1. LET’S UNDERSTAND THE MARKET DYNAMICS

In this era of digitisation, the cloud debate is over-enterprises have already moved a sizeable portion of their business workloads to various cloud environments in anticipation of scalability, business agility and significant cost savings. The question is no longer “Should our company use cloud services or not?”, but rather “How do we seamlessly integrate multiple environments and leverage the advantages of infrastructure platforms to maximise the use of agile cloud for our business?”

We have seen a significant shift in how enterprises are approaching their technology and information systems, as part of a bigger journey towards digital transformation and global strategies. ¹57% of IT leaders expect to partner with Cloud Service Providers and Managed Hosting Providers for their hybrid and multi cloud initiatives. Enterprises are putting in a lot of effort to build IT models that work for them and secure the technological advantage that will help them improve efficiencies, meet business goals and deliver return on investment in the long run. It has been estimated that ²30 - 45% of cloud spend by enterprises is wasted due to improper management. This poses real challenges, especially when dealing with multi cloud and hybrid cloud environments and makes it necessary to realign resources to avoid system inconsistencies or underutilised resources in the cloud.

2. HOW ENTERPRISES APPROACH CLOUD ADOPTION

Aiming to transform their infrastructure operation models in order to achieve borderless growth as well as productivity and efficiency, enterprises start their journey by identifying the possible solution, along with sought-after drivers such as

### Hybrid Cloud

Moving towards the hybrid world requires attention from the extended ecosystem of an enterprise beyond the technology operations staff. Leaders must evaluate themselves and their teams and assess whether they have the right capabilities and systems in place to hone and synthesise all the ingredients of infrastructure transformation.

- A need to revamp IT platforms to enable innovation and faster response to market demands
- Need for an orchestration layer that provides a single view to operate and manage both the private and public cloud
- Transform the way infrastructure models and resources are accessed, connected, and leveraged
- Develop flexible and readily available computing and storage resource pools for current gen and next-gen apps, irrespective of the premise, that measures consumption on “pay per use
- Make business operations more responsive and effective

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¹ 57% of IT leaders expect to partner with Cloud Service Providers and Managed Hosting Providers for their hybrid and multi cloud initiatives.
² 30 - 45% of cloud spend by enterprises is wasted due to improper management.
IT owners need to weigh multiple factors before making the right decision for their organisation and infrastructure. One solution approach is to look at the granularity of workloads: considering various workloads under their control and their dependencies before making a decision on cloud migration. Key considerations for any cloud journey that must be assessed include:

**Business impact**
Evaluating the criticality of underlying applications to business impact

**Cost**
Overall cost involved to move to cloud solutions, considering availability of cloud-ready application architecture, is often the most important criteria for enterprises

**Infrastructure aspect**
Agility and speed of the cloud infrastructure in terms of faster deployment, on-demand scalability, and freedom of choice for technology plays a vital role in decision-making to move to cloud solutions

**Support aspect**
Overall service level agreements and scope of Managed Services for the cloud and infrastructure, supported with security and compliance, prevent migration to cloud if not addressed correctly and may hinder an enterprise’s cloud journey

### 3. REALISE THE POTENTIAL OF IZO™ MANAGED CLOUD FOR AZURE WITH US

As a global Microsoft Azure CSP partner, Tata Communications leverages its expertise in managing enterprise IT infrastructure and extends its Managed Services offering (IZO™ Managed Cloud for Azure) to the workloads that are hosted on Microsoft Azure Public Cloud. Tata Communications has unmatched capabilities in providing IT Infrastructure Services and we offer the full spectrum of services across private, public, and hybrid clouds built around Tata Communications’ Cloud Services and Microsoft Azure.
a) Hybrid Cloud

We help enterprises distribute workloads based on criticality & functionality between private & public clouds. Our orchestration layer provides single view to operate & manage both the private cloud at Tata Communications Data Centres and Public cloud at Azure. Tata Communications Global Service Management Centre which is known as GSMC has certified engineers who are trained in various industry standard solutions and best practices that helps enterprises to leverage our IZO™ Managed Cloud for Azure offerings. It operates 24x7 with continuous proactive monitoring of the infrastructure and shall be the single point of contact for all your IT infrastructure and cloud needs. We provide the right sizing and solution to establish connectivity across multiple options over an internet, ethernet and MPLS at various speeds.

