

Phoronix test suite



Deepin自动化测试组



- Phoronix Test Suite
 - Phoronix-Test-Suite.com PTS核心
 - openbenchmarking.org 用例说明和结果
- Phoromatic
 - Phoromatic.com 控制中心
- PTS Commercial
 - Commercial.Phoronix-Test-Suite.com 商业服务

1. `apt-get install phoronix-test-suite`
2. <http://phoronix-test-suite.com/releases/>下载源码包安装
3. <http://phoronix-test-suite.com/releases/repo/pts.debian/files/>下载deb包安装

- 参考文档
 - phoronix-test-suite-help.doc
- `man phoronix-test-suite`

Phoromatic控制中心



端口设置：user-config.xml

The screenshot displays the Phoromatic web interface. At the top, there is a dark header with the 'phoromatic' logo in green and yellow. Below the header, the main content area has a light gray background. The 'Welcome' section includes a message about logging in or creating an account, followed by a paragraph describing Phoromatic as a remote management and test orchestration system. A link to 'Learn more about Phoromatic.' is provided. The 'Log-In' section features a form with fields for 'User:' (containing 'deepin') and 'Password:' (masked with dots), and a 'Submit' button. The 'Register' section includes a paragraph about creating a new account, followed by three input fields for 'Username', 'Password', and 'Confirm Password'. Each field has a small superscripted number (1, 2, and 3 respectively) indicating requirements. At the bottom, there are three footnotes explaining these requirements.

Welcome

You must log-in to your Phoromatic account or create an account to access this service.

Phoromatic is the remote management and test orchestration system for the Phoronix Test Suite. Phoromatic allows the automatic scheduling of tests, remote WAN all through an intuitive, easy-to-use web interface. Tests can be scheduled to automatically run on a routine basis across multiple test systems. The test r

Phoromatic makes it very easy to provide for automated scheduling of tests on multiple systems, is extremely extensible, allows various remote testing possibl management within an organization.

[Learn more about Phoromatic.](#)

Log-In

User:

Password:

Register

Creating a new Phoromatic account is free and easy. The public, open-source version of the Phoronix Test Suite client is limited in its Phoromatic server abilities OpenBenchmarking.org cloud. For organizations looking for behind-the-firewall support and other enterprise features, [contact us](#). To create a new account for

Username ¹ Password ² Confirm Password

¹ Usernames shall be at least four characters long, not contain any spaces, and only be composed of normal ASCII characters.
² Passwords shall be at least six characters long.
³ A valid email address is required for verification (account not created until email confirmation received).

Deepin ISO自动化安装



- PXE服务器
- Deepin_rootfs制作与配置
- Deepin系统安装

PXE服务器的安装



- 安装NFS
 - `sudo apt-get install nfs-kernel-server`
 - `sudo apt-get install nfs-common`
 - `/etc/exports: /srv/install *(insecure,async,rw,no_subtree_check,no_root_squash)`

- 安装isc-dhcp-server
 - `sudo apt-get install isc-dhcp-server`
 - `/etc/dhcp/dhcp.conf`

```
deny unknown-clients;
option dhcp-max-message-size 2048;
use-host-decl-names on;
allow booting;
allow bootp;
interfaces = "enp3s0";

subnet 192.168.33.0 netmask 255.255.255.0 {
    option routers 192.168.33.250;
    next-server 192.168.33.250;
    default-lease-time 36000000;
    max-lease-time 360000000;
    filename "pxelinux.0";
}

host demohost {hardware ethernet fc:aa:14:89:f9:74;fixed-address demohost;}
```
- `/etc/hosts:`
 - `192.168.33.100 demohost`

- 安装tftpd-hpa

- `sudo apt-get install tftpd-hpa`
 - `# /etc/default/tftpd-hpa`
 - `TFTP_USERNAME="tftp"`
 - `TFTP_DIRECTORY="/srv/tftpboot"`
 - `#TFTP_DIRECTORY="/tftpboot"`
 - `TFTP_ADDRESS="0.0.0.0:69"`
 - `TFTP_OPTIONS="--secure"`

