IT Infrastructure Automation – Market Update and PEAK Matrix™ Assessment for Solutions

Cloud & Infrastructure Services
Market Report – April 2017 – Preview Deck

Our research offerings for global services

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Global services tracking across functions, sourcing models, locations, and service providers – industry tracking reports also available

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▶ **Procurement**

▶ **Recruitment & Talent Acquisition**

▶ **Service Optimization Technologies**

▶ **Transaction Intelligence**

Custom research capabilities

- Benchmarking | Pricing, delivery model, skill portfolio

- Peer analysis | Scope, sourcing models, locations

- Locations | Cost, skills, sustainability, portfolio – plus a tracking tool

- Tracking services | Service providers, locations, risk

- Other | Market intelligence, service provider capabilities, technologies, contract assessment

🏢 **Corporate Headquarters**
Office: +1-214-451-3000
info@everestgrp.com

🏢 **European Headquarters**
Office: +44-207-129-1318
unitedkingdom@everestgrp.com

🏢 **Delhi Office**
Office: +91-124-284-1000
india@everestgrp.com

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* Banking, financial services, and insurance

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Background of the research

Background of the research
- In today's digital age where "applications are the business," establishing an agile, resilient, and cost-effective IT infrastructure has become critical for enterprises, as they look to build and push new products to the market faster than competition. The need for a "business-aligned" IT infrastructure has translated into mainstream adoption of next-generation IT infrastructure concepts such as cloud, converged infrastructure, and operational analytics
- However, most enterprises continue to struggle to reap benefits that are commensurate with the extent of their investments. One of the key reasons that enterprises fail to realize the desired benefits is the lack of "coherent and business context-centered" IT infrastructure services automation strategy. In order to obtain "true business benefits," enterprises need to adopt an automation strategy that:
  - Offers high agility and resilience to support dynamic business requirements (i.e., self-learning / conscious IT infrastructure)
  - Takes a pragmatic adoption approach, supported by a clear decision framework (where to and where not to adopt)
  - Gives due consideration to existing process maturity levels, rather than driving a "big-T" transformation without proper evaluation of the criticality of underlying applications/businesses
  - Has a robust product strategy at its heart, ensuring that there is minimal vendor lock-in involved
- In this research, we present the assessment and detailed profiles of 15 IT service providers featured on the PEAK Matrix for IT infrastructure automation solutions. Each service provider profile gives a comprehensive picture of their IT infrastructure automation solutions' (i.e., software + associated services) vision, scale & nature of operations, and domain investments
- The assessment is based on Everest Group's annual Request for Information (RFI) process conducted in Q4 2016, interactions with leading IT infrastructure services providers, and analysis of the broader IT infrastructure services automation market

Scope of this report
- **Services:** IT infrastructure automation
- **Geography:** Global
- **Service providers:** 15 leading IT infrastructure service providers

This report includes the profiles of the following 15 service providers on the PEAK Matrix for IT infrastructure automation solutions:
- **Leaders:** IBM, HCL Technologies, Wipro, and TCS
- **Major Contenders:** CGI, Cognizant, GAVS Technologies, Infosys, Microland, NTT DATA, Tech Mahindra, and Zensar
- **Aspirants:** Hexaware, Mphasis, and VirtusaPolaris

Our research methodology is based on four pillars of strength to produce actionable and insightful research for the industry

- Market thought leadership
- Actionable and insightful research
- Syndicated and custom research deliverables

1

Robust definitions and framework
(PEAK Matrix, market maturity, and technology adoption/investment)

2

Primary sources of information
(Annual contractual and operational RFIs, service provider briefings, and market feedback)

3

Diverse set of market touchpoints
(Ongoing interactions with key stakeholders, input from a mix of perspectives and interests, as well as support data analysis and thought leadership)

4

Fact-based research
(Data-driven analysis with expert perspectives, trend-analysis across market adoption, contracting, and service providers)

- Annual RFI process and interaction with leading IT infrastructure/cloud service providers
- Dedicated team for IT infrastructure/cloud services adoption trends
- Over 25 years of experience in advising clients on global services decisions
- Executive-level relationships with buyers, service providers, technology providers, and industry associations

