001 OPENING

Hello
and welcome,
to the big long hard tutorial on stuff.
My name is totally besides the point,
and you are watching a technical fiasco in which I struggle with computer stuff
while you struggle to learn something through my eastern European accent.

For this tutorial series,
I have set the goal of going through several different IT topics.
This will be a beginner level tutorial.

Here is an overview.
We are going to make a virtual web server using virtual box.
We are going to install openSUSE on it since it's awesomeness.
We are going to configure SSH, Apache, Mysql, Samba.
We are going to test our server by installing WordPress.

To follow along you need.
A computer at least as good as mine.
<show my computer>
Which really isn't asking much.
As you can see my OS of choice is Linux Mint,
but you can use any operating system you are semi-proficient in.
Mac OS or Windows or any other OS that Virtual Box can be installed on.

Let's get started.

002 PREFACE

The first step is to setup virtual box.
We won't go through the installation process.
Just go to virtualbox.org/
On the left you can see the Downloads link.
From here you need to download the appropriate version for your system.
For Linux users I recommend using the newest version from the virtual box website.
I suggest you also download the User Manual from the Documentation section.
After you setup VirtualBox you need to download and install the
VirtualBox Extension Pack.

A quick note for Linux users.
Post installation you need to add yourself to the
"vboxusers" group in order to be able to use USB devices in your virtual machines.
You can do that by entering
'usermod -a -G vboxusers username'
username as in your username.

The second step is to acquire the OS for the server.
Go to opensuse.org
Click on the big orange "Get it"
We want the Installation DVD
I suggest the BitTorrent Download Method
and I suggest Seeding a bit to show your gratefulness,
and help minimize traffic costs for the SUSE people.

003 SYSTEM

Once you have VirtualBox installed,
it's time to start creating virtual machines.
Find and start VirtualBox.
Click the "New" button.
Next.
In the name field Enter "openSUSE"
Notice how the OS type changed to Linux
and the version to openSUSE
Of course you can name your server anything,

but after that it is recommended to manually set the OS and Version,
this way VirtualBox can help setup a virtual macchine compatible with the OS that will run on it.
Next
It will ask for the amount of virtual memory.
It is recommended not to give more than 50% of the total amount of memory you have on your PC.
Linux works well on 512 so there is no need to give it more.
Next
Now it asks for the hard drive. Don't touch anything
Next
Make sure VDI is selected
Next
By default the "Dynamically allocated" option is selected
We prefer the "Fixed size" option.
After you press Next it allows you to chose the location of the VirtualBox Disk Image and set it's size.
If you don't have enough room on your hard disk you can shrink it down to 4 Gigs.
If you have tons of space you can make it bigger to allow yourself some experimentation later.
I'm going to leave it at 8.
Next
Now press Create and wait for it to finish.
<paused>
And Create again.
And done.
Almost.
<paused>

Click Settings.
From here you can change the virtual machine settings
Go to system
Remove the check from Floppy in the boot order.
Then mark it and use the down arrow to move it to the bottom.
Click on the Processor tab
set the execution cap to 80%,
this prevents the guest system from hogging your processor.
We want the host system to be usable.
Go to storage
Now select the "Empty" item under the IDE Controller.
This is your virtual optical drive.
To load the ISO file we downloaded
click on the CD icon in the Attributes field on the right
and select Choose a virtual... something
now browse to the folder where you downloaded the openSUSE installation DVD
and select it.
Go to Audio
and remove the check from the "Enable Audio" check box.
Go to USB
If you get an error make sure you fix it and then come back.
If you are using Linux make sure you have added yourself to the
'vboxusers' group as mentioned earlier
if you have and still not happy try rebooting your system
Go to Network
make sure Adapter 1 is Enabled.
make sure it is attached to NAT

Finally click OK to close the setting window.

004 NETWORK

005 INSTALLATION

Hello
and welcome,
to the big long hard tutorial on stuff.
My name is a complete mystery,
and you are watching a technical fiasco in which I struggle with computer stuff
while you struggle to learn something through my eastern European accent.
Let's get started.

If there is one thing you should remember about virtual box
then it would be the "Host" key
once you click in the virtual machine it will catch all mouse and keyboard input.
In order to escape you need to press the host key.
It's the Right Ctrl key on your keyboard.
Some OS-s have desktop integration
witch will allow the mouse to jump in and out of the virtual machine
but that feature requires the VirtualBox add-ons to be installed.