Deepin_rootfs制作与配置



- `debootstrap --no-check-gpg --verbose --arch amd64 unstable /media/deepin http://packages.deepin.com/deepin`
- `sudo chroot .`
- `vi /etc/shadow`: 删除第一行中
 “*”:root:*:.....
 - 加载系统后无需密码直接登陆

Deepin系统安装



- `#!/bin/bash`
- `root_dev=/dev/sda`
- `root_part=${root_dev}1`
- `check_rootfs_exists()`
- `{`
- `blkid | grep 069b16d5-af61-4eb3-9c90-60f1943644b4 >/dev/null`
- `}`
- `run() {`
- `DEBIAN_FRONTEND=noninteractive chroot /tmp/y/ "$@"`
- `}`
- `dd if=/dev/zero of=${root_dev} bs=1M count=32`
- `echo ""`
- `mklabel msdos`
- `mkpart primary 1 256G`
- `mkpart primary 256G 500G`
- `toggle 1 boot`
- `quit`
- `"" | parted ${root_dev}`
- `mkfs.btrfs -f ${root_part}`
- `mkdir -p /tmp/{w,x,y,z}`
- `mount -o subvol=/ ${root_part} /tmp/w`
- `btrfs subvol create /tmp/w/Deepin-15`
- `mount -o subvol=Deepin-15 ${root_part} /tmp/y`
- `mount /root/iso/deepin-15/deepin-15-amd64.iso /tmp/x`

Deepin系统安装



- mount /root/iso/deepin-15/deepin-15-amd64.iso /tmp/x
- unsquashfs -x -d /tmp/y -f /tmp/x/live/filesystem.squashfs #解压squashfs文件
- mount --bind /proc /tmp/y/proc # 挂载
- mount --bind /dev /tmp/y/dev
- mount --bind /sys /tmp/y/sys
- mount -t tmpfs none /tmp/y/tmp
- cp /etc/resolv.conf /tmp/y/etc/ #域名解析
- run /bin/bash /usr/share/deepin-installer/hooks/before_chroot/31-get-screen-resolution.job # deepin-installer hooks脚本
- cp -a /tmp/y/usr/share/deepin-installer/hooks/in_chroot/ /tmp/y/tmp
- run /bin/bash -c 'cd /tmp/in_chroot; for s in *; do bash \$s; done
- run apt-get update
- run apt-get install -y grub-pc btrfs-tools openssh-server
- echo '@reboot root /usr/bin/phoronix-test-suite phoromatic.connect 10.0.2.219:8090/HNMJX1' >> /tmp/y/etc/crontab # 每次系统启动后PTS自连Phoromatic控制中心
- echo '/dev/sda1 / btrfs defaults 0 0' >/tmp/y/etc/fstab # 修改/etc/fstab, 加入分区信息
- run grub-install \${root_dev} # 安装grub
- run update-grub
- run systemctl enable ssh.service # 自启动ssh服务
- mkdir -m 0700 /tmp/y/root/.ssh
- echo 'ssh-rsa *****' >/tmp/y/root/.ssh/authorized_keys # 加入ssh-keygen public key, PXE服务器可以连接测试机
- run passwd -d root # 删除root密码

各部分的衔接部分

- 测试机选择PXE启动
 - 1. 第一启动方式设置为PXE
 - 2. 第二启动方式设置为硬盘启动
- 加载完系统后Deepin_rootfs后，如何选择对应的安装脚本
 - 通过PXE启动配置文件，传入需要的参数，加载系统后会传入到Deepin_rootfs系统的/proc/cmdline文件中
 - 再通过crond服务，/etc/crontab加入@reboot，系统启动后自动执行的脚本，通过对cmdline进行检测，执行对应的系统安装脚本

每周自动化测试



1. PXE服务器每周更新cdimage最新ISO到Deepin_rootfs
2. PXE服务器更新default配置文件，设置加载内核和系统
3. 测试机crontab中加入每周重启系统设定，安装系统和准备PTS环境
4. PXE服务器更新default配置文件，设置为从本地硬盘启动
5. 在Phoromatic控制中心执行测试，手动执行或者脚本触发：
 - `http://10.0.2.219:8090/event.php?type=trigger&user=deepin&public_key=xxxxxx&trigger=XXX`



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