



## THE CHALLENGE



A large utility company needed to deploy many thousands of SIM cards every month, in devices spread around the greater metropolitan area of Johannesburg.

Starting from a base of only a few hundred devices during testing at the beginning of the project, there are now in excess of 350,000 MSISDN numbers registered on the APN and RADIUS server.

The challenge was to ensure that there were no disruptions to service whilst the deployment was scaled up on an ongoing basis. Furthermore it was critical that the provided infrastructure was up to the task of accommodating the load created by the large quantity of connection requests generated by the devices in the field.

INDUSTRY:

Utilities

### SOME INTERESTING STATISTICS:

**Total quantity of MSISDN numbers provisioned: 310,000**

**Average number of concurrent sessions: 59,815**

**Peak concurrent connections: 61,500**

**Average transactions per hour: 32,482**

**Average transactions per day: 779,561**



# NATIONAL INSURER case study

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## THE SOLUTION



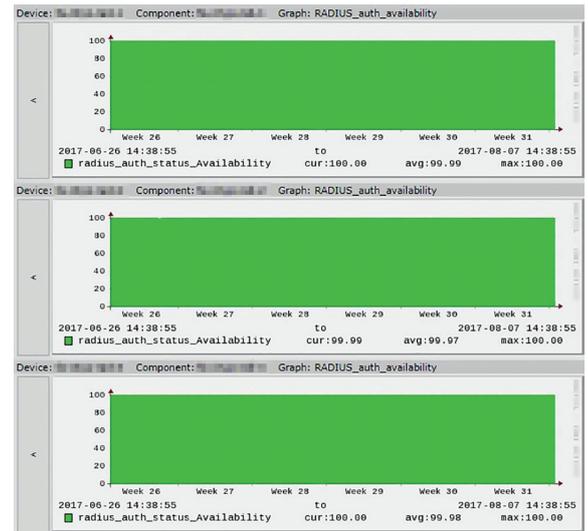
To accommodate this stringent requirement, MSB Micro Systems built and lab tested a totally new solution in a matter of days. Graphically represented the solution is depicted by the following simple picture:



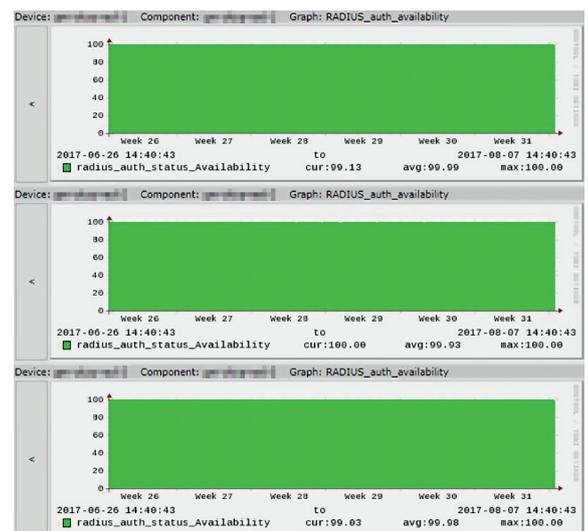
A proprietary server performing a load sharing function fronts the deployment and sends connection requests to an array of RADIUS servers in the back-end. Additionally, as the demand for an increased number of devices connecting to the service grows, it is a simple operation to add more RADIUS servers without causing any down-time to rebuild the entire solution.

Finally, the solution described above is replicated over two geographically separated Data Centres thus ensuring full RADIUS redundancy in the unlikely event of total failure of one of the Data Centres.

### Client RADIUS availability for a 6 week period: Hosting Facility 'A'



### Client RADIUS availability for a 6 week period: Hosting Facility 'B'



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