

# Maintaining z/VM code on LINUX

Michael Maclsaac

MVMUA January 12, 2016 Meeting

Information Builders Headquarters

2 Penn Plaza, NYC, NY

# Abstract

- Organizations running z/VM and zLinux usually do "scripting" on both platforms. As the amount of code and configuration data grows, it is best to have a source code control system. If the desire is to keep the source code in just one place, a choice must be made whether to have it on z/VM or Linux. Because of the ubiquity of Linux, this presentation will recommend keeping your code on Linux. It will describe how to set up a subversion server for Linux code, and then extend it to z/VM using open source software that is freely available.

# Agenda

- Announcement!
- Why z/VM code on Linux?
- Security considerations
- Overview of the solution
- Details of the solution
- **New!** Update on 'zoom'
- Live demo (time/network dependent)
- Questions ???

# Announcement!

- A new paper:

*Using Subversion to maintain Linux and z/VM code*

- Is temporarily available on:

<https://sites.google.com/site/mike99mac/svnPaper.pdf>

- The associated tar file is on:

<https://sites.google.com/site/mike99mac/sampletools.tgz>

# Why z/VM code on Linux?

- Why oh why?
  - As systems grow, you need automation
    - Systems administration => programming
  - Both z/VM and Linux scripts/config are needed
  - 2 OS's = 2 Source Code Control Systems (SCCS)?
  - If “Less is more” => 1 SCCS is better
    - All code can be viewed/backed up in one place
  - Linux has more mature SCCSs
    - RCS, CVS, Subversion, Git, Mercurial

