

Whitepaper

Cloud Computing

Intel® Xeon® processor

5500 series



Intel speeds up the emergence of cloud computing

AchatVille portal

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Introduction

In the corporate world, information is king. Not only does it impact the way companies operate, depending on its relevance, format and use; it is also becoming an increasingly strategic asset. In many cases, the information a company controls determines its ability to compete effectively.

Every company, whether small, medium-sized or large operating in every sector across the world needs to incorporate information management into its daily routine. Some companies take care of information management without even realising it, while others are more strategic, embracing a vision where relations and interactions with employees, customers, suppliers and even the global community are maintained using new technologies.

In this case, the integration of Internet-based support for managing information is well thought-out and controlled. It provides the company with incredible power of communication between its people – employees, suppliers, customers, shareholders, the fabric that the company is made of, and enables it to transform into a predictive enterprise.

But how is this achieved in practice? How can local businesses, specifically retailers, gain simply from having a better understanding of systems available for managing their information?

“I used to sell my products at markets, but 80 percent of my turnover is now generated using the AchatVille portal. I began selling a brand of chocolate online that was produced 30 years ago but had disappeared – Malakoff. I’d found the recipe for it again and I was the only manufacturer. Then it all just took off and I’m now always on the first page of search engine results and am delivering throughout France and abroad, directly and using distributors. I’m going to stop going to most markets as online demand is too strong. I can’t keep up with deliveries. This is unbelievable and it’s all thanks to the Internet.”

Gerald Aribert,
Le Marché aux Cacaos

Managing information: a skill or a service?

All businesses, whether large or small, handle information on a daily basis. However, this does not mean that they have to be experts in information technology. Through infrastructural concepts such as data centres, virtualisation and Software-as-a-Service (SaaS), and most recently cloud computing, the IT industry offers companies a variety of systems for easy management of their information. In addition to being sold as products to be managed in-house, these systems are now often offered as outsourced services that can take advantage of specialist skills and expertise.

There are significant differences between the in-house and outsourced models. Purchasing products to manage information in-house means the company is billed according to the number of servers it uses. It must constantly think about monitoring and altering its server fleet according to its business requirements, as well as operational considerations like maintenance and power consumption.

With the outsourced model, the company subscribes to a service that guarantees a stable performance quality based on criteria ranging from the simplest to the most demanding, according to the company’s specific requirements. Another major benefit of the outsourced model is that companies do not need to make any large initial investments in technology (CAPEX). Instead they pay a monthly, often fixed, fee (OPEX).

There can however be concerns with the outsourced model, such as security, so any business choosing to go down the outsourced route would be well advised to check their service provider’s credentials thoroughly.

“AchatVille has an attractive design and is easy and very intuitive to use. What’s more, it’s getting better all the time. You are never on your own. Exchanging information is important as well, even if you don’t always have the time.”

Jean-Marc Mullenet,
Forme et Zen

Information is key to the 21st Century retailer

Some organisations have a vision of where they want to take their business, and will use information technology to support their vision. Others are less strategic and more reactive, often finding themselves in a position where they have to implement technology but doing so in a way that does not necessarily support their vision.

The 21st Century retailer of course belongs to the former set. They use information technology to extend customer relations, giving them access to more diversified sales networks, whether they are a one-man band, a franchisee, a member of a chain, a local major retail operator or a producer or distributor of original products.

Relations between the retailer and customer become the priority again and are enhanced by a greater wealth of more accessible information, booking services and distance selling. In a broader dialogue, the consumer can enjoy the maximum amount of buying time, better-informed choices and access to alternative products.

AchatVille enables 21st Century retailers to simply implement an essential part of the predictive business strategy: effective customer relations.

“The most difficult thing is to get noticed on the Internet. Websites don’t come cheap. It’s difficult to get yourself known. Even a little insert in the Yellow Pages directory costs much more than a website with AchatVille. Also, AchatVille is helping me get my name known by people in Grenoble. I’m on the first page in Google when you type in ‘hairdressers grenoble’, and I have between 900 and 1,500 visitors to my site every month.”

Jérôme Cézard,
Cézard Coiffure

AchatVille: Addressing challenges of high-street retailing

Significant challenges – economic, demographic, social and technological to name just some – face small businesses, local businesses and high-street shops, especially in a tough competitive environment. How can they co-exist alongside major retailers, and ensure their brands continue to attract and retain business?

