



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

Alfredo Abad

UA: 3-agosto-2018

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Installing Fedora 27

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Fedora-Workstation-Live 27

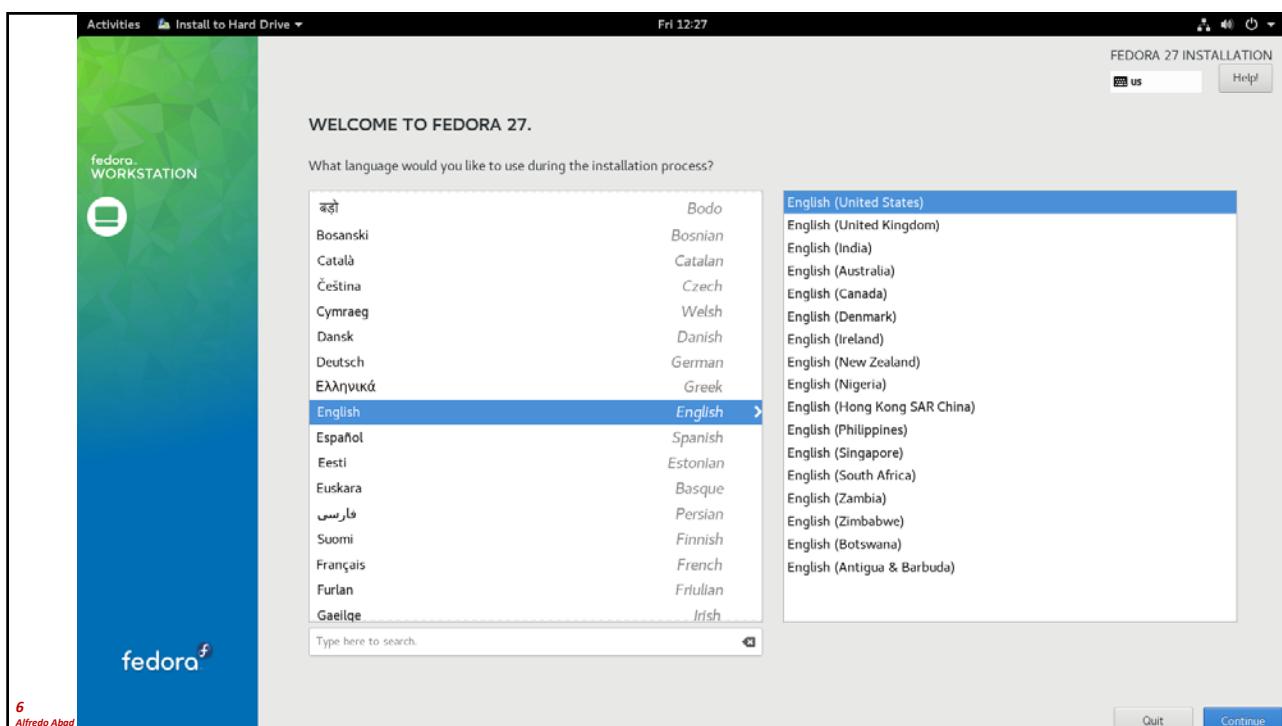
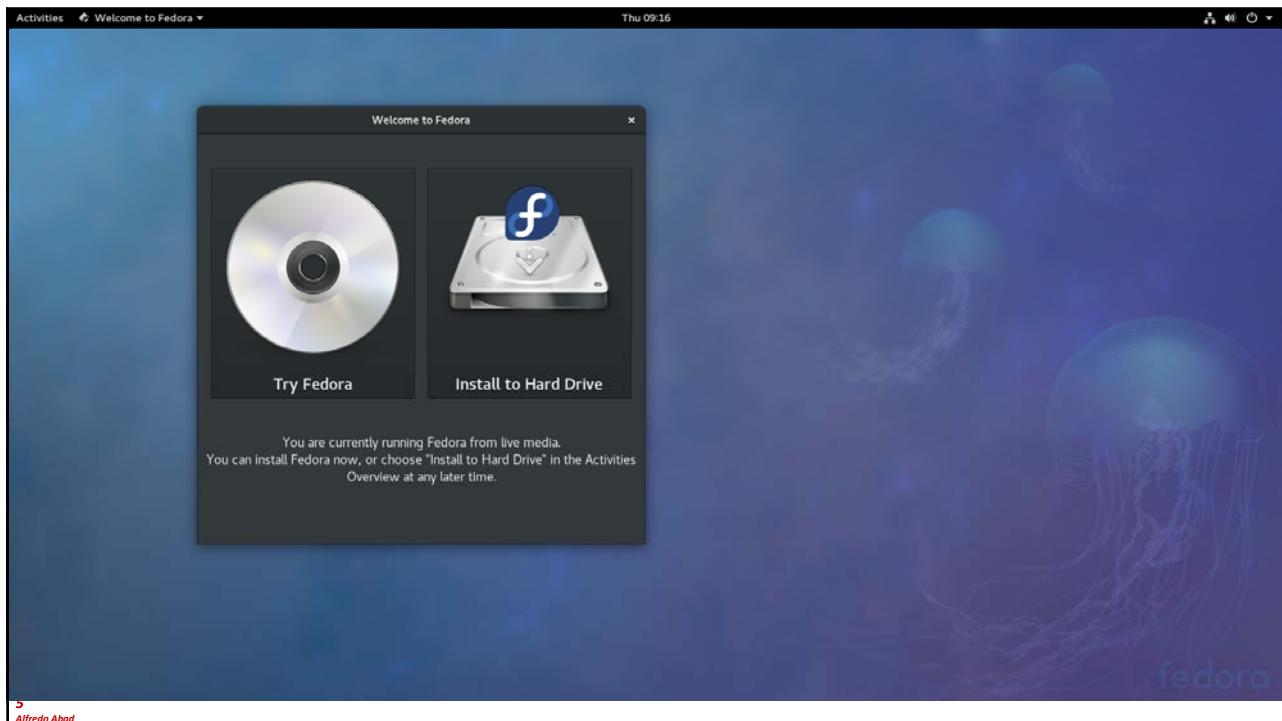
Start Fedora-Workstation-Live 27
Test this media & start Fedora-Workstation-Live 27

