

# Resume / Vita / C.V.

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## Basic information

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## Self-estimate

- Familiar with of GNU/Linux development.
- Have deep knowledge on Virtualization, especially [Xen](#).
- Know well of C, [Python](#) and Shell scripting.
- Effective communication in English.

## Experience

- 2011-02 - Now: [Oracle America, Inc.](#) | Senior software engineer | Nashua, New Hampshire | Full-time
  - 2011-02 - Now: [Oracle VM 3.0](#)
    - Responsibilities:
      - Oracle VM Agent improvement.
      - Assembly and template management.
      - New features and bugfix in dom0.
    - Key skills:
      - Linux storage and network management.
      - Open Virtualization Format (OVF).
      - Python programming.
- 2006-06 - 2011-01: [Oracle Software Research and Development Center \(Beijing\) Co., Ltd.](#) | Software engineer | Beijing | Full-time
  - 2009-11 - 2011-01: [Oracle VM 3.0](#)
    - Responsibilities:
      - Xend improvement.
      - Refactor Oracle VM Agent to include network and storage management functions.
      - Reimplement VM management in Oracle VM Agent.
      - Implement new features and bugfix in Oracle VM dom0 Linux kernel.
    - Key skills:
      - Linux storage and network management.
      - Linux paravirtualized driver implement.
      - Python programming.
  - 2008-10 - 2009-10: Oracle VM 2.2
    - Oracle VM 2.2 is upgrade for 2.1. It adds/improves many features that enterprise customers requires, e.g. high availability, power management, template builder, etc.
    - Responsibilities:
      - Improve xend to provide better interface for Oracle VM Agent.
      - Working on debuggers to help debugging Linux guest on Xen.
      - Working on Transcendent memory project which can optimize memory usage and improve performance for Linux running on Xen.
      - Improve storage management.
      - Refactor Linux control domain networking.
    - Key skills:
      - Linux storage management: iSCSI, Fiber Channel and Multipath technology.

- Linux network internals: Bridge, VLAN and Bonding.
    - Linux firewalls: iptables implement and configuration.
  - 2006-11 - 2008-09: Oracle VM 2.1
    - Oracle VM is a high performance server virtualization software. The hypervisor is built on Xen and it leverages Linux as the control domain. There is also a web-based management console for virtual machine lifecycle management.
    - Responsibilities:
      - Linux paravirtualized driver improvement.
      - Implement Oracle VM Agent in the Linux control domain to communicate with the Oracle VM Manager.
      - Virtual disk/network QoS control.
      - Guest live migration using TLS/SSL.
      - Linux paravirtualized guest PXE boot implement.
      - Linux and Xen serial console improvement.
      - Linux virtual framebuffer improvement.
      - Linux guest VNC console improvement.
      - Implement global locking to prevent virtual machine from starting on different server.
      - Help support team to answer customer questions about Oracle VM.
      - Help QA team to setup Oracle VM testing plan.
    - Key skills:
      - Server virtualization methodologies.
      - Xen hypervisor internals.
      - Linux paravirtualized driver implement.
      - Python programming language.
      - Distributed version control system (VCS) like Git and Mercurial (hg) usage.
      - English communication.
  - 2006-06 - 2006-10: [Oracle Validated Configurations](#)
    - Oracle Validated Configurations is a program to offer pre-tested, validated architectures - including software, hardware, storage, and network components - along with documented best practices. It leverages Oracle Linux Test (OLT) to cover the various components test.
    - My responsibility to improve the test cases in OLT.
    - Key skills:
      - [Oracle Enterprise Linux](#) I/O testing/optimization, including network, disk and filesystem.
      - Oracle Enterprise Linux storage management.
      - Shell script programming.
- 2003-07 - 2006-05: [China Standard Software Co., Ltd.](#) | Software engineer | Beijing | Full-time
  - 2005-01 - 2006-05: NeoShine Linux 2.0
    - NeoShine Linux 2.0 is a upgrade of 1.0. This version add more server capabilities compared to 1.0, which is focus on desktop.
    - Responsibilities:
      - NeoShine Linux kernel maintenance, including new hardware support, USB device support improvement (for webcams and mass storage), and power management improvement.
      - NeoShine Linux installer Anaconda improvement/bugfix.
    - Key skills:
      - Linux kernel patching/customizing/compiling.
      - Linux device driver model and driver development.
      - More C programming skills.
      - Linux operating system installation internals.
      - Team work.
  - 2004-02 - 2004-12: NeoShine Linux 1.0
    - NeoShine Linux is the successor of COSIX Linux. NeoShine Linux 1.0 use [Gnome](#) instead of [KDE](#) as default desktop.
    - Responsibilities:
      - Develop new features for Gnome desktop applications, especially the file manager Nautilus and archiver File Roller.
      - Fix bugs of Gnome applications.
      - Video/audio configuration tools development and the hardware detection library kudzu improvement.
      - Special function keyboard keys support in NeoShine Linux.
    - Key skills:
      - Gnome application development.
      - GNU tool chain usage, including gcc, gdb, ld, make, autoconf, automake and libtools.
      - C programming skills.

- Software diff/patching.
  - Version control with subversion.
  - Bug tracking with Bugzilla.
  - Software quality control skills.
- 2003-07 - 2004-01: COSIX Linux OEM
  - COSIX Linux is a distribution created by CS2C. The OEM product is a customized COSIX Linux version which will be preinstalled to PCs.
  - Responsibilities:
    - Embed PC vendor's brand/logos into COSIX Linux.
    - Develop or customize applications per vendor's requests.
    - Write scripts to automate the OEM version creation process.
  - Key skills:
    - [KDE](#) application development, especially the login manager kdm and archiver ark.
    - Package management with RPM package manager.
    - Linux operating system distribution approach.
    - Shell script programming.
    - Vim editor.

## Education

- 1999-09 - 2003-07 | [Northeastern University at Qinhuangdao](#) | Computer Science and Technology | Bachelor | Qinhuangdao | Full-time
  - High score on most courses.
  - Started hacking Linux and open source software since 2000.
  - Working at Network Center during 2000-09 - 2002-07, gained a lot of network management experience.

## Communities

Open source communities I participate in:

- [Linux kernel](#).
- [Xen](#).
- [Python](#).
- [Django](#).
- [Mercurial](#).

Projects owned by me:

- [ZHIGANG.ORG](#): my personal website based on [Django](#) and [MoinMoin](#) for publishing blogs and technical articles.
- [DocBook build system](#): a system generates various output formats (HTML, PDF, TXT, etc) from DocBook source.
- [xenstore-socket](#): a lightweight inter-domain communication (IDC) protocol for Xen, which leverages the XenStore interface only.
- [Python plugin framework](#): a simple plugin framework which is designed to have little dependency and easily to integrate with other system.
- [Python ifconfig module](#): a python module to display network interface status.
- [Python tarstream module](#): an incremental approach to extract files from tarfile.

## Hobbies

- Reading, badminton, mountaineering and marathon.