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Everest Group's IT infrastructure services automation research is based on four key sources of proprietary information

1
- Proprietary database of IT service contracts of major IT service providers with IT infrastructure services scope of work (updated annually)
- The database tracks the following elements of each contract:
  - Buyer details including size and signing region
  - Contract details including service provider, contract type, TCV and ACV, service provider FTEs, start and end dates, duration, and delivery locations
  - Scope details including share of individual buyer locations being served in each contract, Line of Business (LoB) served, and pricing model employed

2
- Proprietary database of IT service providers (updated annually)
- The database tracks the following for each service provider:
  - Revenue and number of FTEs
  - Number of clients
  - FTE split by different lines of business
  - Revenue split by region
  - Technology solutions developed, including automation investments

3
- **Service provider briefings**
  - Vision and strategy for IT infrastructure services
  - Annual performance and future outlook
  - Key strengths and improvement areas
  - Emerging areas of investment (e.g., focus on artificial intelligence and cognitive solutions)

4
- **Ongoing buyer surveys and interactions**
  - Drivers and challenges for adopting IT infrastructure services automation
  - Assessment of service provider performance
  - Emerging priorities
  - Lessons learnt and best practices

Service providers assessed

CGI, Cognizant, GAVS, HCL, Hexaware Technologies, IBM, Infosys, MICROLAND, Mphasis, NTT Data, TATA Consultancy Services, Virtusa, Tech Mahindra, WIPRO, ZenSar Technologies

Confidentiality: Everest Group takes its confidentiality pledge very seriously. Any information that is contract-specific will be presented back to the industry only in an aggregated fashion

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This report focuses on IT infrastructure automation solutions and offers insights into prominent IT service providers operating in this space (page 1 of 2)

Services delivery automation

IT infrastructure services

- Automation within IT infrastructure management (servers, storage, network, OS/virtualization, database, middleware, End User Compute (EUC), and service desk)
- Examples of tasks automated:
  – Hardware or service provisioning
  – Capacity management
  – Helpdesk/support operations
  – Patch management
  – End-user automation
  – Performance monitoring, incident management, self-healing, and prevention
- Transformation and modernization – using performance data to identify areas for improvement and modernization of IT infrastructure services

Application services

- Automation within Software Development and Life Cycle (SDLC) management
- Examples of tasks automated include:
  – Rapid Application Development (RAD)
  – Code generation
  – Model-Driven Architecture / Development (MDA/MDD)
  – Application release automation and deployment
  – Test automation
- Transformation and modernization – using performance data to identify areas for improvement and modernization for application services

Business process services

- Handling high volumes of repetitive administrative tasks, e.g., invoice settlement or benefits application processing
- Seeking and identifying patterns that can indicate unusual situations or activity, e.g., a deadline about to be breached or potential fraudulent activity
- Gaining commercial intelligence, e.g., used in price optimization in the travel and hospitality sector
- Front-office services such as automated voice as well as in-bound document handling

The focus of this report is on the **complete set of automation solutions (i.e., software + associated services) offered by IT infrastructure service providers**. *The software implemented comprises both in-house and third-party (ISV) offerings.*

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This report focuses on IT infrastructure automation solutions and offers insights into prominent IT service providers operating in this space (page 2 of 2)

NOT EXHAUSTIVE

Automation within IT infrastructure services delivery

- Automation within IT infrastructure management (servers, storage, network, OS/virtualization, database, middleware, End User Compute (EUC), and service desk)
- Examples of tasks automated: Hardware or service provisioning, capacity management, helpdesk/support operations, patch management, end-user automation, and performance monitoring, incident management, self-healing, and prevention
- Transformation and modernization – using performance data to identify areas for improvement and modernization of IT infrastructure services

Third party automation / analytics product providers (illustrative examples)

arago | IPsoft | CORTEX

ayehu | Automic — Let's Automate Business.