It's BOOT time
Start Virtual Machine.
Select the newly created openSUSE virtual machine
and click start
Click on the VM window and use the arrow keys to select the "Installation" option and then Enter.

Once it loads everything
you will be shown the license agreement.
You also have the language and keyboard settings for the install.
I will leave them as they are.
If you really want to change them. Good luck
Click Next.

On the Installation Mode screen click Next again.

On the "Clock and Time Zone" screen
Select your Region and Time Zone.
After that
check to see if the time it's showing you
is the same as the time your'e in.
If not try the "Hardware Clock Set To UTC" check.
If that doesn't help... Set the time.
Click Next

On the "Desktop Selection" screen
select "Other"
and then "Minimal Server(Text Mode)".
We don't need a GUI.

On the "Suggested Partitioning" screen
remove all checkboxes.
It doesn't get any more basic than this.
Click Next

On the "Create New User" screen
enter your name
enter a username
and enter a password, twice
check "Use this password"
check "Receive System Mail"
uncheck "Automatic Login"
Press Next

Press Yes

Now suse allows us to review our installation settings
We are pretty sure everything is ok so we are going to continue.
Press Install.
Press Install Again
now we wait...

006 FIRST RUN

After the installation your system is going to boot from the installation media again.
When you are at the first menu just select 'Boot from Hard Disk' and press enter.

Now that our system is started we want to shut it down.
To do that we first need to login as root.

on the login prompt enter root
press enter
and then
write your password
to shut down the system we write
'shutdown' and enter.

After you install an OS on a system
you want to change the boot order
We do that by going back to the VirtualBox Manager
we right click on our system and select 'Settings..'
Then we click system
and remove the check box for the cd/dvd-rom drive
press ok

Next we want to create a shortcut for our VM on the desktop
we do that whit a right click and
"Create shortcut on desktop"
We can close the Manager window and start our VM from this icon.

//
there are some things we can do with the vm while its working
for instance if we click on the "Devices" item in the main toolbar
we can go to "CD/DVD Devices" and then swap out disks
or remove the disk currently loaded
we can go to "USB Devices" and plug or unplug a device
and we can go to "Network Adapters"
and change the
"Atached to:" "Cable connected" and "Port Forwarding" properties

<to be moved>

ep3

Hello
and welcome,
to the big long hard tutorial on stuff.
My name is <!!!>,
and you are watching a technical fiasco in which I struggle with computer stuff
while you struggle to learn something through my eastern European accent.

In this video we start configuring our system.
First we are going to update it.

Login to the system with your username.

Before updating we need to verify we have an active INTERNET connection.
enter 'ping youtube.com'
You should see the same thing.
More or less.

For those not familiar with opensuse
the 'zypper' command is the same thing as
'yum' in Fedora
or 'apt-get' on Ubuntu.
So to update the system we write
'zypper update'

DENIED

By default only the root account has access to configuration tools and programs,
so we need root access.

We can either logout and log back in as root.
Or just write 'su',
and the root password,
witch we set to be our password during install!

Which is always an awful idea.
The 'su' command gives us root access to the system,
alternatively we can setup 'sudo' later
to avoid login in as root.

Now at the powerful red prompt of danger we can enter all sorts of,
irresponsible destructive assault commands against our enemies.
Or, try 'zypper update' again
For some of the packages it's going to ask for permission.
If that happens just pres 'y' and enter.

!read the warning!
ok
we don't want to just have the list shoot through the screen
we want to take a look at it
so instead of just asking for the list
we are going to instruct Linux to save it to a file
we do that by writing
'zypper ps > ~/zypps'
the grater than symbol after the command
instructs Linux to send the output to a file
the tilde is a shortcut to the home folder
and 'zypps' is the name of the file we created

now we want to open it
'vi ~/zypps'
'vi' is a hardcore text editor
it is a very small program
it is in a sense a caveman text editor
but it is also always available
so a basic knowledge of 'vi' is mandatory for troubleshooting
and fixing systems
so do as I did,
keep a vi manual on your smart phone at all times

to exit 'vi'
pres [esc] -> [:] -> [q] -> [enter]

I'm not happy with the way 'vi' handled that.
We want to look at our info in a more modern text editing solution.
We want zypper to install nano for us.
so first we check how that's done
write 'zypper -h'

Whenever you are wondering about some other command,
you can always write it whit an -h to get some help
Unfortunately our screen can't display all the text,
and we miss out on all the plot and character development.
in order to see the whole thing we need 'less'.
Less is a...
text display thing...
As far as I know...
We can use a pipe '|',
to pipe the output of 'zypper -h'
to 'less'
write 'zypper -h | less'

you can use the pipe to send the result of one command
to another command
and if you want to a third command
and so on...

