# Instructions for installing VirtualBox EventMaster Simulator virtual machine

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# 1. How to simulate multiple EventMaster Processors without multiple computers.

#### Background:

The EventMaster Toolset installation have an emulator of the actual hardware frame, Video Processor Simulator X.X

Because the actual frames are using several hardware specific settings and addresses for full functionality more than one Event Master Frame cannot be emulated on a single computer. A Multiple processor setup can be emulated with several computers on a single network.

This is not very practical and this QSG explains how to run a virtual computer instances and allow for several emulated processors to be run on a single Windows PC.

The VirtualBox EventMaster Simulator emulates the EventMaster video processors functionality, just as the E2/S3/EX/IP4K Processor would. This is not the case for the original emulator.

Advantages of VM simulator

- Multiple VPs on same PC
- Web app is fully functional
  - Code update works
  - Backup / Restore works
  - JSON interface works
  - "Add new Still from PNG" works
- · Incorporated "Create Sim File" into web app

#### 2. System requirements

The EventMaster Simulator VM is setup to require 1 GB of RAM and expand to use a max of 40GB of disk space.

- EventMaster firmware 6.5 and above.
- PC Windows 10
- Intel i5 3.2GHz or faster
- 8Gb of RAM
- 100Gb free Harddrivespace
- GPU Intel 4600 or faster

### 3. Installation steps

- 1. Get the .ova VM file
- 2. Download VirtualBox https://www.virtualbox.org/wiki/Downloads and install it.

#### 3.1. Create Host Only Network

Note: After creating this Host Only Network, the Event Master Toolset "Discovered" tab can only detect the simulated VPs but will no longer discover other real VPs on the network. Use the "Manual Connect" feature to connect to real VPs.

1. On the VirtualBox Manager window, go to File => Host Network Manager



2. Click on "Create"

Host Network Manager

Network	c		
Ì.	1	100	
Create	Remove	Properties	
Name			

3. Choose to enable "DHCP" and on the "Adapter" tab, update the IPv4 Address to be "192.168.0.1" and Network Mask "255.255.255.0" as per picture below

Network Create Remove Properties Name Name IPv4 Address/Mask IPv6 Address,		
Image: Create         Properties           Name         IPv4 Address/Mask         IPv6 Address/		
Name Name Name Name Name Name Name Name		
	/Mask	DHCP Server
VirtualBox Host-Only Ethernet Adapter 192.168.0.1/24		🗹 Enable
Adapter DHCP Server		
Configure Adapter Automatically		
Configure Adapter Manually		
IPv4 Address: 192.168.0.1		
IPv4 Network <u>M</u> ask: 255.255.255.0		
IPv6 Address: fe80::e447:39cf: 1745:d592		
IPv6 Prefix Length: 64		
	_	
Reset	oply	Close

4. Click on the "DHCP Server" tab and update the fields to match the following picture

📰 Host Network Manager		_	$\Box$ $\times$
Network			
Create Remove Properties			
Name	A IPv4 Ar	ddress/Mask IPv6 Address/Mask	DHCP Server
VirtualBox Host-Only Ethernet Adapte	r 192.168	3.0.1/24	🗹 Enable
Adapter DHCP Server			
Enable Server			
Server Address 192.168.0.2	2		
Server Mask: 255.255.25	5.0		
Lower Address Bound: 192.168.0.3	3		
Upper Address Bound: 192, 168, 0, 2	254		
Reset		Apply	Close

5. Close the Host Network Manager window when you are done

#### 3.2. Import Event Master VM

- 1. With Host Network setup, click on "Import Appliance" to import the .ova file
  - 🦸 Oracle VM VirtualBox Manager File Machine Help S Preferences... Ctrl+G -> Import Appliance... Ctrl+1 <u>Export Appliance...</u> Ctrl+E Virtual Media Manager... Ctrl+D Host Network Manager... Ctrl+W Arr Network Operations Manager... 51\_11926 G Check for Updates... A Reset All Warnings Ctrl+Q V Exit

2. Click on Import

Imr	port Virtual Appliance		
	pore virtual Appliance		
pp	liance settings		
Thes You o Delow	e are the virtual machines cor can change many of the prop w.	tained in the appliance and the suggested settings of the imported VirtualBox erties shown by double-clicking on the items and disable others using the chec	c mai k bo:
Ţ	🛃 Network Adapter	Intel PRO/1000 MT Desktop (82540EM)	
4	🔷 Storage Controller (IDE)	PID(4	
<	🔷 Storage Controller (IDE)	PID4	
~	🔗 Storage Controller (SAT	A) AHCI	
	일 Virtual Disk Image	EventMaster_Simulator-disk001.vmdk	
	Base Folder	C:\Users\User\VirtualBox VMs	
¢	🔒 Primary Group	1	
'ou c nach	can modify the base folder wh nine) modified. C:\Users\User\WirtualBox VMs	ich will host all the virtual machines. Home folders can also be individually (per	/ virt
AC /	Address Policy: Include only	NAT network adapter MAC addresses	
Addi	itional Options: 🔽 Import ha	rd drives as VDI	
oplia	ance is not signed		
	2		
			<i>c</i> -

