



Third Generation OSS: StableNet

Dr. Stefan Köhler, CEO Infosim, explains why StableNet is well adapted to a dynamic Telco and Enterprise environment



Dr. Stefan Köhler, CEO, Infosim

Dr. Stefan Köhler has more than 15 years of experience in managing, design and optimization of IP networks. He studied theoretical Physics and Computer Science at the University of Würzburg. From 1998 to 2003 he was member of the scientific staff of the computer science and distributed communication department at the University of Würzburg. His fields of interest at this time were the analysis and optimization of routing protocols and the performance analysis and implementation of Quality of Service Mechanism like DiffServ or MPLS. During this time he was involved in several research

projects with Nortel, Siemens, German Telecom or France Telecom. He has contributed several technical publications specifically in the area of IP routing, network optimization and QoS and is one of the inventors of some Infosim owned patents. He founded Infosim GmbH & Co. KG in 2003. He is currently the General Manager of Infosim GmbH & Co. KG.

Q: What is StableNet's unique selling point?

A: StableNet is a network management product, covering service assurance as well as service fulfilment. There are two main unique sales points from this:

The first point is the automation of the setup process, based on a flexible auto discovery process and the second one is the full integration of fault, performance and configuration management in one framework. If you look at classical solutions, these products are not working well together and thus you have to spend a lot of time integrating them together. Usually other solutions have different database models and the information you need is spread across several programs, while within StableNet all is integrated by design.

Big ISVs still have a lot of these integration problems because they bought a lot of smaller companies, resulting in a conglomerate of individual solutions. They do not really have an integrated framework and integration has to be done manually case by case.

Infosim's USP is one unique framework with four complementary solution modules, which are highly flexible, that you can switch functionality on and off.

Q: Can you give me an example of this?

A: If you look at fault management, as it was implemented in classical systems, you have to code rules and lots of work to get a proper model setup and working. A lot of these tasks however can be simplified with StableNet. ▶

When we auto-discover, for instance a router, then all the dependencies between other network elements and the device dependent measurements are set up automatically.

If it is an Exchange server, then we set up all the related measurements and monitoring for that Exchange server, when identified during the discovery process.

No-one has to intervene manually to do that and this also includes the fault management part. When we discover the network, we identify the dependencies and we set these dependencies in an automatic way.

We also support the manual set up of some measurements, but this is done on a case base case basis when a customer requests a special report.

With StableNet you usually do not have to put in rules for the network level, because this is automatically handled during the discovery process. It recognizes which devices are connected and does set up 80 to 90 percent of the fault management process in a fully automated way.

Nevertheless not all of the fault management setup can be done automatically. For example, business processes are services which by nature, cannot be discovered automatically and

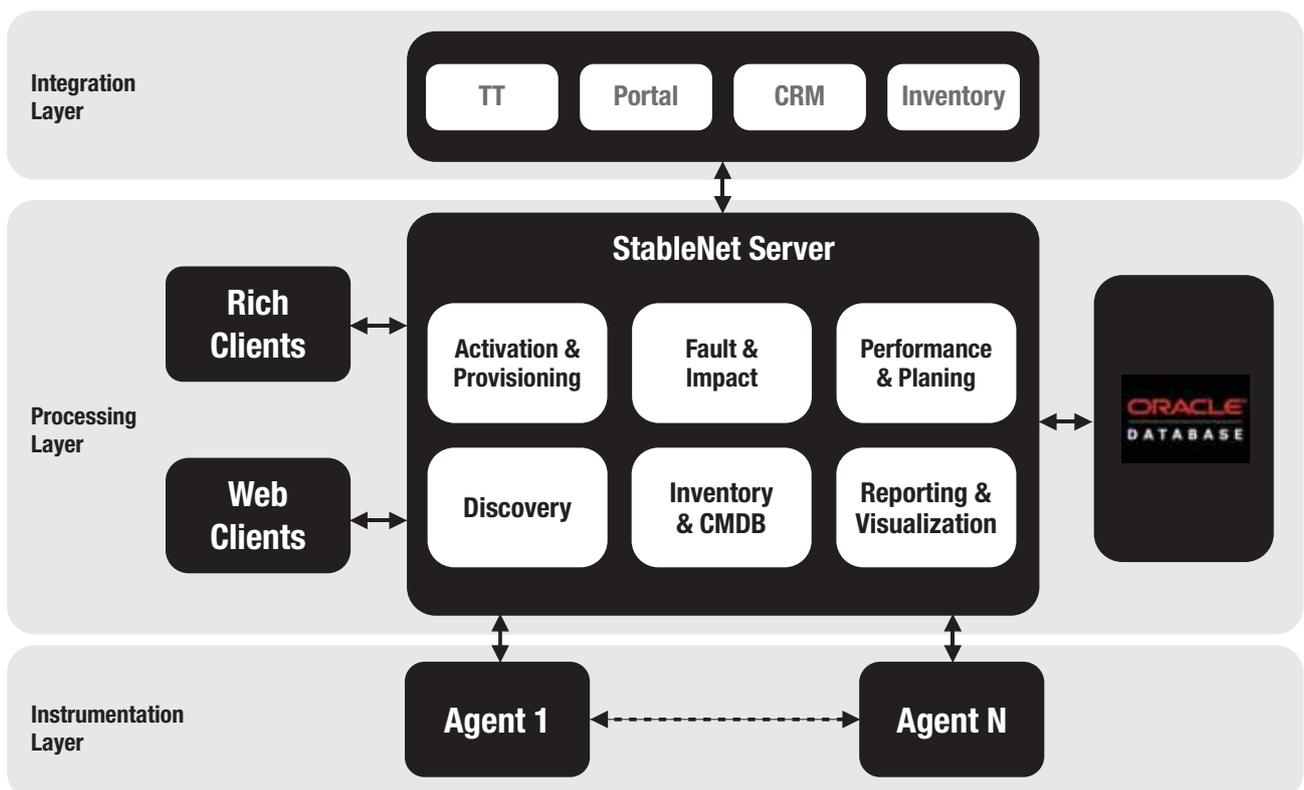
thus you have to set up.