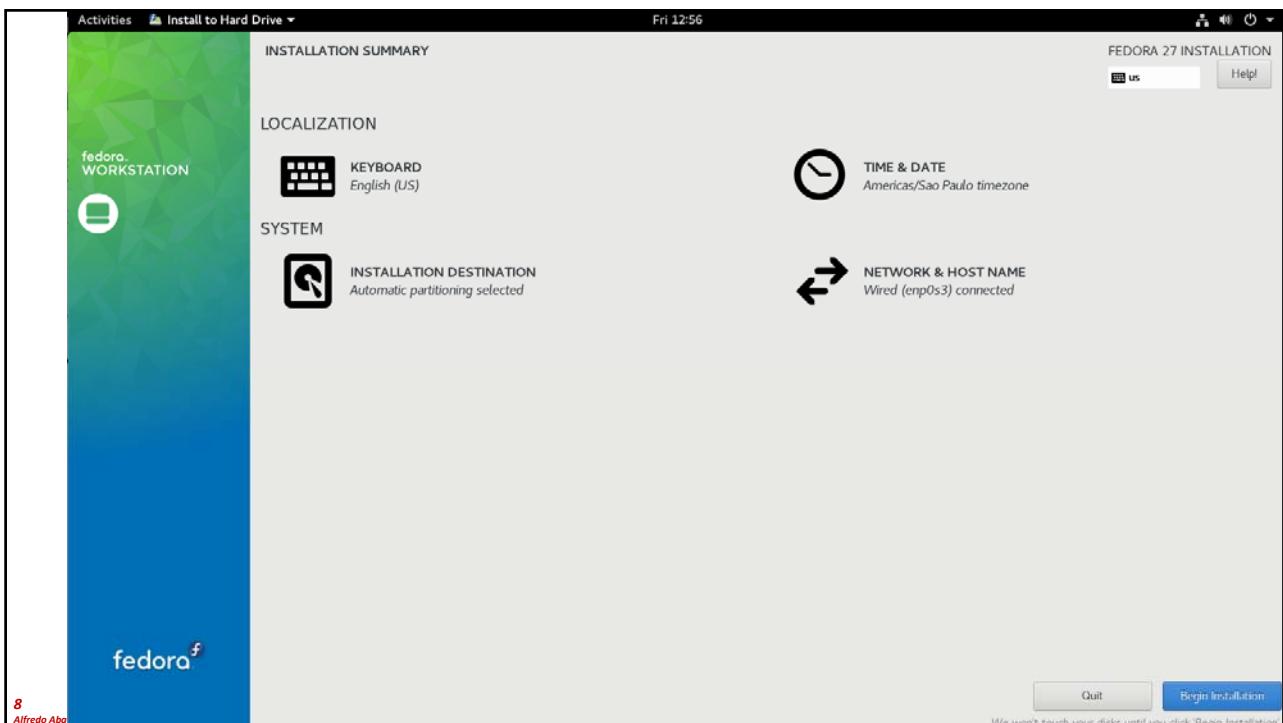
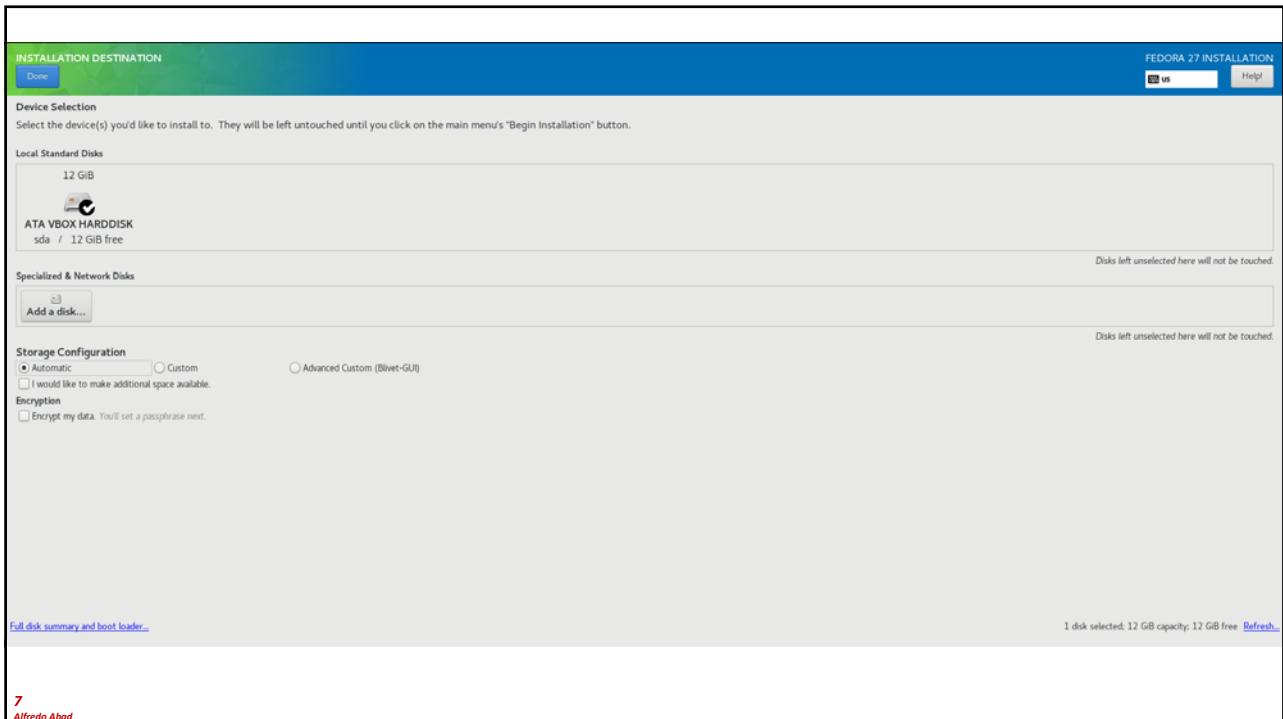
Troubleshooting

