

Docker Editions

- Learn about the various (dozen+) Editions of Docker
- Learn which to use for this course
- Learn Docker CE vs. EE
- Learn Stable vs. Edge releases

Docker Editions at store.docker.com

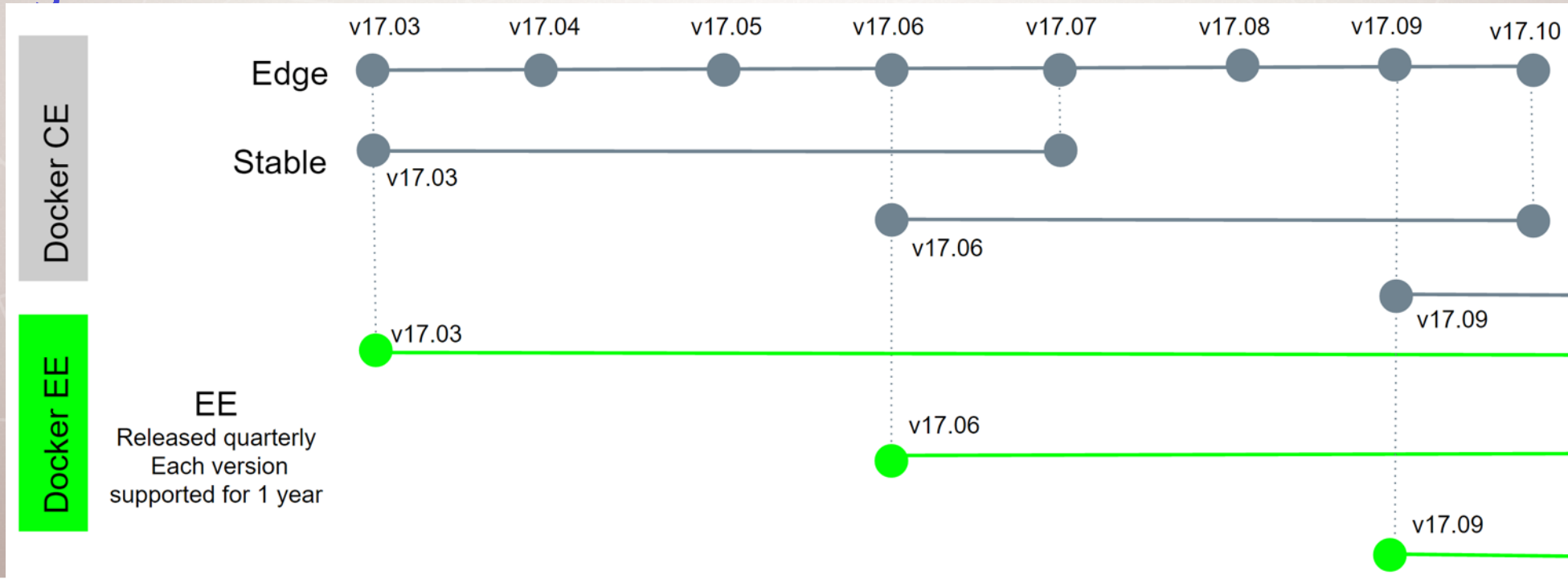
- Docker is no longer just a "container runtime"
- Docker moves fast, it matters how you install it
- Linux (different per distro, don't use default package)
- Docker Desktop (Recommended for Windows and Mac)
- Docker Toolbox (Legacy for Win10 Home/Win7/Win8)

Community vs. Enterprise

- Docker Community (free) vs. Docker Enterprise (paid)
- Old Name "EE" = Enterprise Edition (same thing)
- Windows Server 2016 comes with Enterprise Basic
- Linux servers are a target for Enterprise
- Enterprise also gets you GUI apps like DTR and UCP
- Developers and Sysadmins use Community locally

Stable vs. Edge

- Edge (beta) released monthly, Stable quarterly
- Edge gets new features first, but only supported for a month
- Stable rolls in three months of Edge features, EE supported longer



Docker on Windows

- Learn the two types of containers Windows can run
- Learn which Docker Edition to install on your Windows version
- Learn differences between Windows 10 and Windows Server 2016

Docker on Windows Overview

- Two Types of Containers: Linux Containers and Windows Containers
- Linux Containers still default, when I say "containers" I mean Linux
- Best experience: Docker for Windows, but Win10 Pro/Ent only
- Win7/8/8.1 or Win10 Home should use Docker Toolbox
- Windows Server 2016 also supports Windows Containers
- Getting better all the time
 - e.g. Native Linux containers coming soon

Docker on Windows 10 Pro/Ent

- Use Docker for Windows, from store.docker.com
- More features than just a Linux VM
- Uses Hyper-V with tiny Linux VM for Linux Containers
- PowerShell native

Docker for Mac

- Use Docker for Mac, from store.docker.com
- More features than just a Linux VM
- Uses "xhyve" with tiny Linux VM for Linux Containers
- Terminal/iTerm native
- PowerShell native

