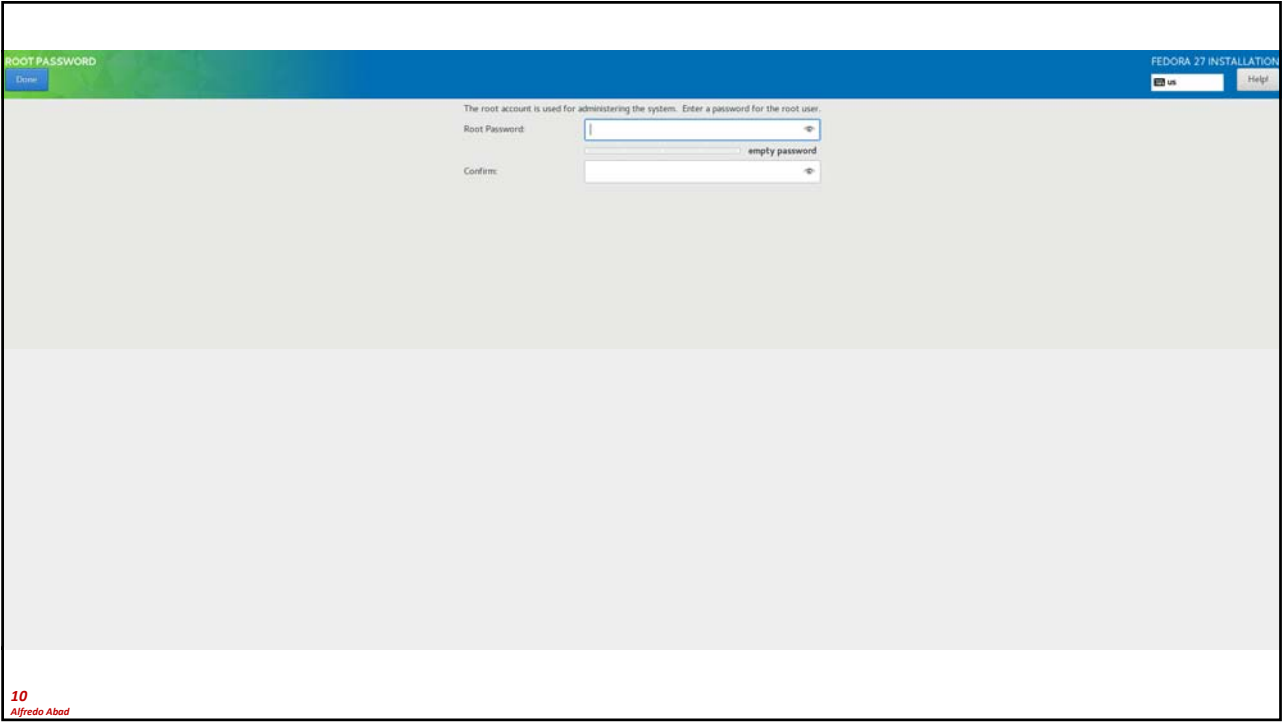
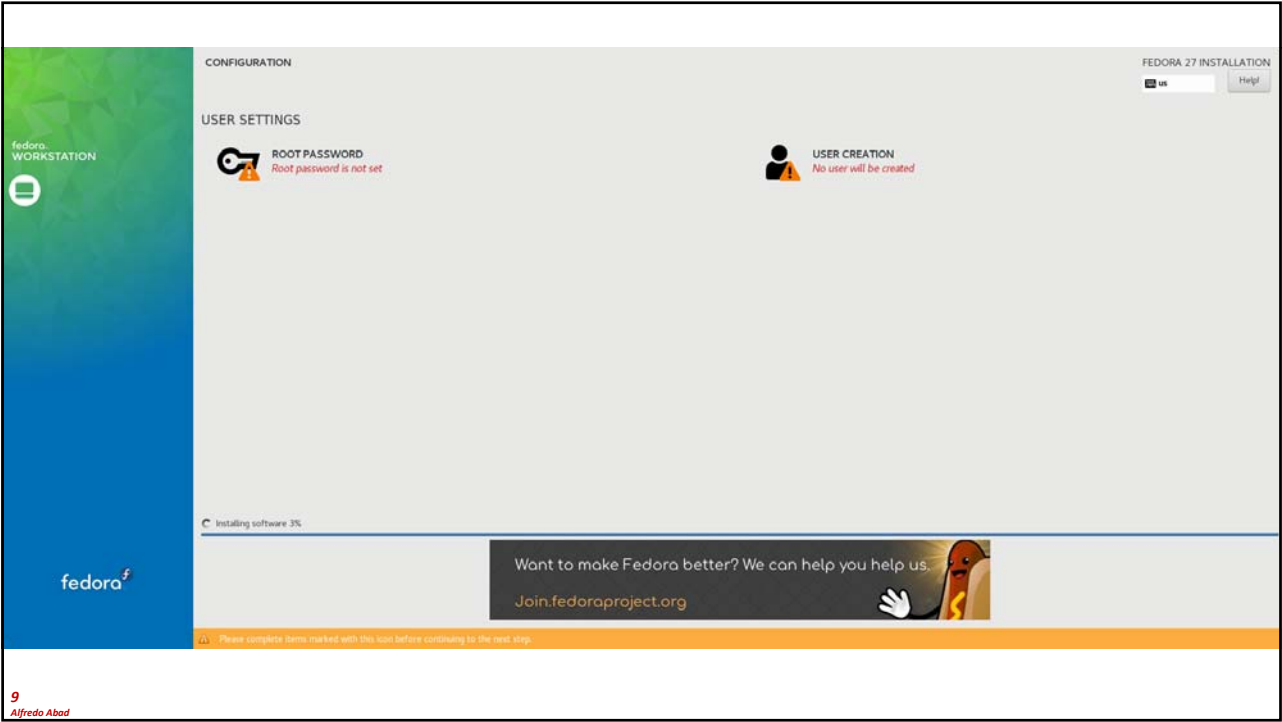
>