- Offer IT infrastructure services automation products
  - Sold either directly to clients or through channel partners (e.g. IT service providers)
  - Can also offer managed services in addition to products (e.g. IPsoft)

Service providers (illustrative examples)

CGI | HCL | IBM

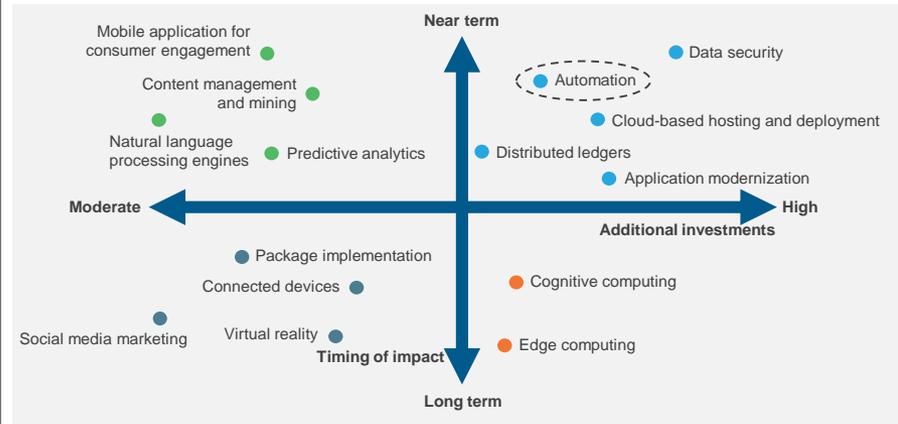TATA CONSULTANCY SERVICES | WIPRO Applying Thought

Infosys

- Design, implementation, and management services for IT infrastructure services automation
  - Offered within managed services or as stand-alone "automation as a service"
  - Cover third-party products and / or in-house IP

Focus of this report (Assessment of IT service provider capabilities)

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Automation is amongst the top priorities for enterprises as they look to drive service agility, cost improvements, and increased resilience within their digital businesses

Enterprise technology priorities

Near term

- Mobile application for consumer engagement
- Content management and mining
- Natural language processing engines
- Predictive analytics
- Data security
- Automation
- Cloud-based hosting and deployment
- Distributed ledgers
- Application modernization

Moderate ← → **High**
Additional investments

- Package implementation
- Connected devices
- Social media marketing
- Virtual reality
- Cognitive computing
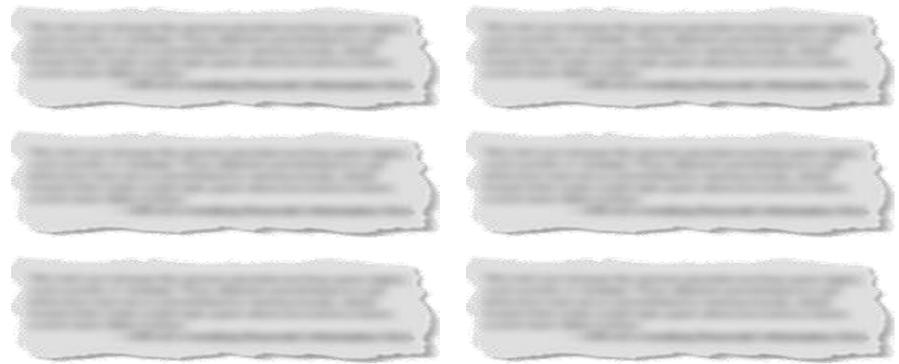- Edge computing

Timing of impact

Long term

More than XX% of enterprises are actively pursuing / planning to adopt automation within their IT infrastructure operations
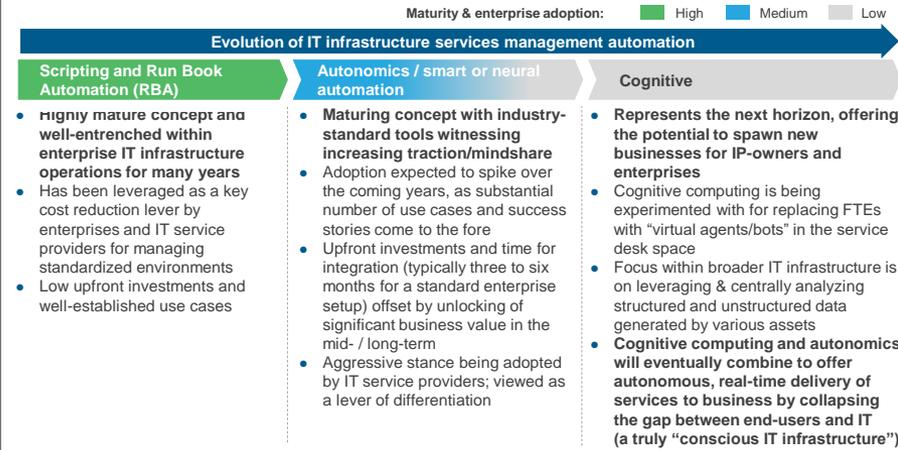
Enterprises value the ability of service providers

