

Fleet management on the basis of cloud software

SOFTWARE AS A SERVICE Despite the recovery of the global economy and the maritime industry, markets are still vulnerable and fraught with considerable cost pressure. Shipowners and ship managers are thus interested in further optimising their cost structure, in simplifying processes and automating their information flows. Fleet management software is one area of high interest since it offers significant potential to reduce costs sustainably.

Christa Thoma

Over the last few years, there have been considerable developments in fleet management software: Smart functionalities, central databases and interfaces for existing systems are examples of simplifying daily work. Modern fleet management software not only looks different, its underlying design is completely different from the software designed a few years ago. The most innovative of it can be accessed via the Internet "cloud" as software as a service (SaaS). The key advantage of SaaS is cost: Clients do not need to build or maintain an additional IT infrastructure to benefit from futureproof SaaS. Therefore, neither capital expenditures nor IT maintenance costs are incurred. This makes a company more agile and competitive.

„Cloud computing“

„Cloud“ is a metaphor taken from diagrams depicting the computer networks that make up the Internet. Cloud comput-

ing allows on-demand access to a shared pool of computing resources (networks, servers, storage, applications and services) via a network. Cloud services typically have the following five characteristics:

- ▶ Little or no start-up costs and no capital investment
- ▶ Rapid deployment
- ▶ Costs for services are usage-based
- ▶ Services can be quickly and easily scaled up or down
- ▶ Services are multi-tenant (many customers leverage the platform).

For private use, "public clouds" have already entered everyday life. Services such as webmail, Internet banking, eBay, and Facebook are classic examples. "Private clouds", however, are company-owned solutions often run by an outsourcing partner. Whether private, public or hybrid clouds, all are Web-based software solutions run by customers/users without the need to manage software-specific computing resources.

This approach is called software as a service (SaaS). With SaaS, companies do not need to procure, run or maintain a software-specific IT infrastructure. Nor do they need to deploy technical or human resources to maintain the software (e.g. updates, technical support).

Thanks to SaaS, even small companies have access to state-of-the-art applications at highly competitive prices. Prior to the introduction of SaaS, many powerful applications were part of expensive, in-house

server-based solutions, which – from a financial viewpoint – only made sense for large companies.

Efficient IT infrastructure

With the introduction of SaaS, shipping companies can optimise capital as well as operational costs, and relieve their organisation of tasks that do not belong to their core competencies. Moreover, implementation and rollout of SaaS applications can be done quickly since they already exist and require only minor, customer-specific changes. Software updates are included in the price and made available to all clients simultaneously via the central server. The SaaS application can be accessed from anywhere via the Internet. For use aboard ships, no permanent Internet access is needed. Regular synchronisation with the central server is sufficient.

Many shipping companies working with in-house solutions used to be sceptical about implementing a "third party" software system. The reason was cost-related: Comparing and testing different solutions, implementing the chosen system and training the users requires a considerable amount of time and money. Moreover, buying a traditional software solution means investing in software licences, hardware, IT personnel, security and support. With SaaS, the latter costs do not apply. The SaaS application is run by the external software service provider and accessed

via the existing, standard IT infrastructure. SaaS incurs no or very little capital, support and maintenance costs.

Costs – benefits analysis

For traditional software solutions, one has to account for licensing and upgrading costs as well as costs to run an in-house data centre:

- ▶ Direct costs: Server, rent, power, IT personnel
- ▶ Indirect costs: Networks, data storage capacity, costs to manage the general IT infrastructure, data security
- ▶ Other expenses: Evaluation and procurement of the server infrastructure, book-keeping and administration, IT management, depreciation.

Running an in-house IT infrastructure means that costs are incurred no matter whether the infrastructure is used or not.

SaaS applications are different. Only actual demand must be paid, either per number of users or number of ships. The costs of the data centre and IT services are shared among many customers and are part of the subscription fee. This way, each customer pays only a small amount of these costs, i.e. costs become more variable and the company's IT cost structure more flexible.

Aside from cost benefits, SaaS applications offer the following advantages:

- ▶ Speed of rollout
- ▶ Software updates are done centrally by the SaaS provider
- ▶ The application is available via the Internet

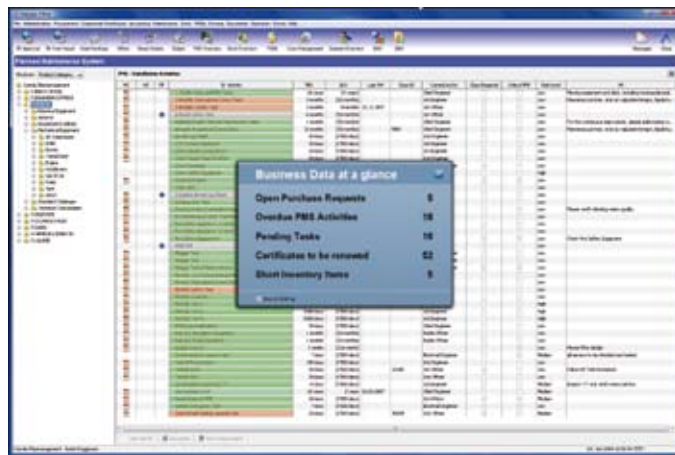


Work stations used to be connected to a company-owned server. Today they communicate within the "cloud"

- ▶ Low entry and exit barrier (there is no IT infrastructure built around the application)
- ▶ Easy scalability according to number of users or number of ships
- ▶ Availability, reliability.

Reservations about SaaS solutions

Despite the advantages of SaaS, some reservations exist. Issues such as security, data sovereignty and inflexibility in terms of customisation of the software tend to be mentioned. When it comes to extremely sensitive data, particular attention must be paid to data security and legal issues. This applies to both traditional as well as SaaS applications. In terms of data sovereignty, some people may worry about losing physical control over their data. However, experience shows that security issues tend to be dealt with more professionally at



Screenshot of the MESPAS software

a dedicated SaaS application provider than would be the case with in-house solutions. Cloud providers have a vital interest in safe IT environments: Security problems would soon mean the end of a SaaS company. For SaaS applications to work efficiently, access to the Inter-

net is essential. However, this is already a given in today's business environment: Internet access is usually part of the standard infrastructure. For use aboard ships, the SaaS application is managed offline, and data transfers and software updates are conducted via regular synchronisations.

Outlook

Cloud services and SaaS applications will play an increasingly important role in the shipping industry in the future. It is predicted that more and more businesses will outsource complexity (IT and hardware concepts) to external data centres. With SaaS, these companies will benefit from professional software applications without having to worry about all of the hardware resources.

Regardless of whether financial considerations or outsourcing complexity are the drivers behind employing SaaS, the main priority remains unchanged: The application must be easy-to-use, safe and work flawlessly.

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