



aCloud

Sangfor Witness Node Installation Guide

Version 5.8.7R1



Change Log

Date	Change Description
April 25, 2019	Version 5.8.7 document release.

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Chapter 1 Deployment

1.1 Deployment of witness node

Physical deployment

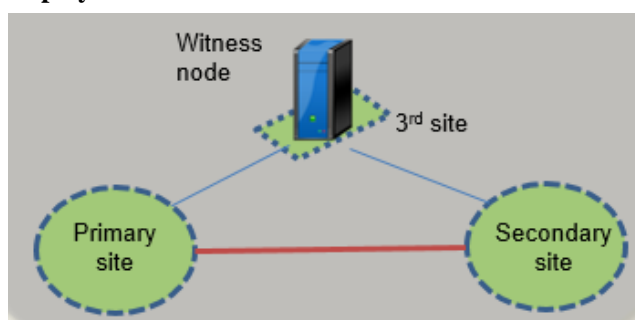
Delivered as aServer1000 appliance, support reusing existing legacy server

Virtual deployment

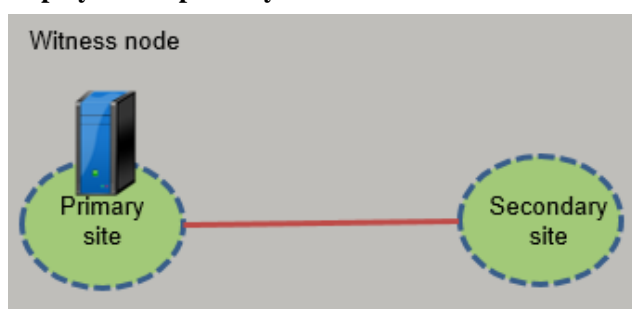
Only VMware is supported now, aCloud will be supported in the future

1.2 Deployment scenarios

Deployed at a 3rd site



Deployed at a primary site



1.3 Hardware Requirement

Deployment scale	Minimum hardware requirement	Remark
Small Deployment (Total 4-6 node in cluster, each fault domain have 2-3 node)	CPU: 6 core Memory: 8GB System disk: Size>=128G Quorum disk: Size>=100G Performance>=1000 IOPS	Support VMware deployment and physical deployment
Medium Deployment (Total 8-16 node in cluster, each fault domain have 4-8 node)	CPU: 8 core Memory: 16GB System disk: Size>=128G Quorum disk: 2 128G or 248G enterprise SSD, configured as RAID1	Recommend deploy in physical server

Large Deployment (Total 18-24 node in cluster, each fault domain have 9-12 node)	CPU: 10 core Memory: 24GB System disk: Size>=128G Quorum disk: 2 128G or 248G enterprise SSD, configured as RAID1	Must deploy in physical server
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1.4 Switch Configuration requirement

1. Recommend use different VLAN for manage, physical edge and storage connection.
2. Disable STP protocol in switch
3. Enable jumbo frame
4. Enable IGMP Snooping in switch (Only support v2 version, disable IGMP snooping if switch does not support)

