SOARING INTO THE CLOUD

UNDERSTANDING THE MARKET OPPORTUNITY FOR CLOUD SERVICES

EXECUTIVE SUMMARY

The worldwide market for cloud services is still developing and must be navigated properly if service providers are going to capitalize on this opportunity to transform their business and ensure they don't become a commoditized network provider.

Despite the fact that the total value of the cloud services market is estimated at 68.3 billion United States dollars, and is expected to rise to 148.8 billion United States dollars by 2014[1], service providers must understand enterprise attitudes and perceptions of the cloud to properly stake a claim in this new market. With a thorough understanding of these nuances, service providers can leverage their unique assets more effectively to deliver a better cloud services experience to their customers. At the same time, they can generate new revenue and benefit from the substantial capital expenditure (CAPEX) and operating expenditure (OPEX) savings offered by a virtualized infrastructure.

[1] "Forecast: Public Cloud Services, Worldwide and Regions, Industry Sectors, 2009-2014", Gartner, June 2010

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AT THE SPEED OF IDEAS™

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INSIGHTS AT A GLANCE

- Cloud adoption rates are robust across major market sectors, with large multinational companies and technology firms using the cloud for at least one application.

- Forty-four percent of information technology decision makers (ITDMs) in the U.S., U.K., France, India, South Korea, Taiwan, and Hong Kong expect to use the cloud more extensively three years from now.

- India currently has the most extensive use of cloud-based solutions and the highest percentage of ITDMs who expect to expand their use of cloud services over the next three years.

- The U.S. follows closely behind India in both categories, while France and the U.K. show the lowest levels of enthusiasm for cloud services.

- In six out of seven countries surveyed, ITDMs believe performance is the single most important issue that requires the most improvement in cloud services.

- Performance, data security, cost, and ease of use are the top four concerns of ITDMs.

- Trust is one of the most important purchasing factors for ITDMs in all markets.

- The dominant network service providers in each country (for example, BT, Verizon, AT&T, Orange) fared consistently better than Amazon as a trusted source of cloud services.

TAPPING INTO MARKET PERCEPTIONS

To better understand regional market opportunities for cloud services, Alcatel-Lucent undertook an in-depth market study of perceptions and attitudes towards the cloud among 3,886 ITDMs in seven countries between June and September 2011. Selected ITDMs in the U.S., U.K., France, India, South Korea, Taiwan, and Hong Kong participated in online interviews structured to reveal similar strains of thinking towards cloud services.

Study participants were selected from organizations with at least 100 employees. Each participant was qualified based on his or her contribution to the organization's enterprise and departmental information technology (IT) decisions, and level of authority over the organization's IT budget. In addition, participants were required to be at least somewhat familiar with the cloud, and have an active role in the purchase or implementation of cloud services. Finally, to ensure study results reflected a cross-section of the potential market for cloud services, participants were selected from large (43 percent), medium (25 percent), and multinational (32 percent) organizations representing seven key market sectors (Table 1). The IT budgets in these organizations ranged from 50,000 United States dollars to 5 million United States dollars, with a median budget of 375,000 United States dollars.

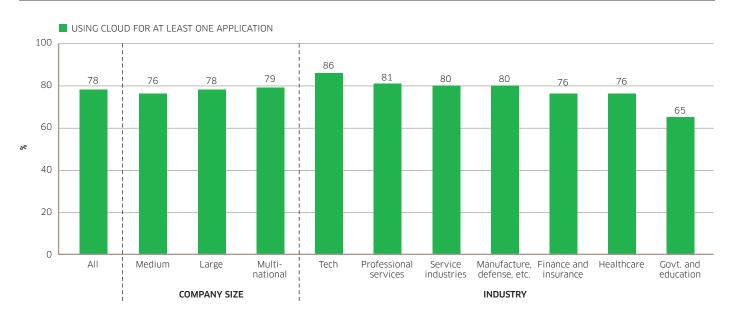**Table 1. Study participants were selected from seven key market sectors**

Industries	%
Manufacturing, defense, etc.	17%
Service industries	16%
Professional services	15%
Government and education	14%
Technology	14%
Finance and insurance	13%
Healthcare	8%

It should be noted that due to the careful respondent selection process, the results of this study should be viewed as being reflective of the cloud-familiar community and not necessarily the entire potential cloud market.
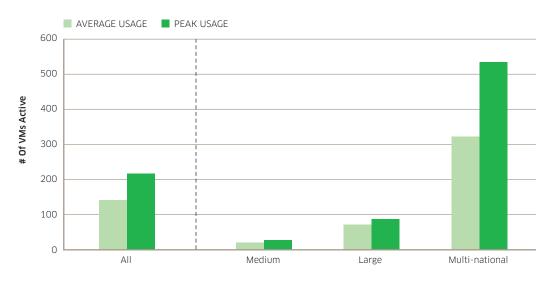
GETTING A CLEAR VIEW OF THE CURRENT LANDSCAPE

Results of the study indicate that cloud adoption rates are robust across major market sectors, with large multinational companies and technology enterprises using the cloud for at least one application. Enterprises in the healthcare, government and education sectors use the cloud less, but more than 70 percent of these companies are putting some of their applications in the cloud (Figure 1).

