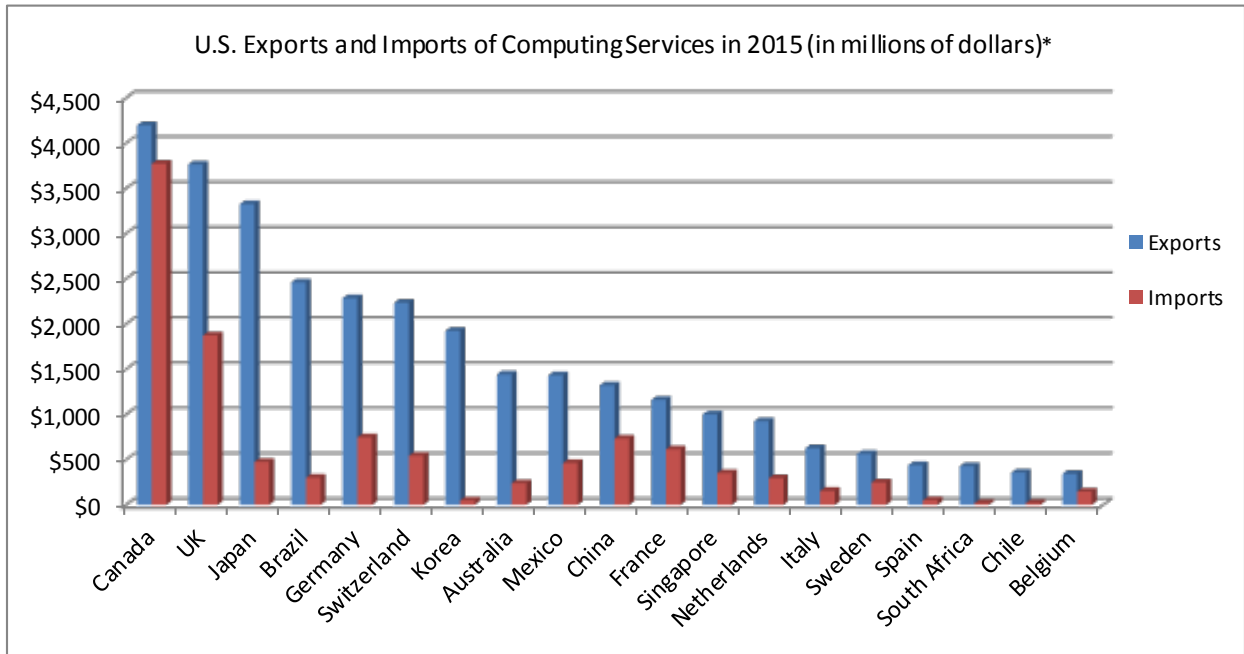


2017 Top Markets Report **Cloud Computing** Sector Snapshot

Industry Trends

Achieving both security and data privacy objectives while also maintaining open, competitive and innovative digital markets continues to be a challenge for the cloud computing industry. Government efforts to manage security and data privacy also remain a difficult task with some foreign governments restricting cloud computing usage and others inhibiting the flow of data outside of their borders through comprehensive privacy laws and data localization requirements. However, despite these potential market barriers, U.S. cloud computing companies continue to be global market leaders possessing a strong competitive advantage, with the big four cloud providers (Amazon, Microsoft, IBM and Google) enjoying a significant global market share.¹



* Bureau of Economic Analysis. "Computing Services" includes data regarding computer and information services and software, telecommunications and charges for the use of intellectual property. Data for India (\$1.5 billion exports / \$13.4 billion imports) not included for graph display reasons.

As has been the trend over the last few years, the strongest demand and usage of cloud services will come from the United States, Canada, Europe and the Asia-Pacific region. Except for a handful of countries, the United States exported more computing services than it imported, generating a trade surplus of approximately \$18 billion in 2015.

¹The Synergy Group: <https://www.srgresearch.com/articles/amazon-leads-microsoft-ibm-google-chase-others-trail>;
<https://www.srgresearch.com/articles/amazon-dominates-public-iaas-paas-ibm-leads-managed-private-cloud>

Key International Competitiveness Issues

When entering or expanding into international markets, U.S. cloud service providers might face some of the following market challenges:

- 1) Data localization restrictions requiring data to be stored, processed or handled in the same country where it originated.
- 2) Compliance with foreign laws establishing measures regarding how certain data may be transferred across borders.
- 3) Being required to have a local presence in-market (e.g., distributor, sales office, business representative, joint venture partner, etc.) could make a significant difference in a company's abilities to do business, especially with the public sector.
- 4) Other competitiveness issues such as licensing requirements, and cybersecurity and restrictive procurement policies.