Chapter 2 Witness node installation guideline

2.1 Create bootable USB

2.1.1 Tools Preparation

1. USB drive

USB drive capacity must more than 4GB

Used to store aCloud(HCI) ISO image inside

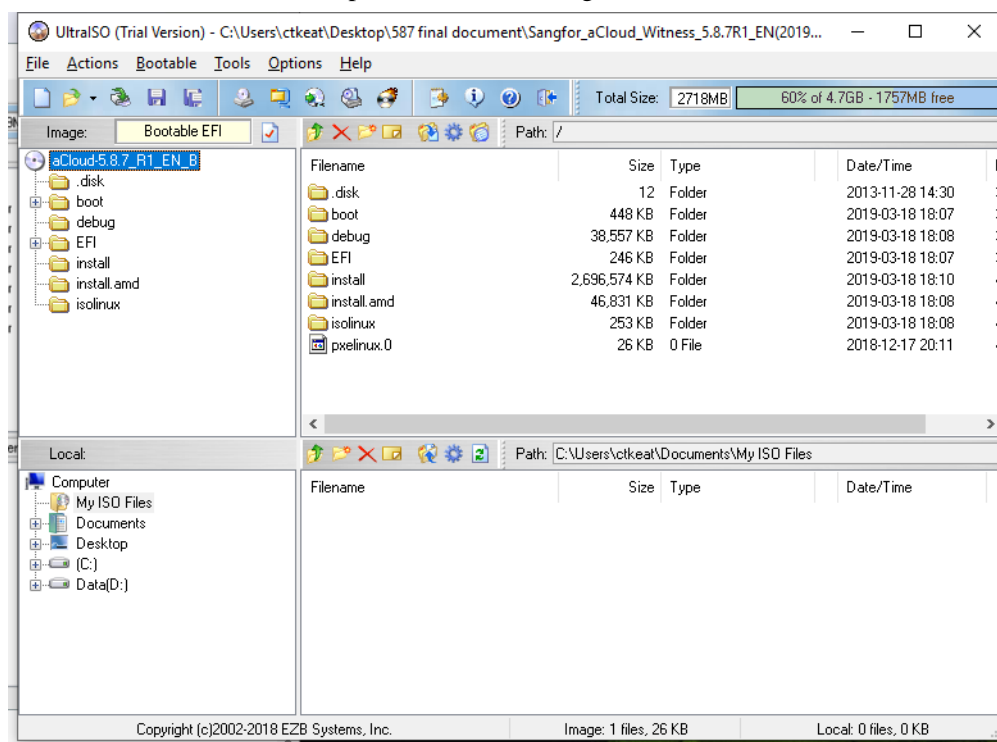
2. UltraISO software

Can be download at http://filehippo.com/download_ultra_iso/

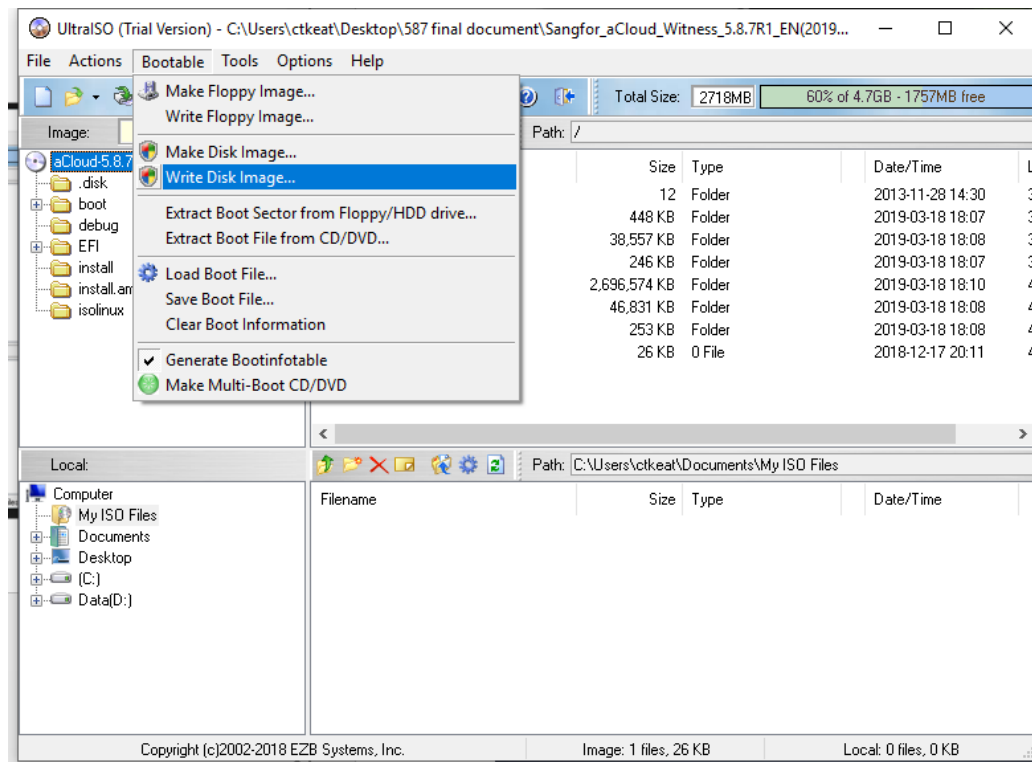
Used to make bootable USB Drive

2.1.2 ISO Writing Steps

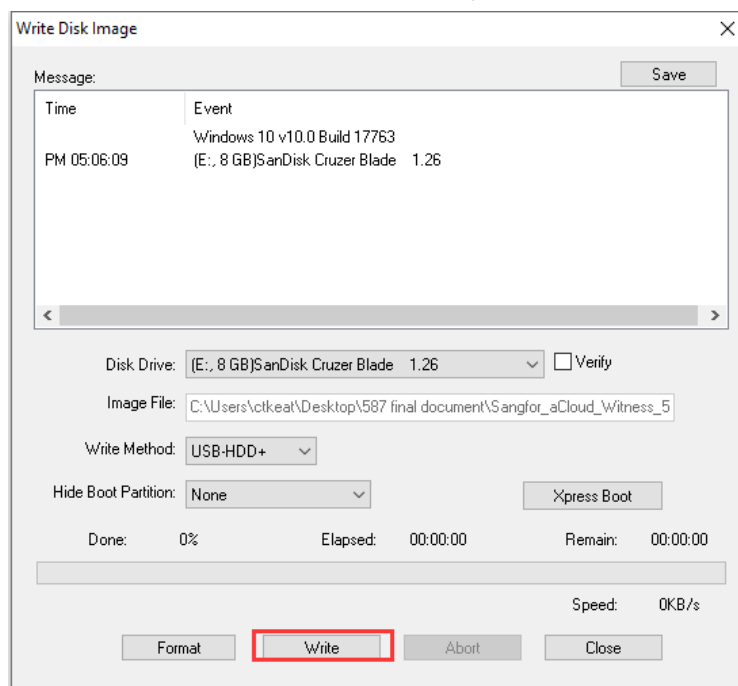
1. Launch the UltraISO & open witness ISO image



