

USE CASES

DISASTER RECOVERY SERVICES ON MICROSOFT AZURE



1. UNDERSTANDING THE MARKET DYNAMICS

In this new era of digitisation, the cloud debate is already over. Enterprises have moved a sizeable portion of their business workloads to various cloud environments in anticipation of achieving scalability, business agility, managed business risks, and significant cost savings. The question is no longer “Shall 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?”

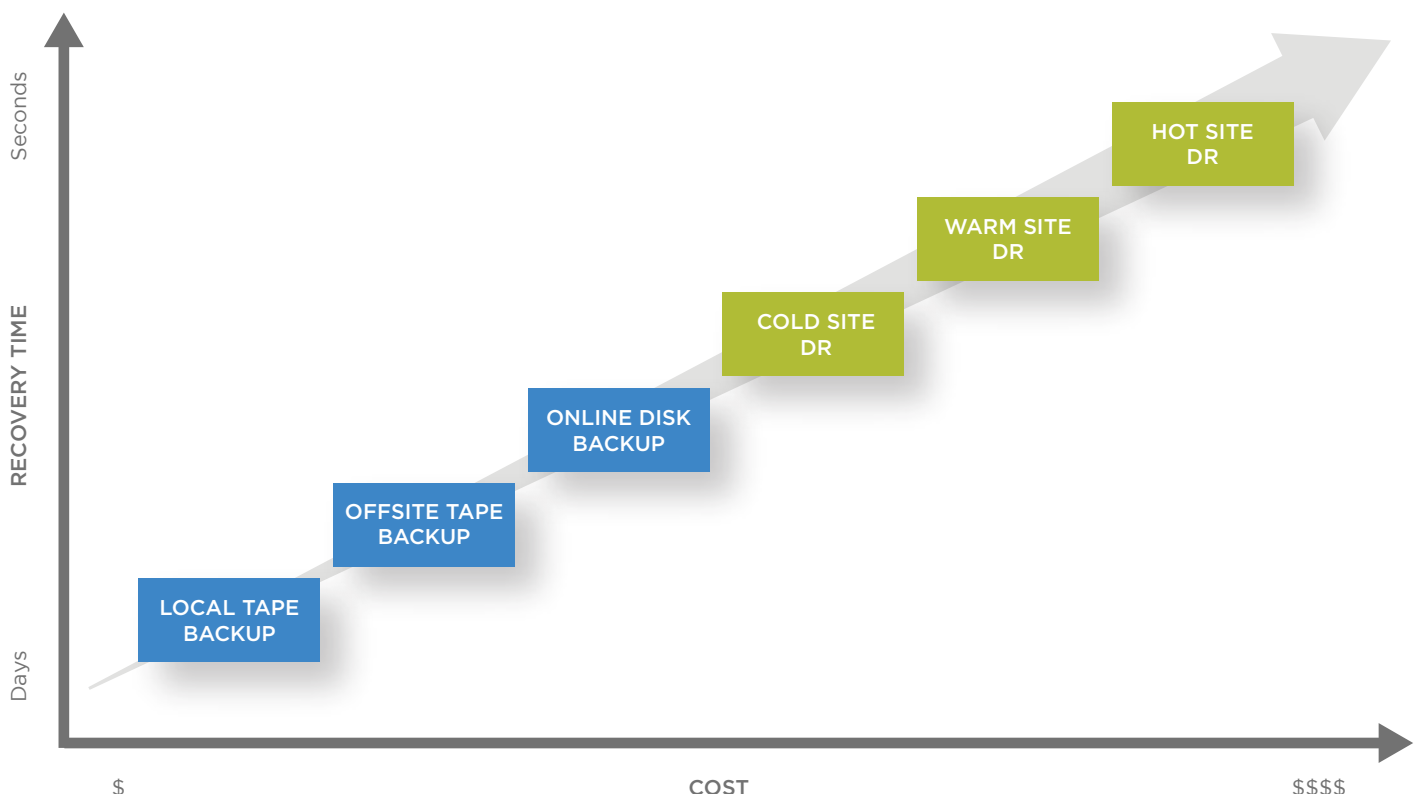
2. HOW ENTERPRISES APPROACH CLOUD ADOPTION