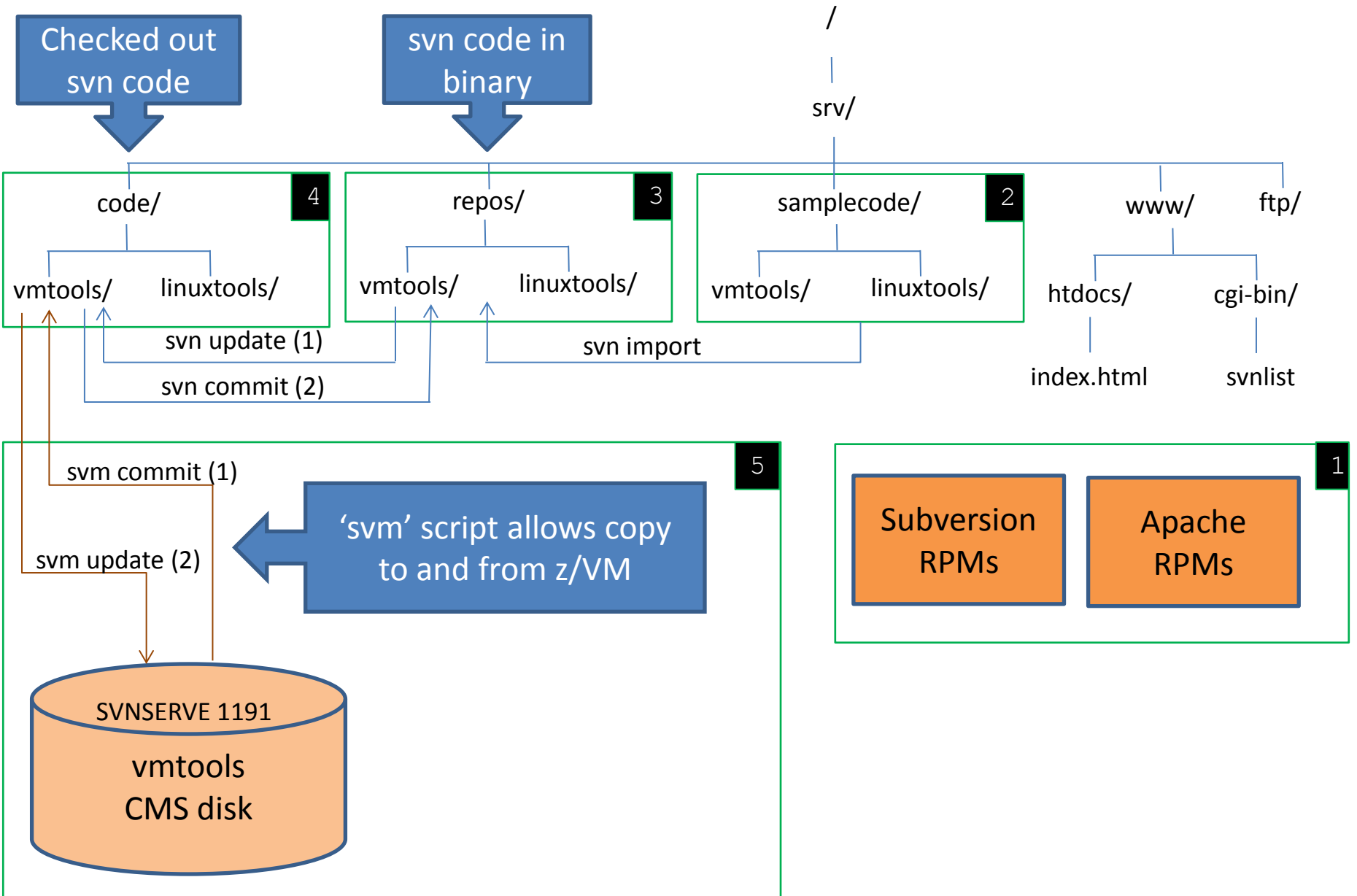
# Security considerations

- Use encrypted https:// rather than http://
- Require credentials for access
- Use existing LDAP services with policies
- Do not allow/require root SSH logins

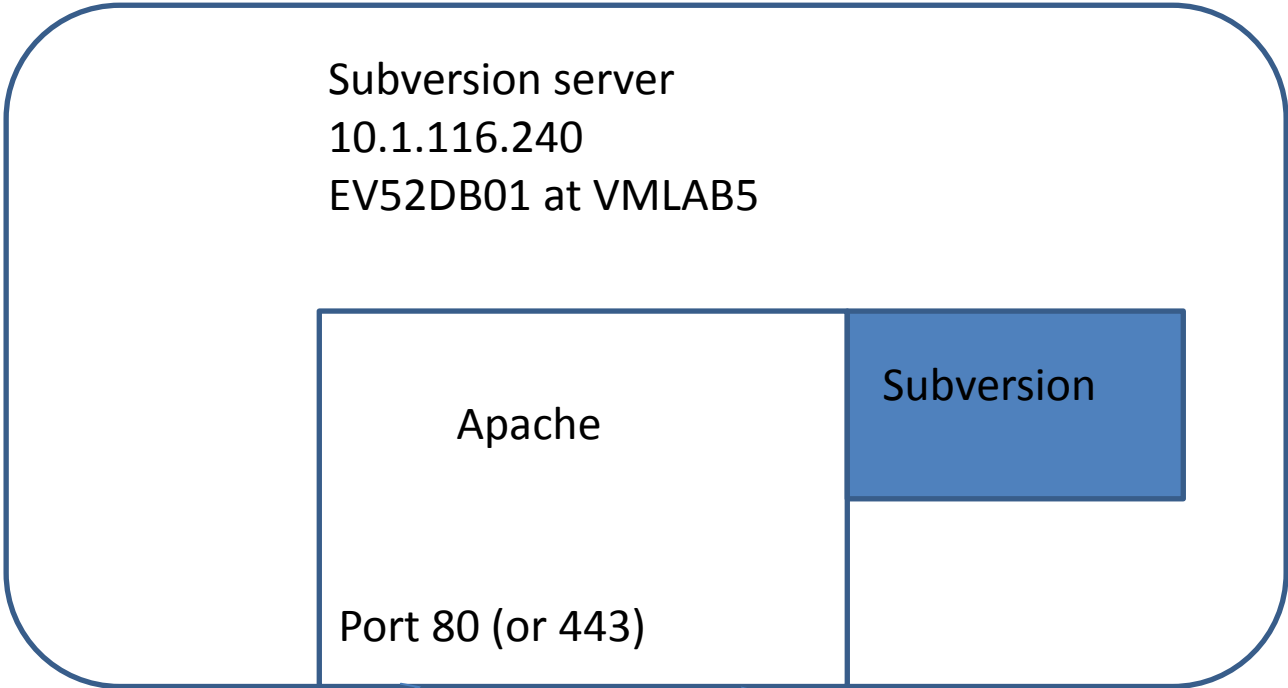
# Overview of the solution

- If a picture is worth a thousand words ...  
Here are 2000 words:
  - 1: Subversion server/CMS disk block diagram
  - 2: Global client/server block diagram