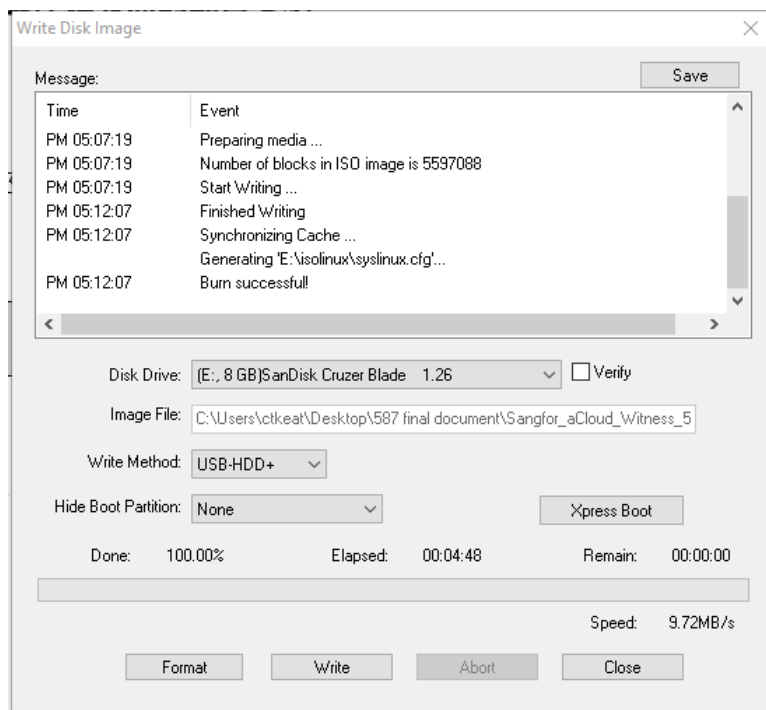
2. Click on “Bootable” > “Write Disk Image



