



IPV6 NETWORKING PROTOCOL UPGRADE SERVICES

CLIENT OVERVIEW

Our client is a leading global provider of network traffic, application performance management and business continuity solutions for mission-critical application environments. Our client's dependable software, services and support utilize today's technologies to provide cost-effective, innovative and reliable solutions allowing their customers to gain competitive advantage and better utilize their existing infrastructure for enhanced return on investment. Hundreds of customers worldwide rely on our client's products to optimize the performance and availability of their business applications and information.

KEY REQUIREMENTS

- Making the existing data structures used in the kernel compatible with IPv6 addresses.
- Preventing duplicate address detection since the IPv6 VIP being added on the active interface, triggers duplicate address detection Requirement for special handling of the IPv6 packets.
- Requirement that the Address Resolution Protocol (ARP) be implemented for IPv6 in a similar manner as it is implemented in case of IPv4, so that the clients in the new environment can detect the scheduler in a similar manner. Existing product for IPv4 uses ARP (Address Resolution Protocol) for neighbor detection to start the communication between scheduler and client..
- Since the product is supported on multiple OS platforms, it was required to maintain the code base platform neutral as much as possible.
- Due to change in the IP address format, GUI has to be modified to display and handle the IPv6 address properly.
- For any performance related issue tracking, there was a need to emulate heavy IPv6 load generation.
- The product has many supporting utilities, which needed to interoperate in IPv6 mode.

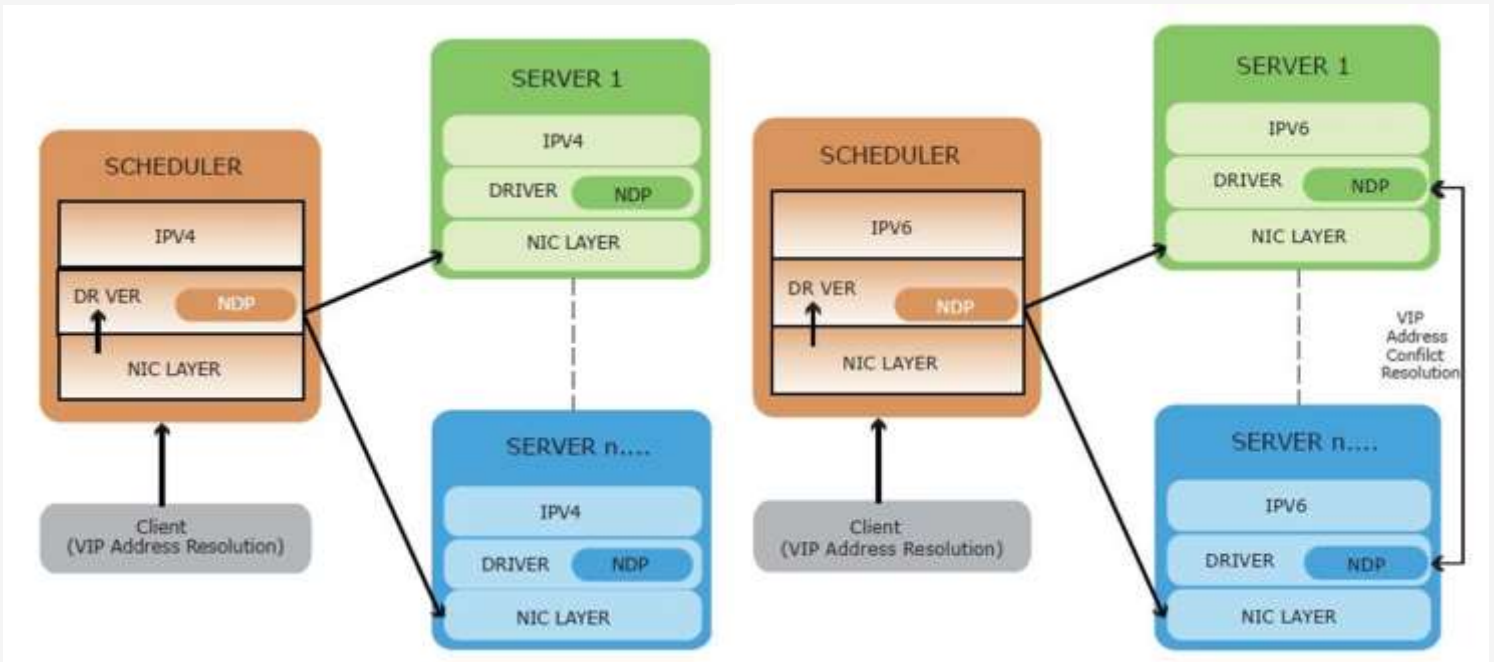
KEY CONTRIBUTIONS

- A setup of IPv6 enabled cluster was done to test the product on a virtualized environment. Various IPv6 enabled applications were deployed for doing the load balancing test for them.
- A cluster consisting of different guest operating systems was specially developed to test the product for load balancing across different mix of platforms.
- A load generating utility was developed to generate IPv6 traffic for testing the product with varying intensity of load for long duration, to test the product for performance, stability and scalability.
- Extensive test coverage of compounding scenarios was achieved through use of automated scripts and manual testing for different combination of loads and different mix of OS platforms.

KEY BENEFITS

- By establishing a multi-faceted team in India, our client was able to augment the product development teams, thus increasing the engineering bandwidth in a cost-effective manner.
- The increased engineering bandwidth helped our client to simultaneously enhance the existing product functionality and re-architect the product to support IPv6 protocol, thus achieving time-to-market and cost goals. Using Xoriant's expertise in networking protocols, the first deliverable of the product was completed in less than 4 months.
- Since the product functionality and user experience was kept same as the version that supported IPv4 protocol, it was easy for our client's customers to upgrade their setup to support the IPv6 protocol.

HIGH LEVEL ARCHITECTURE



TECHNOLOGY STACK

- OS: Windows, Linux, Solaris
- Languages: C, C++, Java
- Tools: Visual Studio 2005, GCC, GDB, Windc
- Driver Kit



About Xoriant:

Xoriant Corporation is a Product Development, Engineering and Consulting Services Company, serving technology startups as well as mid-size to large corporations. We offer a flexible blend of onsite, offsite and offshore services from our eight global delivery centers with over 2000 software professionals. Xoriant has deep client relationships spanning over 25 years with various clients ranging from startups to Fortune 100 companies.