# SVNSERVE user ID with Linux installed

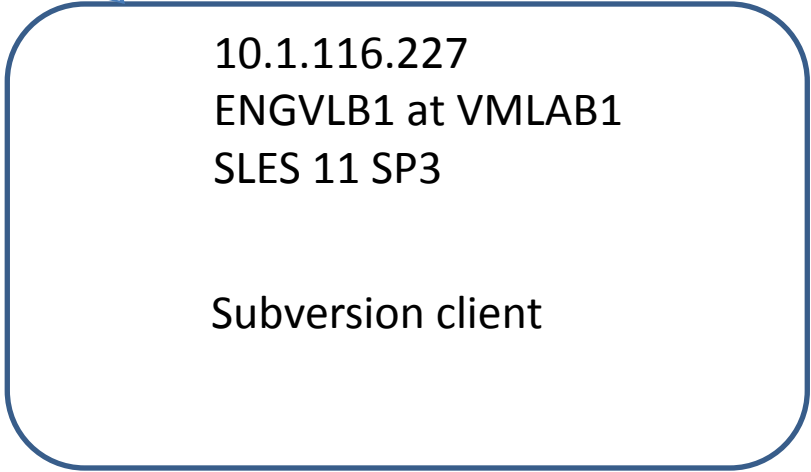






<http://10.1.116.240/zoom/>

oracle/  
engscripts/  
mikes191/  
opsmgr/  
vmtools/



Mike's Laptop  
With Tortoise SVN client

# Details of the solution

- Who really wants more details? 😊
- How about we use the PDF 'bookmarks' ToC?

# Ancillary scripts

- The svncommit script
  - call 'svn commit vmtools' and log the results
- The svnlist cgi-bin script
  - Create an HTML table of Subversion repositories

# New! - Update on zoom

- Zoom is alive and well – see:
  - <http://sourceforge.net/projects/system-zoom/files>
- Version 1-19 released on 12/25 – highlights:
  - Enhanced zsetenvironment to do more to set up a newly installed zoom server
  - Added steps in Ch 5 of the PDF to set up zoom Web access with HTTPS
  - Added concept of node-groups with three new commands `z{ls|mk|rm}nodegroups`
  - Added a RESTful API - `zrestapi` in `cgi-bin/` directory – VERY 'ALPHA'
  - Added a search pattern to `zls{nodes|clients|servers|cecs|lpars|zvms}` commands
  - Allowed for long host names (FQDNs)
  - Use the CP ACCOUNT value in the user directory to set the system's initial node-group
  - Added command `zcpwebscripts` to copy newly Web scripts to virtual hosts directories
  - Added `-l|--long` flag to many commands - verbosity flags are more for debugging
  - Split Web UI `zsystemstable` into two to show Linux and z/VM systems separately
  - Added a NODE-LIST filter to Web UI Linux table to display specific nodes

# New Web filter

cdlengvlb101.es.ad.adp.com:4506/cgi-bin/zlinuxtable?ALL

zoom > zlinuxtable (refreshed at 09:44:38)

## Node filter

Node or node-group search filter:

eng

All systems  Systems on this CEC  Systems on this LPAR

## Linux systems

Host name	Actions	Group	IP address	Distro/Kernel	Memory	CPUs	CEC	LPAR	System ID/User ID	C
<a href="#">cdlvmeng004.es.ad.adp.com</a>	<a href="#">Actions</a>	eng	51.16.116.245	SLES-11-SP3 3.0.101-0.47.52	995-MB	1	A27B7	VLBX	VMENG004/ <a href="#">VLBX</a>	Linux own
<a href="#">cdlvmeng112.es.ad.adp.com</a>	<a href="#">Actions</a>	jass	51.16.116.249	SLES-11-SP3 3.0.101-0.40	995-MB	1	A27B7	VLBX	VMENG112/ <a href="#">VLBX</a>	Linux own
<a href="#">cdlvmeng009.es.ad.adp.com</a>	<a href="#">Actions</a>	jass	51.16.116.252	SLES-12-SP1 3.12.49-11	1146-MB	2	A27B7	VLBX	VMENG009/ <a href="#">VLBX</a>	Linux own
<a href="#">cdlpfevzdb01.es.ad.adp.com</a>	<a href="#">Actions</a>	dbs	51.16.116.224	SLES-11-SP3 3.0.101-0.47.71	3006-MB	2	A27B7	VLB1	TEVLD001/ <a href="#">VLB1</a>	Linux own
<a href="#">cdlpfevzap02.es.ad.adp.com</a>	<a href="#">Actions</a>	dbs	51.16.116.221	SLES-11-SP3 3.0.101-0.40	3006-MB	2	A27B7	VLB1	TEVLA002/ <a href="#">VLB1</a>	Linux own
<a href="#">cdlengvlb101.es.ad.adp.com</a>	<a href="#">Actions</a>	eng	51.16.116.227	SLES-11-SP3 3.0.101-0.47.52	2001-MB	2	A27B7	VLB1	ENGVLB1/ <a href="#">VLB1</a>	Linux own

# Live demo

- Subversion
- zoom

# Questions ???

- There are no dumb questions!
- ...
- ...
- OK, maybe there have been a few
- If you think of any:
  - Email me at mike99mac at gmail.com
- Again, the paper is at:
  - <https://sites.google.com/site/mike99mac/svnPaper.pdf>

Thank you!