Back to 'zypper'
pres the 'space' key to move to the second screen.

And here it is,
to install software we use the 'install' or 'in' option

```
pres 'q' to quit 'less'
and write 'zypper in nano'
pres 'y' to confirm

Now we have nano.
So lets finally look at that list.
write 'nano ~/zypps'
Take a look. And Yes.
We don't care about this file
let's delete it

as you can see for yourself
the way to exit nano is just 'Ctrl+x'
which is simpler than 'vi'
plus the legend at the bottom shows all the basic functionality
needed for a text editor

to delete a file we need to find it first
so we write 'pwd'
which is 'print working directory'
to see where we are

then we write 'ls'
to see the contents of the directory we are in
I don't see our file here.

write 'cd ..'
to go up one dir in the file system

write 'cd /root'
to jump straight into the 'root' folder
using an absolute path as indicated by the '/' symbol

write 'ls -al'
to make sure we are seeing all files
hidden included
in a list with the owner and permission information

before we delete it we are going to make an archive copy of the file

write 'cp zypps azypps'

again 'ls' to see what we did

and finally write 'rm zypps'
notice ho Linux does not ask

pres the up arrow till it says 'ls -al'
and enter
that's the command history
you can see two things
first
        the zypps file is gone
second
        the file '.bash_history'

write 'cat .bash_history'

do you remember these commands
now write 'cat /h[Tab]
The tab auto completes user input based on possible options
pres [Tab.] again
it completes the command with the only directory in the /home
now write .ba[Tab]
it gets to '.bash'
[Tab] again and it shows possible inputs
write an '_' and pres [Tab]
```

At this point it can't be '.bashrc' since
it has no underscore
press enter

and do you remember these commands
enough of that, you get the point

//
File operations can get quite complex in a 'cli'
so I will show you another program that can help people new to linux

Ofcourse im talking about midnight commander, and we are going to use yast to install it.

enter yast

The menu on the left is the top layer of configuration categories.

Pres up and down to look through the sub menus for configuring the system.

To install software we need to go to the software section.
pres enter

Then with the up and down arrows select Software Management

now in the search phrase field write mc

and press enter

scroll down till you find mc and mark it by hitting the space bar

also mark the mc-lang package

and now press [Alt] + a

press enter to confirm

and done

to exit yast pres [Alt] + q or [Tab] to the Quit option and press enter

enter mc

and spend the time to to the next video
trying to break the system

I have always been a big proponent of
learn by breaking

//Next time

ep3 notes

svg

zypper
yum
apt-get
su
zypper update
[y]
[q]
> grater than
~ tilde
| vertical bar

pwd
ls

cd
cp
rm
[Tab]
cat

[Ctrl] + [x]

to exit 'vi'
pres [esc] -> [:] -> [q] -> [enter]

archive

Audio
<the zypper warning>

EP4

Hello
and welcome,
to the big long hard tutorial on stuff.
My name is hidden in plain site ,
and you are watching a technical fiasco in which I struggle with computer stuff
while you struggle to learn something through my eastern European accent.

In this video we will configure SSH.

If you have been watching the episodes back to back,

I suggest you pause for a minute
and reboot the virtual machine.

You can do that by entering 'reboot'
//
After the system comes back on
you should login with your username
and then use the 'su' command
to gain root privileges

Once you are back at the red prompt of danger.
enter yast

Go to 'Network Services'
This is the menu that allows us to configure things like:
 -ssh
 -apache
 -ftp
 -samba

But as you can see,
none of these are available for configuring at this point.

This is because yast has a modular structure,
every configuration task that yast can accomplish,
is a separate program that handles that task.

Go to the 'Software' section.
You can see there are just four configuration options.