On-premises Data Centre or IT infrastructure in our data centres would be connected over a reliable and secured global network to deliver seamless experience through our IZO™ Private Connect & Azure Direct Connect. Tata Communications offers Private instance hosted in enterprise on-premises Data Centres or in our IZO™ Private Cloud and public instance on IZO™ Managed Cloud for Azure. Installation, integration, management and monitoring by Tata Communications over a secure connection.

b) Details of Azure products supported by Tata Communications

<table>
<thead>
<tr>
<th>COMPUTING</th>
<th>NETWORKING</th>
<th>STORAGE</th>
<th>DATABASE</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Virtual Machine</td>
<td>• Load balancer</td>
<td>• Blob</td>
<td>• Azure DBaaS</td>
</tr>
<tr>
<td>• Virtual Machine scale sets</td>
<td>• Traffic manager</td>
<td>• Disk</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Application gateway</td>
<td>• Queue</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Backup</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• File</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Site recovery</td>
<td></td>
</tr>
</tbody>
</table>

*Tata Communications can work with customer for any custom requirement which can be addressed on a case-to-case basis*
OUR MANAGED SERVICES SCOPE

PRESENTATION AND ORCHESTRATION LAYER

IZO™ MANAGED CLOUD FOR AZURE

Tata Communications’ IZO™ Managed Cloud for Azure

Integrated ITL processes
24x7x365 OS/Infra management
Support data migration and total implementation
Consultation and best practices

Middleware services
- JBoss
- Tomcat
- IBM WebSphere
- Microsoft IIS
- Oracle Weblogic
- Apache HTTP Server

Databases
- Oracle Database
- MySQL
- IBM DB2
- Microsoft SQL server

Operating systems
- Microsoft
- Redhat
- Suse
- Oracle
- Linux

Virtual Machines
Storage
(Blob, Table, Que & File)
Network

Seamless integration

SERVICE SUITE

MANAGED SECURITY SERVICES

Managed Hosting Services with storage and backup options
IZO™ Managed Cloud for Azure are offered in two variants. The plan details are as shown below.

<table>
<thead>
<tr>
<th>SERVICES</th>
<th>SILVER</th>
<th>GOLD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloud architecture and design consultation</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Customer portal</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Proactive monitoring &amp; management</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Managed deployment of Azure resources</td>
<td>X</td>
<td>✔</td>
</tr>
<tr>
<td>Managed OS, storage, backup, middleware and database</td>
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<td>✔</td>
</tr>
<tr>
<td>Managed Azure support</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Azure Migration Support</td>
<td>1</td>
<td>✔</td>
</tr>
<tr>
<td>Onboarding assistance</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Resource optimisation</td>
<td>X</td>
<td>✔</td>
</tr>
<tr>
<td>Incident response time</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>24x7 technical support (Phone/Web/Email)</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Change request per instance under management (per month)</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

1 Please refer service guide.

**c) Service variants**

**SILVER**

- Standard templates, documentation & recommendations
- Yes, limited by customer’s Azure support subscription

**GOLD**

- Customised solution templates, documentation, & recommendations
- Yes, priority support through Tata Communications’ Azure partner support subscription

Quarterly recommendations based on monitoring reports

- Major: 60 min
- Minor: 180 min

Troubleshooting request:
- Major: 4 hrs
- Minor: 1 business day
- Troubleshooting request:
  - Major: 60 min
  - Minor: 180 min

Troubleshooting request:
- Major: 4 hrs
- Minor: 1 business day
4. WHY TATA COMMUNICATION FOR IZO™ MANAGED CLOUD FOR AZURE

END-TO-END IZO™ MANAGED CLOUD FOR AZURE
Build, deploy & manage

MICROSOFT PARTNER

MIGRATION & DEPLOYMENT
- Workload migration to Azure
- Greenfield Azure deployment
- Hybrid cloud deployment & integration

DESIGN CONSULTATION
- Requirement analysis
- Comprehensive Azure/hybrid solutions
- Based on best practices

MONITORING AND MANAGEMENT
- 24x7 proactive monitoring of Azure
- ITIL based processes
- Azure certified experts

• Cloud choice — Public, Private, or Hybrid
• Deployment models — Standard, flexible, and fit for business
• End-to-end solution provider — Covers network, infrastructure, security, and emerging technologies like IoT & Big Data in the future
• Depth of technical expertise — More than a decade of experience in IT technologies & niche services
• Customer base — 2000+ enterprise customers globally with 47,000+ SME in India
• Ease of business — Complete transparency in contract structure and a smooth customer onboarding process
• Have complete control on IT estate with single pane of glass
• Leverage Tata Communications’ global network reach that offers reliable and secure connectivity to Microsoft Azure Service Zones
• An end-to-end Managed Service starting with cloud solution design, data migration, cloud solution implementation & management of Microsoft Azure Cloud infrastructure
• Managed Services backed with ISO 20000 & ISO 27001 certification adhering to the best practices and processes for IT Infrastructure management
• Managed Service flavours with pre-defined SLA’s for your critical and non-critical application workloads on Microsoft Azure Cloud
• Integrated portfolio capability with Managed Hosting Service to offer a Hybrid Cloud Solution
• 300+ skilled professionals covering the breadth of technologies