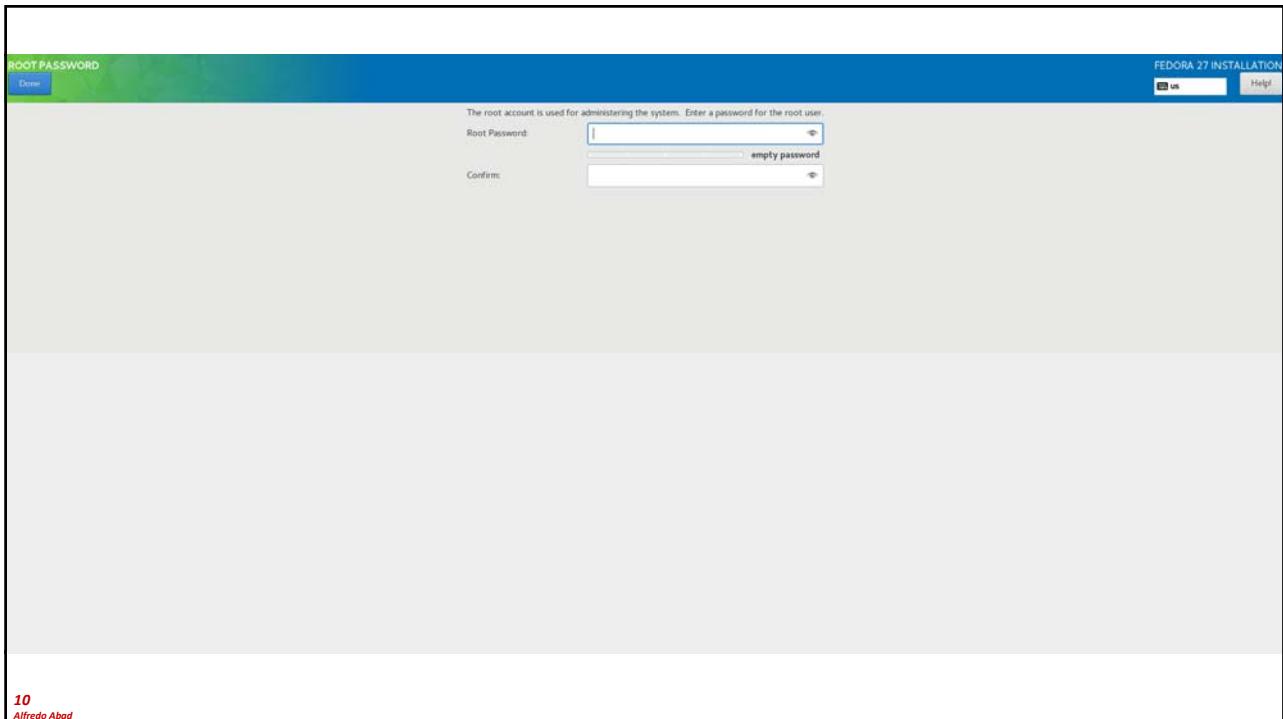
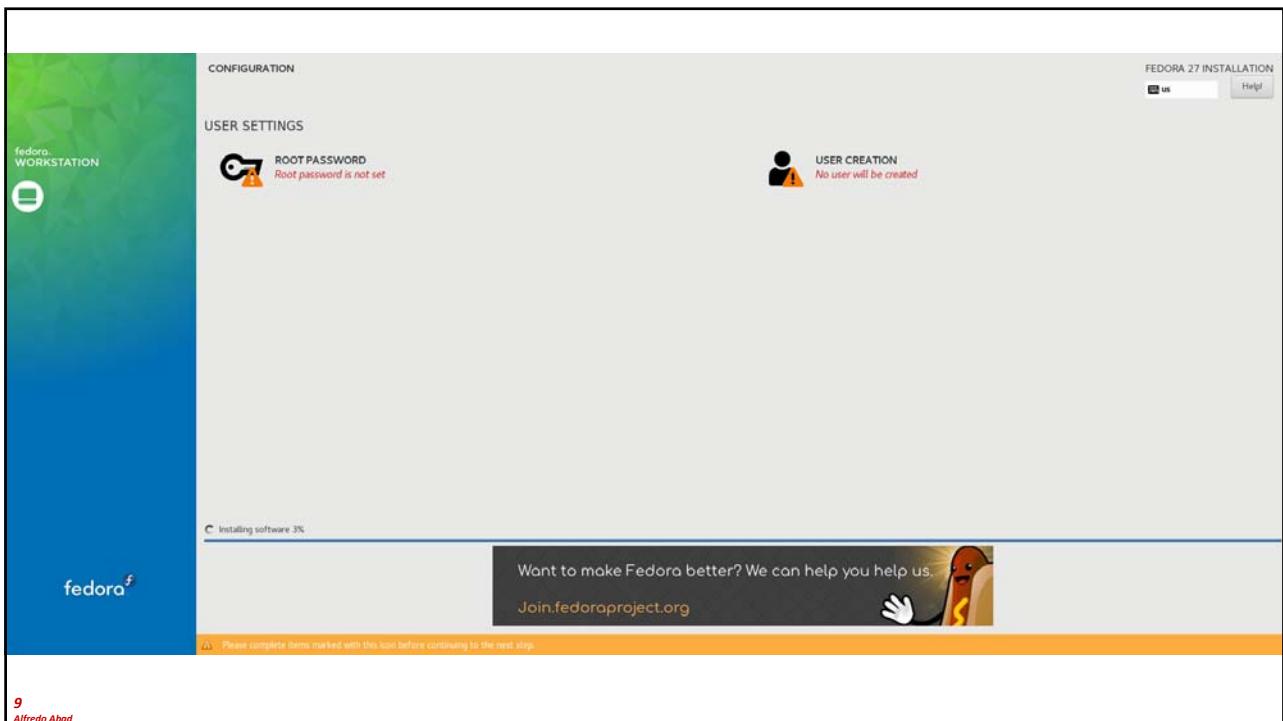


