





# App in a Cloud –

## IT services at the touch of a button with MATERNA Cloud Computing

Cloud computing is more than just hype. It is a model for providing IT services according to industrial principles. The approach is based on established technologies such as virtualisation and automation. Clouds are a significant step towards standardised, service-oriented IT: together with MATERNA as a cloud-enabler, companies and public administrations benefit from the possibilities provided by cloud-based solutions – individually, securely and with high added value.

Few topics are being discussed quite as heatedly as cloud computing at the moment. There are as many opinions about the purpose of this approach as there are concepts which are offered under its name. The cloud is not exactly a completely new way of offering IT services either. Clouds are really just the logical combination of technologies which are already anchored in almost all IT organisations: virtualisation and automation. The aim behind it all is to transfer the virtues of industrial manufacturing processes into the world of IT.

But the IT decision-makers are still unsure as to what sort of clouds are suitable for use in their companies or whether to use them at all. In the June 2010 issue of "Computerwoche" magazine a survey comes to the conclusion that over 40 percent of the respondents already use clouds or are planning to introduce them. But half of them are concerned about security and data protection. The fact that these fears are not unfounded is confirmed by specialists such as the Data Protection Officer at the State of Schleswig Holstein, Thilo Weichert: Cloud computing is not permissible if person-related data is processed outside the European Union, Weichert stated at the 4th Austrian IT/Legal Congress in June 2010. In addition to these legal issues, there is confusion about what cloud computing really means because of the multitude of diverse offers on the market which are difficult to compare with each other.

*Companies with cloud plans therefore need a partner who is independent of any manufacturers and has the appropriate know-how to help with planning and implementation.*

### Clouds are user-oriented

According to the Bitkom trade association's definition, which MATERNA also worked on, cloud computing is characterised by the fact that the IT service in question is provided via internet technologies. This can occur via the internet itself or as part of a closed internal network. The IT service must also be standardised and thus be available to all users in a uniform format. The users should be able to order the service themselves, too. The definition also states that the IT services can be billed simply and according to what is really used.





In order to offer cloud services via a self service portal, the ITSM must also be automated to a large extent. This is the only way that the IT services can be provided without delay and with a constant quality – i.e. according to industrial principles. That means that the IT staff's manual activities are replaced by automatic processes and clearly defined interfaces. Provisioning services and infrastructures is carried out as part of change management without any manual involvement, so any variances in service quality can be eliminated. This "Next Level Service Management" leads to more reliable IT services; the end users receive just what they need on time.

## IT processes are important

Automation demands high maturity levels for the whole process architecture, so the structure of a cloud environment depends a lot on ITSM. Clearly defined processes and a high level of standardisation are basic requirements for automating as many routine tasks in the IT as possible. MATERNA has gained a lot of expertise in this field from carrying out numerous projects. The "Service Excellence" consulting methodology from MATERNA helps companies to bring their processes into alignment with their company aims. Consistently orienting the ITSM to guidelines such as ITIL® (IT Infrastructure Library) is the basis for this. The procedures described for change and configuration management facilitate transparent processes and, building on that, extensive automation of the IT. MATERNA has well-proven consulting methods which companies and public administrations can use successively to help their IT organisation become process and service-oriented.

So that companies and administrations can provide their users with as complete IT services as possible via a cloud, MATERNA's Desktop as a Service is the focal point of the private cloud strategy they recommend: the cloud not only provides individual applications but complete work environments with all the relevant applications, too. The basis for this is formed by a desktop virtualisation solution. This makes it possible to equip PCs or thin clients with a complete working environment including an operating system and applications directly from the data centre. This only requires one single image of the operating system on the servers. As many clients as you wish can then be served via a provisioning server. The great advantage of this is that the cost and effort for maintaining and administering the client operating system is minimal. Operating security increases at the same time because any faulty updates or other unsuccessful changes can be reversed quickly.