The aim of disaster recovery services is to keep businesses online and operational, without disruption, as part of a well-planned business continuity strategy. Enterprises have started adopting cloud solutions extensively to address their disaster recovery needs. Cloud computing, based on virtualisation, takes a very different approach to disaster recovery. With virtualisation, the entire server, including the operating system, business applications, patches, and data, is encapsulated into a single virtual machine. This entire virtual machine can be copied or backed up to an offsite cloud infrastructure and spun up on any other supported virtual machine in a matter of minutes.

Since the virtual machine is hardware independent, the operating system, applications, patches, and data can be safely and accurately transferred from one data centre (DC) to a cloud infrastructure without the burden of reloading each component of the server. This can dramatically reduce recovery times compared to conventional (non-virtualised) disaster recovery approaches, where servers need to be loaded with the OS and application software and patched to the last configuration used in production before the data can be restored.

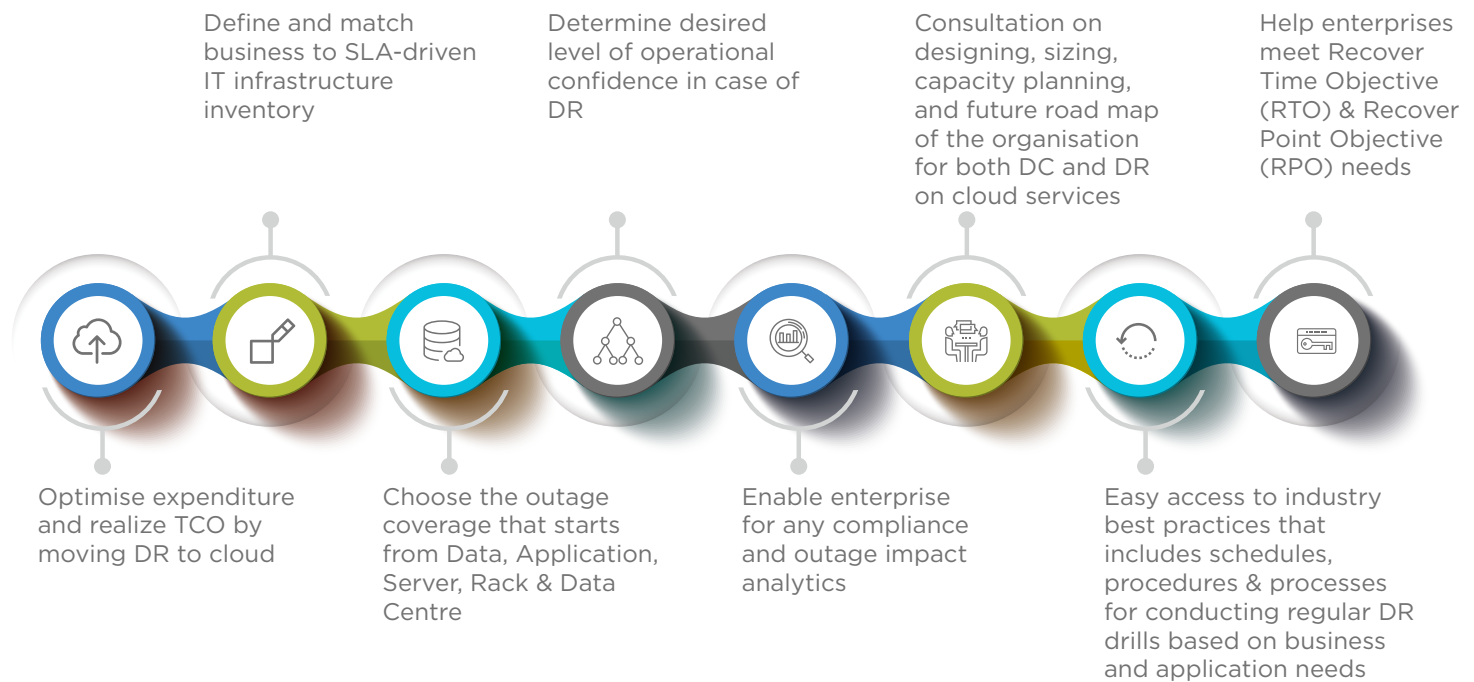
The cloud shifts the disaster recovery tradeoff curve to the left, as shown below. With cloud computing as represented, disaster recovery becomes much more cost-effective with significantly faster recovery times.

