FUJITSU Backup as a Service Appliance

The unprecedented
growth of business data

The role that data plays in today's organization is rapidly increasing in importance. It guides and supports decision-making, underpins key processes, and enables organizations to better understand their customers and uncover new opportunities. More than ever, data sits at the heart of every modern business throughout the world.

With this in mind, it is all the more vital to ensure that data is backed up and safeguarded in case of an outage, breach, error or disaster. There can also be complex legal requirements to adhere to in the management of data, so it is imperative that data is secure.

With the volume of data generated typically growing by 20-40% year-on-year, the associated costs of the supporting resources are also rising in line with data growth rates.

Existing backup and recovery solutions are struggling to keep up with demand, so it's understandable that enterprises are investigating alternatives.

The new cloud
opportunity

FUJITSU Backup as a Service Appliance combines the best of disk-to-disk and cloud-based services. Designed for maximum efficiency, it enables the rapid recovery of recent local data while leveraging the on-demand flexibility of secure cloud storage.

Adoption of cloud-based services is becoming more widespread as organizations seize the opportunity to access more flexible and competitively-priced IT services that can be consumed on demand. Backup and recovery services are no different and have been available via the cloud, for everyone from large organizations down to the individual consumer, for some time.

Until recently, many organizations were concerned about the issues of security, reliability and compliance in data residency. FUJITSU Backup as a Service took care of these barriers to adoption, providing end-to-end security with data encryption and data centers that helped organizations to meet their data residency and privacy obligations.

The increasing and more demanding Recovery Time Objectives (RTO) requests have led to a new breed of backup and recovery services, combining cloud-based services with disk-to-disk recovery capabilities.

Backup as a Service Appliance is an extension of our existing solution and ensures quicker data recovery by deploying a hybrid cloud solution to an organization's facility. What's more, it can limit network bandwidth usage, minimize backup windows and speed up data recovery – helping companies meet even the most ambitious Recovery Time Objectives.

When it comes to backup and recovery, is your organization...

- Finding its current infrastructure is struggling to cope with growing data volumes?
- Keen to take advantage of the cloud to deliver cost-efficiencies, but are concerned about network bandwidth limitations?
- Needing to ensure rapid recovery in the event of an outage or data loss?

FUJITSU Backup as a Service Appliance provides the ideal way forward.

Overview of Backup options

Disk-to-tape
- Time-consuming
- Long backup windows
- Data manually moved to a remote location
- Risk of important data going amiss
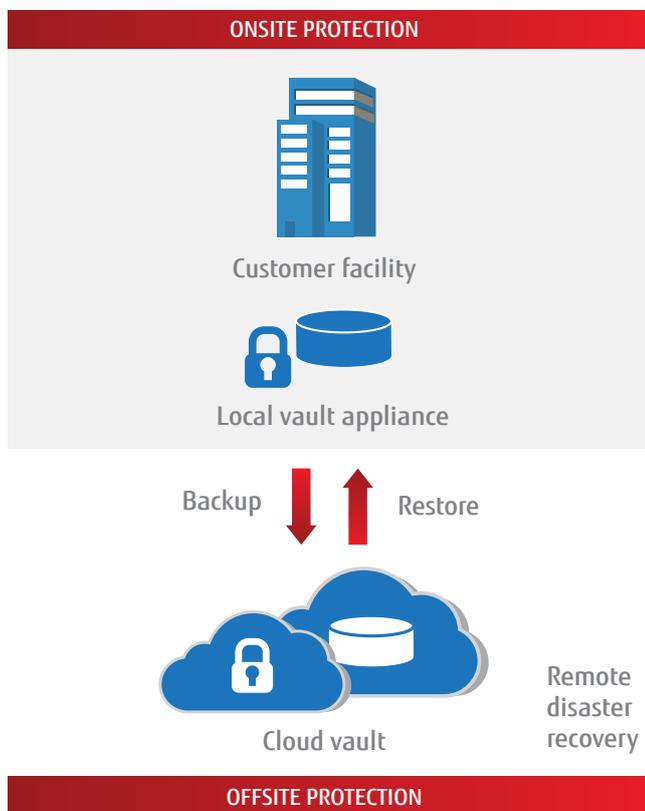- Data is often not encrypted on tape

Disk-to-disk
- Fast and efficient
- Can be more costly
- Requires more infrastructure to own and manage
- Small storage footprints due to de-duplication
- Fast recovery
- Automated retention management

Cloud-based service
- On-demand with self-service interface
- High performance disk-based service
- Easier to use and cheaper to manage
- Flexible, pay-as-you-use commercial terms
- Can be standalone or to augment large, complex backup strategies
- Storage managed by a team of experts
- Automated off-site data transfer

Introducing FUJITSU
Backup as a Service Appliance

FUJITSU Backup as a Service Appliance is an all-in-one solution. It provides local, fast data access and cloud-based replication for remote disaster recovery, as illustrated in the diagram below.