Pres Tab and go to 'Software Management' and pres enter.

Now the yast control center loaded the Soft Management module for us.
//
Enter yast as a search phrase and pres enter

Scrolling down through the results you can see

patterns or meta package options that allow you to
install a group of packages for a certain task
or environment

then we have webyast which we will look at in another series.

And here are YaST2 modules
the package info can give you a hint
as to what the different modules can help you configure

we want to install

yast2 online update configuration
yast2 online update frontend
and
yast2 sshd

as you should remember
we mark the packages we want with the space bar
and then we pres Alt and a
to accept our selection

Now if you look through the menus in yast
you will see that nothing has changed

quit yast

pres up one time
to go back to the last command in the history
and pres enter

This was a triumph
as you can see now the Software section has two new configuration options
and network services has the SSHD Configuration option

lets setup sshd

You can use tab to cycle through the options
but you should have figured out by now that
you can call anything by pressing the Alt key
and the yellow letter in the name of the option you want

Got to Start-Up with Alt and S
Set the service start to 'now and when booting' with Alt and B

Go to General And Edit the port
we want to use 11022.

We do that so that a scripted attack looking for systems whit SSH
can't sniff us out by seeing the default ssh port 22

Go to Login Setting and disable Permit Root Login
Go to Protocol and Cyphers and enable version 2 only

Alt and O for ok

Quit Yast

Before we do anything else we need to confirm that the ssh daemon is running

We do that by using the ps command

enter 'ps aux | less'

on the second screen we can see various applications
like the dhcpcd that handles our dynamic network configuration
we can see 'bash' which is the shell we are using and 'su' that gives us privilege escalation

we can see 'ps aux' that generated the list and 'less' that displays it

we can also see '/usr/sbin/sshd'

pres q to quit less

Just because the service is running doesn't mean it is usable.
We need to allow incoming ssh connections to pass through the firewall of our system.

We can configure the firewall through yast

Go to 'Security and Users' and select 'Firewall'
Go to 'Allowed Services' press enter
You can see the 'Secure Shell Server'
but that wont work since we aren't using the default port
Instead we need to go to 'Advanced'
and enter '11022' on the TCP ports line
Alt and O for Ok
Alt and N for Next
On the summary screen we can see
that we are opening TCP port 11022
Alt and F for finish

Quit yast

At this point we know the service is running
We know it is on port 11022
Now we need to find the host address

enter 'ifconfig'
we can see the Ethernet adapter and it's settings

If you check the network settings of your host system
you may realize that this is not going to work

if we ping the guest
you can see there is no connectivity
between the guest and host systems

that is because the guest system
a.k.a. the virtual machine
is in a NAT behind the host system

so to ssh the guest
we are going to use the host address

First lets configure NAT
Go to Device -> Network Adapters in the VM window toolbar
Click on Port Forwarding
Click the Add New Rule icon
We are going to name it SSH,
it uses TCP
enter both the host and guest port to be 11022

To help the people using windows we are going to use the PuTTY ssh client
If curious the Linux crowd can get it via their package slash software managers
Windows users go to
'http://www.chiark.greenend.org.uk'
Click on 'PuTTY'
'Download'
And get the Windows installer for everything.

Once you have it running
in the session category enter your host systems ip address,
mine is 192.168.1.2
in the port field enter 11022
Select connection type SSH

Write a name to describe the session
click save to avoid re entering everything
click open to connect

Linux people using a terminal instead of PuTTY
need to enter 'ssh username@hostaddres -p 11022'

STOP

Next time,
<Apache>

If you like this video,
why not subscribe, rate, and share.
If you don't like this video,
or you just have suggestions,
write me a comment.

EP-5

Hello
and welcome,

now that we can ssh into our guest system we don't want to see the virtual box windows anymore.

ever

from this point on we are going to use VBoxManage,
to run our silent hidden stealth server
without a head

//

Since we are going to use just a few of the commands and options
I suggest that you read the entire VirtualBox user manual,
for more info on VBoxManage

First if the virtual machine is running use the
'shutdown' command to turn it off.

//

Once it's off open a terminal.

Enter 'VBoxManage'

We are presented with a list of options we can use
with the 'VBoxManage' command.

Lets see if we can get a list of VMs
and find out what their state is.