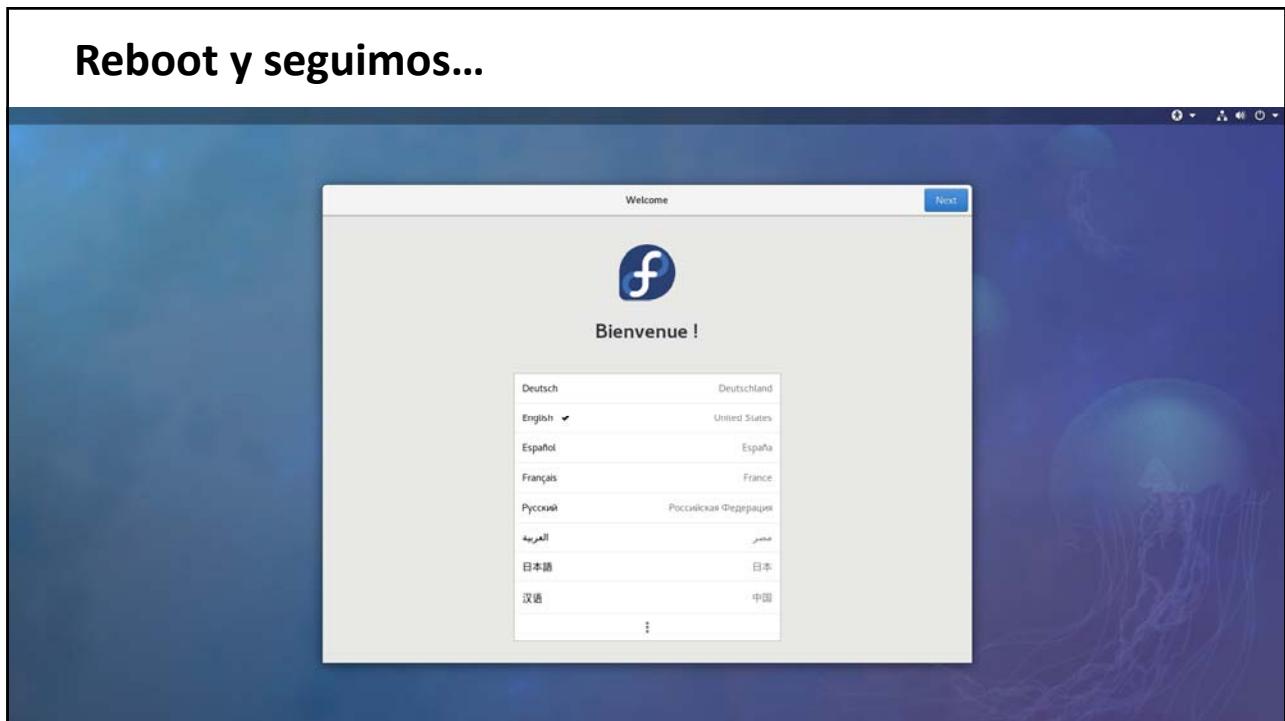
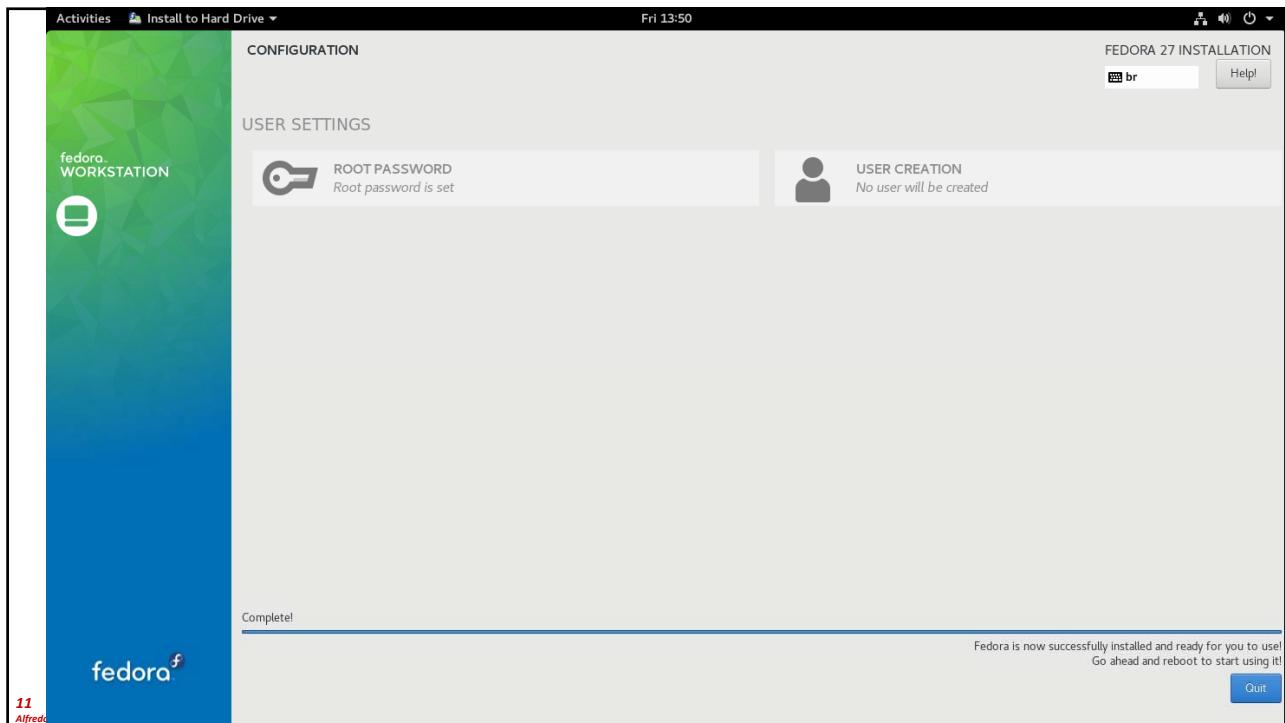
Press Tab for full configuration options on menu items.

