

When ERP met the cloud

How can enterprise-level IT benefit from the move to cloud computing? Jon Pyke (right), Andy Mulholland and Peter Fingar explain.



EVERYONE'S TALKING about cloud computing but the biggest buzz is around enterprise cloud computing (ECC).

ECC is the special case of utilising cloud computing for competitive advantage through breakout opportunities for both cost savings and business innovation, in terms of unprecedented speed and agility, and vastly improved collaboration with business partners and customers.

So why does ECC matter? Here are three key points:

1. On the cost side of the equation, many IT and data centre costs can be reduced and tied directly to usage, up or down as needs go up or down.

2. On the revenue side, risk and start-up expenses for innovation initiatives can be cut dramatically. With no upfront capital expense, new projects can be scaled up instantly or shut down quickly.

3. Companies don't work alone and, on average, over 20 companies make up today's value chains. Cloud computing allows a company to collaborate in new ways with its trading partners.

Of course, cloud computing is not a new technology, architecture or methodology. But it is a new delivery model where all computing and networking resources are provided as 'services' that are elastic, massively scalable and available on-demand with self-service, pay-as-you-go, variable-cost subscriptions.

Enterprise cloud computing has a number of basic characteristics:

1. **On-demand self-service.** A consumer can access computing capabilities as needed automatically.

2. **Ubiquitous network access.**

Capabilities are available over the network and accessed through standard thin or thick-client platforms.

3. **Location-independent resource pooling.** The provider's computing resources are pooled to serve all consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and re-assigned according to consumer demand.

4. **Rapid elasticity.** Capabilities can be rapidly provided to quickly scale up, and rapidly released to quickly scale down.

5. **Measured service.** Cloud systems automatically control and optimise the resource use by utilising a metering capability at some level of abstraction appropriate to the type of service.

Everything relating to cloud uses the notation 'X'aaS; this is because the whole concept and language used for cloud computing essentially relates to supplying 'everything as a service'.

These are the service types available for enterprise cloud computing:

1. **Cloud Infrastructure as a Service (IaaS).** Here, the capability provided to the consumer involves processing, storage, networks and other fundamental computing resources.

2. **Cloud Platform as a Service (PaaS).** This offers consumers the capability to deploy onto the cloud infrastructure applications created by them, using programming languages and tools supported by the provider.

The consumer does not manage or control the underlying cloud infrastructure, network, servers, operating systems or storage; but they do control the deployed

applications and possibly application hosting environment configurations.

3. **Cloud Software as a Service (SaaS).** This enables the consumer to use the provider's applications, running on a cloud infrastructure and accessible from various client devices through a thin-client interface such as a web.

There is also an expanded delivery model that helps business users understand how the cloud can help them take full advantage of what the new delivery paradigm has to offer...

So number 4 on our list is Business Process Management as a Service (BPaaS).

Sometimes referred to as Process as a Service (PraaS) or Business Process as a Service (BPaaS), BPM services provide the complete end-to-end business process management needed for the creation and follow-on management of unique business processes.

And finally there is Management Controls as a Service (MCaaS).

MCaaS offers services such as monitoring service level agreements with cloud providers, security management, distributed policy management, role-based authentication and authorisation, and other foundation services needed by all layers in the cloud stack.

Business focus

The impact of cloud on how IT supports the business calls for a shift from information technology to business technology; from services oriented to business oriented.

The cloud model means software that supports both end-user and developer tasks becomes more intuitive and responsive to change.

Simply stated, many

collaborative and other new-era business applications would not be feasible without a cloud computing infrastructure.

However, organisations should not be misled. Cloud computing is as much a way of thinking as it is a service oriented infrastructure. Without a corresponding paradigm shift, the associated tools and techniques will not generate the desired results.

Yet there is an even bigger point to grasp, and that is how the nature of work itself is changing. IT has been extremely successful in automating standard business processes and procedures. The focus has now moved to empowering the knowledge workers in the front office.

In short, collaboration is now the key to competitive advantage – and the cloud is where collaboration takes place.

In conclusion, the cloud offers us a new way to develop and deliver cost-effective enterprise IT services and solutions, but it is vital we learn from the lessons of the past.

The take-up of PC networks was started and driven by users in a series of individual user-driven projects. This caused serious problems as it became clear that it was one environment client/server. Getting a grip now is important if we are to prevent this happening again.

● *Jon Pyke is the current chair of the Workflow Management Coalition. Andy Mulholland is the global CTO and main board director of Capgemini. Peter Fingar is a leading BPM expert. Their book 'Enterprise Cloud Computing: A Strategy Guide for Business and Technology Leaders' is published by Meghan-Kiffer Press.*