

JosNet: A barebones OS for lightweight isolated servers

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Our project, JosNet, seeks to make JOS a realistic barebones operating system for deploying isolated, lightweight servers: the use case is to be able to script the deployment of a remote VM serving a given directory. The major players in server virtualization (such as Amazon EC2) all run atop Xen, and so we've retooled our JosNet system to deploy onto Xen-paravirtualized servers.

From there, we constructed a workable server operating system: Our system supports the e1000e network stack from lab 6; it features a static HTML server with support for embedded shell commands (the SHTML standard of the Web 1.0 days); an RPC and file transfer facility; a tool to construct filesystem images from local directories; some very complex linker contortions to get Xen to cooperate; and a collection of automatic deployment scripts. We're currently attempting to get an EC2 AMI running JosNet.