DISASTER RECOVERY COST VS TIME TRADE OFF



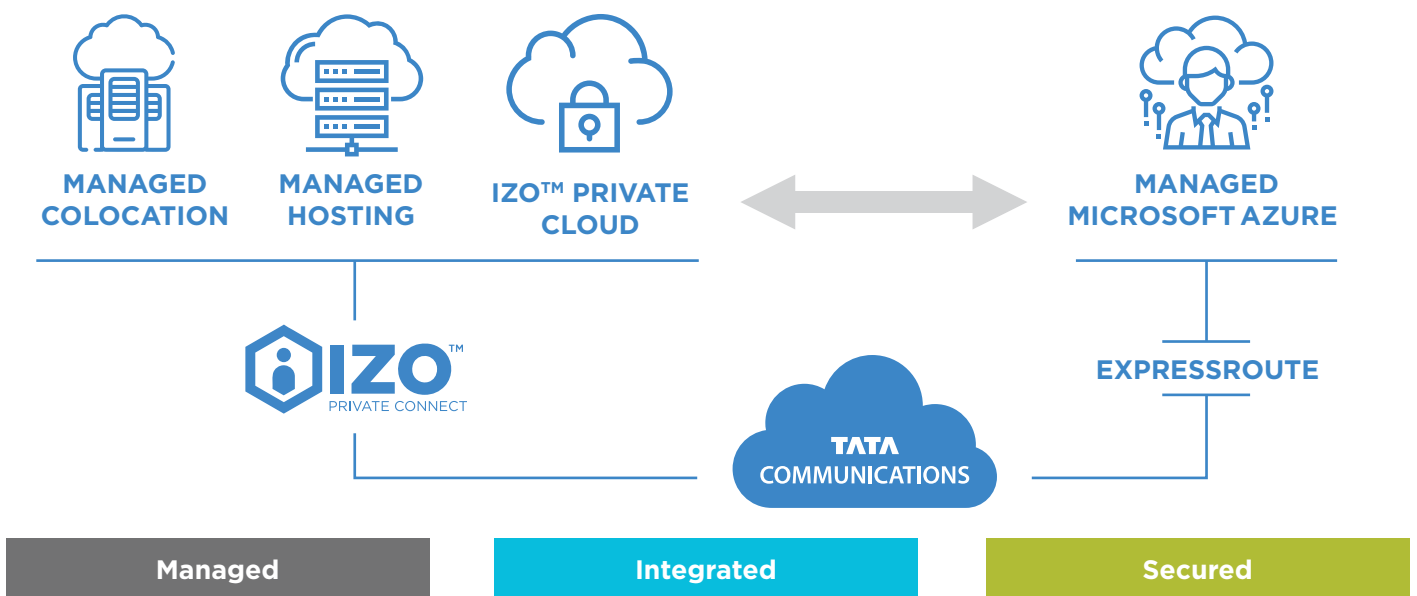
Enterprises doing business with single DC location are increasingly using cloud as their disaster recovery location. In its crudest form, disaster protection for enterprises involves regularly scheduling of backups which are stored in the cloud at low cost, as depicted in the above diagram, helping them remain isolated from accidental deletion or ransomware attacks. As we move up the value chain, cloud-based backup and data replication should serve two purposes: first, data is preserved to meet data compliance mandates, and second, data should also be available for disaster recovery by spinning up virtual machines on request in the form of warm DR. If the business is super critical, enterprises may also employ a hot DR site, which is a 100% replica of the primary site as a standby in case of disaster.

