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IPv6 Certifications

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Many networking, systems and security engineers have been studying IPv6 [1]-related topics for many years. You may be wondering if you can get a certification to show for all the time and effort you have spent learning IPv6. IPv6 has been incorporated into vendor certifications and other non-vendor IPv6-specific certifications. You can work toward attaining these certifications to show your current or future employer that you possess IPv6 knowledge and skills.

Vendor-Specific IPv6 Certifications:

There are many vendors who have embraced IPv6 and included it in their product's features. These vendors have training programs for their products that cover IPv6-related topics and accompanying certifications that test your knowledge of IPv6 and how it is configured.

Cisco Systems has a robust training and certification program [2]. Over the years, IPv6 has been increasingly woven into the course content and exam topics.

For many years, the Cisco Certified Internetwork Expert (CCIE) Routing and Switching certification has had IPv6 questions on the exams. IPv6 is a topic listed in the CCIE Routing and Switching Written Exam Topic Blueprint v4.0 [3] (Exam #350-001) (Section 3.00). IPv6 is also a focus area in the CCIE Routing and Switching Lab Exam Topic Blueprint v4.0 [4] (Section 3.00). The new CCIE Security exam blueprint v4.0 [5] also includes IPv6. Exam candidates must be knowledgeable on IPv6-related technologies like: NDP [6], SeND [7], OSPFv3 [8], IPv6 ACLs, and IPv6 VPN configuration details.

If you want to get your Cisco Certified Network Professional (CCNP) then you must pass the Implementing Cisco IP Routing exam (ROUTE 642-902 [9]) and it has a substantial focus on IPv6. The CCNP also requires that you take the Troubleshooting and Maintaining Cisco IP Networks exam (TSHOOT 642-832 [10]) which also has IPv6 questions. IPv6 is even on the exam blueprint for the Cisco Certified Network Associate [11] (CCNA).

Juniper has been a long time supporter of IPv6 and several of their certifications [12] require knowledge of IPv6. The Juniper Networks Certified Internet Specialist (JNCIS-SP [13]) exam and the Enterprise Routing and Switching, Expert (JNCIE-ENT [14]) cover IPv6 topics.

Brocade has IPv6 capabilities in their products and requires knowledge of IPv6 in their certifications. Both the Brocade Certified Network Engineer (BCNE [15]) and Brocade Certified Network Professional (BCNP [15]) require IPv6 knowledge.

IPv6-Specific Certifications:

Today, there is no one single industry-recognized certification of IPv6 knowledge and skill. There are several IPv6 certifications that exist, and they are maturing as the adoption of IPv6 increases. Following are some of the available non-vendor sponsored IPv6 certifications.

Hurricane Electric [16] is a global Internet backbone service provider that offers the most complete IPv6 connectivity. Hurricane Electric offers a free IPv6 certification program [17] to help encourage people to learn about IPv6 and be recognized for their efforts. The certification starts off at the NewB level, then proceeds to the Explorer, Enthusiast, Administrator, Professional, Guru and finally Sage. Over 65,000 people [18] have embarked on this certification path and approximately 6500 (~10%) have reached the Sage level [19] from 113 countries. This certification is educational, fun, and the price is right.

Sam Browne [20], network instructor extraordinaire (@sambowne [21]), even has a helpful guide [22] to help you with this Administrator level certification. Sam also has a second guide [23] to help reach the Guru and Sage level.

The IPv6 Forum [24] is the primary international organization that is focused on furthering IPv6 adoption worldwide. The IPv6 Forum created a certification logo program many years ago. Initially this program (IPv6 Ready Logo Program [25]) was a way to validate that vendor products and services were IPv6-capable and interoperable. The logo program has now expanded to cover IPv6 training and certifications. There are logos available for certified courses, certified trainers, certified certifications and certified engineers. The IPv6 Education Certification Logo Program [26] covers the details of what is required to obtain accreditation and be able to use these logos. You can be certified as an IPv6 Forum Certified Network Engineer (Silver) [27] or an IPv6 Forum Certified Network Engineer (Gold) [28]. In fact, Cisco's CCNP, CCIE R&S, CCDP and CCDE have received the IPv6 Forum's Gold certification [29] and the CCNA and CCDA have received Silver level [29] certification. The IPv6 Forum has plans to expand these certifications in the coming years.

Nephos6 [30] is an IPv6 and cloud consultancy that offers IPv6 training. Nephos has developed a two-level IPv6 certification program [31] that follows the IPv6 Forum Education Certification Logo Program guidelines. This certification is unique in that it allows a candidate to achieve a Silver or Gold IPv6 Certified Engineer status. The certification requires both academic knowledge and demonstrated experience. The Silver certification exam has 50 questions and the Gold certification exam has 100 questions and students must score a 75% or higher to pass.

At this year's 2013 North American IPv6 Summit [32] you can have a chance to achieve this certification. Nephos6 is offering complimentary testing to a limited number of people who register for the IPv6 Summit conference. The IPv6 Summit is taking place April 17-19 in Denver, Colorado and the Nephos6 testing is taking place on April 18 and 19th [33].

The IPv6 Institute [34] is a group of industry professionals that have contributed to research and development of IP technologies over many years. Their goals are to educate their students about the technical details of IPv6 and advocate the adoption of IPv6 in the community. Their staff and advisors come from diverse IT industry backgrounds and share

their knowledge of IPv6 with their students. The IPv6 Institute has teamed up with the University of Arkansas Global Campus to provide <u>four levels</u> [35] of IPv6 training and certification.

Summary

As IPv6 is integrated into more and more products and services, vendors will incorporate IPv6 into their certification exams. Since there is no single industry-wide IPv6-specific certification there will likely be many other IPv6 certifications available. If you have been diligent about your IPv6 learning then you could attain one of these above-mentioned certifications as a way to differentiate yourself from other job candidates. As more organizations are looking for IPv6 expertise to help them with their IPv6 adoption (e.g. <u>IPv6 Brain Drain</u> [36]), having these certifications will help you be chosen to work on these cool projects.

Scott

<u>IPv6</u>

<u>BCNE</u>

<u>BCNP</u>

<u>CCIE</u>

<u>CCNA</u>

<u>CCNP</u>

<u>certification</u>

Hurricane Electric

IPv6

JNCIE-ENT

JNCIS-SP

Nephos6

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Links:
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[27] http://nav6.org/ipv6forum/home/certifiedlist.php?filter=5
[28] http://nav6.org/ipv6forum/home/certifiedlist.php?filter=6
[29] https://learningnetwork.cisco.com/docs/DOC-10327
[30] http://www.nephos6.com
[31] http://www.nephos6.com/services/education/

[32] http://rmv6tf.org/na-ipv6-summit/2013-north-american-ipv6-summit
[33] http://rmv6tf.org/na-ipv6-summit/2013-north-american-ipv6-summit/ipv6-certification
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[35] http://www.ipv6institute.com/id22.html
[36] http://www.networkworld.com/news/2011/030711-ipv6-brain-drain.html