



RHI uses Open Source Monitoring



The Client

The RHI Group, which has its headquarters in Vienna, Austria, is a global market and technology leader in the field of high-grade ceramic refractory products. As a global player with Austrian roots, RHI employs around 8,400 employees at 33 production sites in Europe, North and South America, China and India. The Group has more than 70 sales and service locations on four continents. RHI produces more than 2 million tons of refractory products yearly. These are refractory bricks, casting mixes and mortars as well as functional products.

Heterogeneous IT environment

As is the case with a lot of companies, RHI has a heterogeneous hardware environment. There are a wide range of operating systems in use, switches from a variety of manufacturers as well as a large number of both physical and virtual servers. Up until 2009, RHI also had a number of different monitoring solutions in place. However, none of these could be used to monitor the Group's entire IT infrastructure. In order to establish a central monitoring system, RHI wanted to replace these different systems with a comprehensive all-in-one solution.

„Our main goal was to move from a reactive to a proactive form of system administration. Another objective was to reduce our maintenance costs. But even more important than the cost factor are the benefits resulting from being able to monitor our entire IT infrastructure with a central system that is also able to scale“, says Gabriele Albus, Director Information Technology RSSC Europe, RHI.

A multi-user capable system

RHI was looking for a multi-user capable system that would allow reporting per site, while at the same time providing an overview of all sensors in use through a unified console. In addition, the system should have a comprehensive rights management system, ensuring that site administrators at the various locations would be able to manage their local IT infrastructure. The Nagios based monitoring system [openITCOCKPIT](#) fulfilled RHI's requirements. openITCOCKPIT was installed in a central configuration with loosely coupled satellite systems at selected locations. This makes it possible to monitor these locations independently from the central, web-based management system; although these satellite systems are configured through the master system, to which they will also send the monitoring results.

Seamless Monitoring

This concept will ensure that even in the event of WAN interruptions monitoring will run smoothly. In addition to this, the master system is designed as a high-availability cluster. Real-time mirroring of all data between the cluster nodes allows for lossless switching within seconds. The high-availability cluster is built upon components of the open source storage project “openATTIC”. In addition to mirroring, the cluster system will also ensure that data consistency is maintained across all systems involved. The cluster will monitor both the state of the hardware components and that of the software used for monitoring. In case of failure of a specific component – or even of the whole system – there is a targeted response to the error that occurred. This allows for the fastest possible recovery.

The master system evaluates all incoming events and directs alarms to the OTRS Ticket Request System. In OTRS, the event is evaluated further, using notification rules that were developed as a custom extension for RHI. Notification rules can easily be configured through the user interface by using logical AND- / OR operators as well as nesting. The notification rule for a specific event is associated with the ticket and includes all alerts and actions that are to be triggered. For example, a rule can specify which particular group is to be notified (static or dynamic) and by which means (email, sms notifications, ...). Events managed through openITCOCKPIT and OTRS can also be opened in other systems, should the need arise. By using „dynamic fields“ in OTRS search, tickets can easily be found based on hostname or IP address.

In addition, the easy navigation and the clear structure of openITCOCKPIT allow IT managers to quickly assess error messages and to see the way events are connected. Last but not least, the open source nature of openITCOCKPIT makes it an extremely flexible and adaptable solution.

Peter Lipp, Regional Sales Manager Austria at it-novum: “After a successful proof of concept and a thorough test phase, RHI was very happy to choose our product [openITCOCKPIT](#). When it came to the actual implementation, the concept for the global rollout and the integration with the OTRS ticket system, our consultants have done an extremely good job. The project is a prime example of how a professional-grade open source solution can be integrated with a complex, non-homogenous IT environment and how – when it is combined with expert consulting services – it will lead to direct customer benefits.“

openITCOCKPIT and it-novum

The company behind openITCOCKPIT is it-novum, the leading provider of open source business solutions on the German-speaking market. openITCOCKPIT came about from initial monitoring work carried out on the complex infrastructure of the multi-national KAP AG group and has been constantly expanded and further developed for external customers over the past ten years. openITCOCKPIT is, therefore, based on sound practical experience in large monitoring systems.

With our 85 employees, we mainly serve large SME customers and major corporations in the German-speaking world from our headquarters in Fulda as well as from our offices in Düsseldorf, Dortmund, Vienna and Zurich.

Thanks to our ISO 9001 certification, it-novum is one of the few open source specialists that stands behind the robust business capabilities of its solutions with a quality assurance system.



Added value through reliable support, consulting, and successful project implementation

- it-novum can offer you tailored support models based on your individual business requirements. And to ensure the availability of your open source-based systems, we can provide you with the appropriate support contract to suit your needs, if required.
- Our own maintenance department will support you in the daily operation of your ITSM solution and can be assessed according to guaranteed service level agreements (SLAs).
- As an IT consulting firm with profound technical expertise in open source business solutions, we are unique and stand apart from the standard offerings of the large solutions providers. Our goal is to provide you with high quality advice and consulting services across all project phases – from analysis to conceptualization to implementation.
- We provide multidisciplinary project teams consisting of developers, consultants and economic specialists. And to help you in the decision-making process, we also offer proof-of-concept assistance.
- By working through a practical simulation and your own prototype system, you can decide for yourself – completely risk free – whether our offerings are right for you. You will also benefit from the security, predictability, clear project methodology and sensible costing our services provide.

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