

Computer Networking Systems Engineering Externship Report

Externship Background : Ed Garcia visited Western NRG, a privately held technology consulting company located in Camarillo, California. The organization recently moved from Ventura to Camarillo, has about 20 employees, and focuses primarily in Firewall Network Security solutions for small to medium size companies. Their website is <http://www.teamnrg.com>.

Informational Interviews:

Tim Martinez – Owner - explained Western NRG, company history, existing market focus and made me feel welcomed to spend the day learning about their operation.

Ole Harman – Oversees laboratory implementations prior to customer roll-outs, provides research and development to plan new technology features or improvements to product line, does in house testing to ensure success prior to customer implementation.

Ed Bascom – Trainer – Works with new hires, provides training, oversees employee development, and ensures employees are learning new technologies.

Juan Martinez – Lead Engineer – Oversee technical implementations, manages primary accounts, and allowed me to tag along for the day during the “externship visit”.

Jobs Available at Western NRG –

1 - Technical Specialist – Requires advanced knowledge in Sonic Firewall for packet filtering and inspection, Microsoft and Cisco Certification, experience with Wireshark Protocol Analyzer, Visio for Diagramming, a background in Customer Service is highly desirable. A related Technical degree with work experience is preferred.

2 – Part-Time Accountant to manage customer billing and product procurement from 3rd party Vendors.

Job Specific Skills – Experience with Microsoft and Cisco products including Firewalls, Routers, and Switches. Knowledge of how to apply “Quality of Service” packet prioritization which places priorities on customer networks. Able to interpret protocol captures using Wireshark Protocol Analyzer. Able to document and update Vision diagrams. Experience working with customers over the phone and able to maintain a customer focused business relationship. Soft Skills include the ability to expand client base thru positive referrals, maintain a positive relationship with existing customers while supporting their technical needs using our product line. Able to listen effectively, and gain customer cooperation in troubleshooting network problems. Ability to explain technical terms using common terms while not making customer feel disconnected in understanding technical problem. Salary range is negotiable. Industry trends are in support of new mobile work force, and providing support for video collaboration tools. Hiring process now includes a probationary process and requires successful completion of the probationary period. Students in the CNSE program are exposed to similar companies that provide

technical solutions. Research on the skills sets required, educational background and salary range are listed at dice.com or monsterJobs.com

Competitive advantage(hard skills/technical): They are EXTREMELY customer focused on making sure the specific technical need of their customer is well achieved. Western NRG uses GOLDmine as their Customer Service Tracking software which is integrated with other products to allow remote access for troubleshooting or viewing remote network packet traffic. With this Remote Access capability, Western NRG is able to collect and analyze remote traffic, and can verify customer network configurations. The ticketing system support Topology Diagrams so that network configurations are better understood while undergoing analysis. Their main security product is Sonic Firewall which filters, logs, allows or blocks specific types of traffic using a variety of strategies that have performance advantages. Both the Network Analysis tool (Wireshark), Sonic Firewall (Security tool), and Diagram Viewer (Visio), are all integrated as a single tool within GOLDmine. When accessing a customer record, the previous journal record includes all the information about the previous customer contact. Therefore, before a call is made, the journal is reviewed, diagrams are reviewed, and then the call is placed based on a schedule to service that client account. Old history is discussed with the customer and new information may be shared before new changes or efforts are initiated.

Competitive advantage(soft skills/business): Customers are greeted well, listened to completely and never interrupted, new information and old information is repeated back to ensure understanding of current issue, and all calls end with an agreed upon verbal and written approach in dealing with the problem. All employees demonstrated extreme customer service skills and banners and wall sayings are dispersed throughout the facility to emphasize this company philosophy. Western NRG provides a fairly inexpensive product line but with more expensive licensing. While their competitors are not selling many Firewalls Western NRG is because of their lower costs. Every year however, customers must pay for a renewal license thus new revenue is generated yearly helping to keep them profitable and making money. During the recession, many of their competitors lost market share, while Western NRG has remained profitable and was pleased to discover their lower cost of entry has been a huge advantage. Revenue is recovered in the long run thru the yearly licensing. As their customers grow and are successful, they continue to buy products at low cost and still pay for yearly licensing.

New business growth: As more companies broadcast Video from within their Private network to Public networks where users can easily access Video feeds, the need for Security and Video consulting will continue to increase. Western NRG provides a Video collaboration tool that can be used by companies to provide video feeds to internal employees and public consumers. In addition, medium size organizations wanting to provide internal business tools to a mobile workforce can benefit from Western NRG's Sonic Wall Firewall which oversees and inspects packets to ensure appropriated access is not misused.

Possible Classroom Project for a Network Services Consulting Company.

Can be used as Case Study in CNSE M01, M05, M13 courses

1. Research Western NRG online and describe what their primary product is and what type of customers do they serve?
2. Compare 3 different Customer Relationship Manager Software products and identify their features. How would these features support “Soft Skills” in working with Customers?
See: http://en.wikipedia.org/wiki/Customer_relationship_management
3. Describe what a Sonic Firewall does and its approach in filtering traffic. List and describe some of its features. (Ie: Rules, etc.)
4. Describe what a Cisco Pix Firewall does and its approach in filtering traffic. List and describe some of its features.
5. Describe Wireshark and its approach in filtering traffic. List and describe some of its features.
Option B –Download, install and used Wireshark during a classroom lab.
6. What relevant Microsoft and Cisco Certifications would benefit a technical specialist/consultant who supports Firewalls and Network Security?
7. What is GoldMine? List some of its features and how it can benefit a company with 100+ customers. What are some features that you find very useful?
8. What is Deep Packet Inspection (DPI) and what types of products use this approach? What are the advantages and disadvantages of this technology?
9. What type of computer and network issues can you see for a company that is using a product like Sonic Wall and McAfee Antivirus tools?
10. Describe Microsoft Visio in your own words and explain how this tool can help solve network problems where the size can exceed 500 nodes?
11. In using Goldmine to support customers, describe a scenario where you will be helping a customer who worked with your colleague last week on some network packet issues and you have been asked to work with the customer today. Assume new changes to the customer network have occurred, thus new network problems have surfaced, and you are not sure of the status of last week’s issues. How would you utilize Goldmine to ensure this account/customer is happy with your company’s service? Assume you have blocked 1 hour of your day to work with this customer over the phone. They are in New York. Write at least 8 paragraphs or 2 pages addressing all the areas you would discuss and attempt to resolve in working with this customer and what approach would you take. Identify your strategy and consider all the points above. How you would start, what would you discuss during that hour, and how would you end assuming not all problems would be fixed since additional work is needed on both sides. Consider the strategy or approach you would use to make sure the customer feels that some value or benefit is coming from Western NRG’s support. Outline and describe your approach.

Strategy for Sharing Externship visit with Colleagues

1 – Email this document.

2 – Share visit experience at Dept Meeting with emphasis on observed skill sets to enter this job category of Technical Support Services.