Simplified Integration is another USP. We are calling our solution a third generation OSS, because device integration is easy and we easily integrate both ways with other B/OSS. Second generation OSS are what we call 'closed shop' solutions, which may cover different vendors but are not easy to integrate, and don't have open APIs.

On the business side, we focus on covering the network elements up to the business process. We can group devices to services and these services can then be grouped to business processes. This gives us significant flexibility, supporting different requirements of different groups (e.g. management, IT department or your internal and external customers). For example, operations or IT management usually want to first see only an overview business process status. They require to be informed about any issue or problem in an easy way, with the option for the team to drill down into details in case, for quick problem solving analysis.

To fulfil these requirements we have cover in the fault management two areas: a) Root Cause Analysis, which does combine many alarms into one, to inform you about the root of an issue. This does enable you to fix the network as fast as possible

StableNetSOA



► to provide the optimal service your customers. The root cause computes the impact and details, e.g. it is pinpointing to you which department you have to inform in order to fix the problem.

b) Besides the Route Cause, we also handle impact analysis. This is possible due to the service mapping functionality within StableNet and due to the ability to integrate additional information obtained from other tools using StableNet's third generation open interfaces.

Example: Customers could have thousands of locations in Europe, using local service partners to fix problems. If an alarm comes up, the service partner at the location will be also informed what is going on and will be notified that they should go to the location and fix it. In addition your business impact is visualized and where are service level agreements reaching a critical state.

Q: How do you distinguish between the two versions of StableNet designed for Telcos and Enterprises?

A: The core of both StableNet solutions are similar with StableNet Telco having more modules, more Telco specific items and more technology like support for FTTX and BGP routing.

For the Enterprise variant, scaling and high availability requirements are usually not as high and not required.

We had developed the Telco version first, but then we realized very quickly that our product would also fit well for IT management of an enterprise. This turned out to be a big advantage, because if you look on the Enterprise side, service oriented views were already demanded before this was common in the Telco space. Now, Telcos ask more and more for service oriented views.

We separated the products, but the basic architecture for the Telco and Enterprise version is similar, differentiated mainly by functional add-on modules and scaling extensions.

Q: How does your solution improve the Network, IT- and Service Management Situation for customers?

A: There are currently several main topics:

a) Both in the Enterprise and Telco environments, a key driver is the consolidation of solutions. If you look at Enterprise customers, they have the problem of having several solutions from different vendors with different maintenance contracts. They want to consolidate down to one solution. I compare the situation with the situation before the early ERP systems. You had different tools for sales & marketing, purchase, warehouse, manufacturing, etc. logistic and it was a big effort necessary to consolidate the information to get an overview about your company. Then vendors like SAP or Oracle invented the first ERP systems to bring things into a common view. One unique solution that does provide you with all information has lot of advantages for IT-Operations and for the Telco space. We believe that StableNet can be this solution for your IT operation.

b) There are two large technology areas that we and our Telco customers are focusing on: That is FTTH (fibre to the home) and MetroE, most commonly together with an all IP strategy. We are looking at MetroE and FTTH, because these are the areas where we

see large investments. Not to forget: We already support IPv6, for next generation networks such as LTE.

At present for example, we are deploying StableNet as the management solution for the very large FTTH (fibre to the home) project Nucleus Connect in Singapore.

Q: What's Nucleus Connect?

A: Singapore is installing a full, country-wide, fibre to the home network. It is one of the biggest FTTH networks at the moment. It is the project that everyone in the world is looking at. The Government of Singapore has invested more than S\$1b (€750m) in infrastructure and founded two companies for that. One is responsible for putting fibre in the ground and building the physical network and the other is responsible for running the network.

The intention is that each end customer has a box with about 4-8 ports with Nucleus Connect is responsible to deliver the connection. They are not going directly to the customers. Other ISPs will provide services to the end customer like telephony or IPTV and using the FTTH network. Customers can have telephone services from company A and solution services from company B while Nucleus Connect providing the virtual connection to the customer. Infosim is delivering the overall network management solution for the project.

We do also support network management of other technologies like LTE, that provide more bandwidth to the end customer side, but this increase of bandwidth at the last mile must be available in the middle tier too. It doesn't make sense to have 50 Mbps to your phone while your backbone network can't deliver the data to your phone. You need a good mobile backhaul infrastructure to keep up with this increase. StableNet can also be used to monitor and do performance reporting on fix mobile converged networks within one integrated solution. Our focus on the Telco side does also include the integration of those solutions. Telcos spend a lot of money to integrate new technologies in there existing environment and they are always interested in new, cost saving solutions.

Q: Are the changes you have outlined top down or in response to customer needs?

A: It's mainly based on customer feedback. For example, we built in service process monitoring in StableNet. This was strongly influenced by key customers expressing what they did require mostly. Six years ago we started developing a more service oriented architecture, which is today for sure a huge advantage. Other solution parts were influenced by the ongoing technology change, e.g. focusing on MetroE and LTE are based on market demands. We know that we delivering a great piece of OSS and IT management software and we plan to keep up with the leading edge technology to continue delivering an advanced product with StableNet.

For more information please visit:

www.infosim.net