//

As we see we can do that with the 'VBoxManage' command
by giving it the 'list' option
and asking for the 'vms'

So we enter 'VBoxManage list vms'

We see a brief list of virtual machines
registered with VirtualBox

//

Now we want to see the state of the server we are working on.

Enter VBoxManage showvminfo

You can see that if we omit a needed argument,
VBoxManage very user frendlyly displays
a Usage explanation for the specific option

We see that we need to enter the vm's name
so press up one time and add the name

VBoxManage showvminfo openSUSE

we can see everything we need
but if we just want to lookup something specific
we can try

VBoxManage showvminfo openSUSE | grep State

we can see it has been powered off
plus we can see when it has been powered off

//

now we want to start it again

you see,
there are two commands that can be used for that

The preferred method is to use the
'VBoxHeadless' command

//

'VBoxHeadless --startvm openSUSE --vrde off'

By default in headless mode the VRDE Remote Desktop Protocol is enabled
it is a security concern so we use the '--vrde off' option
to disable it
unfortunately this way of running a vm would force us
to keep a terminal window open
there are ways to avoid that but it would be an ugly hack
and I don't like ugly hacks

//

Our method would be the
'VBoxManage startvm'
and the name of the virtual machine
to run it headless we need to add the '--type' option
with the 'headless' argument

VBoxManage startvm openSUSE --type headless

The system should be loading
we can open the VirtualBox Manager
to peak at the system and see whats going on

looks like its ready
we can try the
VBoxManage showvminfo openSUSE | grep State
to see if its running
or try either 'top' or 'ps aux' with '| grep VBoxHeadless'

Now let's login

//

open putty

load the profile we made and click open
login with your username and password

Now that the stealth headless system is usable we need to learn how to control it

'VBoxManage controlvm'

the controlvm option
allows us to control the vm
we can pause|resume|reset|poweroff|savestate
we can mess with the network setting
etcetera

What we need to remember is the 'savestate' option

'VBoxManage controlvm openSUSE\ Clone savestate'

This allows us to stop the vm
and start it up directly in to a saved running state
to avoid waiting for the machine to load

We resume a machine in a saved state the same way we start a machine

'VBoxManage startvm openSUSE --type headless'

If you like this video
And your not too busy
Why not rate share or subscribe
If you don't like it
Constructive criticism is welcome
in the comments

EP-6

Hello and welcome

Who am I

In this episode we are going to make sure we are following
one of the most fundamental rules of system administration

patch your s

We will use YaST to setup automatic updates.

login to the system

don't forget you need root privileges

a new trick is that
you don't need to go through the YaST Control Center

you can enter 'yast online_update_configuration'

Activate 'Automatic Online Update'

set the interval to 'weekly'

mark both 'Skip Interactive Patches' and 'Agree with Licenses'

and confirm with ok

our system is going to update weekly
but it will skip updates that require user confirmation
so we are going to make a manual update monthly
we already covered 'zypper update' in an earlier video
lets see how we can update through yast

enter 'yast online_update'

we are immediately presented with the available updates

we initiate the update process with accept

and we wait

Updating is so simple that it really doesn't need a separate
tutorial for it.

The important issue here is to remember that
updates are not a matter of choice or opinion
Updates are mandatory
if you want your system to be stable and secure
and this goes for linux windows and mac etc.
and it's important for the desktop the server and the appliance

EP-7

Hello

Before we begin,
since the last video was released we have had a new version of
VirtualBox come out

I suggest you go get it and I suggest you also update your
VirtualBox extensions pack

Till now we got away with not configuring the network

at all

But we are about to start turning the guest system into a server
And due to some technical limitations in VirtualBox's NAT implementation
Caused by security restrictions in UNIX like systems

NAT is no longer sufficient for the purposes of this tutorial

Currently to access the system
we have setup a port forwarding rule
that redirects all packets incoming to the host system
on port 11022 to the guest system

And that allows us to use SSH,
if we had attempted to use the default SSH port 22
it wouldn't have worked

although you should remember never to use the default port
for something as critical as SSH

so for SSH NAT is fine and dandy

as it is for all other services that can use any port we want

http on the other hand by default uses port 80
we can forward to anything else above 1024
but this is going to get really ugly really fast
once we get to SAMBA later in this tutorial

To avoid the potential problems we are going to switch to the
Bridged networking mode

