My 3 Years with an OpenStack Startup

HOW TO BRIDGE THE GAP BETWEEN THE TECHNICAL AND BUSINESS SIDES

JULES FAKHOURY,
DEVELOPMENT OPERATIONS ENGINEER, ORMUCO INC.
Presentation

Jules Fakhoury
- Bachelor of Engineering (Honours Electrical) from McGill University
- Worked for Ericsson Canada in the Business Unit Global Services
- Currently part of the engineering team at Ormuco since April 2014

Ormuco Inc.
- Began in 2008 as a telecommunications provider
- Today, offers public, private, and hybrid cloud solutions
- HP Helion Network Charter Member
- Headquarters in Montreal (Canada), with offices in London (UK) and Seattle (USA)
Outline

1. How to Get Started with OpenStack

2. Working with system administrators and developers

3. Navigating in the business world
HOW TO GET STARTED WITH OPENSTACK
What is OpenStack?

- Open-source software for cloud computing
- IaaS platform for public and private clouds
- Collection of open-source projects
- Written in Python
- Large community
- Scalability, Interoperability, Cost-effectiveness
History of OpenStack

- Began in 2010 as a joint project of Rackspace Hosting and NASA
- 6-month release cycle
- 15 distributions so far! Latest is Ocata
- Managed by the OpenStack Foundation
- More than 500 companies have joined the project
Getting Started...

- Try OpenStack:
  - Public clouds on the market
  - Local dev environment: devstack.org

- Learn OpenStack:
  - Attend summits, watch past summit videos
  - User stories, books

- Deploy OpenStack
  - Choose a distribution
  - Follow installation guides step-by-step

More info at www.openstack.org
Some of my First Personal Projects

- Competitive analysis of major public clouds
- Build my home test server!
- Single-node-deployment using Packstack: https://www.rdoproject.org/install/quickstart/
- Learned Ceph and install it: http://docs.ceph.com/
- Openstack Installation using CentOS: https://docs.openstack.org/
Navigating through the Documentation

OpenStack Documentation:
https://docs.openstack.org/

- Try them at home!
- Keep a cheat sheet of command-line reference!
- Use them to make your own scripts!
Challenges of Working with OpenStack

- Steep learning curve
  - Develop the needed skills

- Cross-domain technical expertise
  - Different modules that need to be configured

- Rapid 6-month release timeframe
  - Hundred of features added in each version

- Large community
  - Various teams working on different components
Get Involved!

- Subscribe to OpenStack mailing lists
- Join OpenStack IRC meetings
- Join an OpenStack User Group: https://groups.openstack.org/
- Go to OpenStack meetups
- Answers and ask questions (Ask OpenStack)
- Fix Bugs

https://wiki.openstack.org/wiki/How_To_Contribute
WORKING WITH SYSTEM ADMINISTRATORS AND SOFTWARE DEVELOPERS
Engineering Teams at Ormuco

Network and Support

Automation

System Engineering
Year 1 – Technical Support

- Technical support for 50+ enterprise clients
- Researched new cloud computing technologies

Training received:
- Cisco CCNA Routing & Switching
- Attended the OpenStack summit at Vancouver in 2015
Year 2 – Research and Development

- Developed cloud infrastructure and software
- Worked with system administrators and developers

Training received:
- Red Hat OpenStack, RHCSA, RHCE
- Python Codecademy
- Joined OpenStack Magnum team weekly meetings
Year 3 – Sales Eng. and Business Dev.

- Delivered presentations to key stakeholders
- Developed sales and business tools

Training received:
- Cisco Business Value Specialization
- Cisco Advanced Collaboration Architecture Sales Specialization
Milestones

As a System Administrator:
- New regions deployed: Montreal, UK, ...
- OpenStack installation and automation
- Deployment of test and production environments

As a Software Developer:
- User Cloud Portal
- Reseller Portal
- Cloud Management Interface
Training and Certifications

➢ **System Administration:**
  - Red Hat Certified System Administrator (RHCSA)
  - Red Hat Certified System Administrator in Red Hat OpenStack
  - Red Hat Certified Engineer (RHCE)

➢ **Software Development:**
  - Python: [https://www.codecademy.com/learn/python](https://www.codecademy.com/learn/python)

➢ **Other:**
  - Cisco Certifications
  - Attend OpenStack events
  - Join an OpenStack team
  - OpenStack Foundation Certification Program
Mentorship Program

- **Mentorship:**
  - Leverages the expertise of others
  - Fosters relationships between employees
- New-hire training program
- Career and professional development
- OpenStack Mentorship Program (Sponsored by Women of OpenStack)
Lessons Learned

- Working with people experts in their fields
- Project and time management skills
- Being independent and knowing when to ask for help
- Innovate and impress others
NAVIGATING IN THE BUSINESS WORLD
Business Need for OpenStack

➢ Business Challenges:
  Fast-paced market conditions with competition from web-based companies

➢ IT Operations Challenges:
  Deliver secure, on-demand, self-service capabilities to customers

➢ Developer Challenges:
  IT strategy and infrastructure that is cost-effective, flexible, and agile
OpenStack Benefits

- Speed and Agility
- Organized Resources Through Interoperability and Hybrid Cloud
- Vibrant Commercial Ecosystem
- Open Source and Modular Design
Use Case: Government IT

**Background**
- Public client with more than 800 servers
- Wanted to become global leader among smart cities

**Solution**
- IaaS: virtualized resources for Compute/Storage/Networking
- PaaS: App/Database/API Management/BI Services

**Benefits**
- Reduced costs and increased operational efficiencies
- Security and scalability
- Better service to citizens
Cultural and Organizational Changes

1. Consider piloting
2. Start with a cross-functional team
3. Employee training
4. Measuring costs and determining values
IT vs. Business Skills

Management Skills  by Robert L. Katz

- TOP MANAGEMENT
- MIDDLE MANAGEMENT
- FIRST-LINE MANAGEMENT

Conceptual skills
Human skills
Technical skills
My Business Projects

Business Tools
• Use Cases
• TCO Calculator

Sales Engineering
• Requests For Proposal (RFP)
• Technical Demonstrations
Bridging The Gap

- Understand the shift
- Fill the skills gap
- Collaborate with the IT and business teams
- Know how to communicate to your audience
Conclusion
THANK YOU!

ANY QUESTIONS?

Jules Fakhoury
jules.fakhoury@ormuco.com
https://www.linkedin.com/in/julesfakhoury

Link to Presentation Slides:
http://bit.ly/2q4y2Wn