MSC Pool yields attractive ROI

MSC Pool is increasingly popular with operators due to its numerous advantages, such as load balancing and enhanced network reliability. A closer look reveals it possesses a range of benefits that can contribute to an attractive ROI rate.

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Advantages of MSC Pool

Years of technological evolution and commercial application have shown MSC Pool to be a solution ensuring reliable voice services. MSC Pool networking copes with surges in traffic, greatly reducing the threats caused by unbalanced load on NEs. It also implements disaster recovery at the VMSC layer to guarantee stable and seamless services.

Increase resource utilization

The resource-sharing mechanism of the MSC Pool balances loads among network elements (NEs) to mitigate threats from imbalanced traffic loads and surges that may arise based on time and location. Traditional systems require each network office to configure equipment capacity based on the maximum traffic model, which is highly inefficient.

Conversely, the MSC Pool network sets its capacity in line with the total traffic volume to be supported, allowing user traffic to be evenly distributed among MSC nodes. Redundancy capacity configuration costs are saved, and NE resource utilization is enhanced.

MSC Pool technology can also facilitate more extensive service coverage, while inter-MSC location updates and handover operations can be converted into intra-MSC operations. This cuts the number of handovers and signaling overheads incurred on the MSC and HLR, and saves transmission bandwidth and device resources. The subsequent freed up capacities can be allocated to process traffic to realize additional performance gains.

Improve system reliability

Mechanisms for sharing resources, balancing loads, and flexibly distributing traffic are the foundation for reliable disaster recovery. Automated load-balancing across the MSC Pool achieves real-time redundancy protection by switching service requests from a faulty MSC to another in the network pool.

The MSC Pool utilizes network resources more efficiently to curtail CAPEX and OPEX, and its innovative technologies, including geographical redundancy and immediate mobile terminating call recovery, boost network reliability tenfold to 99.9999%.

ROI analysis

The advanced MSC Pool network architecture and optimized traffic models combine to minimize investment, which can be demonstrated through an ROI analysis. This analytical method evaluates key indices such as the investment yield, the cost recovery period, and quantitative benefits. For the MSC Pool, the assessment process primarily focuses on CAPEX, OPEX, and revenue, and then looks at
The solution yields a range of direct and indirect benefits:

**Direct benefits**

Enhanced network reliability: The reliability rises from 99.999% to 99.9999%; the shorter service interruption times have in turn boosted returns. In the first year of deployment, the Huawei MSC Pool stimulated a USD20,000 revenue increase for Operator A.

More calls completed: The solution has reduced inter-MSC handovers and location updates within the MSC Pool, and has significantly raised network KPIs, such as call completion rate, which directly increases MOU. In its first year, the improvement in call completion rates yielded an extra USD2.76 million for Operator A.

Reduced investment: Load-sharing easily copes with peak traffic hours by efficiently utilizing network-wide resources, rather than just those of individual sites. This also means that the network can be expanded much more cost-efficiently. Message traffic within the pool has decreased, slashing the bandwidth needed and lowering transmission costs. Lab tests reveal that interface C/D bandwidth can be cut by over 20% after an MSC Pool is deployed. For Operator A, this translated into a first year revenue increase of USD70,000.

**Indirect benefits**

Reduced churn and higher brand equity: The Huawei analysis revealed that the MSC Pool helps effectively avoid 12% of network faults. Enhanced reliability increases customer loyalty, the operator’s image, and indirect revenue gains.

Reduced maintenance costs: The greater efficiency of the MSC Pool’s unified O&M system reduced costs for Operator A by USD70,000 in the first year of deployment.

The Huawei MSC Pool solution has been commercially deployed in 40 scenarios across the globe. ROI analysis testifies that the Huawei MSC Pool is an effective solution for raising revenue; minimizing CAPEX, OPEX and O&M; reducing customer churn; and boosting network performance. Huawei has the experience, capabilities, and solutions to form long-term partnerships that maximize returns for operators.

**Case study**

In 2010, Huawei performed an ROI analysis on the Huawei MSC Pool of Operator A based on six fiscal years of projected data. In its first year, the MSC Pool will: 1) increase revenues for Operator A by over USD2.76 million; 2) cut maintenance costs by USD70,000; 3) save USD70,000 in C/D interface bandwidth costs; 4) help to avoid 12% of network problems.

Fig. 1 shows the projected trend of Operator A’s MSC Pool up to 2015. Low CAPEX and OPEX coupled with increased revenues as a result of the solution will ensure that the investment costs are rapidly recouped.