Figure 1. Cloud usage by company size and market sector

USING CLOUD FOR AT LEAST ONE APPLICATION

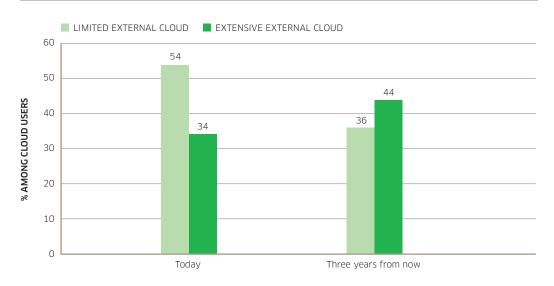|	%
All	78
Medium	76
Large	78
Multi-national	79
Tech	86
Professional services	81
Service industries	80
Manufacture, defense, etc.	80
Finance and insurance	76
Healthcare	76
Govt. and education	65

COMPANY SIZE   INDUSTRY

However, only 34 percent of ITDMs surveyed said they use the cloud for their mission critical applications. In addition, medium and large companies are not taking advantage of the flexibility the cloud's virtual machines offer for applications that do not have large resource fluctuations (Figure 2), despite the fact that their cloud bandwidth consumption doubles from low to peak demand periods.

Figure 2. Medium and large companies are not taking advantage of the cloud

But most ITDMs believe peak usage will expand over the next year, and 44 percent expect to use the cloud more extensively three years from now (Figure 3). The greatest anticipated growth will be in the finance and insurance sectors.

Figure 3. Projected cloud usage in three years

IDENTIFYING REGIONAL DIFFERENCES

The survey also revealed a number of regional differences in current and projected cloud usage. India currently has the most extensive use of cloud-based solutions and the highest percentage of ITDMs who expect to expand their use of cloud services over the next three years. The U.S. follows closely behind India in both categories, while France and the U.K. show the lowest levels of enthusiasm (Figure 4).
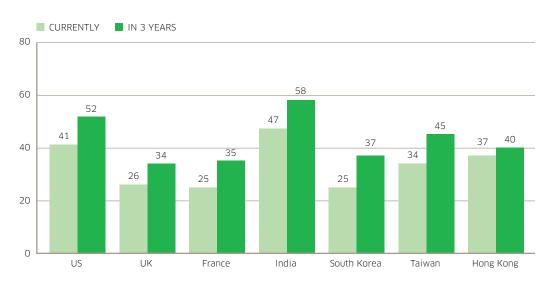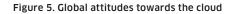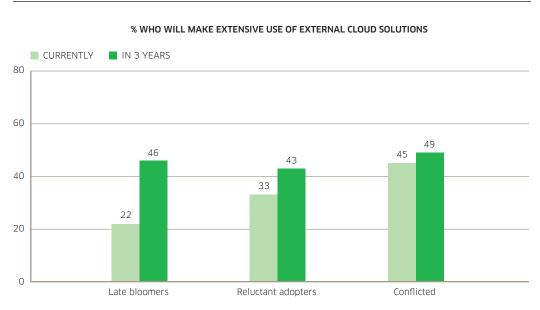
Figure 4. Percentage of ITDMs who will make extensive use of cloud solutions

CURRENTLY IN 3 YEARS

	US	UK	France	India	South Korea	Taiwan	Hong Kong
CURRENTLY	41	26	25	47	25	34	37
IN 3 YEARS	52	34	35	58	37	45	40

CHECKING THE MARKET'S ATTITUDE

Responses to attitudinal questions revealed similar strains of thinking about cloud services in each country. As a result, ITDMs can be grouped as either late bloomers, conflicted, or reluctant (Figure 5).