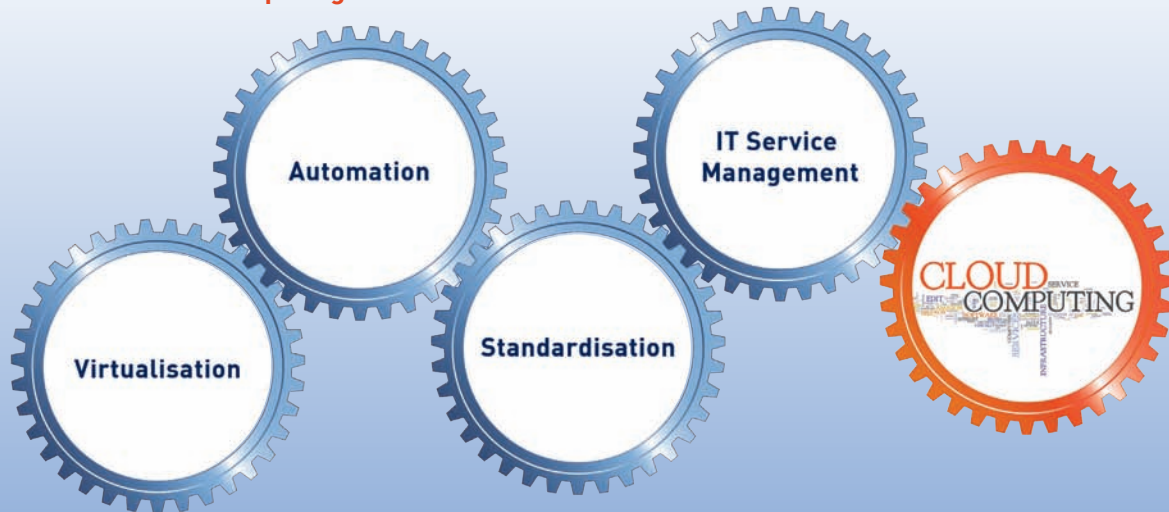
## The cloud-enabler

**MATERNA provides its customers with advice and technologies covering everything to do with the topic of clouds. This starts with setting up a service-oriented IT organisation, includes all the services needed to make the best use of virtualisation and automation and extends as far as setting up the complete infrastructure. Partnerships with the leading technology suppliers as well as their own products ensure they provide individual solutions for all sorts of companies and public administrations. Using mature technologies also makes sure that all investments are protected for the long term. In this way MATERNA can give their customers the opportunity to use cloud computing as a sustainable, strategic way of providing IT services.**

## Advantages at a glance



## Drivers of Cloud Computing



## Cloud Computing

Cloud computing is not a revolution – it is an enhancement of the service idea in IT. The aim is to provide the IT services according to industrial principles – in the best sense of the word. Companies can achieve a lot of benefits:

- High levels of standardisation in the IT portfolio give the users faster access to the services they need.
- Self service and automation reduce the cost and effort for every day operations in the IT organisation and thus free up resources for strategic projects.
- Clouds are extremely scalable and thus provide the IT with significantly more flexibility. It is not important whether an IT service is used by ten or by 1,000 users.
- As the cloud services are provisioned by means of internet technologies, branch offices, business partners or field staff can easily be included too.
- Automation, self service and standardisation achieve considerable reductions in operating cost for the IT.
- Clouds are not an either/or decision. They can be introduced step by step and complement classic IT operations.
- MATERNA only uses proven components, so companies are assured the protection they need for their investments and can be confident that all the products are mature enough for live operations and in critical environments, too.