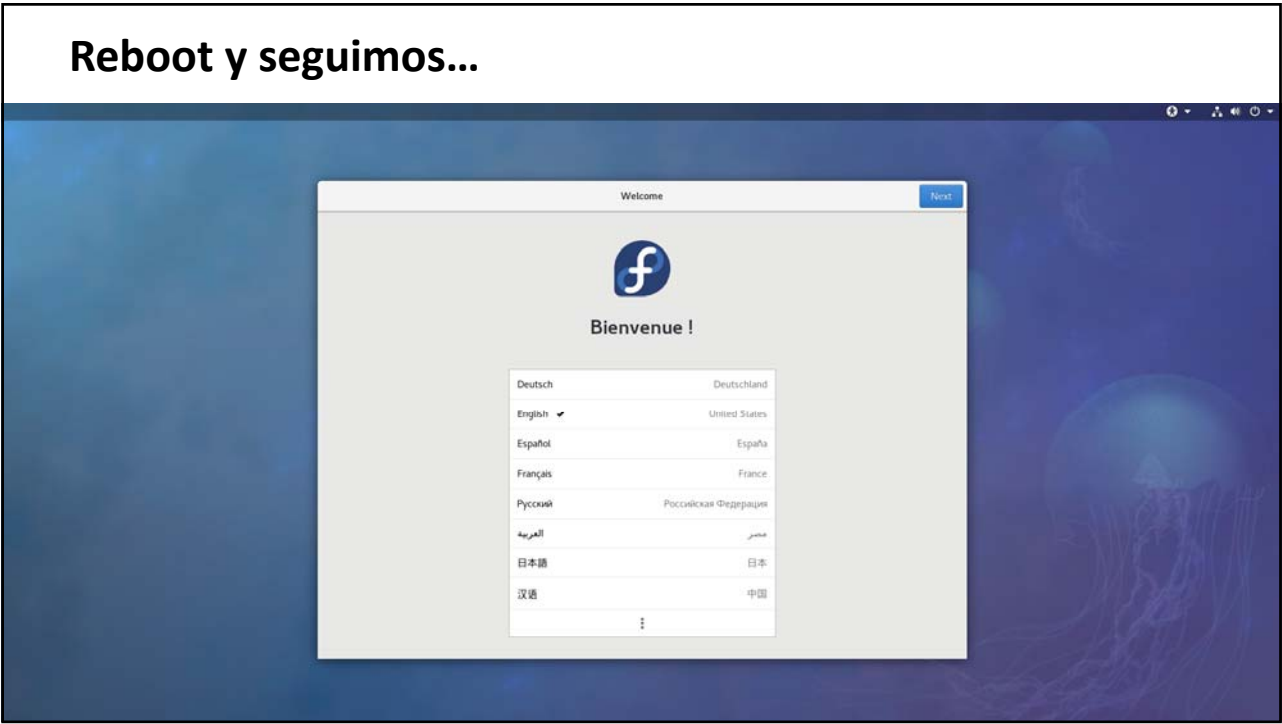
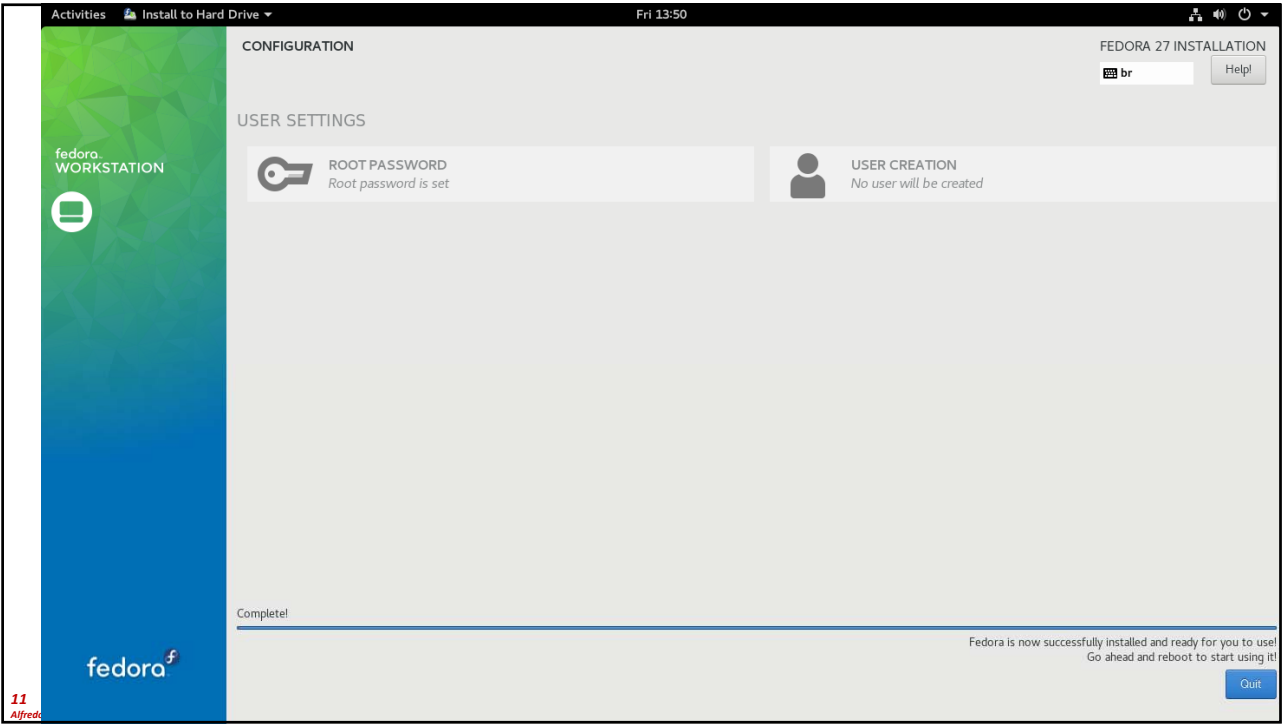
Press Tab for full configuration options on menu items.