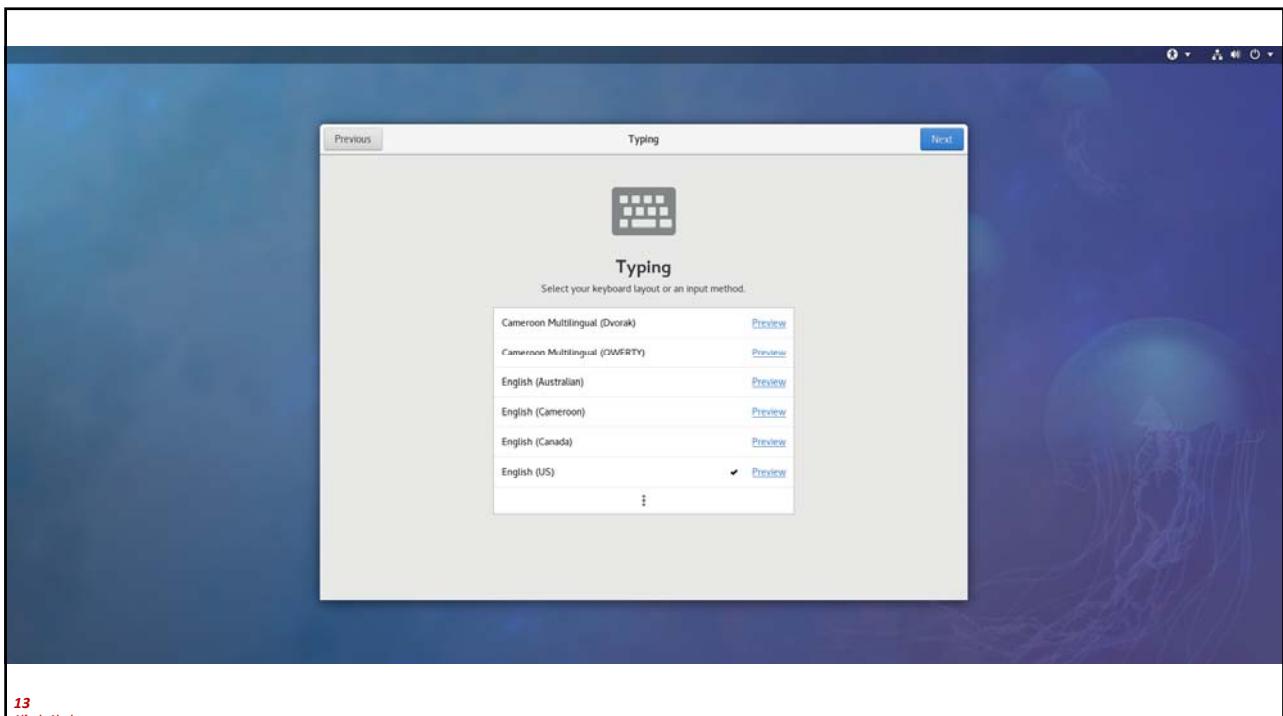
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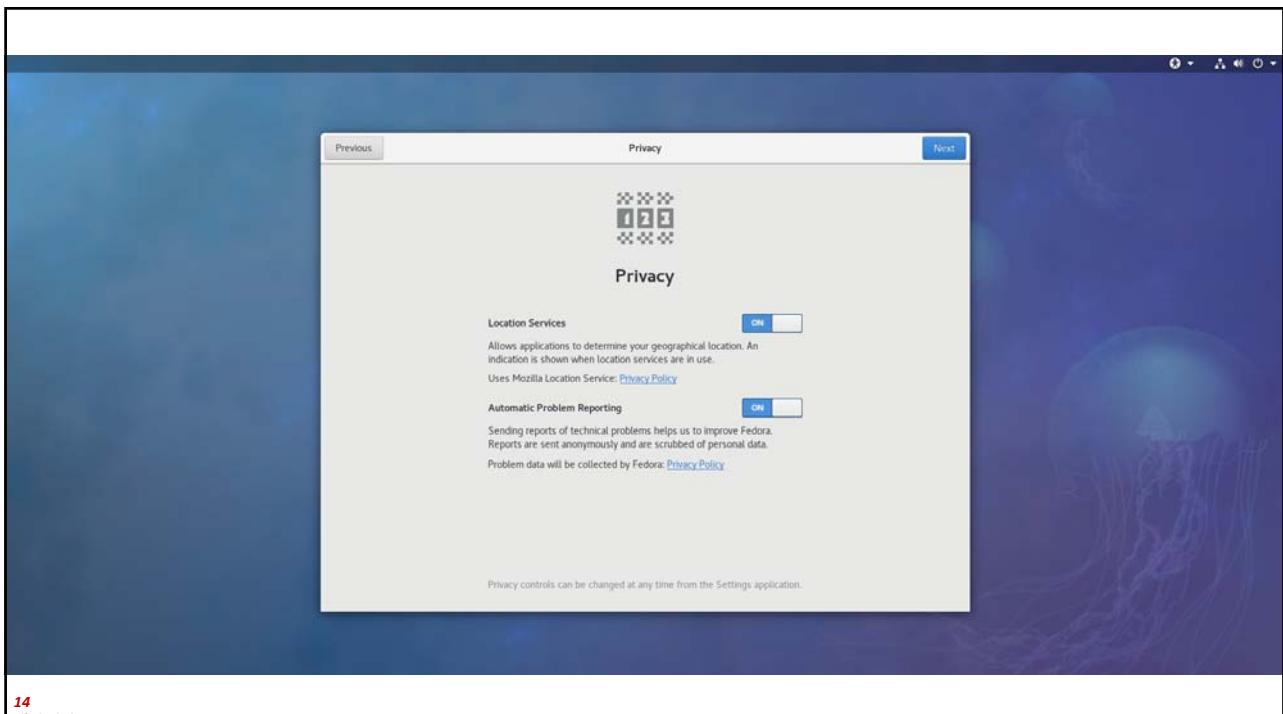