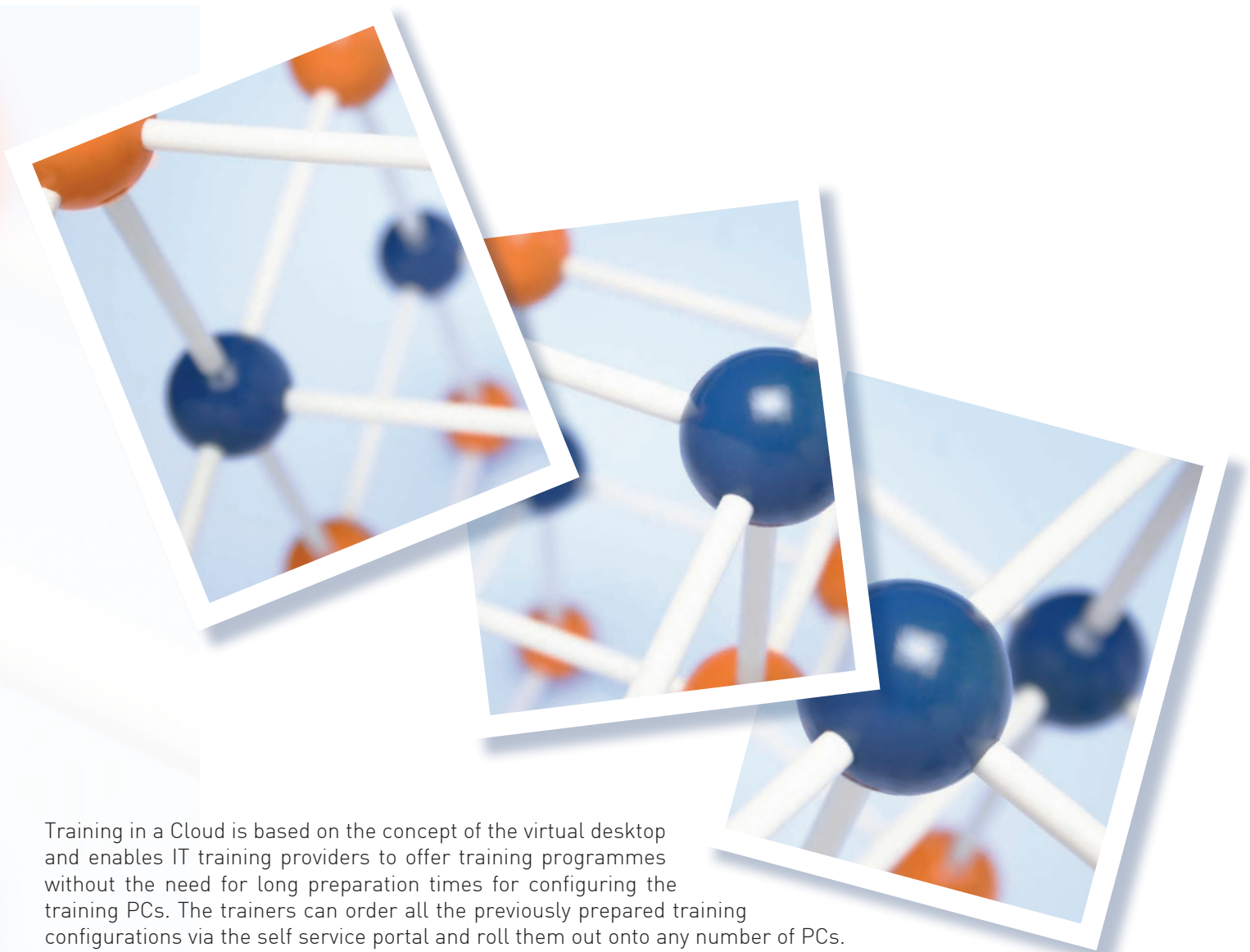
# Solutions in detail

## Modular structure

The cloud-workplace by MATERNA separates the applications strictly from the virtual operating system. All applications are packaged i.e. provided with all the necessary libraries on the servers and fed into the ongoing session via application streaming. This means that all Windows applications can be used via the cloud. Adaptations to the applications are not necessary, which leads to low costs and short rollout times. The IT thus achieves maximum flexibility.