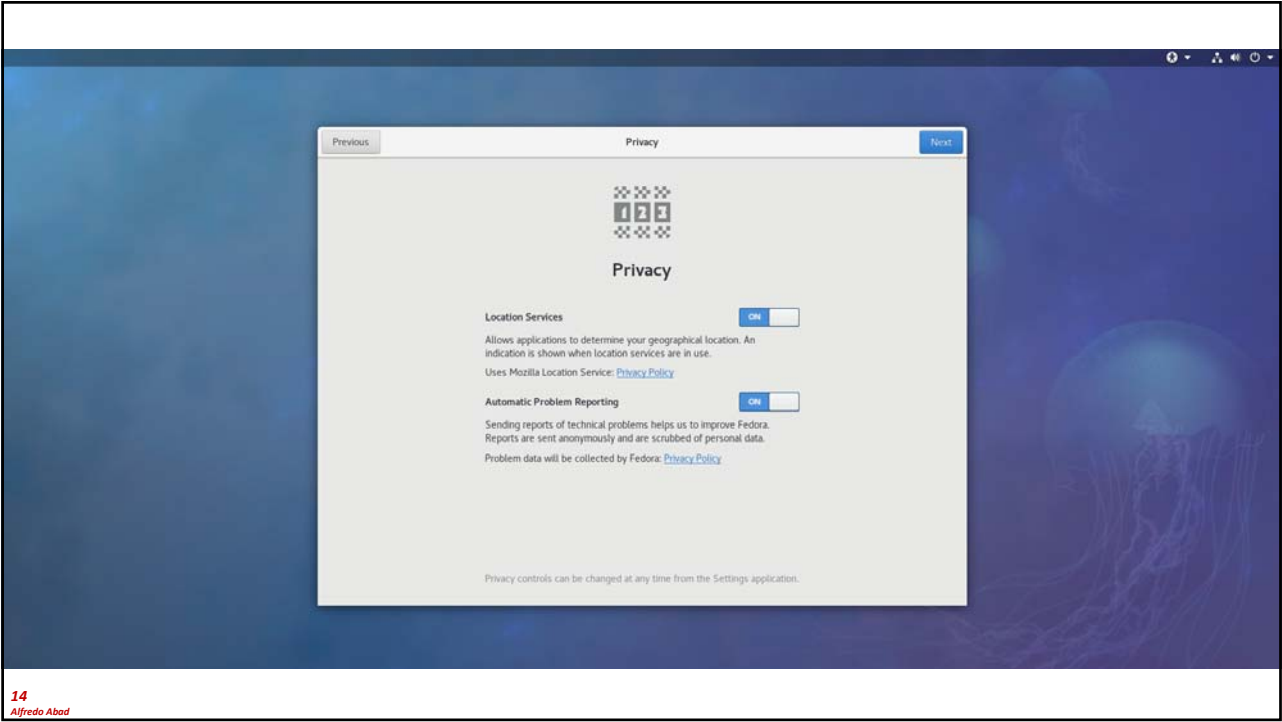
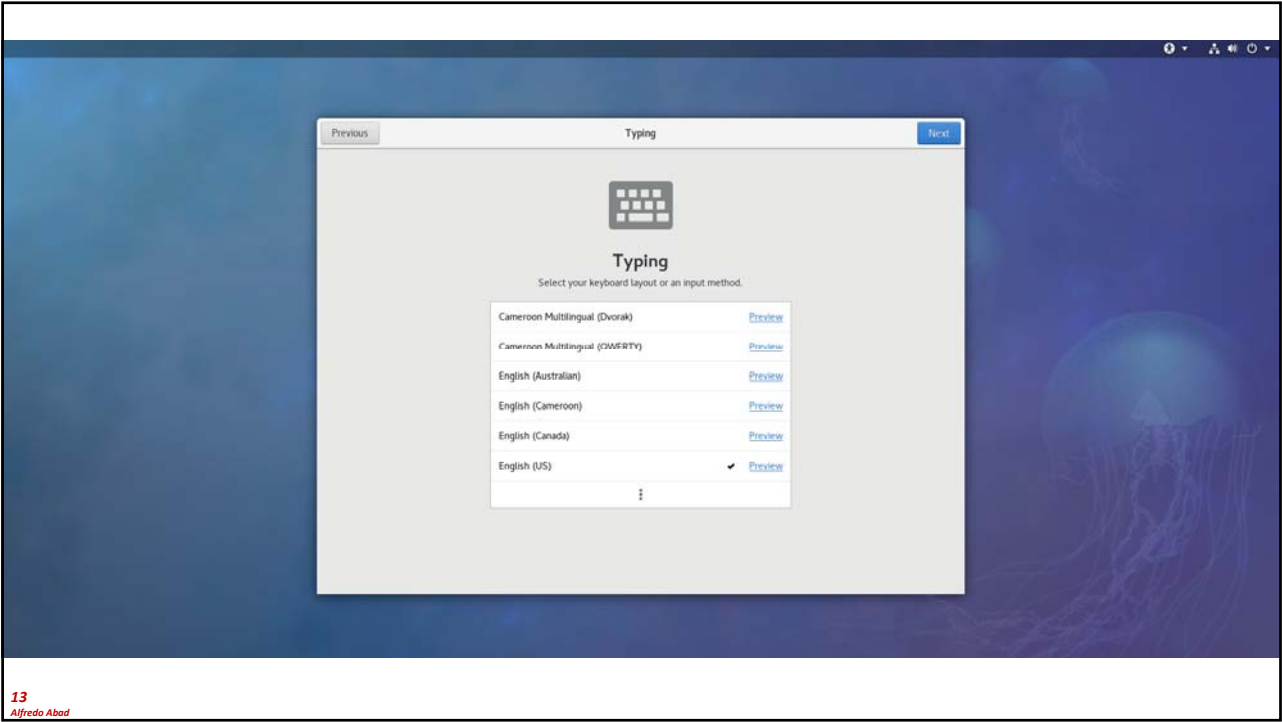
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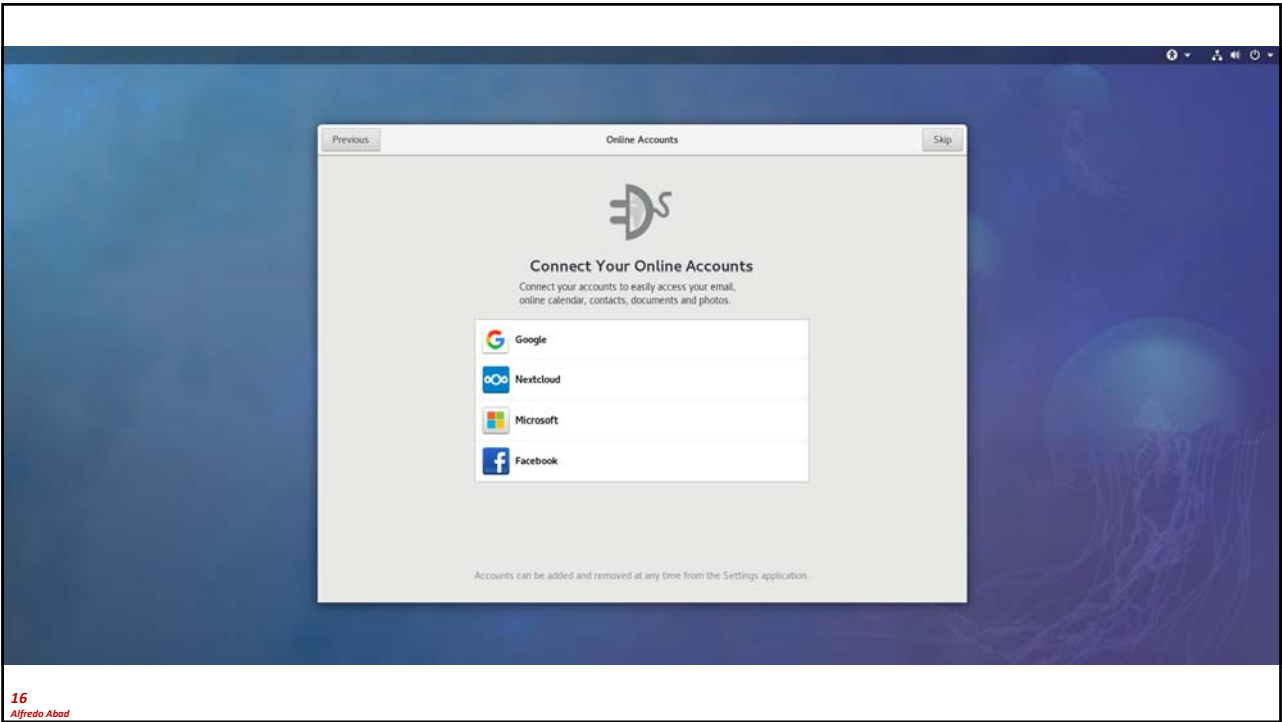
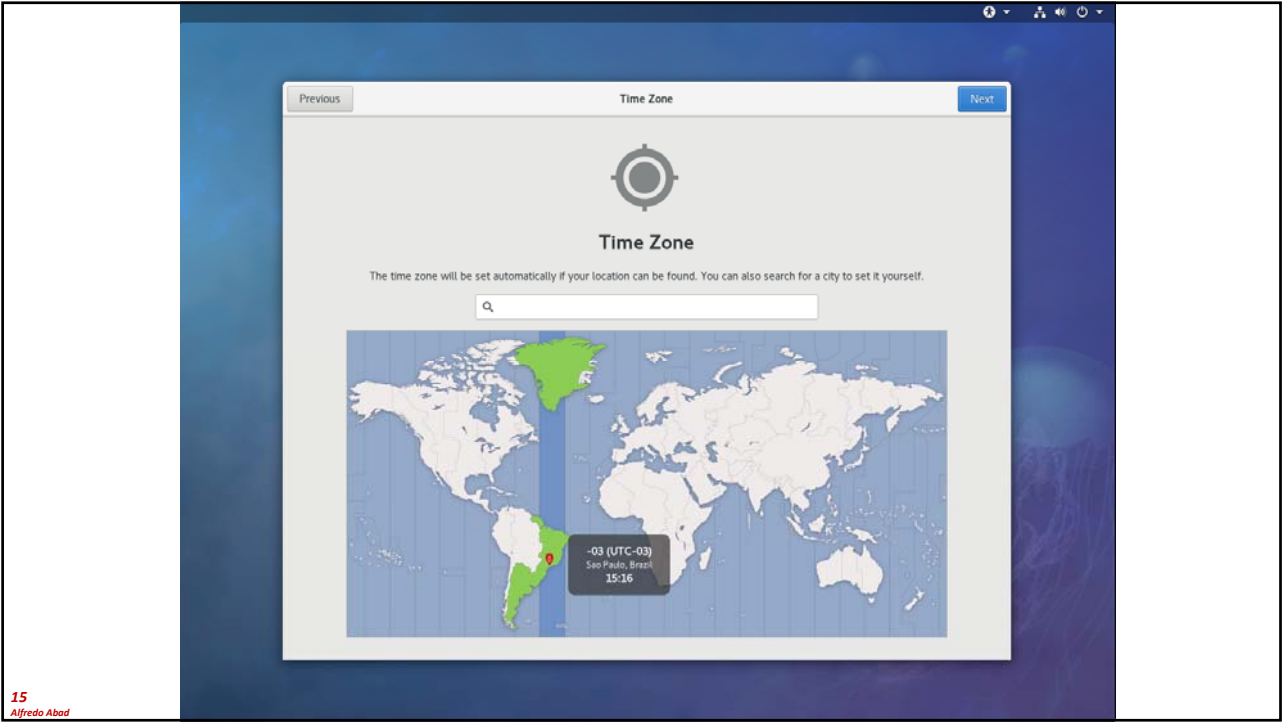




