JUNIPER NETWORKS® | **Engineering** Simplicity

THE CITY OF **PORTSMOUTH**

THE NEXT SOUTHEAST SMART CITY EYES EMERGING TECH CORRIDOR

Summary

Organiztion:
City of Portsmouth, Virginia

Industry:
Government

Business Challenges:
Build a dark fiber municipal network as a foundation of economic development to attract businesses to the city, as well as to support the network needs of city government, schools, and hospitals.

Technology Solution:
- *MX480 5G Universal Routing Platform*
- *ACX6360 and ACX5448 Universal Metro Routers*
- *Junos Space Network Management Platform*

Business Results:
- *Built the foundation of a smart city to offer services like citywide Wi-Fi*
- *Fostered economic development of new businesses with digital technology needs*
- *Future-proofed investment with a highly scalable 400 Gbps fiber ring*

The City of Portsmouth, Virginia, portrays a welcoming mix of gracious, small town character paired with up-and-coming technology powerhouse. Located in the vibrant Hampton Roads metro region in southeast Virginia, Portsmouth is building a state-of-the-art 400 Gbps municipal network that will rival every technology corridor sprinkled along the Atlantic coast.

"State, regional, and local agencies are vying to bring in new businesses as the competition paradigm has shifted. Location is not the frame of reference anymore," says Daniel Jones, CIO for the City of Portsmouth. "Businesses want exceptional connectivity and more technology choices. Portsmouth can meet those needs through our partnership with Juniper."

With the design and architecture complete, the Portsmouth Community Broadband Network (PCBN) will provide 56 miles of fiber infrastructure with a global, transatlantic reach through regional connectivity of fiber cables located in nearby Virginia Beach. Once complete, the network, which is scalable to 1.2 Tbps, will add momentum and validation to Portsmouth's efforts to achieve smart city status.

The PCBN is a vision of city leaders. Initially the design was intended for government operations, but the vision has far exceeded the original parameters. "After hearing from stakeholders in healthcare, higher education, transportation, and federal, state, and local government, the network architecture was redesigned to encompass all the stakeholders' needs," says Todd Rothfuss, IT network and security manager at City of Portsmouth.

Smart City Apps Run on Power of Simplicity

Portsmouth has earmarked multiple smart city projects that will depend on fast, reliable connectivity. A major need is to expand Wi-Fi into city parks and in transportation corridors. To further enhance transportation, the city intends to add IoT sensors to alert drivers of rising sea levels during storms and high tides. Another high-value benefit is that the network will enhance connectivity options by leveraging regional aggregation of Internet service providers at wholesale pricing models.

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- Daniel Jones, CIO, City of Portsmouth

"By enhancing connectivity beyond the two Internet service providers currently available, businesses can choose the best price plans and have a broader selection of service offerings," says Jones. "Construction of fiber infrastructure will reduce the entrance barriers for additional Internet service providers, while providing our citizens with connectivity alternatives."

A Foundation of Engineering Simplicity

Portsmouth chose the Juniper Networks® MX Series 5G Universal Edge Routing Platforms, Juniper Networks ACX Series Universal Metro Routers, and Juniper Networks Junos Space® Network Management Platform as the foundation of its citywide network. Juniper's focus on engineering simplicity was key in the decision.

"Our partnership with Juniper provides the foundational layer of next decade technology," says Jones. "Juniper's engineering and aggressive, leading-edge networking infrastructure gives Portsmouth the capabilities of next-decade technology now," Rothfuss adds.

Portsmouth has a similar forward-thinking vision. It will keep undertaking new smart city goals and stake out a rightful claim as technology hub for the best and brightest digital businesses.

About Juniper Networks

Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.

Corporate and Sales Headquarters

Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, CA 94089 USA
Phone: 888.JUNIPER (888.586.4737)
or +1.408.745.2000
Fax: +1.408.745.2100
www.juniper.net

APAC and EMEA Headquarters

Juniper Networks International B.V.
Boeing Avenue 240
1119 PZ Schiphol-Rijk
Amsterdam, The Netherlands
Phone: +31.0.207.125.700
Fax: +31.0.207.125.701

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