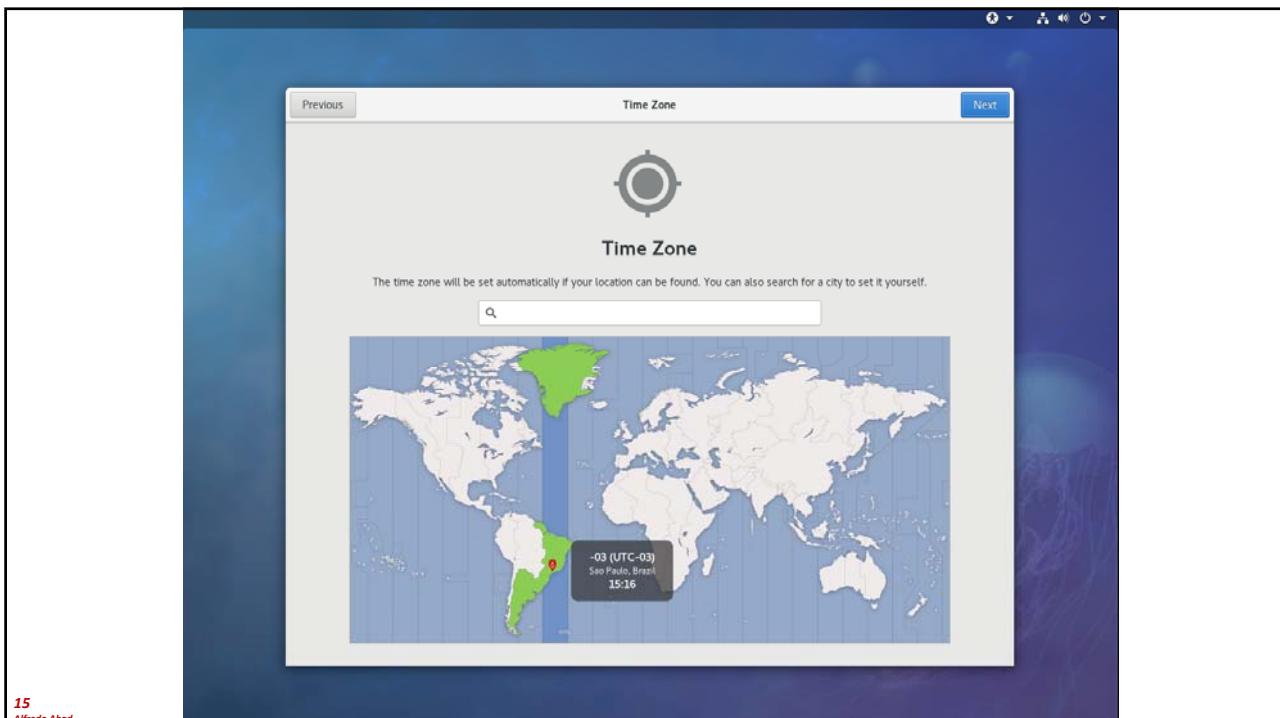




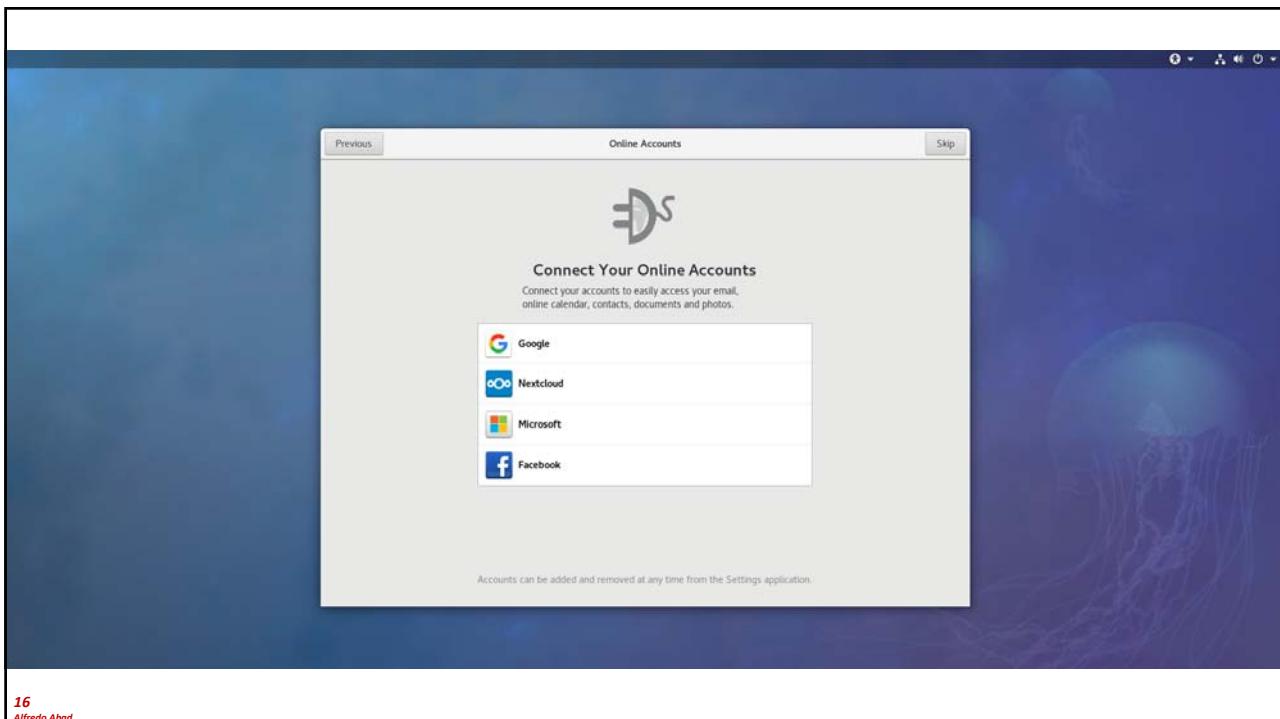
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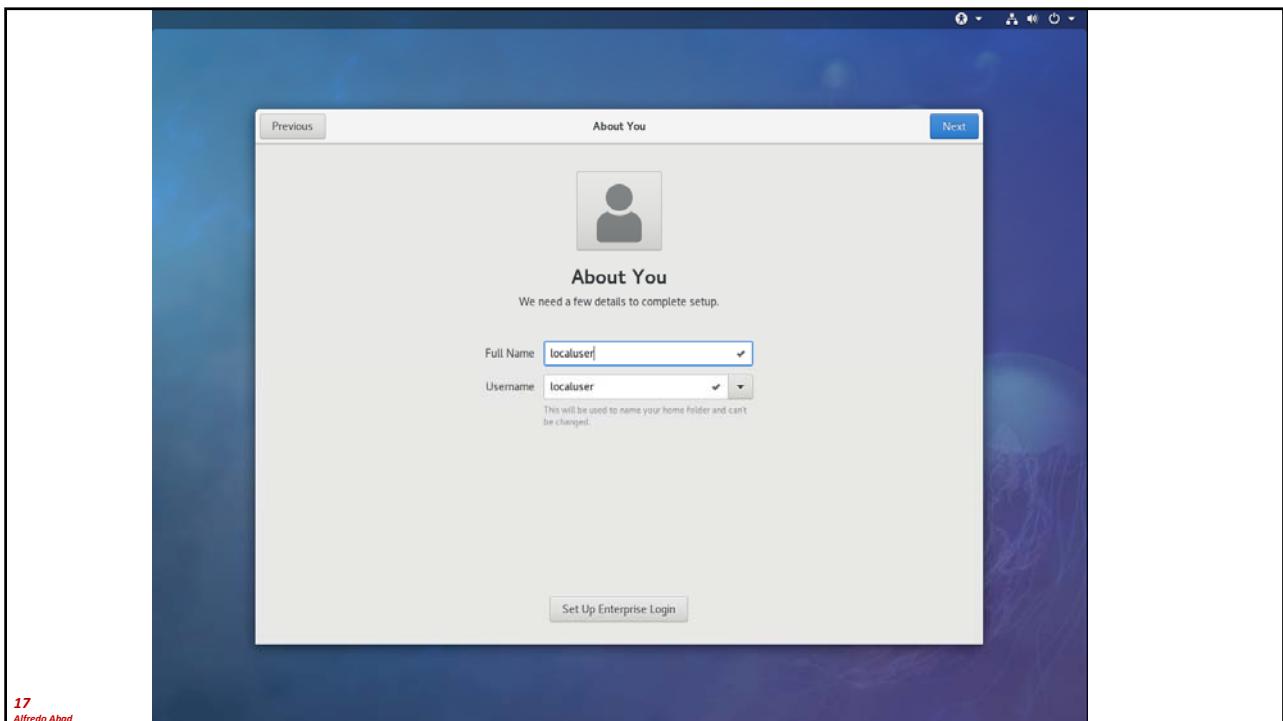
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