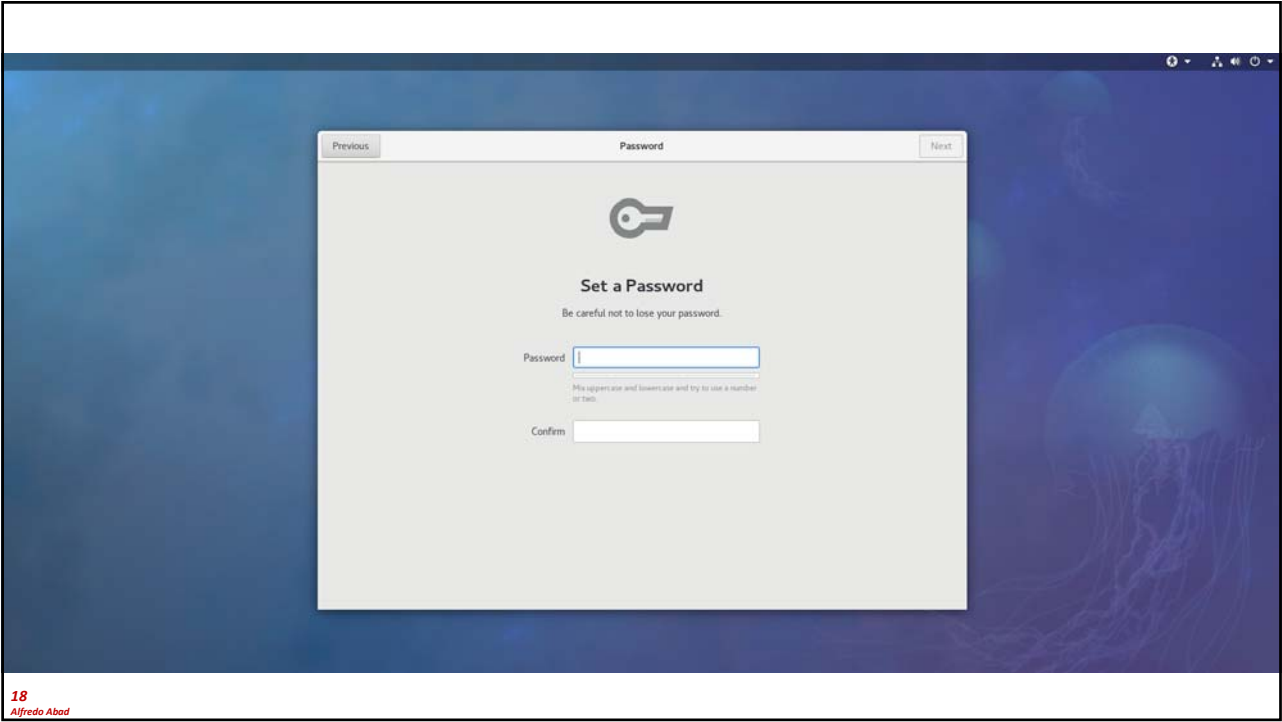
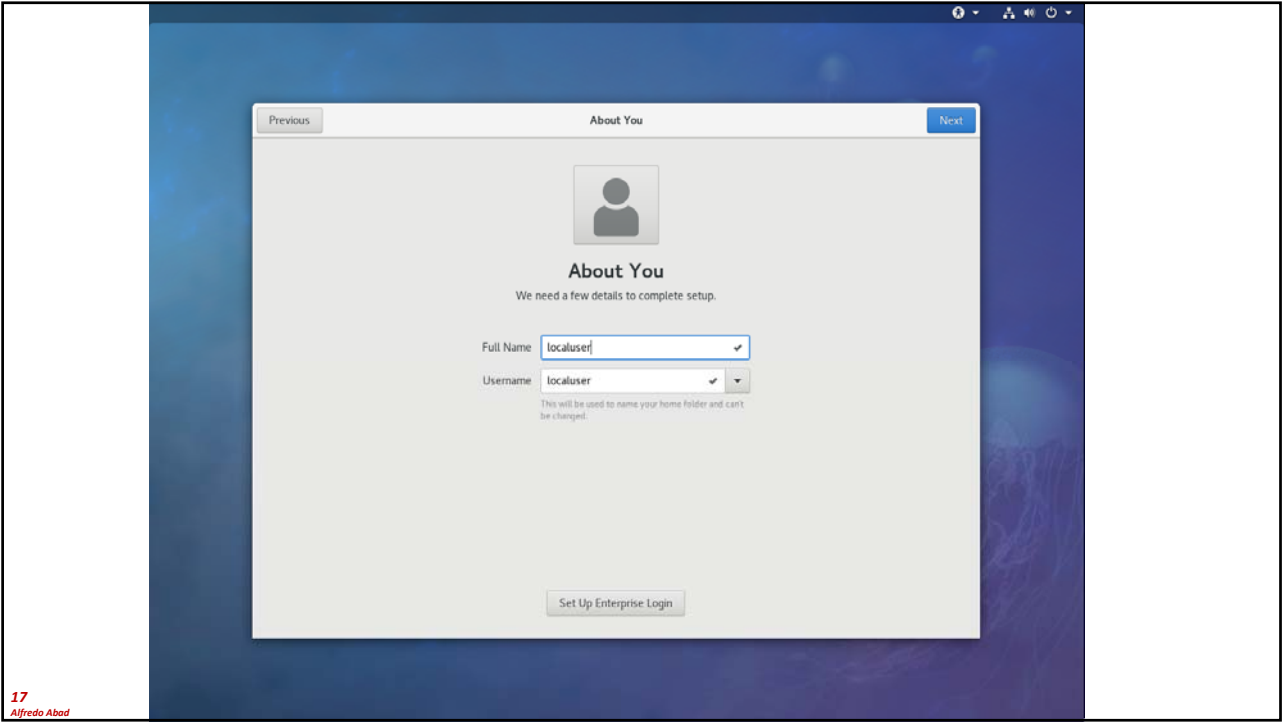