- 3. A new VM called "EventMaster\_Simulator" will be created
  4. Within the Network settings for the VM change the name to "VirtualBox Host-Only Ethernet Adapter" (or whatever the name of the adapter is within the VirtualBox application)

<ul> <li>Settings Discard Start</li> <li>EventMaster_Simulat</li> <li>© Powered Off</li> </ul>	EventMaster_Simulate General System Display Storage Audio Network Serial Ports WSB Shared Folders User Interface	Machine Tools       Goba T         or - Settings       Image: Control of the set of the se
	<u>(</u>	

5. Click on "Advanced" and update the "MAC Address" by clicking on the refresh button EventMaster Simulator 1 - Setting  $\sim$ 

Greentiviaster_simula	ator_1 - Settings	· ^
E General	Network	
🛒 System	Adapter 1 Adapter 2 Adapter 3 Adapter 4	
📃 Display	Enable Network Adapter	
5 Storage	Attached to: Host-only Adapter 🔻	
Audio	Name: VirtualBox Host-Only Ethernet Adapter  Advanced	•
Network	Adapter Type: Intel PRO/1000 MT Desktop (82540EM)	•
Serial Ports	Promiscuous Mode: Deny	•
SB USB	MAC Address: 080027EE9DF5	6
Shared Folders	Cable Connected	_
	Port Forwarding	
User Interface		
	ОК	Cancel

- 6. Start the Virtual Machine
- Start the Virtual Machine
   Note down the MAC Address for use in the Eventmaster XML Settings
   The first time starting up the machine, wait until the browser fully loads within VirtualBox.
   Open a Browser and navigate to the WebApp of the VM via the IP Address.
   Go to the "About" section



11. Use this page to do network setup. If you want to update static IP or setup DHCP, select the appropriate controls and press "Apply", then "Save

IP:	192.168.240.3
SW Version:	6.3.2191
OS Version:	0.4.6
Web Version:	47291
Save System Configuration:	Save All
Network Configuration	
Current Mode:	DHCP
IP Mode:	Static  Static
Static IP:	DHCP 100.198
Static Subnet:	2 <del>55:255</del> :255.000
Static Gateway:	1 <u>92 168</u> ,000.001
	Apply
As the VM continues to boot, eventually the	e web app will appear in the VM window as well.

- As the VM confidence to Book, eventually the way pool in the VM which way well.
   Open EventMasterToolset GUI and the VP can now be discovered on the left tab of the Configuration tab
   If you want to simulate additional VPs, either go thru steps 1-10 again or power off the current VM and then right click on the VM in the VirtualBox Manager and click on "Clone". Create a "Full Clone". After adding the new VM, 64

EventMaster_Si	mulat	tor	
	0	Settings	Ctrl+S
	Ģ	Clone	Ctrl+O
	×	Remove	Ctrl+R
	2	Group	Ctrl+U
	4	Start	•
		Pause	Ctrl+P
	$\odot$	Reset	Ctrl+T
	$\bigtriangledown$	Close	Þ
	➾	Discard Saved State	Ctrl+J
	Ē	Show Log	Ctrl+L
	G	Refresh	
		Show in Explorer	
	5	Create Shortcut on Desktop	
	BĴ	Sort	

15. In order to emulate several processors the steps 1 thru 11 needs to be repeated for each processor emulated.

#### 3.2.1. Troubleshooting

12.

1. If VirtualBox detects an "Invalid settings detected" and it is a Network issue, make sure "VirtualBox Host-Only Network" is not disabled in the Network Connections



2. If you launch the VM and you see the pop up below. Please click on the "Unlock Profile and Relaunch" button in blue



- 3.3. How to change the VP simulator configuration
  - 1. On the host PC, open Chrome or any web browser and type in the IP address of the simulator
    - a. DO NOT use the Window that is opened by the VM Software to make any updates, just minimize it.

2. On the home page, click "Tools -> Create Sim Files"



3. Click on the "e2" under "Select Frame"





- 5. Choose the configuration of the cards
- 6. Add any linked systems.



7. Press "Use XML Directly" to update the configuration right away or "Download XML" to get a copy of the sim file so that it can be uploaded manually



#### 4. Updating firmware on the Event Master VM simulator

To update the firmware on the VM, use the "ToolsManage Software" in the web application just like the real Event Master hardware.

