Urban Operation Center Solution
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The objective of smart city construction is to improve people’s livelihood, promote industry development, and boost urban management efficiency by leveraging cutting-edge ICT technologies. To underpin the development of smart cities, a highly flexible and reliable open architecture is needed. To address this need, ZTE developed an Urban Operation Center (UOC) in compliance with related industry standards to support the long-term development of smart cities.

Challenges Facing UOC

With years of construction of IT facilities, governmental departments of many cities have built fairly complete information supporting systems for their own business, which have accumulated more and more data. However, owing to the lack of unified management, these massive urban data resources are collected from diversified sources and based on different criteria, making inter-department data sharing very difficult. So it is urgent to effectively integrate all these business systems and build unified information infrastructures that can be used by all departments (e.g. a unified cloud data center).

Although some cities have built a preliminary architecture for data sharing and exchange, there are still many problems:

- **Poor data quality**: No quality check and control for data, too much invalid data.
- **No unified data standards**: No unified standards for data collection and interpretation, making data application difficult.
- **Information silos**: No processing for information from different sources, lack of data correlation and integration.
- **Lack of mining the deep value of data**: Only original raw data is shared, and the deep value of data has not been mined.

Introduction to the Solution

Solution Composition

The ZTE UOC solution aims to provide a unified public software platform for the overall planning of smart city construction, and solve the issues of data silos and cross-department data analysis as well as how to display urban operation status. Based on the basic platforms of cloud computing and big data, UOC improves the work efficiency of government departments through data sharing, provides support for governments’ decision making through cross-department data analysis, displays urban operation status & key indicators of each department through a city dashboard based on unified GIS to improves urban supervision ability, and enhances the elasticity and openness of the smart city architecture through a unified open software platform.
Solution Highlights

**In-depth understanding of related industry standards:** ZTE has participated in developing the standards of the public information platform for the Ministry of Housing and Urban-Rural Development. ZTE’s UOC solution fully complies with the standards of the Ministry of Housing and Urban-Rural Development and the Ministry of Industry and Information Technology.

**Open public information platform with high flexibility, reliability, and performance:** This SOA-based platform is developed on the basis of the enterprise service bus. All the capability engines and general components can be combined flexibly to meet the interfacing requirements of upper-layer applications. All the 14 smart applications of ZTE for various industries are based on the UOC platform.

**Strong capability to respond to customization requirements:** The experienced project implementation teams, strong research & development process control capability, unified development environment, and wide variety of capability components can effectively support on-site customization.

Case Studies

**Smart City Construction in Qinhuangdao**

ZTE worked with the municipal government of Qinhuangdao to complete the top-level design of the smart city for Qinhuangdao and planned to build a smart city with an overall architecture of “1+N”, i.e., to build N application systems based on one comprehensive public information “Cloud” platform. All application systems such as safe city, smart transportation, smart healthcare, smart tourism, smart community, smart security check, smart energy and smart environment monitoring were built based on the smart city cloud platform.
The smart city of Qinhuangdao set a reference model for new-generation smart city solutions and construction mode, and helped the government to break information silos, centralize and share information and achieve unified operation.

Smart Transportation Cloud Platform in Ningbo

The smart transportation cloud platform provided by ZTE for Ningbo integrates multiple service systems from the traffic police, Transportation Commission, urban management department, and bus companies. Externally it provides more than 30 public traffic data services, while internally it acts as a unified comprehensive traffic control platform. In September 2013, an APP named "Ningbotong" was launched as an exemplary application of the transportation cloud platform. By now, the platform has more than one million users, with over 200,000 daily active users.