The AchatVille web portal www.achat-ville.com was created in response to this question. It gathers 260,000 boutiques, 2,400 of which already have a web presence. Through the AchatVille portal members are able to market their products to citizens all over France, not just those in their local area.

Intended for very small businesses, retailers and the self-employed to help them make the best possible use of information technology, the AchatVille portal established a partnership with Eolas (Business & Decision division) and Intel. Intel® processor technology provides the flexible infrastructure needed to support the AchatVille portal.

The cloud computing model is based on flexible and secure data centres. It also needs to meet infrastructure challenges such as network bandwidth, energy supply, cost and the environment. The enhanced virtualisation capabilities and the low power consumption of Intel processors were ideally suited for building AchatVille backbone.

Consequently, together with Eolas and Intel, AchatVille offers members a service that takes care of the technical aspects of managing information. It also supports them through the different stages of ‘computerising’ their business.

Run by the French Chambers of Commerce Federation, the portal has received support from the French Ministry of the Economy and Finance. It has been described by the European Commission as “best European practice”.

“I went for the option that allows you to have up to 1,200 products online. ... It’s really great. I’m getting 60-70 orders a month. But you need to be careful as the orders come in fast and you have to be organised. We come up first in Google most of the time. I sell throughout the whole of France and in some parts of Europe and even Japan. Also, the cost of postage is free anywhere in France. I am breaking even on volume.”

Frédéric Trotignon,
A Mots Couverts

Business & Decision Eolas

The number of data centres is increasing everywhere, reflecting an explosion in the number of servers required to meet the exponential demand for Internet-based services. In an effort to support their servers' operation and keep them cool, it is not uncommon to see some data centres using more power than a medium-sized town.

Business & Decision Eolas likes to think that it sets a good example in terms of sustainable development, with an approach based on compliance with standards and in particular with the European Union's Code of Conduct¹.

The EU Code of Conduct for Data Centres was launched to tackle a rising concern: while Europe has committed itself to a 20 per cent reduction in CO2 emissions by 2020, the technology sector continues to contribute to the problem, with electric energy needs that could double by 2020 in the absence of appropriate measures. The objective of the EU Code of Conduct is to provide a reference framework that will substantially help diminish data centre energy consumption, without slowing down the growth of activity required by evolving business needs.

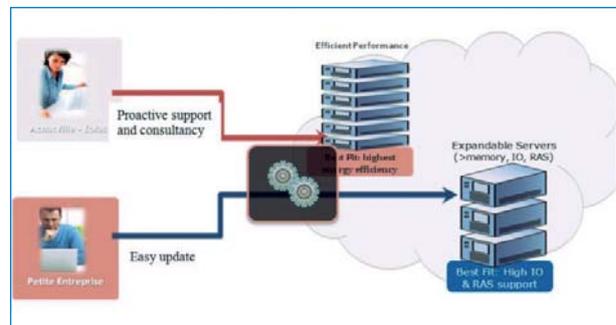
In order to limit its ecological footprint as much as possible, Business & Decision Eolas is totally committed to operating new-generation data centres, involving strategic cooperation with leading global companies such as Intel. It will not compromise on the green issue.

The organisation focuses on seven key areas: high-quality environmental buildings; power usage effectiveness (PUE); optimised electrical distribution; low-consumption servers; intensive use of virtualisation technologies; use and production of green energy, and the implementation of procedures for continually improving the system based on load and new technologies.

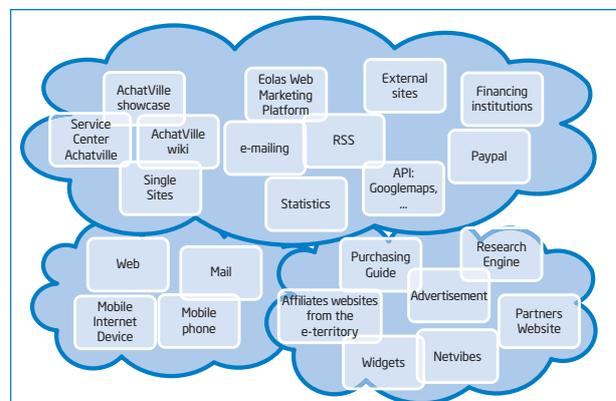
Cloud computing in practice

From a company point of view, cloud computing is an abstract concept and many businesses may even use applications without realising they are cloud services. If you ask a retailer subscribed to AchatVille what it is, first and foremost they would say a service which brings together multiple applications and simplifies their implementation. Guaranteed security – in terms of operation and data – is also seen as an important feature.