Docker on Windows 7/8 and 10 Home

- Use Docker Toolbox, not as fancy as Docker for Windows
- Like others, download at store.docker.com
- Runs a tiny Linux VM in VirtualBox via `docker-machine`
- Uses a bash shell to make it more like Linux/Mac options
- Does not support Windows Containers
- Must put all your code in C:\Users\<your-username>

Docker on Windows Server 2016

- Windows Server 2016 supports native Windows Containers
- "Docker for Windows" runs on Win 2016 but not required
 - Only do this for when you run Win 2016 locally for dev/test. NOT for prod
- No options for previous Windows Server versions
- Hyper-V can still run Linux VM's (that can run Docker) just fine

Docker for Windows: Setup

- Install Docker
- Tweak Docker for Windows settings
- Clone my GitHub repo
- Get a code editor
- Tweak your terminal and shell (optional)

Docker for Windows Tips

- PowerShell Command Completion: posh-docker
 - <https://docs.docker.com/docker-for-windows/#set-up-tab-completion-in-powershell>
- Code paths enabled for Bind Mounts (C:\Users by default)
- Bind Mounts work for code (but often not databases)
- Backup option: use `docker-machine create --driver hyperv`
 - <https://docs.docker.com/machine/drivers/hyper-v/>
- Great Dockerfile/Compose file editor: Visual Studio Code
 - <https://code.visualstudio.com/>
- Great Terminal UI replacement: cmdr
 - <http://cmdr.net/>
- Great info and troubleshooting/FAQ
 - <https://docs.docker.com/docker-for-windows/>

Docker Toolbox on Windows: Setup

- Install Docker
- Clone my GitHub repo
- Start the Docker Quickstart Terminal
- Tweak Docker VM settings
- Get a code editor
- Tweak your terminal and shell (optional)

Docker Toolbox on Windows: Tips

- Use the Docker Quickstart Terminal to start with
 - In background it auto-creates and auto-starts VM
 - Defaults to bash shell
- Code paths enabled for Bind Mounts work in C:\Users **only**
- Bind Mounts work for code (but often not databases)
- Re-create Linux VM or create more with `docker-machine`
- Great Dockerfile/Compose file editor: Visual Studio Code
 - <https://code.visualstudio.com/>
- Great Terminal UI replacement: cmdr
 - <http://cmdr.net/>

Docker on macOS Overview

- Docker for Mac
 - Requires Yosemite 10.10.3 (2014 release)
 - Yosemite works with 2007-2008 Mac's and newer
- Docker Toolbox
 - For Snow Leopard, Lion, Mountain Lion (10.6-10.8)
- Docker in a Linux VM
- Docker in a Windows VM
 - Not usually possible, only works with Vmware Fusion
- Don't use homebrew (brew install docker), it's docker CLI only

Docker for Mac: Setup

- Install Docker
- Tweak Docker for Mac settings
- Clone my GitHub repo
- Get a code editor
- Tweak your terminal and shell (optional)

Docker for Mac Tips

- Bash Command Completion
 - <https://docs.docker.com/docker-for-mac/#installing-bash-completion>
- Code paths enabled for Bind Mounts (/Users by default)
- Bind Mounts work for code and (usually) databases
- Run more nodes: `docker-machine create --driver`
 - Fusion, VirtualBox, Parallels, etc. <https://docs.docker.com/machine/drivers/>
- Great Dockerfile/Compose file editor: Visual Studio Code
 - <https://code.visualstudio.com/>
- Great Terminal replacement: iTerm2
 - <https://www.iterm2.com/>
- Great info and troubleshooting/FAQ
 - <https://docs.docker.com/docker-for-mac/>
- My Shell Setup (iTerm2 + oh-my-zsh + much more)
 - <http://www.bretfisher.com/shell>

Docker on Linux

- Easiest install/setup, best native experience
- Three main ways to install: script, store, or `docker-machine`
- `get.docker.com` script (latest Edge release)
 - `curl -sSL https://get.docker.com/ | sh`
- store.docker.com has instructions for each distro
- RHEL officially only supports Docker EE (paid), but CentOS will work
- Installing in a VM, Cloud Instance, all are the same process
- May not work for unlisted distros (Amazon Linux, Linode Linux, etc.)
- Don't use pre-installed setups (Digital Ocean, Linode, etc.)

Docker for Linux: Setup

- Install Docker
- Add your user to docker group
- Clone my GitHub repo
- Get a code editor
- Tweak your terminal and shell (optional)

Docker for Linux Tips

- After installing Docker, also get `docker-compose` and `docker-machine`
 - <https://docs.docker.com/machine/install-machine/>
 - <https://docs.docker.com/compose/install/>
- Run more nodes: `docker-machine create --driver`
 - VirtualBox, AWS, etc. <https://docs.docker.com/machine/drivers/>
- Great Dockerfile/Compose file editor: Visual Studio Code
 - <https://code.visualstudio.com/>
- Bash command completion just works