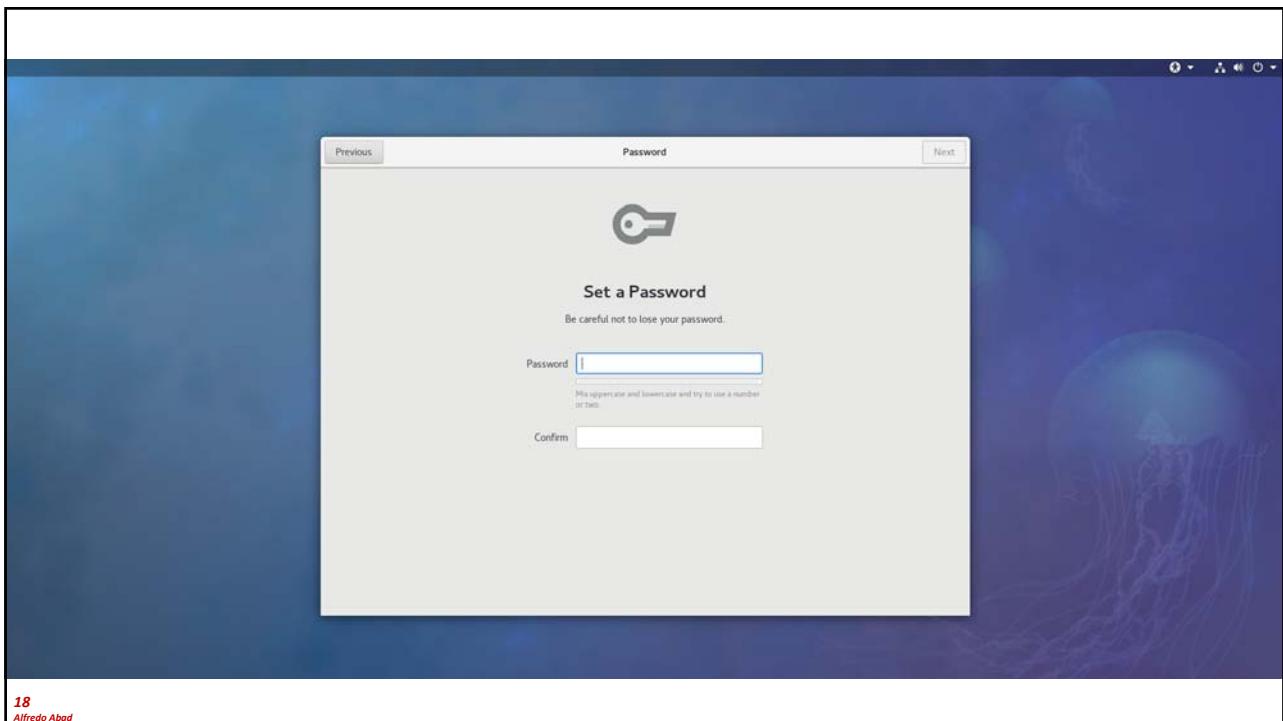
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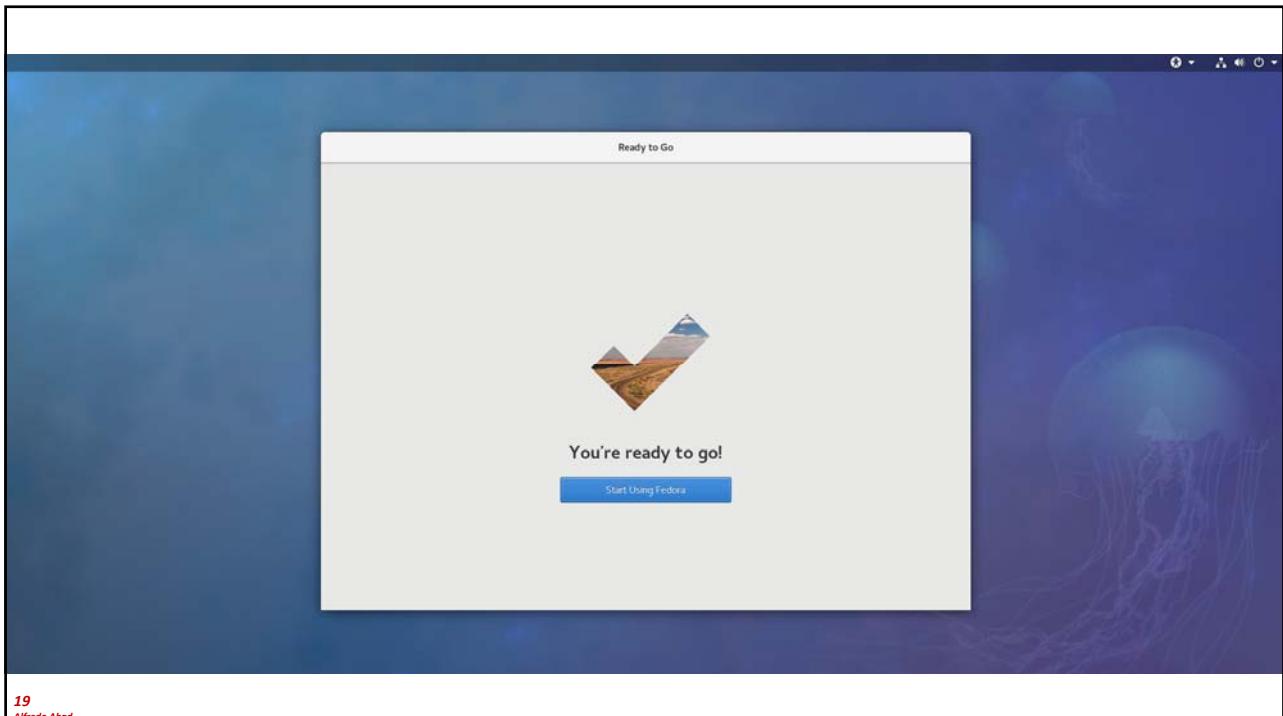
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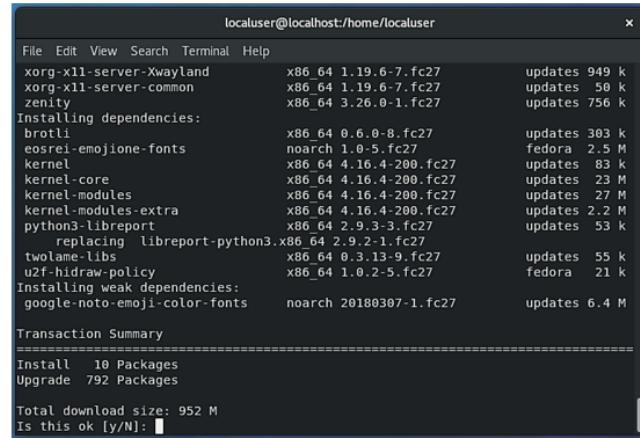


