

## Success Story

# UBS Relies on Proactive Application Performance Management in the Mainframe Environment

UBS is one of the world's leading financial firms, serving an international client base. The bank operates in over 50 countries and from all major international centers of finance. UBS employs more than 80,000 people around the world. This leading market position requires a complex and global IT infrastructure which needs to cope with great challenges regarding the availability, stability and performance of applications and the efficient usage of resources.

We spoke with Hansueli Weber, who is responsible for performance management, about the requirements and solutions of UBS in this area.



Hansueli Weber has been working in the IT department of UBS for over 30 years. He passed several areas of IT – from operator and support technician in the data center to database administration and database technology, first for IMS, later as DB2 specialist. He has been working in the field of performance management for several years now. Here, he is responsible not only for system performance but also for performance measurements and analyses.

### Key facts about UBS

- UBS is a leading global wealth manager, a leading global investment banking and securities firm, and one of the largest global asset managers.
- In Switzerland, UBS is the market leader in retail and commercial banking.
- With headquarters in Zurich and Basel, Switzerland, UBS operates in over 50 countries and from all major international centers.

### Mr. Weber, please describe the IT infrastructure of UBS AG and the challenges in the field of performance management.

UBS operates several global zOS sysplexes. Our system environment consists of over a dozen CECs (Central Electronic Complexes), located in the USA, Switzerland and APAC. Altogether, 22 sysplexes with over 50 LPARs run on these machines. Within our system architecture, we operate diverse subsystems such as DB2, CICS, IMS, MQS, USS, SAP and Websphere. Our distributed environment counting a multitude of servers is connected with the zOS mainframe as well.

The online system runs on CICS Transaction Server. The transactions are executed in about 1,000 CICS regions worldwide. The data on the mainframe are mainly kept in DB2 databases. These are spread on over 30 datasharing groups with over 100 DB2 members altogether.

The Swiss systems consist of six sysplex environments, the largest being a 12-way sysplex. Plexes and disk subsystems are allocated to two locations respectively and connected via Ficon. The data are mirrored with PPRC. We use GDPS to ensure availability. In this environment, over 40 million online transactions are executed each day as well as over 200,000 batch jobs.

Our challenges in the area of performance management lie in controlling the global organisation and the high number of sysplex environments. Moreover, we need to manage a large bandwidth of hardware and software and a range of most diverse applications. In the past few years, all systems have been merged to only a couple of locations and the complexity of hardware and software has increased considerably.

This is why performance management is very important for us. Our central performance team has a staff of 10 people. The team belongs to the department Mainframe Engineering and is a line organisation. It has established itself in the past few years and is highly accepted by the management. Our responsibility includes managing and taking care of all performance problems and tuning activities in the whole mainframe environment. In addition, there is a project organisation responsible for performance optimisation which reports directly to the Chief Information Officer.

**Please describe your performance management concept. What are your goals in this area?**

We have put in place a 4-stage process, consisting in proactive control, monitoring, trend analyses and ad hoc measurements including analyses. To support this process, we use a number of tools. Our highest goals in the area of performance management are to ensure the availability and stability of applications and the efficient usage of resources. We can thus optimise costs and comply with our customers' SLAs.

**Why did you opt for the TRILOGexpert products?**

In 1995, we installed the measurement product STROBE<sup>®</sup> and one year later the automation engine APC for STROBE<sup>™</sup>. In 2001, we started to replace STROBE with InTune<sup>®</sup>, which was later superseded by the improved version TriTune<sup>®</sup> by TRILOGexpert. In the whole process, we always used the respective versions of the automation component APC<sup>™</sup> by TRILOGexpert. Using TriTune without APC would make no sense for us. We would lose proactive control, e.g. automatically discovering runaways and triggering TriTune measurements. We use the tools on all systems for batch and CICS. We are thus being informed about performance bottlenecks before serious problems occur.

**How are the products integrated into your performance management concept?**

We use TriTune and APC for TriTune mainly proactively as well as for ad hoc measurements and analyses. In the batch area, APC automatically discovers runaways, immediately triggering TriTune measurements. The alerts created by APC generate a PM One ticket. For online, we measure some selected CICS regions during peak time every day.

**Which are your benefits gained from using TriTune and APC?**

By using TriTune and APC, we can guarantee the high stability of applications and compliance with SLAs. Thanks to this integrated solution by TRILOGexpert, we are able to discover and solve problems promptly. On average, about 50 - 100 problem tickets are generated each month. These help us gain expertise for continuous improvements and to put these into practice quickly.

**Is workload charging a relevant topic for UBS?**

Yes, the costs of the business are passed on to the customers by means of an internal clearing system. This means that our customers directly profit from the benefits achieved through performance management.

**How do you cope with the challenges in the client server environment?**

We create daily reports of the transaction load which client server applications generate on the mainframe through the connection via MQ CICS, SAP and DB2 Connect. The distributed applications are controlled by their own monitors.

We are planning to install the APC Performance Desktop in order to obtain additional sysplex-spanning views on performance data and to be able to correlate performance metrics of various sources.

**Are you happy with TRILOGexpert as a provider?**

Since 1995 we used STROBE and APC successfully. When we replaced STROBE with InTune, we had to deal with some problems at the beginning. It was our goal to have the same functionality with InTune as with STROBE. By working closely with BMC and through investigations by UBS we were able to get closer to this goal during the years and to reach it in the end. By converting to TriTune, the quality of the product further improved. The cooperation with the TRILOGexpert support works very well.

**Please give us a short perspective on the next steps in the area of performance management at UBS.**

We are planning to install the APC Performance Desktop. This installation will be on a sysplex under Websphere. All production systems will transfer the data on the mainframe collected by APC to this sysplex. This will enable us to carry out performance analyses from a single point of view, the web-based graphical user interface ensuring enterprise-wide data access.

We will not need to log in on each sysplex separately in order to analyse problems. We can thus save a considerable amount of administrative time and effort. In addition, the APC Performance Desktop generates various tables and diagrams which provide consolidated and concise views on the performance data of our enterprise from the perspective of the zOS mainframes.

This article has been written by TRILOGexpert in close cooperation with Hansueli Weber, UBS AG. We thank him for his valuable assistance.

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InTune® was a registered trademark of BMC Corp. It was replaced by TriTune in 2006.

## Proactive Application Performance Management with Automated AQM



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