# Sun Ray in combination with RayMote W*Admin® bundle

Volkswagen Slovakia (VW SK), a part of Volkswagen concern, is the largest industrial corporation and exporter in Slovakia. This significant world automobile producer is well-known for its innovative approach and application of modern high technology. To make the operation and management of the company desktop workplaces more effective, in the beginning of the year 2000, VW SK started to consider the possibility of implementation of the thin client technology as an alternative to traditional PCs in chosen workplace departments. Sun Ray technology combined with the functionality of a unique software pack RayMote W*Admin® developed by TEMPEST Inc. proved to be the ideal solution.

The scheme of infrastructure in administration

Switched LAN
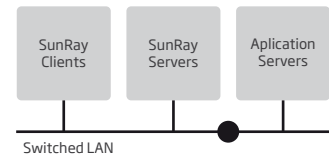
The scheme of infrastructure in production

Switched LAN
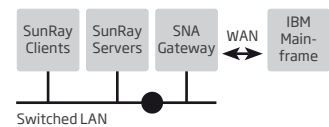
Unique Combination Of Technologies

The tender was won by TEMPEST Inc., which proposed as the solution Sun Ray hardware platform from Sun Microsystems. By implementation of its own software RayMote W*Admin®, TEMPEST added specific functionality on top of the Sun Ray technology. Development and functionality of this application are managed by monitoring of customer's existing real requirements on thin client systems in implemented projects. Sun Rays with their functionality belong to ultra-thin clients, where the processing of all applications is done on the server side and there are just input and output controls on the user desktop side. Their advantage is zero administration on the desktop side and at the same time power and processing reliability increase thanks to the implementation of powerful servers. Sun Ray devices in comparison with PCs are much simpler to control, are noiseless and enable users to concentrate on their professional activities without solving problems with setting or controlling PCs. Software RayMote W*Admin® enables administrators to manage broad Sun Ray infrastructure from a remote site. This brings low operation costs for system administration, which is important for a large company like Volkswagen Slovakia. In addition, the application offers unique functionality such as possibilities to create user profiles, customized desktops according to the requirements of particular workplace, security rules for use of company IT resources, monitoring and evaluation of application and system resources utilization. Only the combination of the two technologies, RayMote W*Admin® and Sun Ray, provides the customer with a solution based on thin client technology without compromises on functionality, security, manageability or reliability.

Sun Ray Features

The advantage of Sun Ray technology is a simple integration into any network infrastructure. Also in case of VW SK, new devices and servers were simply implemented into the already existing company LAN without the replacement of any network components. The successful pilot operation confirmed full functionality of this solution. One of its unique features is hot-desking, providing user with immediate access to its in-process applications from any Sun Ray device within the company network via the user's authentication chip card. This feature proved to be very useful for the staff, which works at more than one workplace. Previously it was necessary for them to have a dedicated PC at each workplace. Now after coming to any department, they just insert the card and deal with tasks within the department.
Another advantage is the extensive options to customize the Sun Ray environment to meet the specific requirements of the company and individual users as well. TEMPEST company consultants set up and customized the environment according to the needs of VW SK. For example, a full screen Windows desktop will appear to selected users after their chip card is inserted. The user has entirely the same environment as if he/she were working on the local PC, in spite of the fact, that the whole process is running at remote central servers. This solution met with a very positive response.

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Sun Ray Technology Implementation Phases

After the successful pilot operation, VW SK decided to implement Sun Ray technology as the desktop device not only in Bratislava plant but also in the newly opened plant in Martin. Nowadays the technology is used by the staff in logistics, stock evidence, economic agenda as well as system administrators. Typical applications are SAP R/3 client, MS Office, intranet and database applications, e-mail, etc. Within the project Logis-Liss, Sun Ray technology was implemented also in the production halls, where there was a need to solve many specific requirements. To increase reliability, all applications used in production halls were migrated into the Solaris environment. Because the key project applications for all plants of the Volkswagen group are operated centrally in Wolfsburg on IBM platform, there was a need to integrate servers into the SNA network and to adapt the terminal emulator 3270 so that it completely meets the specific requirements of VW SK. Moreover, it was necessary to integrate necessary computer peripherals with Sun Ray devices (bar-code readers) and to provide printing from desktops to system printers. The most important requirements were considered to be the systems accessibility and the ability to do a failover to other server during an outage of some Sun Ray servers with only a minimum impact on user operation. During the years 2000 up to 2002, more than 200 Sun Ray 1 desktops were implemented in VW SK.

RayMote W*Admin® - The Solution Meeting Specific Requirements

The experience of Sun Ray technology implementation in VW SK indicated a certain gap in the management of Sun Ray infrastructure. Therefore TEMPEST decided to develop the management software RayMote W*Admin®, which enables to employ the full potential of the Sun Ray platform. This tool enables to define basic components of desktop look and feel for each individual user. In addition, the software enables creating group profiles for users belonging to a specific group. Within the group, profile applications used by the members of the group can be defined (e.g., Secretary profile, Storekeeper profile, etc.). RayMote W*Admin® significantly helps VW SK to meet high requirements for security and accessibility. The central LDAP repository is used for storing of all system parameters (e.g. group profiles, system modules, user's activities). As a result, by means of RayMote W*Admin® it is possible to define a group of servers (a server farm), which share common parameter settings (by replication of LDAP data). Servers are backed up reciprocally if one of them fails. More servers in a system enable to distribute user load to individual servers (load balancing) as well as the high reliability and minimum outage for users. The higher level of security is a very substantial advantage. Within the customized desktop profile, users have precisely set up applications they are allowed to use; other applications are not accessible from their desktops. Hierarchical roles can be set for administrators, with different access rights assigned to individual administrators for individual operations of RayMote W*Admin®. This distributes the responsibility for the entire system to a greater number of independent persons with clearly defined rights as opposed to the typically used single administrator account. RayMote W*Admin® implements strict rules for user passwords. The system of logging of individual user screens enables tracing of each user's activities. Another important feature of RayMote W*Admin® is the possibility of monitoring or real utilization of system resources giving an opportunity to get a better picture of actual needs of the company and on that basis to better scale (or redistribute) IT resources and thereby to reduce the TCO.

The Benefits Of RayMote W*Admin® Deployment

Mr. Alex Domorak, Volkswagen IT manager, evaluates the benefits of RayMote W*Admin® deployment: "The use of RayMote W*Admin® was one of the keys to the success of our projects, helping us significantly to simplify our work. A large proportion of demanding requirements we required from Sun Ray technology deployment would be very difficult to satisfy without RayMote W*Admin®. Thus we are able to minimize administration of hundreds of desktops to just a few clicks. Thanks to group profile settings, increased security and accessibility as well as to the complex monitoring of the entire infrastructure, the operation efficiency significantly increases. It is a great asset to us."

To summarize:

the benefits of Sun Ray and Ray-Mote W*Admin® deployment include slower desktop depreciation, better utilization of IT resources in the company, lower operation costs, higher security and reliability of desktops. As Mr. Alex Domorak says: "Sun Ray, in combination with RayMote W*Admin®, is an interesting and promising solution, which could be very effective from the economic point of view, on the assumption that the starting-point conditions are fulfilled." Volkswagen Slovakia is sharing its experience of Sun Ray technology deployment with potential customers at reference visits.

Solution:

Sun Ray Implementation and Integration

Products:

servers Enterprise 250, Netra T1, SunFire 280, SunRay 1, SunRay 100, SunRay Server Software 1.3, RayMote W*Admin® 1.0

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