CompTIA
Cloud Industry
Roadmap

An overview of the current and emerging trends affecting the cloud/SaaS Industry

How to Use this Roadmap

This cloud-related roadmap was produced by the CompTIA Cloud community. The roadmap is a planning and validation tool. It's intended to aid your business in the evaluation, adoption and implementation of new Technologies as well as identify aging technologies where opportunities may be less attractive. And, it provides an overview of the trends and issues that are influencing technology decision-making.

This roadmap serves three primary functions.

1. **Helping channel players position their business for success**
2. **Removing uncertainty associated with change**
3. **Enabling CompTIA and its member communities to build supporting resources for its membership and the Industry**

This roadmap was developed by the members of the CompTIA Cloud Community in consultation with industry experts and data provided by CompTIA's expert market research staff. The roadmap captures technology and market trends for the next two to three years at a high level. They are broken down into three categories:

- **Emerging**: Technologies are just beginning. Their adoption ascent and trends that will increase in importance
- **Current**: Technologies and trends that have gained momentum and are important today
- **Fading**: Technologies and trends that are commoditized and have or are declining in importance. These items are not obsolete, but rather past-peak in value.

This roadmap provides forward looking statements for threats, opportunities and recommendations for possible actions. These statements put the trends in context, and make them more applicable to businesses. As with all roadmaps, this document provides an overview of the landscape and multiple, diverse routes for you to take.

Everyone will use this roadmap differently. What's important is for you to use the roadmap to start a journey. However, the roadmap is just that, a guide and you should thoroughly research and evaluate each opportunity as it applies to your individual resources and capabilities.

	Emerging	Current	Fading
Cloud Technologies	• BYOA (Bring Your Own Access) • IOT • Management • Hybrid cloud • BYOD in corporate infrastructure • Big Data Analytics • Fog Computing	• Communication – UCC/ Hosted VoIP • Collaboration – Web, Content File Sharing/Social Technologies • Virtual Desktop Integration • Server virtualization • Hosted exchange • Cloud Storage/Backup/recovery • Mobility/BYOD • Cloud Application Management • Device Management • Mobile Device • SaaS Applications	• Community Clouds • 1:1 workload to server ratio

	Emerging	**Current**	**Fading**
Cloud Services	• Easy migration/integration • Service delivery/consumption/ pricing models • Adoption Of Unlimited Models (All you can consume) • Cloud Assessments • Enhanced Security • Tailored LOB Solutions	• Hosted services - IaaS, PaaS/ SaaS • Implementation and migration • Customization • Mobility carrier services (BYOD) • Business process improvement • More monthly / utility type billing options • Interoperability & portability standards for cloud (API's) • Capex/Opex • 24 x 7 Support • Single Pane of Glass capabilities	• Traditional software licensing sales • Cloud is driving consolidation as traditional sales decline
Partnerships	• Broad industry service aggregation – APIs • Complex partnerships to deliver new services • Integration / Automation • Investment in IP • Cloud brokerage • SaaS aggregation platforms	• Enablement of variable pricing – utility/ metered usage or seat based • Consumerization • Telecom (agent model) • Account ownership • Sales Tools • Customization • Relationships • Co-Marketing with Vendor and Distribution involvement and input	• Private label/white label • Pay to play, partners don't pay to enter partner programs anymore
Regulation	• Compliance challenges (ongoing, indefinite) • New laws and taxes • Impact of international standards • Privacy and Identity protection - Federal • Data location importance and Patriot Act Requirements	• Security regulations • Industry standards • Ambiguity/transitive properties of compliance • E-discovery (in litigation) • SOX • HIPAA • PCI Security • GLBA • G-Cloud • ISO • Federal (not state) • BA Agreements	
Pressures Impacting The Industry	• Data/privacy security • Globalization • Education gap deterring adoption • Skills gap deterring adoption • Shadow IT • Hidden/Not Understanding Cost Models	• Compliance, technical training, planning + policies • Broadening skill requirements for vendors • Cloud advocacy to drive adoption • Economic environment • BYOD Issues • Cloudwashing by vendors • The need to sign new vendor partnerships to get access to the right cloud services	• Transition from product to cloud sales financials • Margin retention
The Channel	• Vendor consolidation • Cloud vendor/end user/direct model • Shifting Customer Base • Education • Heavy focus on ease of management and efficiency • Influence of outside 'channels' ie: Telco SaaS • Relevance of IT Channels between xsp • Management across multiple cloud providers	• Vendors going direct • Business model shift to recurring revenue • Vendor/distributor/reseller/ end user model • Adoption + viable business model • Cloud distribution portals	• Pay to play

POTENTIAL THREATS

Service Levels: With multiple suppliers involved in the delivery of even a single service, it is difficult to control service levels in the cloud.