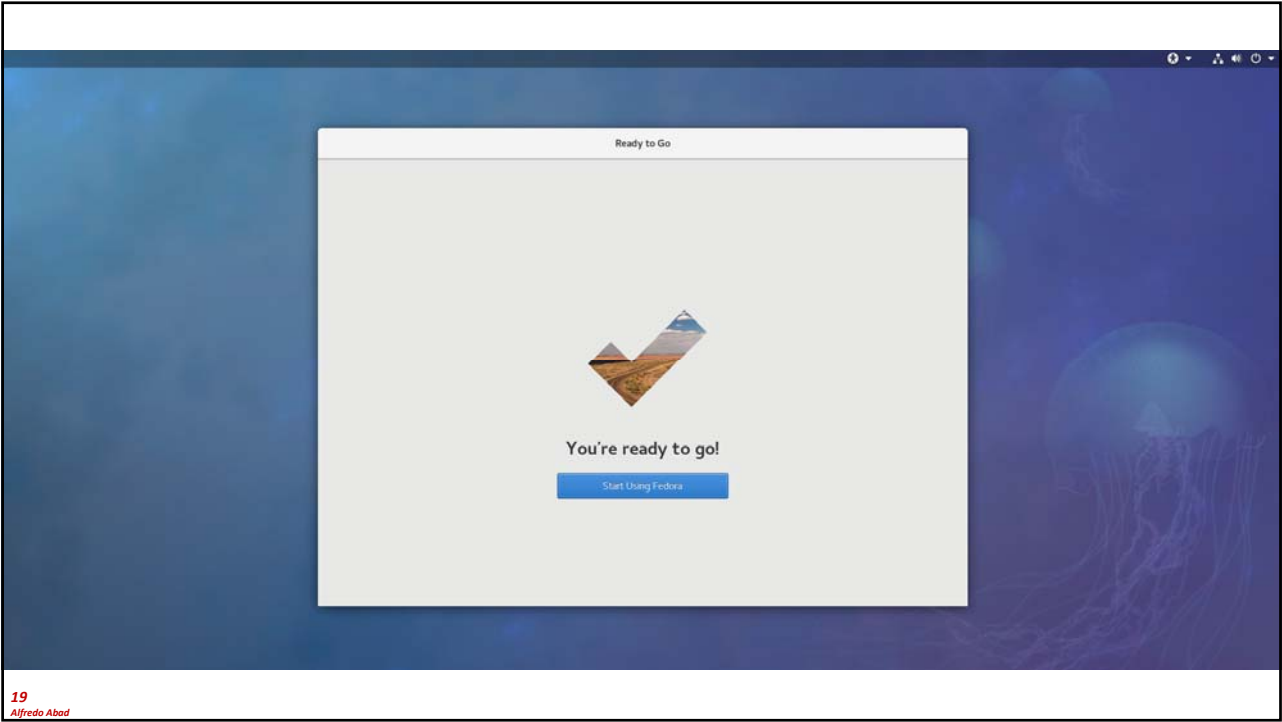












The first thing to do after login is open the terminal and update system. Run the followings commands and type the password:

```
[localuser@localhost ~]$ sudo su
```

```
[root@localhost localuser]# dnf update
```

```
localuser@localhost:/home/localuser
File Edit View Search Terminal Help
xorg-x11-server-Xwayland      x86_64 1.19.6-7.fc27      updates 949 k
xorg-x11-server-common       x86_64 1.19.6-7.fc27      updates 50 k
zenity                       x86_64 3.26.0-1.fc27        updates 756 k
Installing dependencies:
brotli                      x86_64 0.6.0-8.fc27      updates 303 k
eosrei-emoji-one-fonts      noarch 1.0-5.fc27             fedora 2.5 M
kernel                     x86_64 4.16.4-200.fc27        updates 83 k
kernel-core                 x86_64 4.16.4-200.fc27        updates 23 M
kernel-modules              x86_64 4.16.4-200.fc27        updates 27 M
kernel-modules-extra        x86_64 4.16.4-200.fc27        updates 2.2 M
python3-libreport           x86_64 2.9.3-3.fc27            updates 53 k
replacing libreport-python3.x86_64 2.9.2-1.fc27
twolame-libs                x86_64 0.3.13-9.fc27          updates 55 k
u2f-hidraw-policy           x86_64 1.0.2-5.fc27            fedora 21 k
Installing weak dependencies:
google-noto-emoji-color-fonts noarch 20180307-1.fc27      updates 6.4 M

Transaction Summary
=====
Install 10 Packages
Upgrade 792 Packages

Total download size: 952 M
Is this ok [y/N]:
```

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Press y and press enter. The first system update can be slow, be patient. Usually, I reboot the system after the update is complete.