3. Click on write button to start burning firmware to USB.

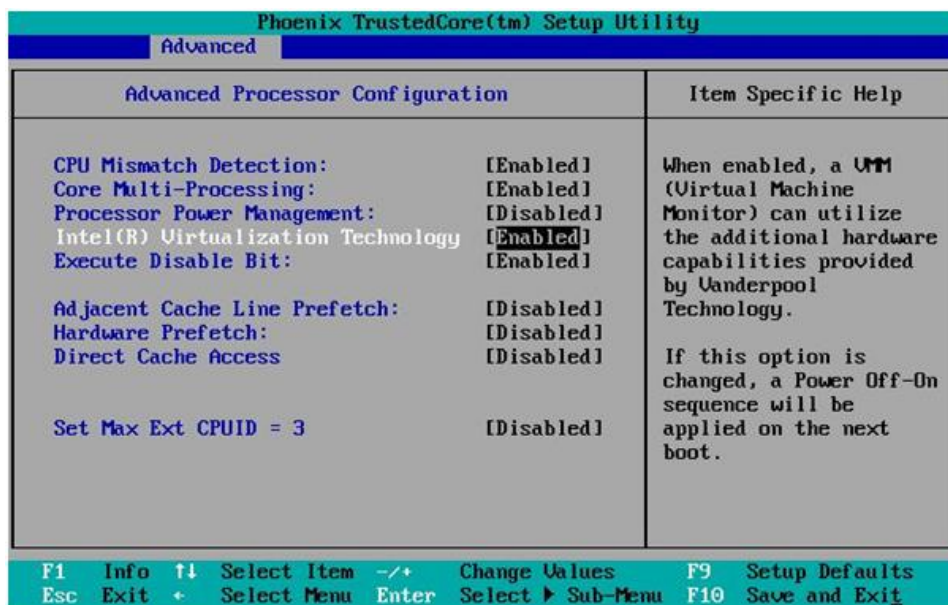


4. Successful burn message



2.2 Physical node installation

1. Boot to server BIOS and make sure Intel VT virtualization is enabled in server.

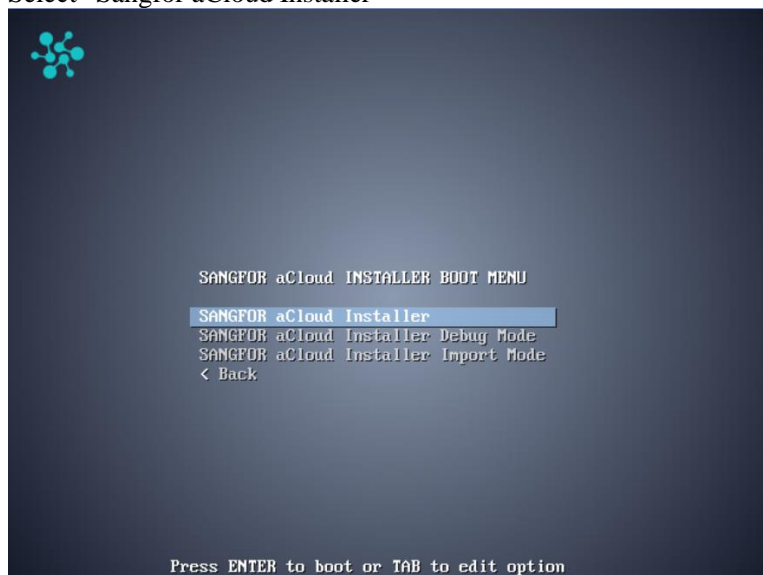


2. Start physical server and boot with USB drive

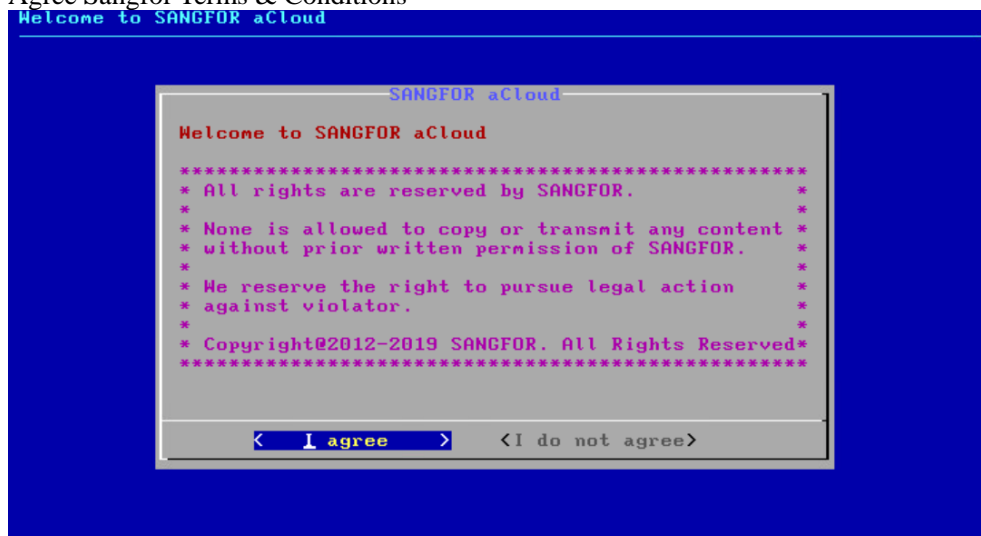
3. Select “Install Sangfor aCloud on this machine”



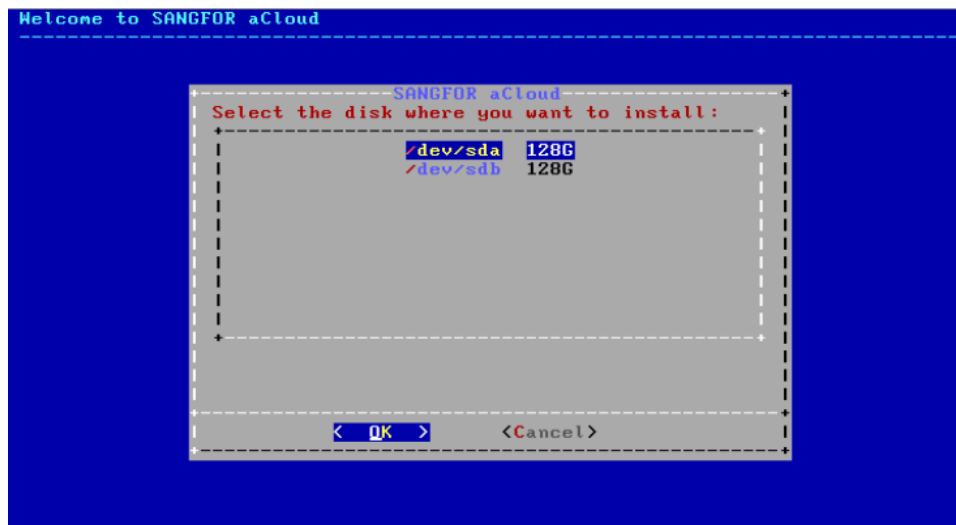
4. Select “Sangfor aCloud Installer”