The drivers



3. REALISE THE POTENTIAL OF MICROSOFT 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 to the workloads that are hosted on Microsoft Azure Public Cloud Service. 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.



4. TATA COMMUNICATIONS DISASTER RECOVERY SERVICE ON AZURE

Disaster Recovery on cloud is one of the biggest benefits of enterprise cloud journeys and one which optimises overall expenditure and realises ROI. We enable enterprises to adopt cloud more efficiently by offering & managing solutions out of our MHS facilities for DC and **providing managed services for DR on Microsoft Azure**. Tata Communications' certified experts help in **consulting, sizing, capacity planning, and devising a future road map** of the IT infrastructure for both DC and DR on cloud.

Enterprises can leverage Tata Communications' **industry certified best practices** that include **business impact analysis, planning, scheduling, and procedures & processes for conducting regular DR drills** based on your business and application needs. Tata Communications is able to consult and help enterprises meet **defined Recover Time Objectives (RTO) & Recover Point Objectives (RPO)** needs of the business.

We extensively use **Azure Site recovery manager, Double take and native tools** for workload replication/migration from **V2V and P2V** across private & public clouds. Tata communications offer **workflow-based automated protection** across hybrid clouds using **Azure Site Recovery, Sanovi DRM tools, Zerto and Perpetuity**.

Tata Communications provides **end-to-end Managed Services** for remote replication, DR monitoring and validation, drill support, and compliance reports using DRM tools.

Primary/Source	DR at Azure Public Cloud
DC at on-premises site	<input checked="" type="checkbox"/>
DC managed by Tata Communications	<input checked="" type="checkbox"/>
DC at Tata Communications IZO™ Private Cloud	<input checked="" type="checkbox"/>

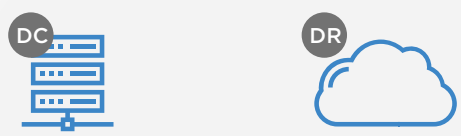
Based on the source and destination environment, Tata Communications will use the relevant replication tool or agent. In an agent-based replication, a replication software agent is installed in the source and destination VMs, which synchronise and replicate the source machine to the destination. This is a third-party replication tool, and will be offered to the customer as part of the Disaster Recovery Service.

In cases where native replication tools are available for an application, and the customer wishes to execute native replication, this can also be considered.

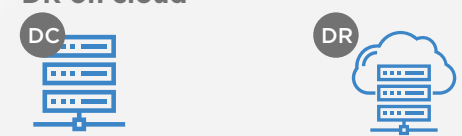
DISASTER RECOVERY SCENARIOS

BUILT FOR HYBRID CLOUD ENVIRONMENT OF YOUR CHOICE

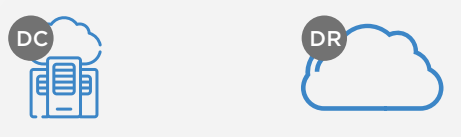
1 DC on physical servers and DR on cloud