# Install Additional Repositories and Packages on Fedora 27

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To meet the purposes of this article, we need install additional software repositories and third-party packages. The repositories needed is listed below, run the following commands to install it:

```
[localuser@localhost ~]$ sudo su
```

```
[root@localhost localuser]# dnf install http://download1.rpmfusion.org/free/fedora/rpmfusion-free-release-27.noarch.rpm
```

```
[root@localhost localuser]# dnf install https://go.skype.com/skypeforlinux-64.rpm
```

The commands below are to configure google repository:

```
[root@localhost localuser]# rpm --import https://dl.google.com/linux/linux_signing_key.pub
```

```
[root@localhost localuser]# printf '%s\n' '[google-chrome]' 'name=google-chrome'
'baseurl=http://dl.google.com/linux/chrome/rpm/stable/x86_64' 'enabled=1' 'gpgcheck=1'
'gpgkey=https://dl.google.com/linux/linux_signing_key.pub' >/etc/yum.repos.d/google-chrome.repo
```

After configuring the repositories, run the command:

```
[root@localhost localuser]# dnf update
```

Now, begin to install the list with all packages that we need for this Fedora setup, I will show how to install all packages in an easy way below. At this list, you can see some additional packages that can improve user experience besides system packages who increase the Fedora features, who will be used to join Fedora 27 on the network domain.

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```
samba
realmd
sssd
oddjob
oddjob-mkhomedir
adcli
samba-common-tools
krb5-workstation
openldap-clients
policycoreutils-python
samba-winbind-clients
samba-winbind
gnome-tweak-tool.noarch
java-openjdk
icedtea-web
unzip
thunderbird.x86_64
gimp
vim
gnome-music.x86_64
gnome-photos
p7zip
vlc
curl
cabextract
xorg-x11-font-utils
fontconfig
https://downloads.sourceforge.net/project/mscorefonts2/rpms/msttcore-fonts-installer-2.6-1.noarch.rpm
gscan2pdf.noarch
```

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```
https://downloads.sourceforge.net/project/mscorefonts2/rpms/msttcore-fonts-installer-2.6-1.noarch.rpm
gscan2pdf.noarch
system-config-printer
tesseract.x86_64
tesseract-langpack-enm.noarch
libreoffice-langpack-en.x86_64
brasero.x86_64
nautilus-extensions.x86_64
brasero-nautilus.x86_64
nautilus-sendto.x86_64
nautilus-font-manager.noarch
gnome-terminal-nautilus.x86_64
nautilus-image-converter.x86_64
nautilus-search-tool.x86_64
sushi.x86_64
raw-thumbnailer.x86_64
Pinta.x86_64
dnf-automatic
dconf-editor
NetworkManager
```

To install all packages in an easy way, create a file with the list above (one package per line), and run:

```
[root@localhost localuser]# for i in `cat package.txt`; do dnf install -y $i; done
```

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The installation can be slow, be patient.

## Enable Automatic Security Updates on Fedora 27

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It's a best practice enable automatic security updates for an operational system. Its provide a lot of bug fixes and keep your system safer.

To configure only the security updates edit with vim the `/etc/dnf/automatic.conf` file and change the following params (press insert to edit):

```
[root@localhost localuser]# vim /etc/dnf/automatic.conf
```

The config file to look like this content. Change the values for the lines `upgrade_type` and `apply_updates` like the lines below:

```
[commands]

# What kind of upgrade to perform:

# default                                = all available upgrades

# security                               = only the security upgrades

upgrade_type = security

random_sleep = 300

# Whether updates should be downloaded when they are available.

download_updates = yes

# Whether updates should be applied when they are available.

# Note that if this is set to no, downloaded packages will be left in the
```

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```
# Note that if this is set to no, downloaded packages will be left in the

# cache regardless of the keepcache setting.

apply_updates = yes

[emitters]

# Name to use for this system in messages that are emitted. Default is the

# hostname.

# system_name = my-host

# How to send messages. Valid options are stdio, email and motd. If

# emit_via includes stdio, messages will be sent to stdout; this is useful

# to have cron send the messages. If emit_via includes email, this

# program will send email itself according to the configured options.

# If emit_via includes motd, /etc/motd file will have the messages.

# Default is email,stdio.

emit_via = stdio
```

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```
[email]

# The address to send email messages from.

email_from = root@example.com

# List of addresses to send messages to.

email_to = root

# Name of the host to connect to send email messages.

email_host = localhost

[base]

# This section overrides dnf.conf

# Use this to filter DNF core messages

debuglevel = 1

To save the changes at vim, press ESC, wq! and Enter.

After changing the file, you need to enable the schedule of automatic security updates:
```

```
[root@localhost localuser]# systemctl enable dnf-automatic.timer

[root@localhost localuser]# systemctl start dnf-automatic.timer
```

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## Change Computer name on Fedora 27

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To change the computer hostname run the following commands (choose the hostname that you want, I used Workstation-Fedora27):

```
[localuser@localhost ~] sudo su
```

```
[root@localhost localuser]# hostnamectl set-hostname --pretty Workstation-Fedora27
```

```
[root@localhost localuser]# hostnamectl set-hostname --transient Workstation-Fedora27
```

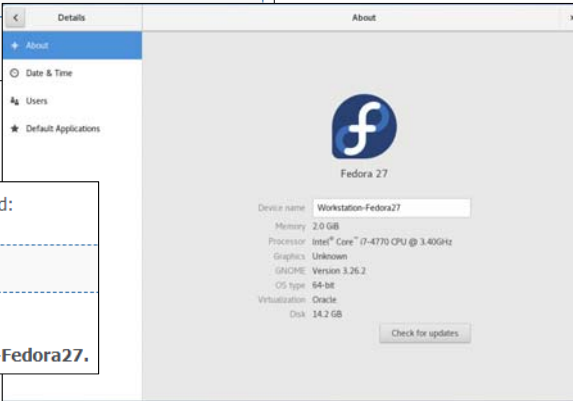
```
[root@localhost localuser]# hostnamectl set-hostname --static Workstation-Fedora27
```

To verify the changes go to settings and press details.

Also, you can verify on terminal running the following command:

```
[root@localhost localuser]# hostname
```

The output must be the hostname, in this case, **Workstation-Fedora27**.



The screenshot shows the 'About' window in Fedora 27. The window title is 'About'. The left sidebar has a menu with 'About' (selected), 'Date & Time', 'Users', and 'Default Applications'. The main area displays the Fedora logo and 'Fedora 27'. Below this, system details are listed: Device name: Workstation-Fedora27, Memory: 2.0 GB, Processor: Intel® Core™ i7-4770 CPU @ 3.40GHz, Graphics: Unknown, GNOME: Version 3.26.2, OS type: 64-bit, Virtualization: Oracle, Disk: 14.2 GB. A 'Check for updates' button is at the bottom right.