But we are not going to stop using NAT

in order to do that we want to have the machine turned off

now we want to add another network interface card to the virtual system

enter 'VBoxManage modifyvm openSUSE --nic2 bridged'

if it doesn't display an error

enter 'VBoxManage showvminfo openSUSE | grep NIC'

we can see both NIC 1 and 2 are configured
we can see the adapter mac address
which is useful if you decide to make a static ip binding
in the dhcp settings of your router

we can also see that the bridge is made through eth0
and that the virtual cable is connected

in my case I am using eth0 so everything will work

but if you are using eth1 or anything else
the bridged connection will not be able to communicate

to change it to what you are using enter
'VBoxManage modifyvm openSUSE --bridgeadapter2 eth1'

or eth2 or whatever you have
if you are using Linux write ifconfig
and see which adapter has your ip address
that is the adapter you should use for the bridge

If we look again at the showvminfo output
we can see it has changed

lets start the system and see whats the what

'VBoxManage startvm openSUSE --type headless'

since we left the first NIC as NAT
we can still use

'ssh username@localhost -p 11022'

once we login we 'su' into the red prompt

and we write ifconfig -a

eth0 is what it was before

we have a new adapter

but it isn't configured

enter YaST

go to Network Devices => Network Settings

On the Overview screen select the 'Not Configured' adapter
and then Ctrl + i 4 'Edit'

You can change any settings From here
In my network I want to get addresses through DHCP
and I personally don't need IPv6 so...

Switch to the general screen
I am going to leave it to Activate at Boot Time
And I will leave it in the Automatically Assigned Firewall Zone

But I am doing this just to see what will happen

If you have something else in mind
you should think about the settings you enter here

When you are done go to next

Since we are here we should think about the hostname
go to the 'Hostname/DNS' screen
I will change mine to 'visuse'
and remember i did that

ok to accept the settings

now write ifconfig to see the result

and we are done

EP-8

Hello

Today, Apache

Lets jump straight in the deep end.

start yast
and open Software Management

write YaST as a 'Search Phrase'
and select 'yast2-http-server'

Accept

wait

quit

yast again

'Network Services'

now has the 'HTTP Server'

we installed the yast module that controls apache
we didn't install apache
so yast now asks us if we want to have it installed

we say Install

check the 'Open Port in Firewall'
and have this automatically configured for us

For WordPress we need only PHP so we are going to leave
python and perl unchecked

unless you want to play around with them

we don't touch anything on the Default Host screen
Virtual Hosts are not covered in this tutorial

set Service Start to When Booting

since we haven't installed PHP either YaST
is going to install it for us

to test apache we want a browser

enter 'zypper in links'

and start 'links'

Links is a supper awesome text based web browser
press 'g'

and enter 'http://localhost'

We should see the Access Forbiden page error 403
Don't worry about it.

press 'q' to quit links

to test php we are going to make a simple index.php page

enter 'nano /srv/www/htdocs/index.php'

the whole script is just
one line that says '<?php phpinfo(); ?>'

press Ctrl + o to save
and Ctrl + x to exit

now open the browser again and go to
'http://localhost'

exit again with 'q'

last time we gave the virtual machine a second interface
so we can try this from the host system

enter the ip address of the guest system in the address bar
and awesome

EP-9

Hello,

currently we have 2 of 3 components
needed for wordpress

we have Apache
we have PHP

now we need mysql

so as allays we are going to do it with YaST

start the software management
search for mysql

we want the community server
plus whatever is offered

and accept

another simple convenience we want is
the runlevel module

so we start Software Management again
search runlevel

mark yast2-runlevel
accept

now we quit yast

and enter it again

go to System and System Services (Runlevel)
find mysql
enable

ok

ok again

and yes

quit yast

now we have mysql installed and running
it's setup to start at runlevel 3 and 5

it just needs to be configured

enter
mysql_secure_installation

this is going to get us started

we still don't have a root password for mysql
so we press enter for none

we want to set the password

enter the password we want to set

re-enter

we want to remove anonymous users
we want to disallow root login remotely
we want to remove test database and access to it
we do want to reload the privilege tables now

and currently mysql is go

EP-10

Hello,

Today samba!!!