2 DC on physical servers and Hybrid DR on cloud



3 DC on virtual servers and DR on cloud



4 Both DC & DR on cloud



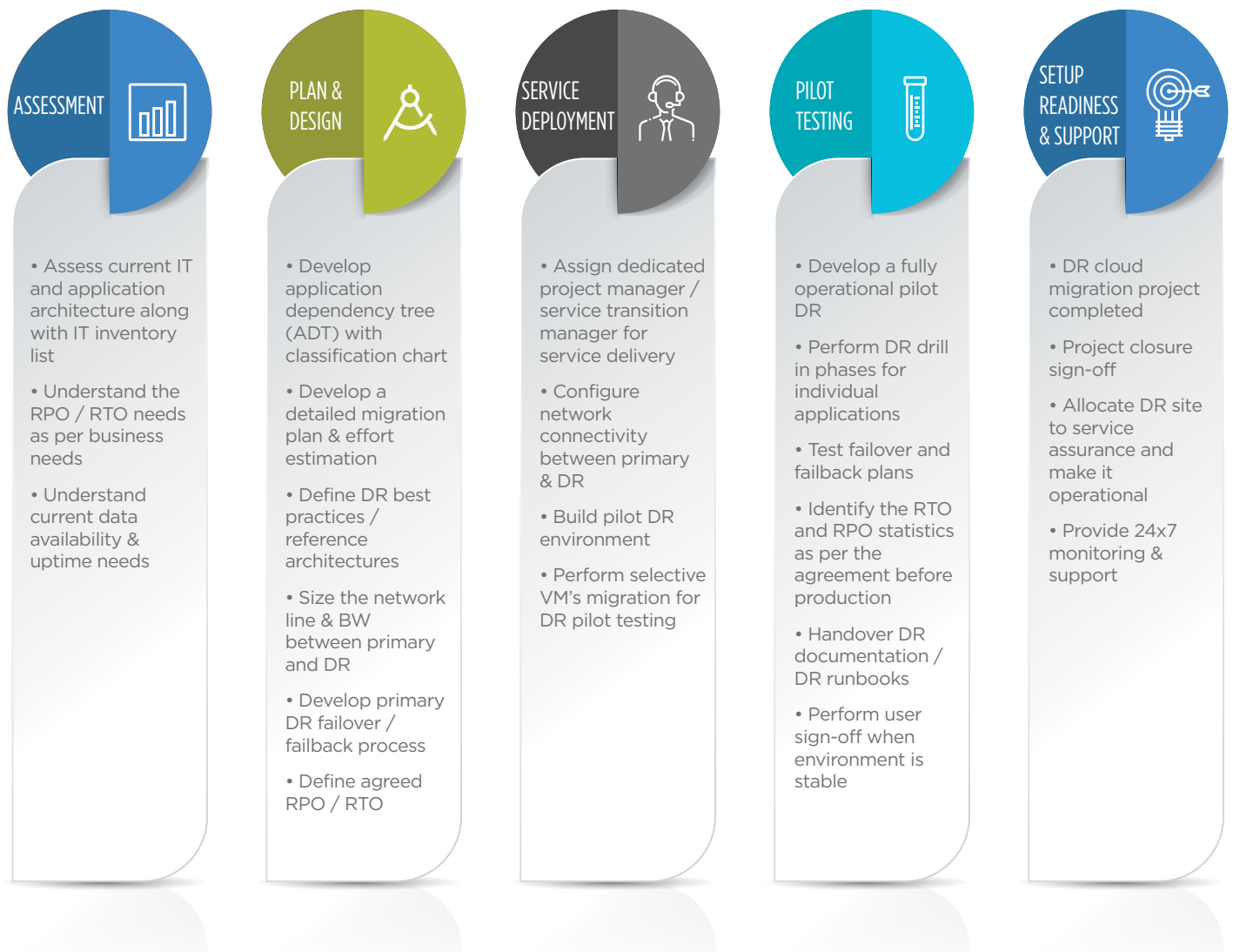
Details of Azure products supported by Tata Communications

Computing	Networking	Storage	Database	Database
<ul style="list-style-type: none"> • Virtual Machines • Virtual Machine scale sets 	<ul style="list-style-type: none"> • Virtual network • Load balancer • Application gateway • VPN gateway • Traffic manager • Azure DNS 	<ul style="list-style-type: none"> • Blob • Queue • File • Disk • Backup • Site recovery 	<ul style="list-style-type: none"> • Azure DBaaS 	<ul style="list-style-type: none"> • ASR

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

5. TATA COMMUNICATIONS' ADVANTAGES

THE TATA COMMUNICATIONS DISASTER RECOVERY SOLUTION - OUR APPROACH



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-  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+ SMEs 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, and 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 SLAs 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
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For more information, visit us at www.tatacommunications.com

Contact us

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