U.S. exporters of cloud computing services have access to a wide array of resources to mitigate the market access challenges outlined above. For example, the U.S. Department of Commerce has a network of digital attaches located in strategic markets (Belgium, Brazil, China, France, Germany, India, Indonesia, Japan, Mexico, Singapore, South Africa and South Korea) tasked with helping digital services exporters gain market access and navigating foreign digital policy and regulatory issues. To help address data flow issues, the International Trade Administration (ITA) administers both the EU-U.S. and Swiss-U.S. Privacy Shield Frameworks to provide a mechanism to transfer personal data from the European Union and Switzerland to the United States, while complying with EU and Swiss data protection requirements. ITA is also leading work to implement the Asia-Pacific Economic Cooperation (APEC) Cross-Border Privacy Rules system, which will ultimately raise the level of consumer privacy protection in the APEC region and facilitate data flows among all 21 APEC member economies. The U.S. Department of Commerce also provides a network of international trade specialists located in over 100 U.S. cities and in more than 75 countries, whose goal it is to provide export assistance to U.S. companies. For more systemic issues, such as foreign laws or regulations which prohibit or limit the ability of U.S. companies to offer their services in international markets, the U.S. Department of Commerce can also provide government-to-government engagement.

Foreign Competition

Despite the strong global market share of U.S. cloud service providers, U.S. companies face significant competition from top foreign competitors including Alibaba (China), BT (UK), Fujitsu (Japan), SAP (Germany), Orange (France) and Singtel (Singapore), among others. Market familiarity, services bundling, perceptions that data is more safely stored in local data centers, latency issues, and better access to customer service are all potentially to the benefit of foreign competitors. With the progressive global expansion and utilization of cloud computing, U.S. companies should expect increasing competition from foreign providers in the coming years.

Resources for Exporters

- *Cloud Computing Top Markets Report*

The International Trade Administration's 2016 *Cloud Computing Top Markets Report* is meant to help exporters determine export market potential by comparing opportunities across borders.

http://www.trade.gov/topmarkets/pdf/Cloud_Computing_Top_Markets_Report.pdf

- *The Digital Attaché Program*

This program offers access to Digital Trade Officers in 12 key foreign markets who can help U.S. companies grow their exports through global ecommerce channels, gain access to the global online marketplace and navigate foreign digital policy and regulatory issues. These officers are located in U.S. embassies and consulates abroad. The Digital Attaché Program is part of the Department of Commerce's comprehensive effort to address 21st century trade barriers and help the digital economy.

<https://www.export.gov/digital-attache>

- *Country Commercial Guides*
These guides provide information on market conditions, opportunities, regulations, and business customs for over 125 countries and are prepared by trade and industry experts at U.S. embassies worldwide.
<https://www.export.gov/ccg>
- *U.S. Commercial Service*
The U.S. Commercial Service is the trade promotion arm of the U.S. Department of Commerce's International Trade Administration. U.S. Commercial Service trade professionals in over 100 U.S. cities and in more than 75 countries help U.S. companies get started in exporting or increase sales to new global markets.
<http://www.trade.gov/cs/>
- *EU-U.S. and Swiss-U.S. Privacy Shield Frameworks*
The EU-U.S. and Swiss-U.S. Privacy Shield Frameworks were designed by the U.S. Department of Commerce and the European Commission and Swiss Administration to provide companies on both sides of the Atlantic with a mechanism to comply with data protection requirements when transferring personal data from the European Union and Switzerland to the United States in support of transatlantic commerce.
<https://www.privacyshield.gov/welcome>
- *Asia-Pacific Economic Cooperation (APEC) Cross-Border Privacy Rules*
The APEC Cross-Border Privacy Rules (CBPR) system was developed by participating APEC economies to build consumer, business and regulator trust in cross border flows of personal information. The APEC CBPR system requires participating businesses to develop and implement data privacy policies consistent with the APEC Privacy Framework.
<http://www.cbprs.org/>
- *U.S. Chambers of Commerce around the World*
<https://www.uschamber.com/amcham-directory>
- *Information and Communications Technology Trade Shows*
<http://www.tofairs.com/fairs.php?fld=13&rg=&cnt=&cty=&sct=>