As with Apache we are going to
install the yast module
and let it handle the actual instalation
of the samba server itself

so enter yast

go to Software Management

search 'yast2-samba'
select the server
the client is auto selected

accept and w8

once the instalation ends
we exit yast
and enter it again
now netowrk services has the samba server

we start it
and it asks to install samba and samba-client
we say install

after the instalation we have step 1

it's asking for a workgroup or domain name
you should check what the workgroup of the host system is
if a work group is set

Next

2 of 2 asks for domain stuff

i select "Not a Domain Controller"
you can select whatever you want
but thats on you

Next

we set the samba server to start at boot
we check the open port in firewall

we go to shares and
I am going to delete everything in the list
if you want to look at this things
don't delete them
we go to add
as share name we enter webdev
share description is Web Dev Folder
we are sharing a Directory today

we go to browse
and we browse to the /srv/www folder

read only no
Inherit ACLs no

and ok

now go to edit
add
guest ok

mark it ok

in identity
we give the system a NetBIOS Hostname
my system is caled visuse so i enter it

NetBIOS makes the system register itself
on the network with a name
so that you can use a name instead of an IP address

ok

we go to trusted domains
we dont have trusted domains
in LDAP Settings
we dont have LDAP settings

OK

now we open network
windows users go to network naighbourhood
and in the workgroup work group we should see

visuse
webdev

and we can see what we have in the
/srv/www folder on the web server

awesome

EP-11

In the last video we configured samba
and samba is ok

but lets review what we did
enter "cat /etc/samba/smb.conf"

This is the samba configuration file
when you use YaST to configure something
it actually reads the .conf file in /etc when it loads
and then saves the changes you made back to the file

and this is something I really like about openSUSE
if you have another Linux distribution
that you need to configure
you can use the YaST generated config files as reference

but if you already know how to configure stuff
you can directly use the .conf files in /etc
and not even go into YaST

back to the file
first it has the [global] configuration section
here you can see and change global options

then you have the share configuration section
if you didn't deleted the default shares when we were in YaST
you will see them in here
i did so I only see my [webdev] share

the brackets define a share
and whatever is in them is the name

a comment is just a comment
you can remove it if you don't want it

i have never needed acls before

path defines what local folder is shared

read only defines if the folder is writable or just readable

guest ok makes the share accessible to anybody
without restrictions
the security lights should start going off

so we have shared the www folder
and given everybody the right to modify it's contents

let's test this

go to network \ visuse \ webdev
and try to create a folder or a file

fail

//pause

let's take a look at why
enter 'cd /srv' and 'ls -al'

this is the root of the file system
and everything here is property of the root user and group

if you look at the www directory permissions
drwxr-xr-x
the 'd' says it is a directory

the rwx after that are the permission
of the user who owns the dir

then the r-x are the permissions of the group

and then we have r-x for everybody else

the 'root root' indicates the owning user and group

when we use samba to access this resource as a guest
the system treats us as nobody

so lets give ourselves some write permissions
chmod o+w www
this is change mode other plus write www

we go to network \ visuse \ webdev
we make a new folder and a new file inside of it
go back to the terminal 'cd www'

we can see untitled folder owned by nobody from the nobody group
and inside we see the new file

these are ours and we should be able to delete them
htdocs isn't ours and we cant delete it

bare in mind that the files aren't actually ours
they belong to everybody who has network access to the server

always keep security in mind

EP-12

We have a samba server
and a basic understanding of how it works

now we need to implement at least some measure of security
so we are going to add an smb user
and give him an access password

first we remove the write permision for other from the www folder
'chmod o-w www'

to test our changes we are going to make our share
inaccessible to guests

enter 'nano /etc/samba/smb.conf'

just delete the guest ok line
Ctrl+o to write changes and Ctrl+x to exit

now that we have changed the config file we need to restart samba
so that the configuration changes take affect

enter 'service smb restart'