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## Disable SELinux (Security-Enhanced Linux) on Fedora 27

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SELinux is an acronym for Security-enhanced Linux, It is a security feature of the Linux kernel. To keep this article more friendly, I not cover the setup of SELinux, we disabled it because I found some problems to join the computer at the domain with SELinux enabled. By the way, if you want to know more about security and SELinux, you can find good articles explaining this subject. To disable SELinux, run the command:

```
[root@Workstation-Fedora27 localuser]# vim /etc/sysconfig/selinux
```

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## Join Fedora 27 on Active Directory or SAMBA 4

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To join the Fedora Workstation into Active Directory or Samba 4 you need to pay attention to your network DNS (Domain Server Name), usually, the first DNS from a network is the IP address of the Domain Controller and is delivered to DHCP server (Dynamic Host Configuration Protocol). If your network environment uses a static IP address, you must configure it manually on the Fedora Workstation.

To check the DNS configuration at your network run the following command:

```
[root@Workstation-Fedora27 localuser]# nmcli device show
```

The output looks like this:

```
GENERAL.DEVICE:                enp0s3
GENERAL.TYPE:                   ethernet
GENERAL.HWADDR:                 08:00:27:AA:5E:4F
GENERAL.MTU:                    1500
GENERAL.STATE:                  100 (connected)
GENERAL.CONNECTION:             enp0s3
GENERAL.CAMINHO CON:            /org/freedesktop/NetworkManager/ActiveConnection/0
WIRED-PROPERTIES.CARRIER:      active
```

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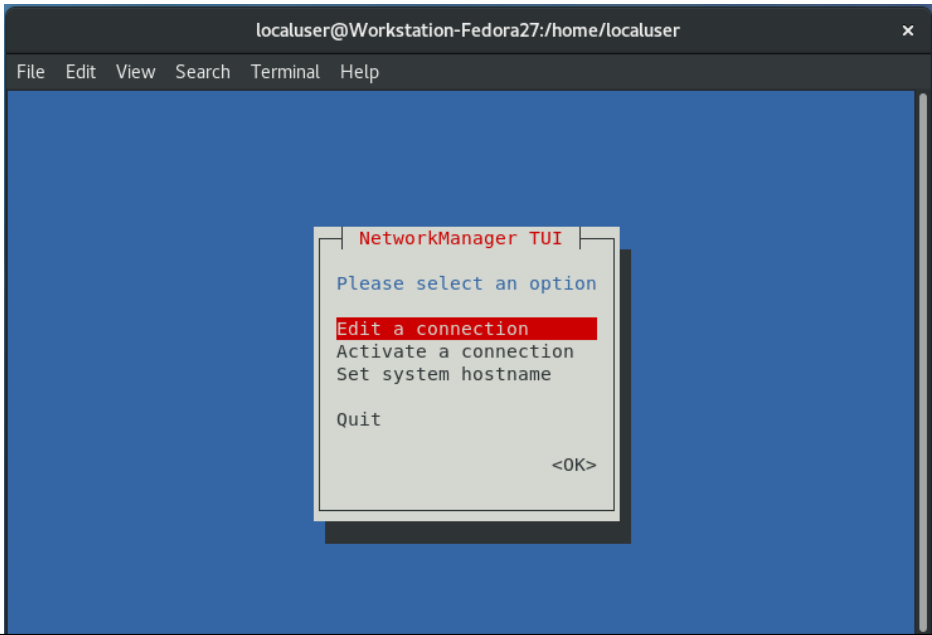
```
WIRED-PROPERTIES.CARRIER:      active
IP4.ADDRESS[1]:                 10.0.2.15/24
IP4.GATEWAY:                    10.0.2.2
IP4.DNS[1]:                     10.0.2.100 <<<< DOMAIN CONTROLLER IP ADDRESS
IP4.DNS[2]:                     10.0.2.101
IP4.DNS[3]:                     10.0.2.102
IP6.ADDRESS[1]:                 fe80::a84e:4e53:d696:ddc9/64
IP6.GATEWAY:
```

If the output doesn't show DNS IP ADDRESS information, you can add this manually though Network Configuration on System settings or through the terminal. To do this through the terminal, run the following command and insert the information listed above:

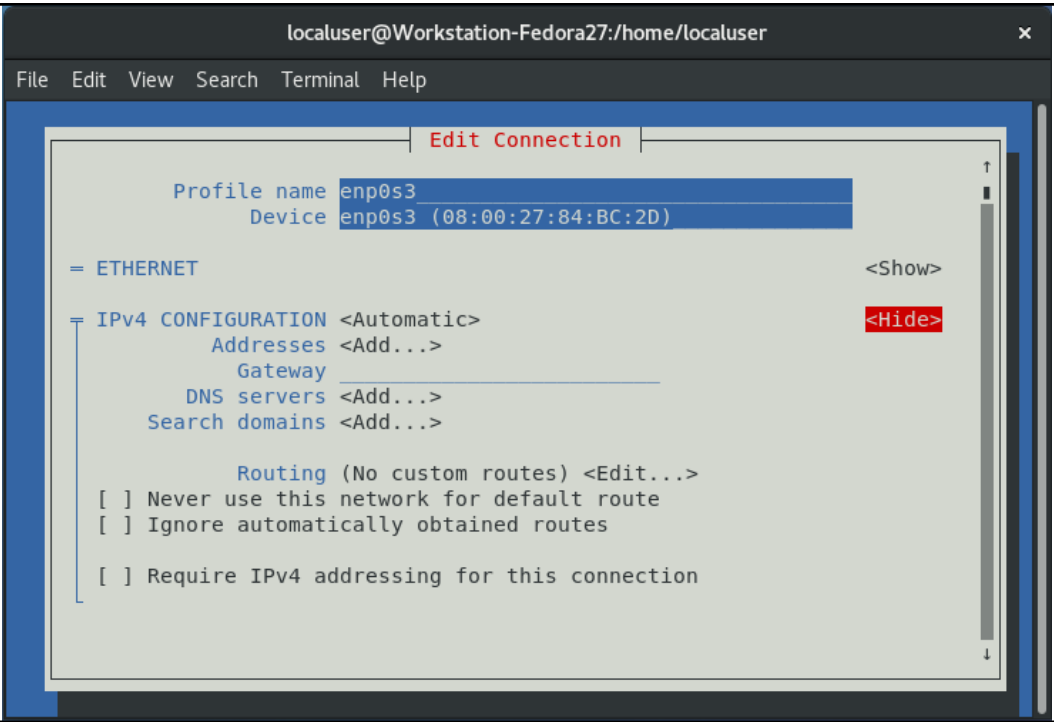
```
[root@Workstation-Fedora27 localuser]# nmtui
```

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Choose the option Edit a Connection and OK



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Fill nmtui IPV4 Configuration according to your network environment information. Another useful test is trying to ping the name of your domain.

```
[root@Workstation-Fedora27 localuser]# ping mylocaldomain.com
```

To join the Fedora Workstation at the domain, run the following commands:

```
[root@Workstation-Fedora27 localuser]# realm join --user=Administrator mylocaldomain.com
```

Note: The user and domain is an example, at this point you need to use a user with rights to join Fedora at the domain controller. If you want to unjoin Fedora, use the following command:

```
[root@Workstation-Fedora27 localuser]# realm leave --user=Administrator mylocaldomain.com
```

Edit the file /etc/samba/smb.conf :

```
[root@Workstation-Fedora27 localuser]# vim /etc/samba/smb.conf
```

Add the following lines to the file:

```
[global]
```

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Add the following lines to the file:

```
[global]
```

```
realm = mylocaldomain.com
workgroup = mylocaldomain
dns forwarder = 10.0.2.100
security = ADS
template shell = /bin/bash
winbind enum groups = Yes
winbind enum users = Yes
winbind nss info = rfc2307
winbind use default domain = Yes
idmap config *:range = 50000-1000000
idmap config * : backend = tdb
store dos attribute = Yes
map acl inherit = Yes
vfs objects = acl_xattr
```

Save the changes (on vim press ESC and "wq!").

