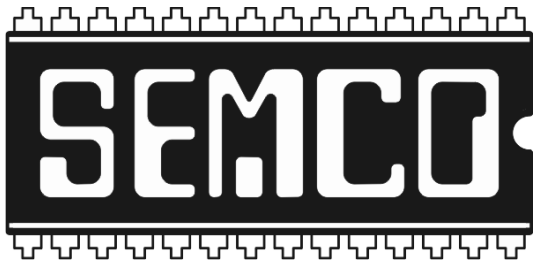


# 0-VIRTUAL MACHINES-- AN OVERVIEW

by Francis Chao  
fchao2@yahoo.com



An International  
Association of Technology  
& Computer User Groups

**Web location for this  
presentation:**

**<http://aztcs.apcug.org>**

**Click on "Meeting  
Notes"**

# SUMMARY

You can use free virtual machine programs to run separate operating systems in your existing computer. By doing so, you can realize massive savings in time, space, and costs.

# TOPICS

- Two Types of "Virtual Machine Programs" (= "Hypervisors")
- 3 "Hypervisor" options: "VMware Player", "VirtualBox", and "Hyper-V"

# TYPE 1 VERSUS TYPE 2

## "HYPERVISORS"

- "Virtual machine program"  
= "Hypervisor"  
= software program that can create virtual machines
- "Virtual machines" have virtual motherboards, virtual USB ports, virtual sound cards, virtual hard drive controllers, virtual mice, virtual keyboards, etc.

**Real computer (= "host computer")  
runs 64-bit version of "Windows.."**

**"Type 2" Hypervisor such as  
"VMware Workstation Pro" or  
"VirtualBox" runs inside  
"Windows.."**

**"Virtual Machine(s)" running  
Linux, Windows.., Unix, etc.**

**Real computer (= host computer)  
runs "Type 1" Hypervisor  
such as "Hyper-V"**

**"Windows 11"  
or "Windows  
10" runs inside  
"Hyper-V"  
as a "Root  
Partition"**

**"Virtual  
Machine(s)"  
inside  
"Hyper-V"  
running Linux,  
Windows.,  
Unix, etc.**

# **IMPLEMENTING "VIRTUAL MACHINES"**



**Real computer (="host computer") runs  
64-bit version of "Windows 10",  
or "Windows 11"**

# **BIG STEP 100: INSTALL A "VIRTUAL MACHINE PROGRAM"**

**Real computer (= "host computer")  
runs 64-bit version of "Windows.."**

**Install the free "VMware  
Workstation Pro"  
or the free "VirtualBox"  
= "virtual machine program"**

**The actual steps for "BIG STEP 100" are located at:**

**[http://aztcs.apcug.org/meeting  
notes/winhardsig/virtualmach  
ines/vmware-1-installing.pdf](http://aztcs.apcug.org/meeting_notes/winhardsig/virtualmachines/vmware-1-installing.pdf)**

**BIG STEP 200: CREATE A  
NEW "VIRTUAL MACHINE"  
USING THE "VIRTUAL  
MACHINE" PROGRAM**

**Real computer (= "host computer")  
runs 64-bit version of "Windows.."**

**"VMware Workstation Pro"  
= "virtual machine program"**

**Create a new "virtual machine"**

**The actual steps for “Big Step 200” are located at:**

**[http://aztcs.apcug.org/meeting  
notes/winhardsig/virtualmach  
ines/vmware-2-createVM.pdf](http://aztcs.apcug.org/meeting_notes/winhardsig/virtualmachines/vmware-2-createVM.pdf)**

**BIG STEP 300: INSTALL A  
"GUEST OPERATING SYSTEM"  
INTO THE  
"VIRTUAL MACHINE"**



**Real computer (= "host computer")  
runs 64-bit version of "Windows.."**

**"VMware Workstation Pro"  
or "VirtualBox"  
= "virtual machine program"**

**Install "Windows 11", or  
"Windows 10" or "Linux Mint"  
as a  
"guest operating system"  
inside the "virtual machine"**

**BIG STEP 400: INSTALL THE  
VIRTUAL MACHINE PROGRAM'S  
DRIVERS INTO THE  
"VIRTUAL MACHINE"**

**= INSTALL  
VMWARE'S "VMWARE TOOLS"  
OR  
VIRTUALBOX'S "GUEST ADDITIONS"  
INTO THE  
"GUEST OPERATING SYSTEM"**

**Real computer ("host computer")  
runs "Windows 11" or "Windows 10"**

**"virtual machine program"  
such as "VMware Workstation Pro"  
or "VirtualBox"**

**"Virtual machine" runs a "guest  
operating system" ("Linux Mint"  
or "Windows 10" or "..11")**

**Install "VMware Tools" or  
VirtualBox "Guest Additions"**