Security: Due to the complexity of the environment, cloud security is difficult to manage and is only as elective as its weakest link. Proactive management of the technologies and business process under your control will help mitigate liability. Performing due diligence on suppliers and partners is critical.

Mergers and acquisitions and/or the failure of cloud suppliers: a consolidation of cloud suppliers over the next 2-3 years will have a disruptive effect on both service providers and end-users. The failure of a single supplier could be disastrous for a VAR or MSP.

The burden of national and international cloud regulation: Federal and state governments have not enforced regulations on a broad basis. Also, the legal community, perhaps due to a lack of understanding, has not aggressively pursued liabilities that exist for suppliers and marketers of cloud services. This will likely change over the next 2-3 years. Along with new regulations and requirements, this could increase the costs and management issues throughout the supply chain.

Changing data laws could impact where and how vendors can sell cross border. At the moment EU law is being reviewed and proposals are out to specify full local sovereignty in regions, meaning to sell into the UK you may need to comply with the variations in UK data laws as well as EU statutes. There is support for and challenges to these proposals and the outcome is uncertain at this time. For USA vendors selling into the UK there is additional risk. US courts are demanding Microsoft hand over data held in Ireland. The outcome of such legal discussions is already affecting the buying decisions of UK firms. Analysts are predicting there will be a further impact on cloud sales dependent on the decisions that are made regarding the sovereignty of data held by various countries.

POTENTIAL OPPORTUNITIES

Deliver and Integrate: Companies that sell, deliver, and manage a comprehensive suite of cloud services from a single platform will have a substantial advantage over those delivering point solutions.

Mobility: Deliver and manage content for consumption; develop or adapt cloud-based business applications to improve productivity and help businesses electively operate in an "anytime, anywhere" environment.

Unified Cloud Communications: Integrate email, VoIP, collaboration, shared storage and other hosted solutions into seamless applications. Customize to meet vertical market's needs (growth opportunities).

Cloud Consultancy: Provide consultation services for platform selection, management, integration, education and training in cloud solutions; for both channel and end-user communities.

Security: Provide security consulting, implementation and management services for technology and the business processes across the enterprise (from on-premise infrastructure to the mobility users).

Vertical Focus: Apply cloud technologies to address the specific needs of healthcare, legal, manufacturing, accounting and other industries. Create service bundles and complete solutions for these customers. Develop intellectual property by customizing existing applications like file management and collaboration to service specific business needs.

Cloud Brokerage: Negotiate cloud service deals, provide expert consulting recommendations, and manage the cloud services supply chain from end-to-end for SMB organizations and small enterprise customers.

Managed Cloud: Provide cloud management services to help business understand how the cloud / Internet is being used by their business and how they can manage and maximize productivity. As more and more cloud architecture incorporates multiple clouds the opportunity to manage these complex environments will become evident.

Cross Sell and Upsell: Cross sell and upsell cloud applications to create solution bundles that improve productivity in your clients business. This will create more opportunities to deliver additional service and make the customer ties stronger and increase the life time value of the relationship.

POSSIBLE ACTIONS

Educate: There is a significant demand for end-user and service provider education around cloud services. That need can be addressed through certification programs, research, supply chain management, and communication and marketing support.

Business Model Transformation: Provide tools to help the reseller community integrate managed services and cloud services, and to transition their businesses to maximize current and future market opportunities.

Process Management tools: Develop a process framework that makes it easier for solution providers to select suppliers, manage the supply chain and market/sell/bill cloud services.

Financial Models: Initiate a financial model to benchmark or measure all service providers' progress against the highest performing cloud service providers.

Legal / Regulation Management: Provide the reseller and vendor communities with regular updates regarding pending legislation and its impact on cloud services.

ABOUT THE CompTIA CLOUD COMMUNITY

The CompTIA Cloud Community addresses the challenges and opportunities in the emerging field of cloud computing and application delivery. This group develops best practices, education programs, industry standards, and member driven initiatives specific to the Web-based technologies. For more information on the CompTIA Cloud Community, please contact us at communities@comptia.org.

About CompTIA

CompTIA® is the voice of the world's information technology (IT) industry. As a non-profit trade association advancing the global interests of IT professionals and companies, we focus our programs on four main areas: education, certification, advocacy and philanthropy. Our association members are at the forefront of innovation and represent businesses that maximize the value their clients receive from their technology investments. Our member communities allow IT professionals to collaborate on industry issues and develop the resources needed to grow the industry. For more information, visit www.comptia.org or follow CompTIA on Twitter at http://twitter.com/comptia.