



μ CernVM – A Lightweight Virtual Machine Hosting ROOT

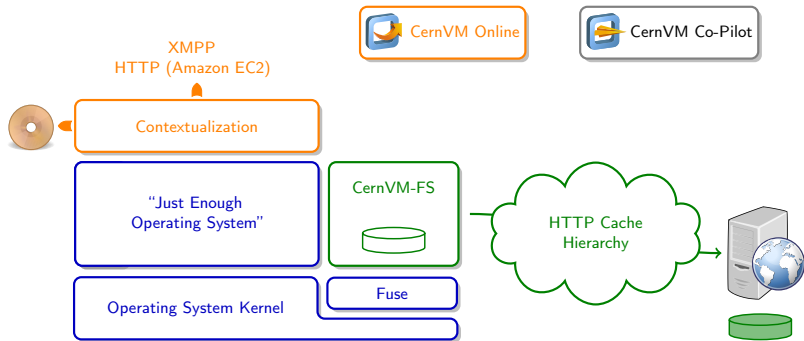
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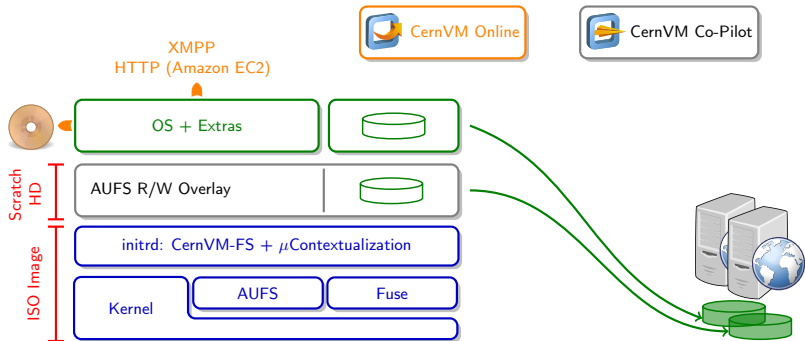
Classic CernVM



- Uniform and portable environment for physics data processing
- Minimal operating system derived from application dependencies
- Easy to maintain and to distribute



μ CernVM



Idea: Operating system on CernVM-FS

Instead of 400 MB hard disk image: 10 MB ISO image + 100 MB cache.

- *Not* a LiveCD, *not* a diskless node
- ⇒ Operating System on Demand



```
MicroCernVM
ISOLINUX 4.06 2012-10-23 ETCD Copyright (C) 1994-2012 H. Peter Anvin et al
early console in decompress_kernel

Decompressing Linux... Parsing ELF... done.
Booting the kernel.
[ 1.277254] acpiphp_ibm: ibm_acpiphp_init: acpi_walk_namespace failed
[ 1.459769] sd 2:0:0:0: [sda] Assuming drive cache: write through
[ 1.460199] sd 2:0:0:0: [sda] Assuming drive cache: write through
[ 1.461662] sd 2:0:0:0: [sda] Assuming drive cache: write through

* Welcome to micro-CernUM
* Beta release 1.2

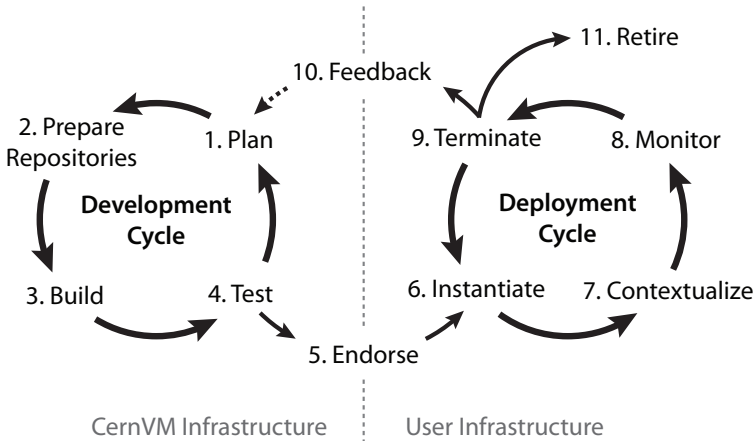
[INF] Setting up environment... check
[INF] Loading predefined modules... check
[INF] Starting networking... check
[INF] Mounting root filesystem... check
[INF] Starting CernUM File System... check

mount: mount point /proc/bus/usb does not exist
Welcome to Scientific Linux
Starting udev: _
```



μ CernVM Changes the VM Life Cycle

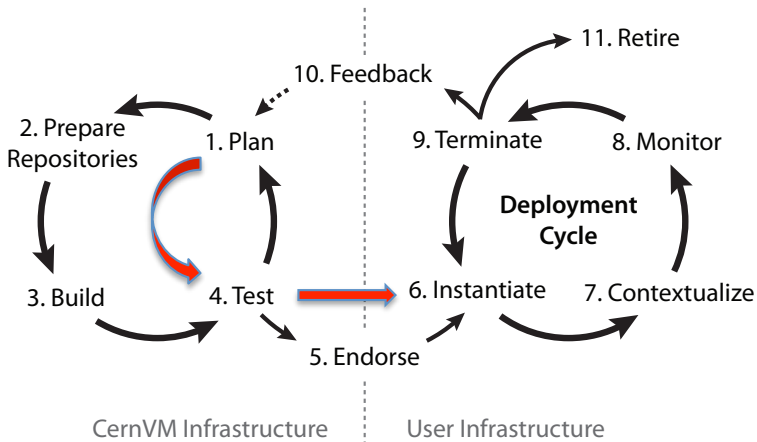
Work in progress





μ CernVM Changes the VM Life Cycle

Work in progress



Avoids: Image Building

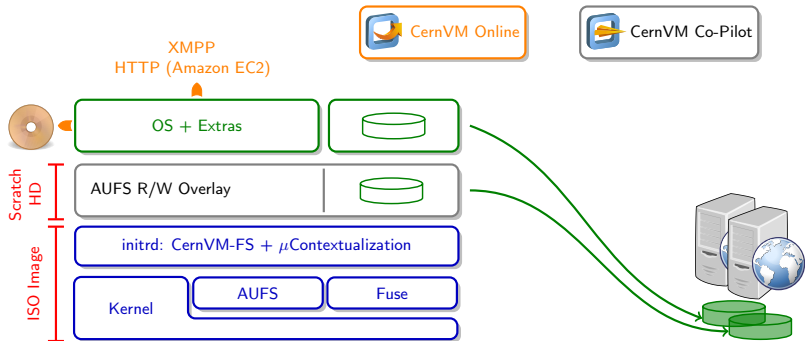
Solves: Image Distribution

Options for updating: **stay, diverge, rebase**

CernVM-FS snapshots facilitate **long-term data preservation**



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