Figure 5. Global attitudes towards the cloud

% WHO WILL MAKE EXTENSIVE USE OF EXTERNAL CLOUD SOLUTIONS

CURRENTLY IN 3 YEARS

	Late bloomers	Reluctant adopters	Conflicted
CURRENTLY	22	33	45
IN 3 YEARS	46	43	49

Late bloomers comprise 15-30 percent of ITDMs. They are not currently invested in cloud technologies and are typically less familiar with the cloud. However, they anticipate doubling external cloud usage in the next three years.
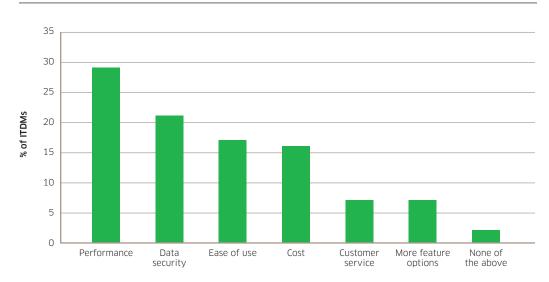
Conflicted ITDMs comprise 14-24 percent of ITDMs. This group strongly agrees with the strengths of the cloud, is already invested heavily in cloud computing technologies, and anticipates little change over the next three years. However, this group also readily acknowledges the dangers and drawbacks associated with cloud-based services.

Reluctant adopters are ITDMs who have a greater level of skepticism towards cloud services. They are only tepidly investing in cloud solutions, but are increasing their investment slowly. This group is more prevalent in Europe than elsewhere. In fact, negative attitudes towards the cloud are much stronger among reluctant adopters in the U.K. and France. Only one in six reluctant adopters in the U.K. and only one in 12 in France expect to make extensive use of cloud services in the next three years, compared to at least one-third of reluctant adopters in Asia and the U.S. who expect to use cloud services extensively.

UNDERSTANDING KEY CONCERNS

Asked to identify their main concerns with cloud services, ITDMs in all markets pointed to service outages. It's not surprising, therefore, that performance (stability, response time, end-to-end availability) and data security are the two most important aspects of cloud solutions that ITDMs say need the most improvement (Figure 6).

Figure 6. Performance and data security are the top demands for cloud services

DEFINING REQUIRED SUPPLIER CHARACTERISTICS

In addition, ITDMs in all markets said that what they look for most when they are considering cloud solutions is a trusted supplier who can provide a reliable, secure solution for their mission critical applications (Figure 7). Medium-sized companies tend to want a provider who is a partner in their cloud use. Large companies tend to want a provider who can deliver a reliable, simple solution. And multinational companies tend to want a provider who can meet their performance needs. Based on this criteria, the dominant network service providers in each country (for example, BT, Verizon, AT&T, Orange) fared consistently better than Amazon as a trusted source of cloud services.

Figure 7. Top five attributes of willingness to purchase

IDENTIFYING POSITIONING OPPORTUNITIES

Past research on the cloud failed to recognize the significance of attitudes and perceptions about cloud services, and the key role performance will play in future adoption rates. The Alcatel-Lucent study reveals that there is a real demand for a next-generation, high-performance cloud solution. Although demand varies by region, ITDMs in all regions agree on the key attributes they want in a service provider offering cloud services. An analysis of the interview responses underscores that ITDMs are not necessarily looking for a provider who is a leader in cloud technologies, but they do want one they can trust to provide secure, cloud solutions that are sufficiently robust to handle an organization's most mission critical applications.

In addition, the research revealed that ITDMs in all regions are willing to pay for a next-generation, high-performance cloud solution. In fact, a carrier-grade cloud service is four times more attractive to ITDMs and has the potential to generate ten times more revenue than existing cloud services. To fully capitalize on this opportunity, service providers must provide a cloud solution that can support complex network topologies, offers a bandwidth and latency guarantee, as well as encrypted storage options. The ideal solution should also enable user-configured redundancy options, and rapid virtual machine instantiation.

MARKET KNOWLEDGE SHARPENS YOUR BUSINESS EDGE

Market and Consumer Insight (MCI) investigates links between consumer behavior and technological trends to help Alcatel-Lucent and its clients, communication service providers, make more informed and impactful business decisions.

MCI experts dig deeper and reach farther to provide information that helps communication service providers formulate new thinking, including:

- Global and regional, urban and rural, insights
- Research on sociological, cultural, market and technological trends and the latest information and communication technology (ICT) regulations

For more information related to planning, strategizing and executing adeptly to deliver a better cloud services experience based on more detailed survey results by industry, region, and enterprise size, as well as ITDM willingness to pay per cloud feature, please contact the Alcatel-Lucent Market and Consumer Insight team at mcinsight@alcatel-lucent.com.

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