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The first thing to do after login is open the terminal and update system. Run the followings commands and type the password:

```
[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 58 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]:
```

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

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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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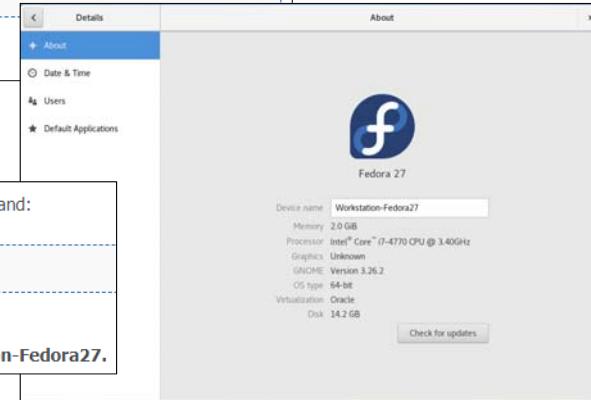
Change Computer name on Fedora 27

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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**.

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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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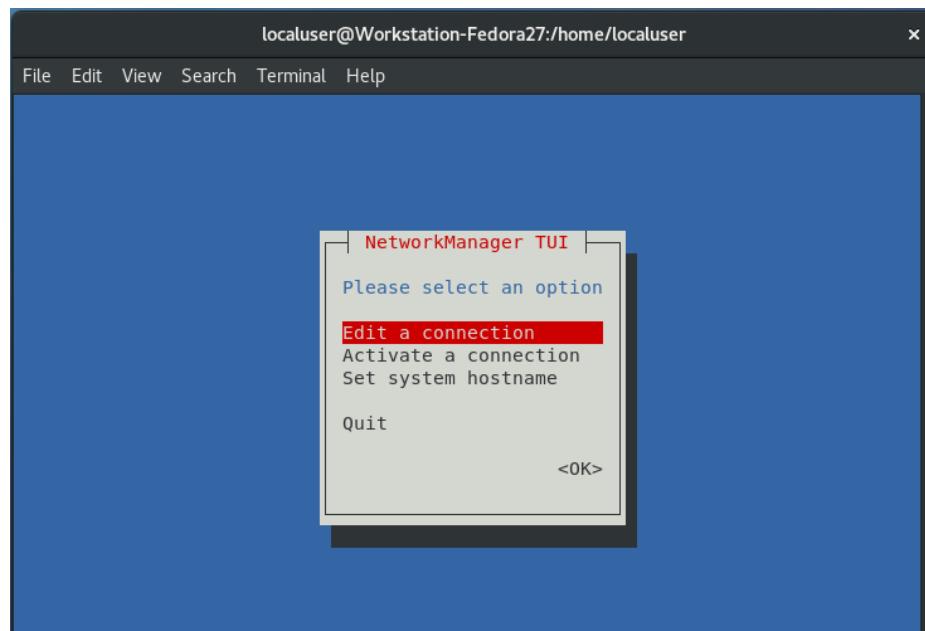
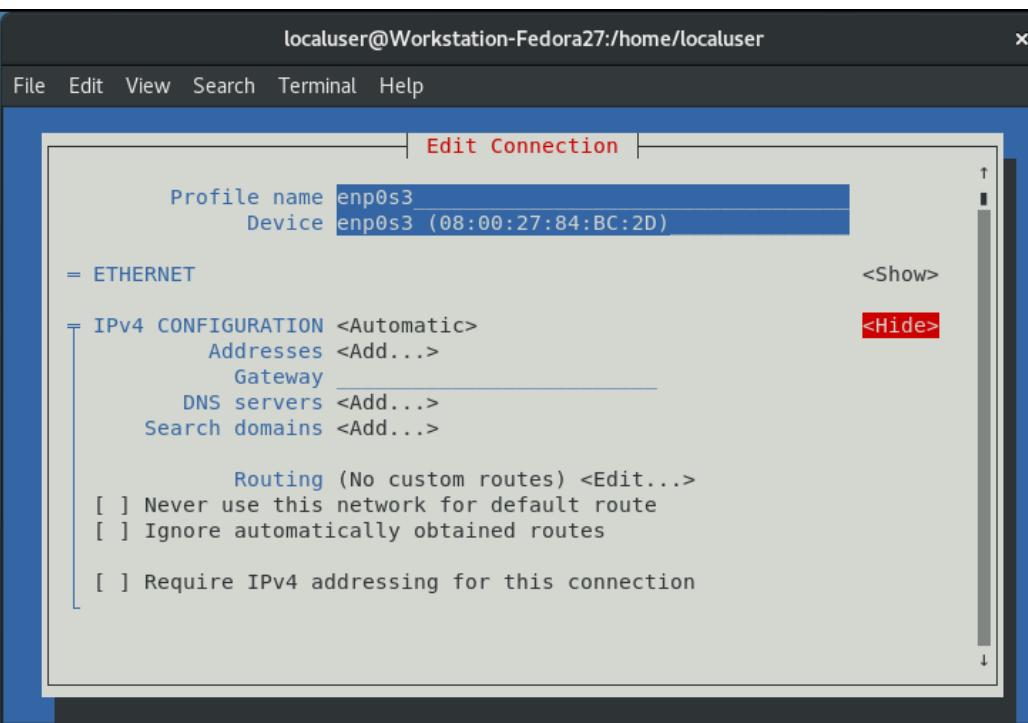
```
WIRED-PROPERTIES.CARRIER:     active
IP4.ADDRESS[1]:               10.0.2.15/24
IP4.GATEWAY:                  10.0.2.2
IP4.DNS[1]:                   10.0.2.100 <<< DOMAIN CONTROLLER IP
ADDRESS
IP4.DNS[2]:                   10.0.2.101
IP4.DNS[3]:                   10.0.2.102
IP6.ADDRESS[1]:               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]# nmcli connection modify ens3 ipv4.method manual
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv4.addresses 10.0.2.15
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv4.gateway 10.0.2.2
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv4.dns 10.0.2.100
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv4.dns 10.0.2.101
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv4.dns 10.0.2.102
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv6.method ignore
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv6.addresses fe80::a84e:4e53:d696:ddc9/64
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv6.gateway 10.0.2.2
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv6.dns 10.0.2.100
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv6.dns 10.0.2.101
[root@Workstation-Fedora27 localuser]# nmcli connection modify ens3 ipv6.dns 10.0.2.102
```

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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:

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```
[global]
```

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/sssd/sssd.conf.

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

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 localuser]# 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
```

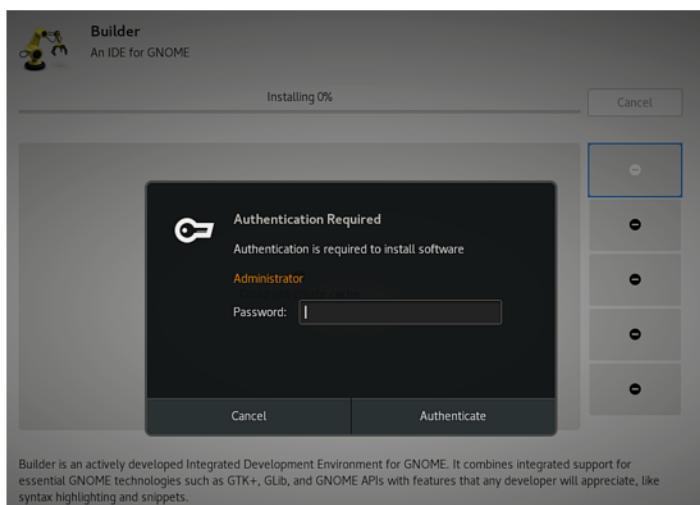
The second line you can fill with the domain users who need administrative rights (eg. **%johnwoo ALL=(ALL) ALL**).

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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
```

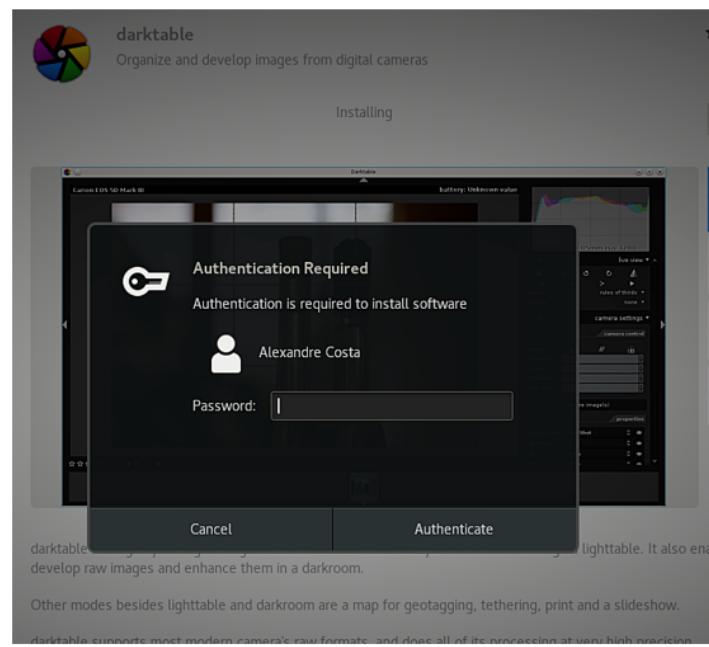
Add the following lines to the file:

[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.

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