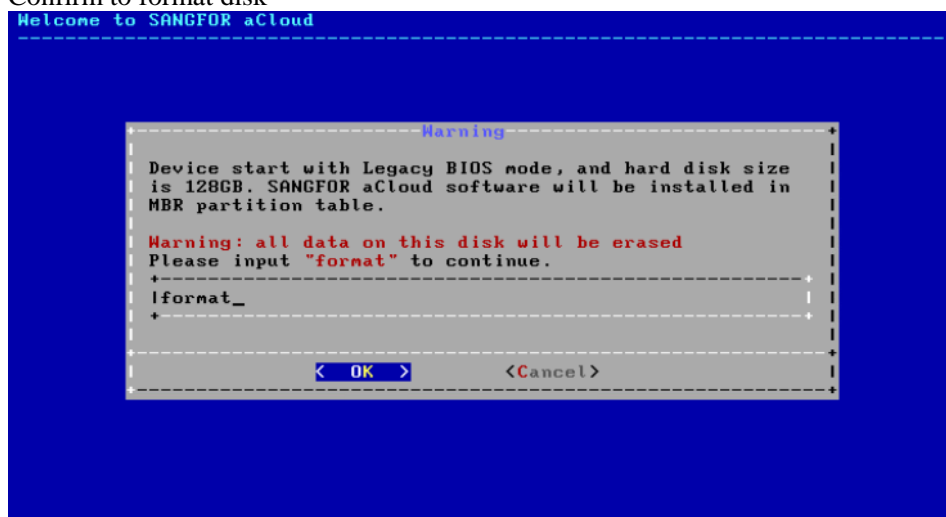
5. Agree Sangfor Terms & Conditions



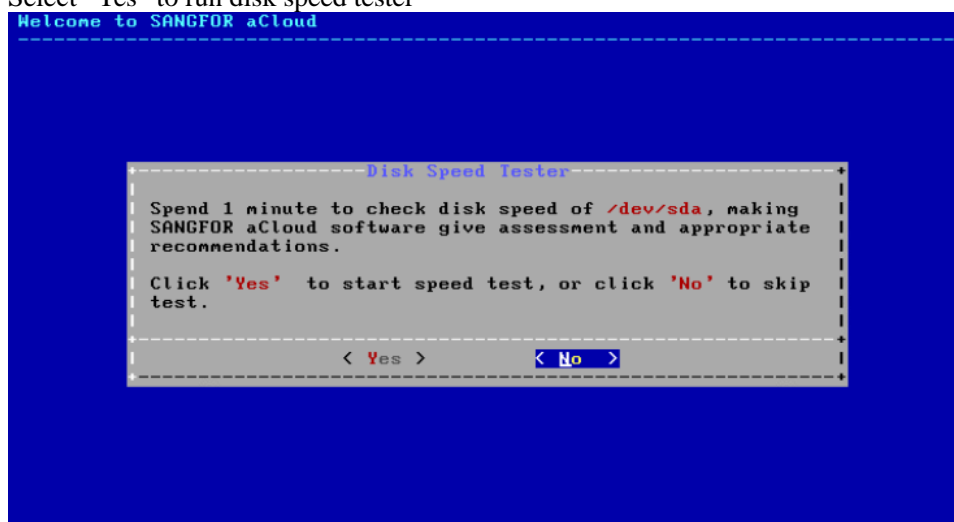
6. Select a disk (Sangfor witness node will be installed here)



