IPv6 Essentials for Web Developers

The Problem:
IPv4 addresses are running out.

The Solution:
IPv6 Internet Protocol version 6

IPv6 addresses can look like this:
2610:0008:6800:0001:0000:0000:0000:000a
and abbreviate to this:
2610:8:6800:1:0:0:0:a
or this:
2610:8:6800:1::a

Penn State’s IPv6 address range is 2610::/32

Get Ready Now!
Deploy IPv6 by 2011.

128-bit addressing leaves plenty of space for future growth.

Penn State is already using IPv6:
Web: http://wikispaces.psu.edu/DNS and NTP: otc2.psu.edu

So are other Internet2 Institutions:
Georgia Institute of Technology
Indiana University
Ohio University
Penn State
Portland State University
Princeton University
University of California, Berkeley
University of California, San Diego
University of Delaware
University of Illinois, Urbana-Champaign
University of Iowa
University of Notre Dame
University of Oregon
University of Pennsylvania
University of Rhode Island
University of South Florida
Wichita State University
Worcester Polytechnic Institute

For more info and to request an IPv6 address:
http://tns.its.psu.edu/services/IB/IPv6.html

• Use IPv6-capable interfaces for development.
• Leave room for IPv6 addresses in database and form fields: 39 characters vs. 15.
• Update your validation code.
• Note that IPv6 addresses contain colons, not periods, and may contain letters A-F.
• Add IPv6 addresses to IP-based ACLs.