



NEWS RELEASE

China Unicom Teams with Cisco to Enable Cloud + Network Synergy with Segment Routing

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BEIJING, April 17, 2018 (GLOBE NEWSWIRE) -- Recently, China United Network Communications Group Co., Ltd. (China Unicom) officially announced seven new products: Cloud Network Connection, Cloud Networking, Cloud VPV, Cloud Broadband, Unicom Cloud Shield, Intelligent Boutique Video Network, and Boutique Financial Network. China Unicom has achieved a major milestone in pursuing network transformation based on Industrial Internet and has become one of the leading service providers in building "cloud + network" synergy.

Cisco has been collaborating with China Unicom for the past two years, to transform the existing traditional nationwide MPLS VPN network into Industrial Internet with the "cloud + network" synergy based on Segment Routing. This project marks a series of firsts:

- China's first Segment Routing deployment in a service provider's backbone network;
- the first case of interconnecting equipment from multiple vendors supporting Segment Routing;
- the first case of achieving high availability (HA) with controllers from multiple vendors

Industrial Internet is a concept derived from Consumer Internet. It refers to the practice of traditional industries leveraging the advantage of big data, cloud computing, smart devices and networks to increase internal efficiency and the ability to provide service for external customers. It is one of the most important ways for traditional industries to realize transformation and upgrade through "Internet+".

China Unicom sharply discovered the tremendous opportunity of Industrial Internet and worked on it as a corporate strategy to build China's first on-demand network that provides network routes with minimal latency for customers, supporting minute-level service launch. However, China Unicom's nationwide MPLS VPN backbone network covers 300 cities with more than 1200 devices, and once it is connected with the IP RAN/SPDC metro network in the future, there will be tens of thousands of devices involved. In addition, "cloud + network" integration requires the ability to provide traffic engineering service for each tenant and each application. This presents an unprecedented challenge to network scalability. None of these issues can be solved by traditional RSVP-TE.

Segment Routing inherent benefits of network simplification, massive scalability and cross-domain operations support perfectly fit with China Unicom's needs. Interoperability between vendors' devices and controllers was a mandatory requirement.

Cisco used the ASR 9000 router series as the Provider Edge router (PE router), and went beyond traditional third-party equipment (using the static Segment Routing solution) to realize the connection of SRTE. As part of the overall solution, Cisco provided its Network Services Orchestrator (NSO) and WAN Automation Engine (WAE), participated in activities such as business modeling, equipment configuration, topology information collection and route calculation for Cisco and third-party equipment, and successfully delivered a multi-vendor Segment Routing solution.

Cisco also worked with China Unicom to drive and achieve high availability (HA) with multiple vendors' SDN controllers. The system can monitor the condition of the master controller. When the master controller fails, the backup controller from a different vendor can smoothly take over all the business models, business examples, as well as configuration and route information, so as to complete the switching. This innovation is of utmost importance for upcoming 5G/large-scale SDN deployment.

Cisco's Advanced Services teams played a major role in the implementation phase of the project. To align with China Unicom's business strategy, Cisco did some "joint development" and customized development through a "three-step" strategy — consulting, implementation, and optimization. Cisco's solution support team acted as the single Point of Contact (PoC) coordinating with related suppliers to follow up and screen problems, and the time needed to solve problems was reduced by 43%.

Ma Jichun, chief engineer from the digital department of China Unicom's design institute CITC, said: "In the context of the new era, China Unicom strives to work with its partners to build a 'cloud + network' ecosystem by actively adopting SDN, NFV, cloud computing, Ultra-broadband Network and other technologies. There is a broad space for China Unicom and Cisco to engage in close collaboration and work together to develop leading technologies such as Segment Routing and SDN. China Unicom will build future networks with an open attitude, to better meet the new needs of customers."

Jonathan Davidson, Senior Vice President and General Manager of Service Provider Networking at Cisco said: "Cisco and China Unicom have worked to transform its networking model and rebuild an intent-based next-generation network. Our collaboration is Cisco's first Segment Routing deployment case in China involving technology from multiple vendors. We look forward to continuing our joint innovative practices, working together to drive the strategic layout and coordinated development of Industrial Internet."

Cisco is leading the disruption in the industry with its technology innovations in systems; silicon; software and security; and its unrivalled expertise in mass-scale networking, automation, optical, optics, cable access, video, and mobility. Combining these capabilities with Cisco's portfolio of go-to-market security, collaboration, IoT, and professional services, we enable service providers, media and web companies to reduce cost and complexity, help secure their networks, and grow revenue.

Supporting Resources

- [Cisco Segment Routing](#)
- For more information about Cisco service provider news and activities, visit the [SP360 Blog](#) or follow us on Twitter [@CiscoSP360](#)

About China Unicom

China Unicom has branch organizations in 31 Chinese provinces (autonomous regions and

municipalities) as well as multiple countries and regions outside of China. It is China's only telecom service provider listed on New York City, Hong Kong and Shanghai at the same time. China Unicom ranked No.241 on the 2017 Fortune Global500 list.

About Cisco

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