To enable cache logins you need to configure SSSD (System Security Services Daemon), to do this, edit the file /etc/sss/smb.conf.

```
[root@Workstation-Fedora27 localuser]# vim/etc/sss/smb.conf
```

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The main lines that we need to change are:

```
use_fully_qualified_names = False
fallback_homedir = /home/%u@mylocaldomain.com
```

The SSSD file looks like this:

```
domains = mylocaldomain.com

config_file_version = 2

services = nss, pam

[domain/mylocaldomain.com]

ad_domain = mylocaldomain.com

krb5_realm = mylocaldomain.com
```

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```
[domain/mylocaldomain.com]

ad_domain = mylocaldomain.com

krb5_realm = mylocaldomain.com

realmd_tags = manages-system joined-with-adcli

cache_credentials = True

id_provider = ad

krb5_store_password_if_offline = True

default_shell = /bin/bash

ldap_id_mapping = True

use_fully_qualified_names = False

fallback_homedir = /home/%u@mylocaldomain.com

access_provider = ad
```

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# Enable user authentication through SSH with Active Directory (SAMBA 4) Fedora 27

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To configure SSH for remote authentication of the domain users, you need to edit the following file  
/etc/ssh/sshd\_config:

```
[root@Workstation-Fedora27 localhost]# vim /etc/ssh/sshd_config
```

At the end of the file include the following lines:

```
AllowGroups wheel domain^admins domain admins domain?admins
```

```
UsePAM yes
```

You can configure the groups how you wish (eg. it\_support).

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# Sudoers Users and Active Directory (SAMBA 4) Fedora 27

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To configure domain users as the member of sudoers edit the file `/etc/sudoers` :

```
[root@Workstation-Fedora27 localuser]# vim /etc/sudoers
```

Add the following lines:

```
%domain\ admins ALL=(ALL)    ALL
```

```
%[username] ALL=(ALL)    ALL
```

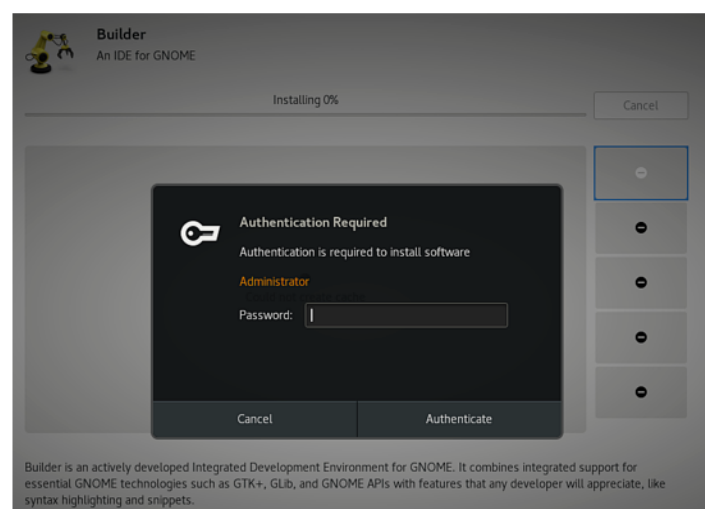
The second line you can fill with the domain users who need administrative rights (eg. `%johnwoo ALL=(ALL) ALL`).

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# User login box in the Fedora 27 system session

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When we work with Fedora 27 in a domain we encounter an authentication problem when we need to perform activities that require administrative rights in a graphical environment (Gnome). When you try to install an application through the "software" tool, an authentication box is displayed for root or Administrator user authentication. The image below illustrates this issue:



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To display the user's username in the authentication box create the file `51.fedora-admin.conf` at the directory `/etc/polkit-1/localauthority.conf.d/`:



To display the user's username in the authentication box create the file **51.fedora-admin.conf** at the directory **/etc/polkit-1/localauthority.conf.d/**:

```
[root@Workstation-Fedora27 localuser]# touch /etc/polkit-1/localauthority.conf.d/51.fedora-admin.conf
```

```
[root@Workstation-Fedora27 localuser]# vim /etc/polkit-1/localauthority.conf.d/51.fedora-admin.conf
```

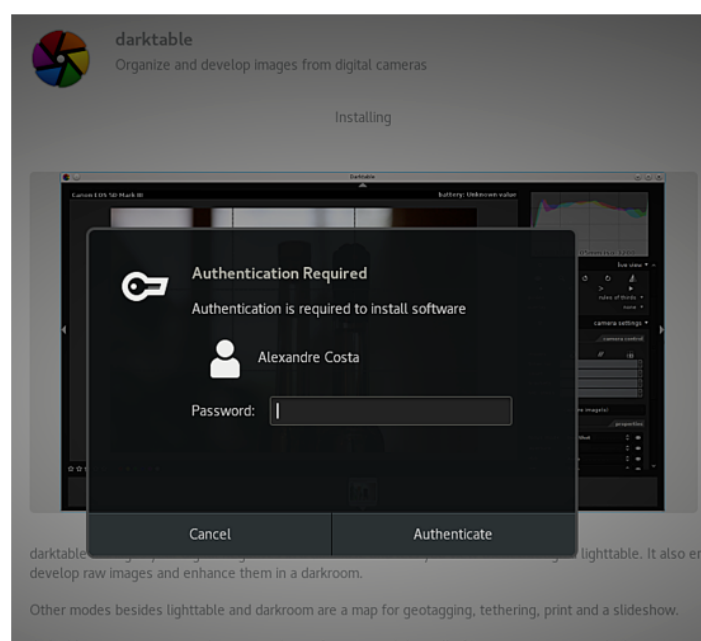
Add the following lines to the file:

```
[Configuration]
```

```
AdminIdentities=unix-group:admin;unix-group:Domain Admins;unix-user:0
```

After the configuration, the all users of your network will be able to login with the own username and password to execute activities who need special rights. Only users in the sudoers file can execute activities who need special rights.

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The authentication of users not listed in the sudoers file will fail.