EVEREST GROUP INTERACTION WITH ENTERPRISES

Next horizon for IT infrastructure automation

Maturity & enterprise adoption: **High** **Medium** **Low**

Evolution of IT infrastructure services management automation

Scripting and Run Book Automation (RBA)	Autonomics / smart or neural automation	Cognitive
- **Highly mature concept and well-entrenched within enterprise IT infrastructure operations for many years** - Has been leveraged as a key cost reduction lever by enterprises and IT service providers for managing standardized environments - Low upfront investments and well-established use cases	- **Maturing concept with industry-standard tools witnessing increasing traction/mindshare** - Adoption expected to spike over the coming years, as substantial number of use cases and success stories come to the fore - Upfront investments and time for integration (typically three to six months for a standard enterprise setup) offset by unlocking of significant business value in the mid- / long-term - Aggressive stance being adopted by IT service providers; viewed as a lever of differentiation	- **Represents the next horizon, offering the potential to spawn new businesses for IP-owners and enterprises** - Cognitive computing is being experimented with for replacing FTEs with "virtual agents/bots" in the service desk space - Focus within broader IT infrastructure is on leveraging & centrally analyzing structured and unstructured data generated by various assets - **Cognitive computing and autonomics will eventually combine to offer autonomous, real-time delivery of services to business by collapsing the gap between end-users and IT (a truly "conscious IT infrastructure")**

IT infrastructure services automation

Key enterprise drivers for private cloud adoption

Low ← → *High*

Theme	Relevance	Details
Guaranteed productivity improvements		-
Theme B		-
Theme C		-
Theme D		-
Theme E		-

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This IT infrastructure automation compendium report has 15 IT service provider profiles, focusing on their IT infrastructure automation solutions, partnerships, and recent investments

Company vision

XYZ looks at automation as the fourth disruptive wave after the industrial, computer, and internet revolutions. It uses its knowledge-based AI platform, ABC, to integrate machine learning with the deep knowledge of an organization to drive automation and innovation. Through automation, XYZ aims to reinvent systems and process landscapes in an enterprise and achieve increased productivity.

Strengths

- XYZ has been able to establish a credible brand recall with ABC, placing the solution amongst some of the leading automation offerings within the consideration set of enterprises
- The "Plug and play" approach offered by ABC to drive extensive cost-savings and reduction in human effort has been appreciated by clients

Areas of improvement

- XYZ needs to build a more sophisticated value proposition for ABC beyond productivity improvements and cost effectiveness
- XYZ needs to build credible use cases for ABC leveraging cognitive / AI-based features (e.g., self-heal capabilities) – potential benefits for well-standardized / automated environments remain limited

Proprietary solutions (representative list)

Solution	Details
ABC solution	- ABC is an intelligent, self-service hybrid IT management platform that helps to deploy, manage, govern, and optimize infrastructure and application components distributed over public cloud, private cloud, virtual, and on-premise environments - ABC is composed of three components, all of which are built on open-source technology - XYZ Information Platform – an open-source data analytics platform - XYZ Automation Platform – a platform that continuously learns routing logic, resolution processes, and diagnosis logic to build a knowledge base that grows and adapts to changes in the system - XYZ Knowledge Platform – a platform to capture, formalize, and process knowledge

Partnerships (representative list)

Partner	Details
	XYZ has integrated its ABC platform with more than 60 industry tools such as Nagios, VMware, Chef, IBM, Remedy, ServiceNow, AppDynamics, and McAfee.