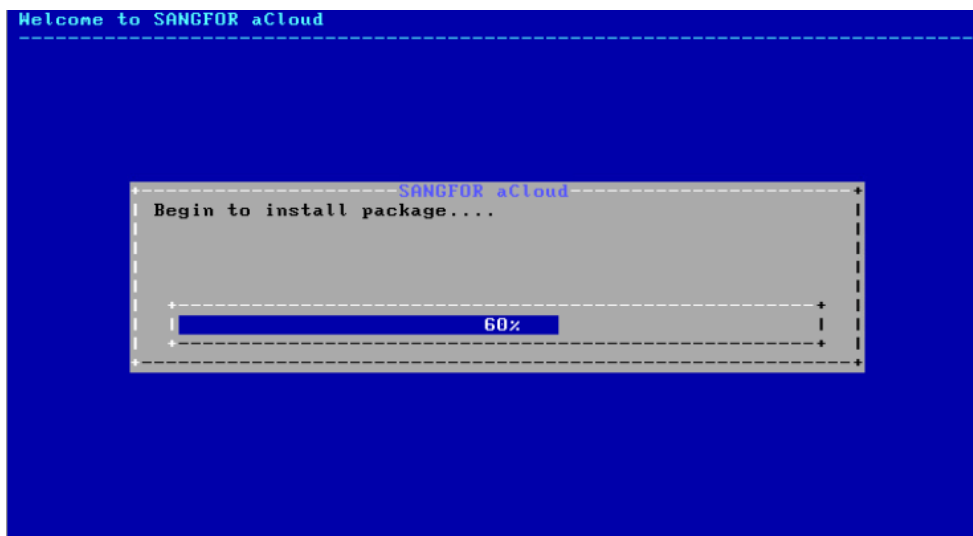
7. Confirm to format disk



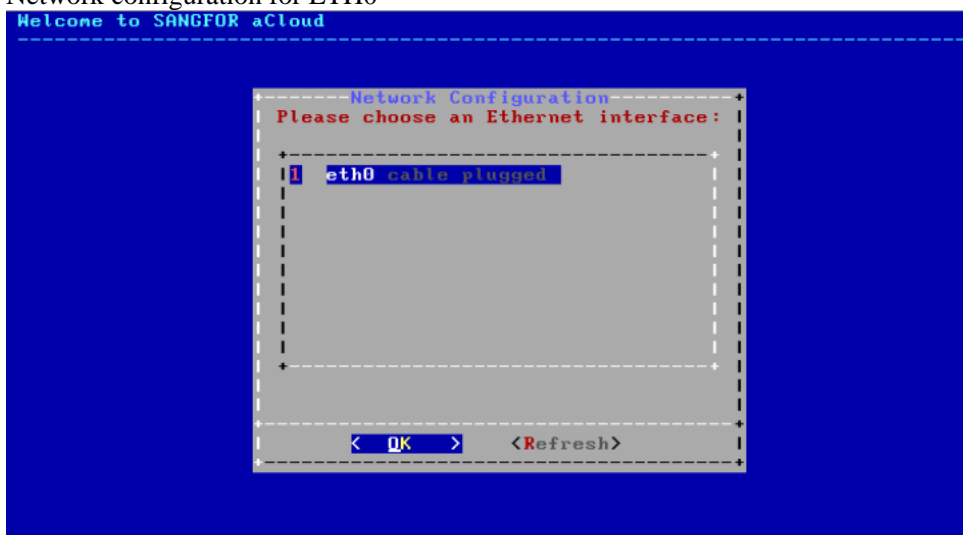
8. Select "Yes" to run disk speed tester