Desktop as a Service from MATERNA is enabled by two components: DX-Union Management Suite, the strengths of which have been proven in many projects, is used for the management of daily operations. It allows both physical and virtual IT services to be administered in one uniform user interface. DX-Union is in a position to integrate the virtualisation technologies of all the important providers and can thus be used as a standard tool in ITSM. The second important MATERNA component is the self service portal Caruso. The end-user can use it to conveniently order any of the cloud services in the IT's service portfolio. By following this approach of setting up private clouds on the basis of tried and proven components, MATERNA can implement projects with higher added value.

MATERNA is one of the few suppliers on the market which has already put cloud projects into practice successfully. Their Training in a Cloud solution is already up and running at MATERNA itself and is currently being evaluated at various customers.



Training in a Cloud is based on the concept of the virtual desktop and enables IT training providers to offer training programmes without the need for long preparation times for configuring the training PCs. The trainers can order all the previously prepared training configurations via the self service portal and roll them out onto any number of PCs.

The work is carried out in the background by DX-Union, the workplace management solution from MATERNA. With DX-Union, all the standard processes for configuring the virtual training environment are initiated and monitored automatically. Weekend sessions for the IT team are thus a thing of the past. The requirements for the client hardware are also reduced. Whereas PCs in a local installation have to be set up to cope with peak loads, the virtual training places can also use simple computers or even thin clients without any problems. It is also possible to provide the training desktops via secure internet access in branch offices, home-offices or other more distant locations.

### **MATERNA as a Cloud-Enabler**

With the Desktop from a Cloud concept, their know-how in ITSM and their virtualisation competence, MATERNA is in a strong position to support companies with the implementation of cloud computing. MATERNA is not just a cloud provider either; they are really cloud-enablers for companies and public administrations of all sizes. Their partnerships with important component manufacturers, who supply automation and virtualisation solutions as well as hardware, mean MATERNA can provide complete cloud computing from the initial consultation through to implementation - all from one source.



## Services from MATERNA

MATERNA delivers everything companies need to set up efficient private clouds from the initial consulting sessions through to full implementation. MATERNA's consulting methods first investigate the company's aims and their workflows and thus ensure that IT projects will achieve measurable added value for the company. On the technology side, MATERNA has developed consulting approaches which provide reliable details about the individual status of the customer's IT. Infrastructure analyses which examine the hardware and software as well as the processes connected with daily operations help to determine the current status and enable clear statements to be made as to whether a company is well enough prepared for cloud computing. This includes, primarily, how well virtualisation and automation are already anchored in the company and where more efforts might be necessary. This means MATERNA is not just a cloud provider but is positioned much more as a cloud-enabler for companies and public administrations of all sizes.

## Solutions from MATERNA

As one of the few IT service providers which have already successfully implemented cloud projects, MATERNA can rely on a whole series of well-proven solutions:

- **Training in a Cloud:** a complete solution for internal and external IT-based training programmes. By using the cloud, the training environment can be configured automatically. The trainer can simply select the course, the number of participants and the training venue from a web-based catalogue.
- **Desktop as a Service (based on the DX-Union Management-Suite):** This can be used to provision complete workplaces with operating systems and applications from the cloud. Clearly separating the operating system and applications ensures high flexibility and security. And existing applications do not need to be adapted. This is also ideal for smaller IT service providers which want to supply a smaller customer base with sector-specific solutions.
- **VirtualisationCheck:** This consulting methodology helps companies and public administrations to assess their involvement in the field of virtualisation and to extend it purposefully. The method is oriented to the company's business aims in order to draw the fullest benefit from the available technologies.
- **Internet as a Service:** On the basis of DX-Union, Internet as a Service provides highly secure internet access from the cloud in the data centre. The user does not actually work with a local web-browser at their workplace, but starts a browser on a terminal server in a secured network. This separation means that any malware cannot influence the local operating system.

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