There is no need to update the OS at this time

#### 5. Example of Setup of a Dual E2 System

1. After using section 3.3 above, there is a EventMaster\_Simulator running. Clicking on the "About" page, I see an E2 with IP address 192.168.000.175 created. Keep a note of the MAC address of this VP for later use. In my setup it is 08:00:27:ee:9d:f4

File Machine View Input Devices Help		
E Serce		About
Current Mode: Static		
IP Mode: State: *		
Static IP: 192.168.000.175		
Static Subnet:		
Static Gateway:		
192.168.000.001		
(1997)		
i Product Informa	ition	
		a 🗸 🖉 🖬 🗑 🖬 🕲 🕲 Refer Cel 🖉

 Using section 3.3 to clone the VM, there is a EventMaster\_Simulator\_Clone running. Clicking on the "About" page, I see an E2 with IP address 192.168.000.175 created. Update the IP address to 192.168.000.176 and press "Apply". Keep a note of the MAC address of this VP for later use. In my setup, it is 08:00:27:1b:7b:1d 3. Open Event Master Toolset and the two E2s should appear. Expand the Discovery list and change the Unit ID of the IP address 192.168.000.176 to Unit ID = 1



4. Open a web browser and connect to 192.168.0.175 and go to the Tools Create Sim Files. Enter in the information of the E2 at 192.168.0.176 (Enter correct MAC address of VP at 192.168.0.176). Then click on "Use XML directly" below. The VP will reboot and will now use the new simulator configuration.

Web App X	Web App	×   +												
← → C ① Not secur	e   192.168.0.175/createsimfile	es											1	0 🖬 🄇
🔛 Apps 📙 Personal 📕 Work	🖬 MyCloud 🧉 iCloud 🚺	BarcoZone 🧥 Redmi	ie 🗶 Wiki -	Ching Ho	🧕 Jenkins 172	Jenkins 15	0 🧕 Ne	ew Jenkins 🛛 👌	🕨 iTrack 🛛 🛛	ioogle Keep 🔞 Fols	om Wiki M Gmail	🖬 (2,751 unread) - ch	i 🚯 Barco 1	ravel
BARCO							E2 W	/eb App						
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Manage Software			0	1	2			0	4	8		Multiview	Output	
Backup & Restore												_		
System Logs					FROM	FRAME TYPE		то	FRAME ID	IP ADDRESS		MAC ADDRESS		
Update Sim Files		Eq	Βφ		CONNECTOR			CONNECTOR	:					
Create Sim Files					0-0	E2		0-1 *	1	192.168.0.176		08:00:27:18:78	ID]	
E Preset					0.1	62		00 ×		192 168 0 176		08:00 27:18:78	ID.	
Use JSON										172.100.0.170				
Help					1-0	E2	•	1-1 *	1	192.168.0.176		08:00:27:18:78	ID	
Contact Us						E2		1-0 •	1	192.168.0.176		08:00:27:18:78	ID	
							- 12							

5. Open a web browser and connect to 192.168.0.176 and go to the Tools Create Sim Files. Enter in the information of the E2 at 192.168.0.175 (Enter correct MAC address of VP at 192.168.0.175). Then click on "Use XML directly" below. The VP will reboot and will now use the new simulator configuration.

BARCO						E2	Web App				
🔀 Dashboard											
🗲 Tools 🗸 🗸			Expansi	ion				VPU		MV	Slot
Manage Software		0	1	2	2		0	4	8	Multiview	Output
Backup & Restore											
System Logs	Pro	er Key		FROM	FRAME T	YPE	TO	FRAME ID	IP ADDRESS	MAC ADDRE	ss
Opdate Sim Files	0.0	10		0.0	F2		0-1	0	192 168 0 175	08:00:27:55	9D/Ed
Preset						_					
Use JSON					E2		0.0 🔻	0	192.168.0.175	08:00:27:EE	:9D:F4
D Help				1-0	E2	×	1-1 *	0	192.168.0.175	08:00:27:EE	:9D:F4
Contact Us				11	52		1.0 •		192 168 0 175	09:00:27:55	-9D-E4
Sollow Us									112.100.0.175	 	

6. In the EMT, connect to the E2 at 192.168.0.175



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6	Disc	rvered	In use																			System1	3 +
1		Name		System	System View	Detail View	VPU Resource																
L		E2 [S] 192.16		System1				_															
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## 6. Known issue(s)

- 1. When creating a slave connection to an EX unit, the VM requires you to use both Exp link connectors from the master VP to master VP to the EX and vice versa vice versa
- Fiber output card is currently not supported in the "Create Sim Files"
   CXP I/O card is currently not supported in the "Create Sim Files"