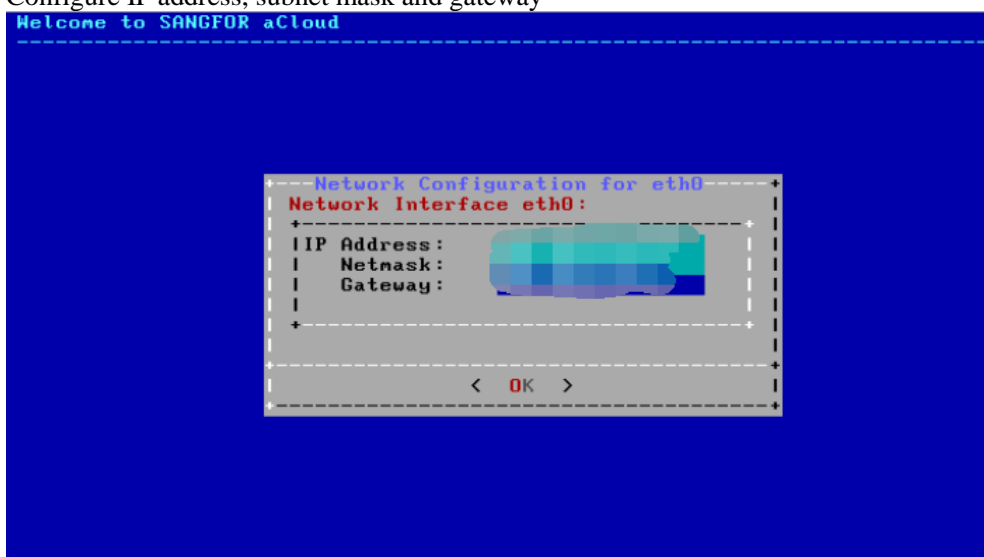
9. Wait for witness node installation



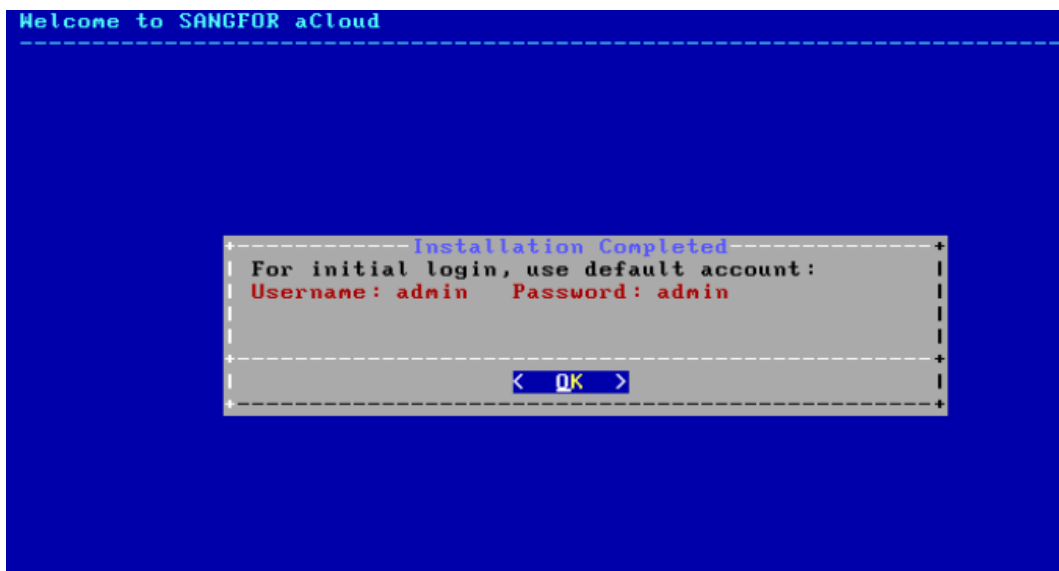
10. Network configuration for ETH0



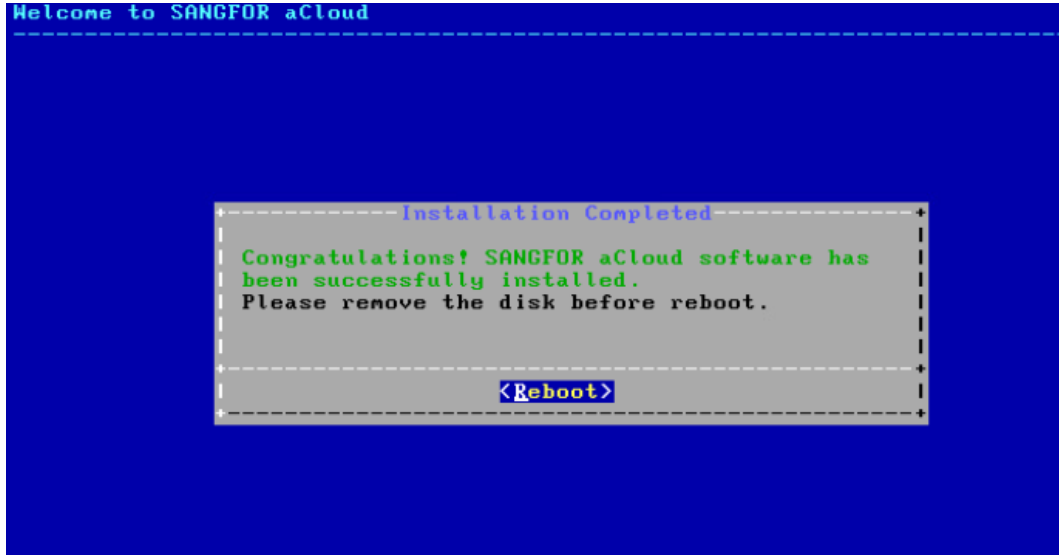
11. Configure IP address, subnet mask and gateway



12. Installation completed, default login account: **admin**, password: **admin**.



13. Remove the USB and click on reboot to restart the server



14. After server rebooted, login to witness node with configured IP address. Witness web console shown as below.

Sangfor aCloud Witness ... Witness Node System							
Maintain witness node and configure network							
Refresh Shut Down Restart Add New Aggregate Interface Advanced Static Routes							
Status	Interface Name	Type	Description	IP/Netmask	Gateway	Driver Type	Link Mode
	eth0	Communication In...	-	192.200.19.229/255.255.255.0	192.200.19.1	vmxnet3	10000M / Full-duplex

2.3 ISO installation on VMware

1. For the ISO installation on VMware, it have 2 extra setting need to configure.

First is enable nested virtualization under VM profile.

