



# THE COMPUTERWORLD HONORS PROGRAM

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## CASE STUDY

### ORGANIZATION:

South Carolina Department of Probation

### PROJECT NAME:

Network Security and Secure Access

### Summary

The South Carolina Department of Probation, Parole and Pardon Services is charged with the active supervision of more than 35,000 offenders who are on probation, out on parole, or have been released as youthful offenders by the state Department of Corrections. Due to the far-flung nature of the South Carolina Department of Probation employees and resources, the information technology team needed to create an easily accessible, secure and scalable networking for the Department. The solution had to support employees no matter their location. The team built out the secure network with integrated firewalls, VPN appliances, intrusion detection and prevention solutions, as well as routers that include a variety of security options. The IT team can now monitor the network 24x7 and prevent attacks and attempted intrusions as they occur. The security afforded by the new infrastructure makes it possible to use DSL or cable modem for connectivity rather expensive T-1 lines.

### Introductory Overview

The South Carolina Department of Probation, Parole and Pardon Services is charged with the active supervision of more than 35,000 offenders who are on probation, out on parole, or have been released as youthful offenders by the state Department of Corrections. Roughly 600 members of the department's 1,000 staff are assigned to 56 field offices in the state and are directly or indirectly responsible for monitoring the offenders in the region.

In setting up the secure network, our Information Technology Systems and Services (ITSS) team faced a series of unique challenges. First, we had to come up with a solution that would serve the needs of a large number of employees doing a wide range of jobs throughout the state. The solution would have to provide secure networking between 56 remote sites and the main headquarters in Columbia, South Carolina while expanding to meet the needs of a mobile field work force as the department seeks to securely, efficiently and effectively collapse services into the core.

Secondly, our ITSS team had to build upon a network that is highly accessible and readily available to authorized personnel both mobile and in courts throughout all 46 counties in South

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*Columbia, South Carolina,  
United States*

YEAR:  
*2006*

STATUS:  
*Laureate*

CATEGORY:  
*Government and  
Non-Profit Organizations*

NOMINATING COMPANY:  
*Juniper Networks*



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Carolina. It needed to be ultra-secure to protect the highly sensitive data generated and stored by the Department. Because the system would be tied into the Internet and the State government's own intranet, security issues were of paramount importance.

Lastly, our ITSS team had to find a solution that would secure the outer edge of the network in a hostile environment while providing the flexibility to incorporate cost-effective and yet completely disparate forms of data transmission technologies. The solution had to have the ability, power and vision to adapt over time as the carrier technologies and the network evolved.

In the end, we decided to invest in a combined Juniper Networks intrusion detection and prevention, and firewall/virtual private network (VPN) solution, as well as Juniper multi-service secure routers, each well-suited to meet a particular need our Department had.

We knew that we had to build this to scale while taking into account the economics of the bandwidth that would be required as we began to collapse servers back to our central location where possible. The solution we came up with, after lengthy comparative testing, research and discussion, had to be secure and resilient.

We really needed to find a solution that was highly secure and that could handle a myriad of different technologies. We are going to do it better, faster, cheaper and more secure - quite a task but one we have taken on with a passion. The new Juniper Networks solution including the J4300s, the firewalls, the IDPs, and the core M7i routers provide exactly what we were looking for - standards based secure routing at the edge of our network with headroom and real confidence in the underlying technology and company.

### Benefits

Selection of the Juniper Networks products throughout the Department of Probation, Parole and Pardon Services has led to a more robust and secure networking solution capable of adapting and evolving as our department's needs change. Our ITSS team is now able to monitor system security twenty-four hours a day, seven days a week and detect attacks and attempted intrusions the moment they occur. The additional layer of security provided by the Juniper Networks IDP device has given the team better visibility into our network and has allowed us to eliminate potential sources of trouble like spyware, misconfigured PCs and areas of previously undetected Web traffic congestion.

Because of the easy to use management platform, the kinds of operational complexities that occur in most networks are greatly reduced in the ITSS network. The result makes remote administration, upgrades and support faster and easier than ever before. In the end, this common standard will save the ITSS team time, effort and money, while providing a much more flexible system than those offered by other solutions companies.

Since the Juniper networking solution was first installed nearly a year ago, it has proven to be highly effective at protecting the Department's infrastructure and data while offering authorized users easy access to the data they need. Our team is pleased with the result. Our new solution with Juniper provides us the security, peace of mind and scalability to meet our needs for years to come.



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### The Importance of Technology

Our ITSS team installed an intrusion detection and protection (IDP) device to give us added visibility into and protection from network intrusions. The Juniper Networks IDP 100 appliance provides up to 200 MB of throughput and supports up to 70,000 sessions. Using industry recognized stateful detection and prevention techniques, the IDP provides zero-day protection against worms, Trojans, spyware, keyloggers and other malware, minimizing the time and costs associated with intrusions.

To protect the network's edge where it meets the public Internet, we installed dual Juniper Networks NetScreen-208 firewalls in fail-over mode with a NetScreen-204 moving further in to assist in the core server and SAN environment. The flexible defense philosophy was intrinsic to the mindset of our Probation, Parole and Pardon (PPP) team as we evaluated what we believed would be the most secure and cost-effective means to connect the agency going forward. It comes down to the secure mindset as we move forward and the ability to make sure we can deliver services while mitigating risks for the business.

The Department's link with the state government intranet, which is viewed by our ITSS team as a potentially hostile zone, is protected by a Juniper Networks M7i multi-service edge router, capable of delivering Layer 2 or Layer 3 service to any customer.

With the core secure, our team moved to the final part of the solution, which was the implementation of multiple Juniper Networks J4300 services routers to be installed in each of the Department's field offices. A key point to these routers for the team was the use of a wide array of Layer 2 access protocols, including frame relay, Ethernet and PPP/HDLC, as well as the comprehensive range of supported interfaces.

### Originality

After serving their time in prison, many former convicts are under the jurisdiction of the state upon their release. While they are in this transition, former prisoners in South

Carolina are overseen by the Department of Probation, Parole and Pardon Services, which is a 750-person unit that supervises more than 35,000 offenders, who are on probation, out on parole, or who have been released as youthful offenders. About 580 of the Department's employees are based in 56 field offices scattered throughout the state and are responsible for monitoring the offenders in their regions. The Department also provides services to its agents in 46 different courts across the state. While in court, judges and their staff require immediately updated information on a particular offender. The Department's agents regularly travel to homes for progress follow-ups on former prisoners. The agents require secure communications with their field offices and the Department's headquarters in Columbia, the state's capital. The Department employees also communicate with other agencies, including social services, county and local law enforcement agencies, and vocational rehabilitation agencies.

Due to the far-flung nature of the Department's employees and resources, our Information Technology Systems and Services team had to master a serious challenge when to create an easily accessible, secure and scalable networking solution for the Department. Our solution had to support employees no matter their location. Agents need the ability to collect information when they visit offenders and check on their status. Then upon returning to their offices, they need to upload that information into the department's systems so the data can be used by others, and on



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future visits agents can see how the offenders progress.

### Success

Those who benefit from this are more than 750 members of the Department of Probation, Parole and Pardon Services employees who supervise more than 35,000 offenders, who are on probation, out on parole, or who have been released as youthful offenders. This includes about 580 of the Department's employees who are based in 56 field offices scattered throughout the state. These employees are responsible for monitoring the offenders in their regions. It also benefits agents in 46 different courts across the state.

Our target audience of users has embraced this project immediately.

### Difficulty

The biggest challenge was to create an easily accessible and secure networking solution for the entire department, despite the distributed nature of the organization.