DSSP-001: Essential Philosophy Document

Revision 1.3 (05/09/19)

John P. Willis

Datashed Proprietor

ABSTRACT

The Essential Philosophy Document, or "EPD", summarizes the overall philosophy of information technology guiding technology decisions in data center design, equipment deployment, and software deployment employed in the Datashed and its environs.

The primary goal of the Datashed is to provide a 1990s-style data center environment, eschewing the modern, homogeneous approaches to equipment and operating system selection. To that end, the Datashed will host the majority of its services on non-commodity hardware, using a wide variety of operating systems.

The Datashed does, however, make concessions to modern practices in select areas. Its physical cabling plant is structured, the core of its network secure and performant, and some commodity x86/Linux equipment is used for monitoring, backup storage, and occasional hardware emulation.

1. Heterogeneous Environment

The Datashed offers a heterogeneous hardware and software environment. This means that services will be provided by and available to non-commodity hardware. Racks will not match each other, servers will be more than commodity x86-64 hardware running Linux, networks will be varied beyond the standard UTP-based Ethernet.

This derives from a belief that choice and variety in IT deployments is a good thing, and though we value consistency, our adherence to it is not slavish.

2. Relaxed Approach

We feel that the IT industry takes itself too seriously. We want to provide an alternative. Just by looking at the decor (such as wall scrolls), one can tell that the Datashed is not a somber place. It seeks to be as inviting to humans as it is to servers, switches, and routers.

Though we attempt to maintain a well-managed structured cabling plant, the Datashed is not unfriendly to the occasional experimental or *ad hoc* deployment.

3. Traditional Administration

We don’t believe that building up a server interactively is a bad thing. Not everything needs to be scripted and repeatable, except where it’s important. One will not encounter complex DevOps orchestration tools in wide use here, although tenants are free to use them in their own colocated environments.

4. Open Community

We strive to make technical details of our projects known to members of our community, and the Internet community at large. We believe this will foster an environment that is both fun and educational.

5. DIY Ethic

We follow a DIY ethic. With limited resources, a small, non-commercial data center such as ours must be both pragmatic and resourceful. If a standard practice that is accepted in large, commercial data centers is impractical or financially unfeasible, we will develop a robust alternative, rather than giving up and saying it cannot be done.

We don't typically have support contracts with hardware or software vendors, even if it means that we do not receive the latest and greatest updates. Often, our equipment is old enough that the vendor either no longer exists, or would not provide support anyway. We mitigate threats ourselves, use secondhand and/or EOL equipment whenever we can, and don't shy away from exposing old operating systems to the Internet.

6. Reasoning for DSSP Standards

The DSSP standards are in place to help us stay on-track with our overall philosophy, and give us reminders for tasks that we want to do consistently each time. There are, however, no committees or bureaucracies dedicated to enforcing them. The DSSP standards exist to serve **us**; they do not exist for us to serve **them**.

@(#)dssp-001.ms 1.3