CPU – Hardware virtualization – Expose hardware assisted virtualization to the guest OS

Edit settings - demo config (ESXi 6.5 virtual machine)

Virtual Hardware VM Options

Add hard disk Add network adapter Add other device

CPU	6	
Cores per Socket	1	Sockets: 6
CPU Hot Plug	<input type="checkbox"/> Enable CPU Hot Add	
Reservation	None	MHz
Limit	Unlimited	MHz
Shares	Normal	1000
Hardware virtualization	<input checked="" type="checkbox"/> Expose hardware assisted virtualization to the guest OS	
Performance counters	<input type="checkbox"/> Enable virtualized CPU performance counters	
Scheduling Affinity	Hyperthreading Status: Not active Available CPUs: 6 (Logical CPUs) 0, 2, 4-7	
CPU/MMU Virtualization	Automatic	
Memory	8192	MB

2. Another configuration need to make is enable disk UUID for the witness node machine.

Edit VM – VM Options – Advanced

Edit settings - Demo witness (ESXi 6.5 virtual machine)

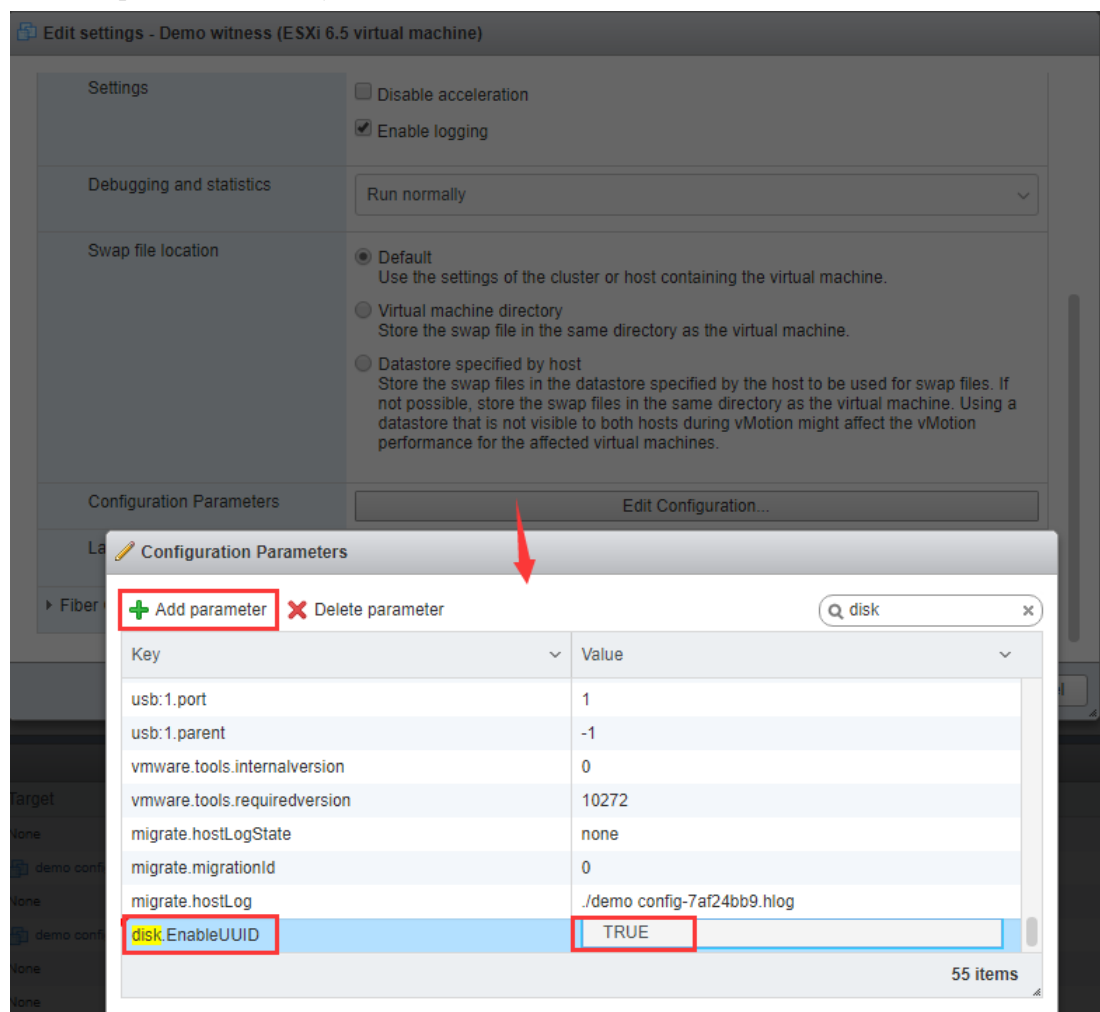
Virtual Hardware VM Options

General Options	VM Name: Demo witness
VMware Remote Console Options	<input type="checkbox"/> Lock the guest operating system when the last remote user disconnects
VMware Tools	Expand for VMware Tools settings
Power management	Expand for power management settings
Boot Options	Expand for boot options
Advanced	Expand for advanced settings
Fiber Channel NPIV	Expand for fiber channel NPIV

Save Cancel

3. Go to **Configuration Parameters – Edit Configuration**

Add new parameter with key **disk.EnableUUID**, value set to **TRUE**





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