ABO Proxy Server Replacement Documentation

1. Overview
   1. This document describes the configuration and setup of the ABO Proxy replacement server.

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1. Configuration – Preexisting
   1. Physical Hardware
      1. Old “Mail” Server
   2. OS
      1. Red Hat Linux v2.6
   3. Network Interface(s)
      1. One E100
   4. Software required
      1. Apache w/ ModProxy module

1. Configuration - Replacement
   1. Physical Hardware
      1. Mac Pro “DTDT0149” running ESXi v6 free HyperVisor, host is AVANTI32
   2. Virtual Host
      1. AVANTI34 – 2 cores, 2 GB memory, ~20 GB disk space, on SSD storage pool
   3. OS
      1. CentOS 7 (Core)
      2. NTP turned on
   4. Network Interfaces
      1. One dedicated E1000 phys, isolated vswitch connected to E1000
   5. Software required
      1. NGINX
2. Documentation
   1. Preexisting Proxy Server Apache – Required Settings
   2. VM – Required Settings
      1. The proxy server must be on its own virtual switch, which must have exclusive access to one of the physical NICs on the machine.
      2. The network adapter should be set to E1000. VMNet2 and VMNet 3 as of the time of this writing presented problems (the install process couldn’t detect the NIC).
   3. NGINX – Required Settings
      1. NGINX repository added to RPM
         1. rpm -Uvh <http://nginx.org/packages/centos/7/noarch/RPMS/nginx-release-centos-7-0.el7.ngx.noarch.rpm>

(This is for version 7. If you want a newer version, you will need to use a different address.)

* + 1. NGINX installed
       1. yum –y install nginx
    2. Attempt to start nginx with restart command
       1. service nginx restart
    3. SELinux settings for NGINX implemented (if attempt to start NGINX fails and SELinux is the culprit per /var/logs/audit/audit.log)
       1. grep nginx /var/log/audit/audit.log | audit2allow -m nginx > nginx.te
          1. **After this step, read the nginx.te file created in the current directory and make ABSOLUTELY sure the context you are adding makes sense before you proceed. For example, you wouldn’t want to grant nginx access to the system\_cron\_spool\_t context.**
       2. grep nginx /var/log/audit/audit.log | audit2allow -M nginx
       3. semodule -i nginx.pp
    4. nginx.conf edited to desired settings
    5. /etc/nginx/conf.d directory emptied of everything but the desired <serverdescription>.conf file
    6. <serverdescription>.conf file edited to desired settings
       1. Include “proxy\_read\_timeout 300;” for very long ABO reports – same setting as previous mail server
    7. nginx service enabled (Otherwise it won’t automatically come up when you start the VM)
       1. systemctl enable nginx.service
  1. OS – Required Settings
     1. NTP installed
        1. yum –y install ntp
        2. systemctl start ntpd
        3. systemctl enable ntpd (to make sure it starts automatically)
  2. Backup & Restore
     1. To backup:
        1. Shut down VM
        2. In vSphere, File(menu)->Export->Export OVF Template
           1. Fill out fields as desired. Try to be as descriptive and consistent as possible. **Only tested with Folder of files (OVF)**
        3. Backup will commence and you will receive notice of failure/success within vSphere once complete.
     2. To restore:
        1. In vSphere, File(menu)->Deploy OVF Template
        2. Point it at the .OVF file within the folders that got created, click Next
        3. Click Next
        4. Make sure to use a name that is not preexisting, and click Next
        5. Select the desired datastore and click Next
        6. Select Thick Provision Lazy Zeroed (VMware default) and click Next
        7. Choose the VM network to use. At the time of the writing of this document possible use of a network other than the one already used (VM Network 2 on AVANTI32) is not foreseeable, so use that one, and click Next.
        8. Confirm settings and click Finish when ready to start restore
        9. Once restore is complete, get the VM’s Mac:
           1. Right Click VM->Edit Settings->Hardware(tab)->Network Adapter
           2. Make note of this as you will need it
        10. Click cancel
        11. Right Click VM->Power->Power On
        12. Go to Console(tab) and allow the machine to boot
        13. Log in as root with the appropriate credentials
        14. Type cd /etc/sysconfig/network-scripts
        15. Type ifconfig and note that there is no non-local (127.0.0.1) IP address listed for either interface
        16. Type nano ifcfg-eno<########>
            1. To edit the network config script, where <########> is a randomly generated number. At the time of this writing, the filename was ifcfg-eno16777728
        17. Change the “HWADDR” setting to the MAC address you noted earlier
        18. Press Ctrl-X, then Y, then Enter
        19. Type service network restart
        20. Type ifconfig
            1. Make sure non-local IP address is now displayed on one of the interfaces
        21. Type reboot
        22. Test by:
            1. HTTPing to the external IP