ONSITE PROTECTION

Customer facility

Local vault appliance

Backup   Restore

Cloud vault

Remote disaster recovery

OFFSITE PROTECTION

Making cloud backup and recovery a viable option for your organization

FUJITSU Backup as a Service Appliance is an extension to our existing service. It's a combination of pre-configured hardware, storage and software, enabling local backup and recovery to be implemented quickly and simply managed, while simultaneously leveraging the power of the Fujitsu cloud-connected Backup as a Service.

The appliance is designed to support your security needs across the complete Backup & Recovery process. By enabling replication to the FUJITSU Cloud you can leverage Fujitsu's cloud data centers around the globe to satisfy your specific data residency requirements.
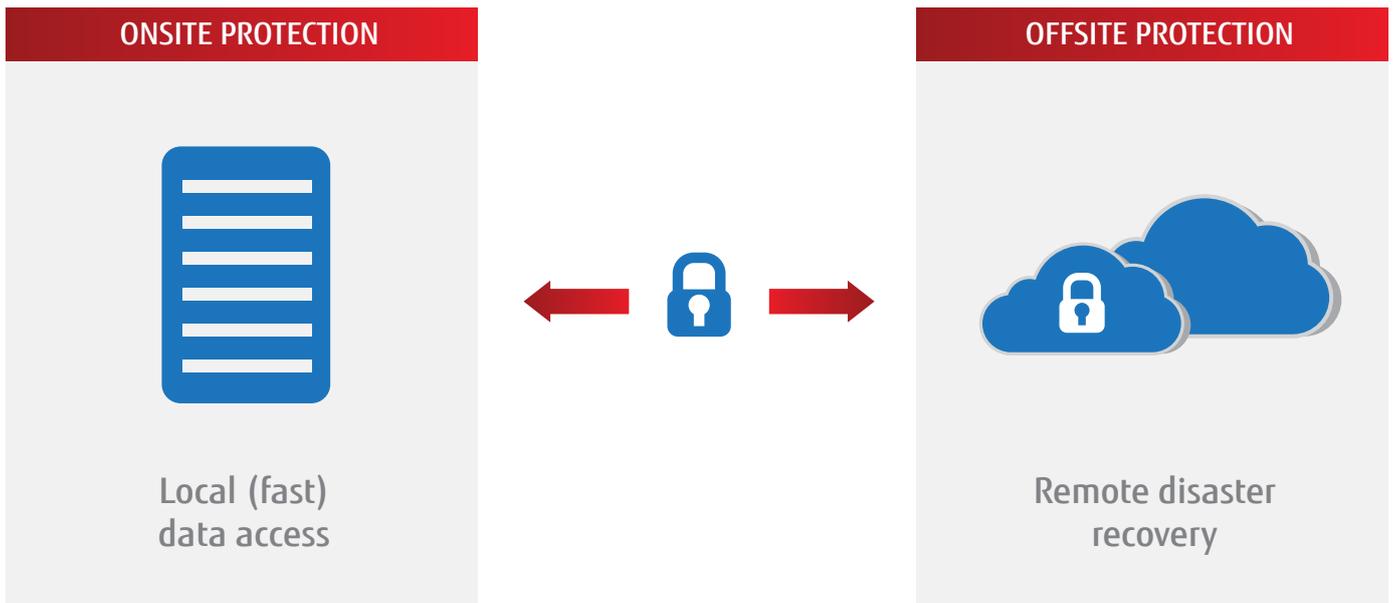
The appliance can be installed onsite as a vault, giving you a local copy of backup data for immediate access, any time you need it. As an additional safeguard, it automatically replicates your data to Fujitsu's secure cloud service for offsite disaster recovery protection.