Investments (representative list)

Theme	Details
XXXXX	XYZ has invested in XXXXX focused on advanced text analysis through machine learning and natural language processing.
XXXXX	XYZ is a strategic member driving the XXXXX initiative for enterprise adoption

Source: Everest Group (2017)

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Cloud and Infrastructure Services research calendar

■ Published   ■ Current

Topic	Release date
Infrastructure Services – Annual Report 2016	July 2016
Private Cloud Enablement Services – PEAK Matrix™ Assessment and Profiles Compendium	September 2016
Hosted Private Cloud Services – PEAK Matrix™ Assessment and Profiles Compendium	December 2016
Upcoming Contract Renewals – Infrastructure Services: "Over 40% Incumbents Replaced Annually; Providers Beware!"	February 2017
IT Infrastructure Automation – Market Update and PEAK Matrix Assessment for Solutions	April 2017
IT Operations Automation – Market Trends, PEAK Matrix™ Assessment for Products & Profiles Compendium	Q2 2017
Workplace Services – Market Trends, PEAK Matrix™ Assessment & Profiles Compendium	Q2 2017
Enterprise Cloud Services – Annual Report 2017	Q2 2017
Infrastructure Services – Annual Report 2017	Q2 2017
IT Security Services – Market Trends, PEAK Matrix™ Assessment & Profiles Compendium	Q3 2017
IoT Services – PEAK Matrix™ Assessment & Profiles Compendium	Q3 2017
Hybrid Cloud Enablement Services – Market Trends and PEAK Matrix™ Assessment & Profiles Compendium	Q4 2017

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Additional research recommendations

The following documents are recommended for additional insight into the topic covered in this research. These documents either provide additional details on the topic, or complementary content that may be of interest

1. Enterprise Pulse Study 2016 – "Customer (Dis)Satisfaction: Why Are Enterprises Unhappy With Their Service Providers" (EGR-2017-4-R-2077); 2017. Despite large scale investments by service providers, customers are largely dissatisfied. This report presents insights into the unstated expectations in an engagement and reviews the enterprises' current satisfaction level with their service providers. The report also details the technology investment priorities of enterprises and opportunity areas for service providers. The objective of the report is to aid service providers strategize their engagement approach and prioritize investments to meet mounting customer expectations.

2. IT Infrastructure Services Automation - Codified Consciousness is the Future (EGR-2016-4-R-1885); 2016. The lack of a "coherent and business context-centered" IT infrastructure service automation strategy is one of the key reasons that enterprises fail to realize desired benefits from IT infrastructure investments. This market report investigates this trend and provides an in-depth analysis of the IT infrastructure services automation market. The research covers the current state of the market, enterprise adoption drivers, challenges, best practices, imperatives for IT service providers, technology provider landscape, and outlook for 2016-2017

For more information on this and other research published by Everest Group, please contact us:

Chirajeet Sengupta, Partner: chirajeet.sengupta@everestgrp.com
Yugal Joshi, Practice Director: yugal.joshi@everestgrp.com
Ashwin Venkatesan, Practice Director: ashwin.venkatesan@everestgrp.com
Mukesh Ranjan, Senior Analyst   mukesh.ranjan@everestgrp.com
Bharath Reddy, Senior Analyst   bharath.reddy@everestgrp.com
ITS research: ITSresearch@everestgrp.com

Website: www.everestgrp.com | Phone: +1-214-451-3000 | Email: info@everestgrp.com

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From **insight** to *action*.

About Everest Group

Everest Group is a consulting and research firm focused on strategic IT, business services, and sourcing. We are trusted advisors to senior executives of leading enterprises, providers, and investors. Our firm helps clients improve operational and financial performance through a hands-on process that supports them in making well-informed decisions that deliver high-impact results and achieve sustained value. Our insight and guidance empowers clients to improve organizational efficiency, effectiveness, agility, and responsiveness. What sets Everest Group apart is the integration of deep sourcing knowledge, problem-solving skills and original research. Details and in-depth content are available at www.everestgrp.com.

Dallas (Headquarters)
info@everestgrp.com
+1-214-451-3000

Bangalore
india@everestgrp.com
+91-804-276-4533

Delhi
india@everestgrp.com
+91-124-496-1000

London
unitedkingdom@everestgrp.com
+44-207-129-1318

New York
info@everestgrp.com
+1-646-805-4000

Toronto
canada@everestgrp.com
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