

NetPhantom[®] at R+V Versicherung



Volume insurance business via bank branches

The dense network of Germany's Volksbank and Raiffeisenbank branches offers a priceless advantage for selling R+V insurance plans and providing customer care. The sale of insurance products by these cooperative banks' branch employees is an essential factor in R+V's volume business. The banks' specialists are usually not well-versed in the intricacies of insurance, however, so it is absolutely crucial that high-performance and easy-to-use IT applications offer them efficient support in advising customers.



R+V Versicherung AG has a multitude of high-performance mainframe applications to support its numerous insurance products (including life, motor, accident, home and liability insurance). One of these central host applications supplies a rate calculator for R+V products. R+V was looking for a modern solution that could make these applications' offerings available to bank employees in the 14,400 Volksbank and Raiffeisenbank locations in such a way that the employees can quickly calculate costs and premiums for bank-branch customers

Host rate calculator now in Web portal format

The R+V Versicherung AG is among Germany's largest universal insurance companies and is the biggest bank insurance company. More than five million customers avail themselves of R+V's offerings, which include all common insurance types. In addition, R+V insures the cooperative financial transaction banking network that serves mainly Volksbank and Raiffeisenbank customers, along with other well-known financial institutions, such as the Schwäbisch Hall Savings and Loan Association and Union Investment. The insurance products are marketed primarily through the approximately 14,400 Volksbank and Raiffeisenbank branches, where about 11,200 employees are currently handling about 17,8 million insurance contracts.

without needing thorough knowledge of insurance-related rate structures. In addition, the company wanted to transfer the respective host applications in which the corresponding data and algorithms are implemented to a modern graphical user interface (GUI) in order to then embed them into an existing Web portal structure.

Core functions from tried-and-true host applications

The associated specifications provided for the continuous use of the algorithms currently in place, partly because they are very powerful and partly for cost reasons. After all, it is more expensive to completely reprogram the rate calculator functions and to implement standard software than it is to reuse the core functions of tried-and-true host applications after wrapping them and linking them to the prevailing program paradigms via efficient interfaces.

Standard software is up to ten times more expensive

Insiders believe that standard software costs up to ten times more than the intelligent re-use of old host applications because of its long learning curve and the extensive programming required to customize it.

Reprogramming—a much bigger adventure

Reprogramming these applications, for instance on the basis of application servers, is an even more massive financial and organizational adventure. Big software projects very often go over time and over budget, not to mention that the leading application servers sometimes require outlays of hundreds of thousands of euros just as a basic investment before the technical specifications are implemented.

Host applications as a business asset

Consequently, R+V Versicherung AG sought out a tool that brings the scope of the host applications required onsite to the bankers' PC workstations, giving them access to the algorithmic power of the host application via a user interface customized for their particular needs.

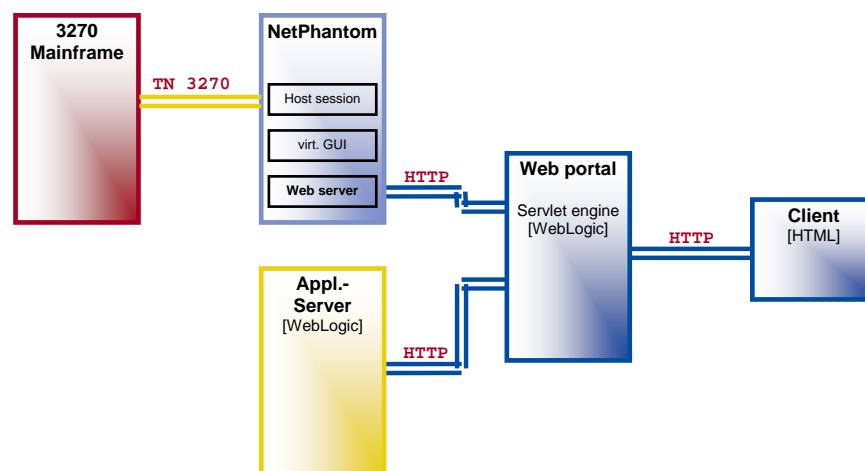


Image: R+V's software architecture

With NetPhantom the established host screens could be converted to a modern GUI within the desired Web portal

structure in a reasonable timeframe and budget, all achieved whilst not tampering with the host application as a whole. *The host logic is left alone and wrapped in such a way that the new web application essentially sees it as a single object.*

No flat, purely mechanical GUI-fication

Of course, NetPhantom does not just pack the host application into a big bag and then give the bag a few graphic modernizations or stylish bells and whistles. This would be a flat, purely mechanical GUI-fication that basically *merely makes the application in the Web portal “appear modern”*. Several such tools are already known on the market. They may certainly be useful in certain limited contexts, but they are not promising, nor are they stable investment prospects, which puts their competitive pricing into perspective.

