Project Skylab:
Helping You Get Your Cloud On

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Disclaimer

The views and opinions expressed here are those of Craig Balding only and in no way represent the views, positions or opinions - expressed or implied - of my employer or anyone else.
# whoami

- Global Tech Security Lead @F500
- UNIX, Pen-Test, Incident Response
- Other blog: SecurityWannabe.com
- EuroTrash Security Podcast (Full crew here!)
- More @ cloudsecurity.org/about
3 Questions For You

- Do you use cloud storage?
- Have you booted a cloud compute instance in a public cloud?
- Have you played with cloud network overlays?
The Theory Bit
Prior Art

SKYLAB

APOLLO TELESCOPE MOUNT
COMMAND AND SERVICE MODULE
MULTIPLE DOCKING ADAPTER
AIRLOCK MODULE
ORBITAL WORKSHOP
Motivation

- Learn
- Get Practical
- Home Server RIP
- Geekin’ Out
- Community Project
Use Case: Pen-test target practice

- Testing new/updated tools
- Software NIDS/NIPS testing
- Exploit testing

Use cases
Use Case: Assurance Testing

- Package Golden Image as AMI
- Upload, launch [1...n]
- Apply patches/workarounds & run tests
Public Cloud Networking 101

- Black Box
- One NIC Per VM
- Limited Routing
- Basic Firewalls
- Think Different

Use cases
Overlay Networks

An overlay network is a computer network which is built on top of another network. Nodes in the overlay can be thought of as being connected by virtual or logical links, each of which corresponds to a path, perhaps through many physical links, in the underlying network.
Amazon recently opened up their Virtual Private Cloud, currently beta.

This is a cloud provider specific network overlay.

Hook up your existing network. Software VPN on your side, Hardware on their side.

All traffic traverses the customer gateway – no Internet access from within VPC.

Can use existing AMIs and Elastic Block Storage.

Amazon rapidly innovating – keep up with release details!
VPNCubed

The first overlay network service for the cloud market.

Based on OpenVPN, uses CohesiveFT created VMs as cloud VPN endpoints

Supports multicast.

Cross connect clouds, extend your home/business network

Supports Amazon EC2 and gogrid
Gen 1 Requirements

Cheap!
x86 Only
Scriptable
On-demand
Pay As You Go
Simulate 2 Subnets
Fast startup/shutdown
Use existing public & paid AMIs
Connect from anywhere (Securely!)
The Practical Bit
(wakey, wakey)
DEMO
Futures

Beyond x86
Multi-provider
Documentation
VMware Support
Enhanced routing
Explore ecosystem
Improved Automation
Define more Use Cases
More Security Related AMIs

I’ve received some requests for the slides I presented at BruCON, so here they are. As the slides are mostly devoid of text, I’ve included the speaker notes. The notes are not polished, hence treat accordingly :-). To view in “Full Screen” mode click on the icon at the bottom right of the slideshare embed below and click “Fit to Height” to see the notes.

P.S If you weren’t at BruCON, you missed an excellent security conference - strong content, excellent organisation and facilities, friendly crowd. Thanks to Benny & crew for being excellent hosts!
Recently created the cloud security forum – an independent hang out for IT and IT security people to discuss cloud security issues

Topic areas out as per CSA security domains

There’s a dedicated forum for Skylab which I’ll be posting to with progress updates.

If you have suggestions for Skylab, please share with me there.
Questions?

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