It offers a technical structure that guarantees service quality, data security and transaction performance. It also streamlines costs, anticipates the different rates that each business works at, reflecting different seasons, peaks in demand and downturns in activity. It enables users to set up new solutions in an easy, 'non-technical' manner and supports new uses of equipment and technology. It is ultimately about closely monitoring business activities to get the best results.



AchatVille functional diagram



AchatVille application cloud

Environmental challenges

Business & Decision Eolas's technical infrastructure for the portal is based on two data centres which supplement and provide backup for each other. The architecture of the servers used in these data centres is based on Intel® Xeon® processor 5500 series.

There were several reasons behind this choice, which was crucially important given the platform's level of requirements. First of all, the performance of these processors can cope with the most severe demand peaks, a frequent occurrence with this type of infrastructure.

The latest generation Intel® Xeon® processors 5500 series automatically and intelligently adjust server performance according to an organisation's application needs for an up to 9x performance gain over single-core servers at 18 percent less operating power.

Built on the Intel® Microarchitecture, they expand the benefits of virtualisation with innovations that boost performance, increase consolidation ratios, and enable servers of different generations to be combined in the same virtualised server pool, improving virtual machine failover, load balancing, and disaster recovery capabilities. Intel® Virtualization Technology (Intel® VT) enhances virtualisation performance by up to 2.1x and reduces roundtrip virtualisation latency by up to 40 percent.

Service quality, based on high resilience and performance, is offered across the board and the infrastructure is fully virtualised.

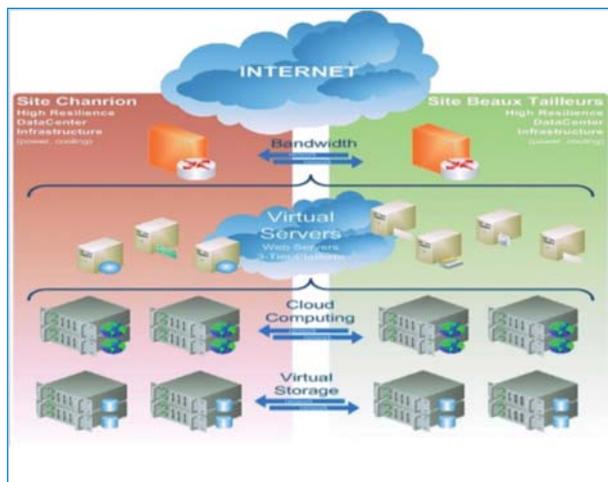
Conclusion

Before the virtualised platform was set up, AchatVille used to operate five physical servers (two web front-end, one file server, two data-base servers) with an average power consumption of 1 196 Wh.

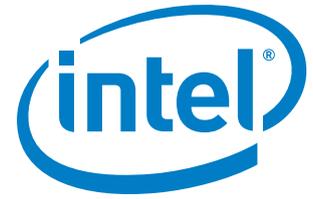
Now that AchatVille has migrated to the virtualised Intel-based platform, it uses the same number of servers in the same structure, except that they are virtual, which enables much greater flexibility and performance. Its service quality has been enhanced by setting up a redundant architecture (with additional physical servers) and the average power consumption has dropped to 179 Wh, which is 15 per cent of the previous platform's consumption.

"At the moment, I have around 10,000 visitors on my site every month and 18,000 connections to all of my products. After seeing an increase in the number of contacts and requests for information, I went for the online sales option with secure payment. It has been a real success... Corinne, who works with me, is in charge of our site. It's her job to update it very frequently. She puts high-quality photos on it. In fact, she's always concerned about putting our products on show... She also manages our customer base and regularly sends out promotion campaigns. One important point is that she always replies to requests via email immediately."

Jean-François Renaud,
Boutique Emotion



Global cloud infrastructure



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¹ http://re.jrc.ec.europa.eu/energyefficiency/html/standby_initiative.htm

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