In comparison with these solutions, NetPhantom has considerably more potential for deep transformation of the host application without destroying the old application code’s business assets. NetPhantom offers a graphic editor with which 3270 screens can be transformed into graphical interfaces that not only look like Windows, but also react and are operated like Windows interfaces; in addition, NetPhantom provides programming interfaces through which additional functions can be integrated on the basis of REXX script language or directly in Java. Optionally, communication can take place via a client/server connection that is ongoing (“stateful”), in contrast to HTTP.

Transmission vector of only 2 to 4 kB with Java clients

The interfaces designed by the NetPhantom editor can be run conveniently on any Java-capable client via an intranet or the Internet, independent of operating system. If necessary, a pure HTML front end can be used, however. This limits the IT demands on the respective clients to a minimum, but an HTML solution means that one of the technological highlights of the NetPhantom solution is lost, namely the minimized volume of communication between servers and thin clients. In a Java-client solution, the corresponding client receives the screen setup and content information in the form of a *vector* of only 2 to 4 kilobytes that also serves to encode the data. If the same contents are transmitted using an HTML user interface and the same functions, about ten times the transmission capacity is required.

HTML as the greatest common denominator

For R+V the advantages of HTML as the “greatest common denominator for clients in web programming” balanced out the disadvantages during transmission. With HTML as a client standard, it was possible to ensure that it would work for all Volksbank and Raiffeisenbank branches without exception: whether with or without a Java Virtual Machine, only a browser

is needed on the client side for all operating systems and operating system versions.

More than just one-to-one into the new user interface

The old host screens were not to be converted to the new user interface one-to-one, however; instead they were to be provided with additional functions like troubleshooting and automation for navigation. Thus R+V Versicherung's specifications envisioned, among other things, enabling automatic navigation after login or importing a list that stretches across multiple screens in the old host application.

So that the layout and development of the interface elements appear uniform for all portal applications, the HTML pages were created independent of NetPhantom. A web designer developed and documented the layout and designed the input screens. These interfaces are integrated simply into the NetPhantom mechanics, or the host/(Java GUI)/HTML sequence, via the HTML control's Name tag.

Because the pre-assigned Web portal did not work with frames, the NetPhantom HTML pages could not just be put into a corresponding frame. Nevertheless, the contents of the pages can be integrated dynamically and without major outlays into the portal via interfaces to the HTML templates—very similar to a portlet technology. Java Server Pages (JSP) were used on the Web server for this purpose.

Interplay between NetPhantom and popular application servers

Both the NetPhantom server and a standard application server (WebLogic by BEA Software), which handles the rewritten applications, are running via the R+V Web portal. The portal thus forms the IT brackets for the synergy-building cooperation between reprogramming and the “old” applications wrapped using NetPhantom. With NetPhantom technology, this type of linking can also be carried out directly via the **Remote Application Protocol (RAPP) Java API**.

Integration with BEA WebLogic and IBM WebSphere via RAPP API

NetPhantom can be used easily as an IT link between the mainframe (with and without additional middleware, such as the MQ Series) on the one hand and modern application servers and service-oriented architectures (Java frameworks) on the other. Application servers like BEA WebLogic and IBM WebSphere can be docked via the RAPP API mentioned above. All processes are carried out on the server side, so an extensive and efficient integration culture where modern Java applications can and must cooperate with the old business-critical applications on the mainframe virtually builds itself. One of the

results of this is the unattended interaction between the host application and the external applications.

NetPhantom obviously holds enough potential that it is worthwhile for R+V to add two different server cultures to the Web portal. This decision is even easier because NetPhantom's modern Java architecture and the corresponding interfaces represent a bridge between the mainframe and service-oriented architectures (e.g., Web services).

*Specialists from **sd&m** and **Syracom** were instrumental in designing the architecture and setting up the corresponding infrastructures. Project management was handled by **sd&m**.*

Work on the project began in June 2002. In October 2002 it went live for the first group of end users. This report was written after the application had been in operation for more than one year.

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