got to network \ visuse \ webdev to see if we can enter it

```
as you see it asks for a password
let's try our password

denied

samba doesn't have a user link

so let's add a user and give him access to the share
enter 'smbpasswd -a 'username
as in your username on the system
remember that the user you add to samba needs to exist on the system
and then enter a password

make sure that the samba password is different from the user's password
it will work but it is a security issue

now go and open it

you should be able to enter it and create a folder and a file
do that now

then go back to the terminal and 'ls -al' to see the result
owned by link users

this is a development system
so we are able to take security a bit more lax
what I mean is that we are going to
give the htdocs folder to the web developer

enter "chown -R username /htdocs"

done

now you can just mount it and use it

EP-SCRIPT

but turning the system on and of through a terminal is inconvenient

we want to double click an icon on the desktop

this next part is a gift to the Linux community
windows users can try the same thing with a batch file but...

in a terminal enter
echo '#!/bin/bash' > ~/bin/ViBoxRun

#!/bin/bash
#VIRTUAL SYSTEM CONTROL SCRIPT V1.0
#Written by Mario Kukucov
#Especially for the Big Long Hard Tutorial

#Check for user input
if [ -z $1 ]; then
        #SCREAM BLOODY MURDER!!!
        echo 'Usage: ViBoxRun <name>'
        exit 1
fi

#Get the state of the machine
eval `VBoxManage showvminfo $1 --machinereadable | grep VMState=`

#Notify us of the current state
echo $1 is in the $VMState state!

#Act accordingly
case "$VMState" in
```

```
poweroff) VBoxManage startvm openSUSE --type headless;;
saved) VBoxManage startvm openSUSE --type headless;;
running) VBoxManage controlvm $1 savestate;;
*) echo I can\'t handle the state of things!!!;;
esac

#I don't think we need this line, not sure what it does!
exit 0;
```

save it

we just have to give ourselves
permission to execute the script

The 'chmod' command allows us to change permissions
for files and directories
there are three different permissions
r for read
w for write
and x for execute

they can be set for the
user who owns the file with 'u'
the group that owns the file 'g'
and for others 'o'

so when we write u+x we give the user who owns the file
the permission to execute the file

'chmod u+x ~/Desktop/ctrlvm.sh'

and test it

EP-13

Now that we have apache and samba
we want to start web serving
We have a working web server
but it's not verry interesting
It has just one simple page that shows things
we don't want everybody to see

As stated previously
we want to get to a working install of word press

But we awso want to have a phpMyAdmin
installed on the server to help us with sql
Plus we want a custom CMS development workspace

So what we really want is to have 3 separate websites
on just one server

lets begin by creating some folders for our sites

Open the network share and enter your access password
make 3 copies of htdocs directly in webdev and name them
blog
dev
pma

now we go into the terminal and we start
YaST -> network services -> http server

We go to the Hosts screen
and we Alt-a Add

enter server name 'dev.com'

```
go to browse and browse to the /srv/www/dev folder
OK

enter an administrator e-mail
whatever you want

Go to change virtual host ID
and just give it OK

Next and Next one more time

Now back at the Hosth screen give it add again
enter server name 'pma.com'
go to browse and browse to the /srv/www/pma folder
OK

enter an administrator e-mail
whatever you want

Go to change virtual host ID
and just give it OK

Next and Next one more time

And Finish
quit YaST

enter if config to see the ip address of the virtual machine
make a note of it
and make sure this is the bridged adapter's address
the nat connected adapter doesn't play here

Linux users open the /etc/hosts file
Windows users can do a search for the hosts file
last time I used XP it was in the
"C:\Windows\system32\drivers\etc"
keep in mind that wherever it is in the windows folder
There is a good chance it is hidden

Make a comment line at the bottom
to distinguish your involvement in what is about to happen
enter

#Added for development
192.168.1.5     dev.com
192.168.1.5     pma.com

save the changes and exit

now open a browser to see if the addresses dev.com and pma.com
take you to the virtual machine
and look at the phpinfo table values for
SERVER_NAME
and DOCUMENT_ROOT

EP-14

in this part we want to install
phpmyadmin on our pma.com vhost

first we need to download the newest version from
http://www.phpmyadmin.net/
click on download and get the newest version

open the pma folder on the server and delete index.php
now just extract the contents of the folder inside the archive
directly into the pma folder
```

now try to open pma.com
you should get this ugly error

it is complaining about mysqli
so let's give it to it
go back into the terminal and start yast
open the software manager and search mysqli
mark it accept and ok
and wait

after the install finishes refresh pma.com

LINKS

//LINKS
https://www.virtualbox.org/
http://www.opensuse.org/en/
http://www.apache.org/
http://www.mysql.com/
http://www.php.net/
http://wordpress.com/
http://validator.w3.org/