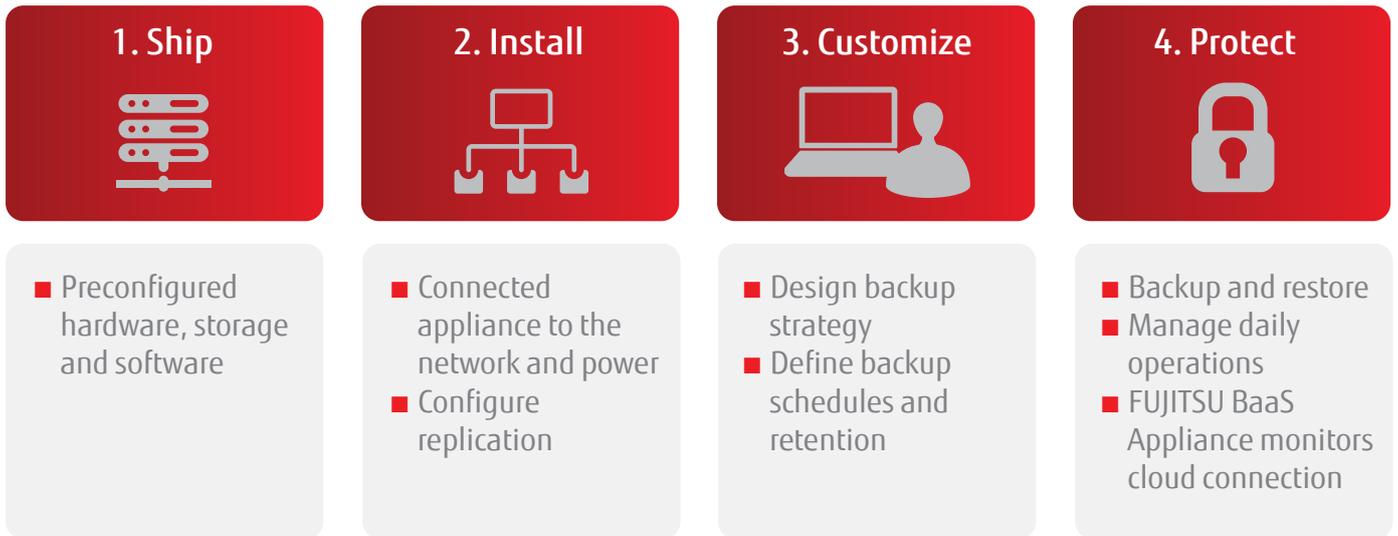### What are the benefits of FUJITSU Backup as a Service Appliance?

- Fast, resilient data protection, with recovery at LAN speed – ensuring you recover on time, every time
- Leverages global capabilities of FUJITSU Cloud IaaS Trusted Public S5 to deliver automated, continuous cloud replication that reduces costs and resources
- End-to-end security with front-end, over the wire and at-rest encryption for your peace of mind
- Highly efficient use of bandwidth and minimal storage footprint
- Scalability that enables you to meet changing business demands, thanks to flexible licensing arrangements
- Ease of adoption, as it is quick to deploy with a single point of contact for support

In case of site outages that might also affect your onsite vault, you have a copy of the data in the cloud. The combination of local and cloud-based vaults enables you to flexibly balance backup, recovery and network bandwidth availability.

ONSITE PROTECTION	OFFSITE PROTECTION
Local (fast) data access	Remote disaster recovery

How it works

1. Ship
- Preconfigured hardware, storage and software

2. Install
- Connected appliance to the network and power
- Configure replication

3. Customize
- Design backup strategy
- Define backup schedules and retention

4. Protect
- Backup and restore
- Manage daily operations
- FUJITSU BaaS Appliance monitors cloud connection

Rapid deployment

FUJITSU Backup as a Service Appliance is composed of everything you need to get going fast. With the hardware arriving pre-assembled, storage pre-configured and software pre-installed it's designed for swift deployment. You'll have one point of contact for support to guide you through the process and help with customization.

As it's all part of a single package, the procurement process is streamlined too.

Ensuring all bases are covered

All satellite vaults replicate their data to a primary vault, which is either a Base Vault on the customer site or a cloud primary vault in a Fujitsu data center. The base vault replicates the data to a cloud-based vault to ensure DR even in the case of system failures to the base vault.

Using a combination of base vaults and/or satellite vaults, it's possible to provide simple backup management for multiple remote or branch office locations. It also consolidates all backups to a central data center. Setting up these satellite and base vaults is easy. It simply involves turning on the application and establishing the LAN or Internet connection to the offsite vault in the cloud.

To fulfil the highest Recovery Time Objectives, FUJITSU Backup as a Service supports three backup strategies:

1) Data backup in base vaults
2) Data backup in local vaults at remote locations
3) Data backup in cloud-based vaults for disaster recovery

Remote Office

Central Office

Remote Office

Satellite Vault → Base Vault   Satellite Vault

Secure cloud based vault
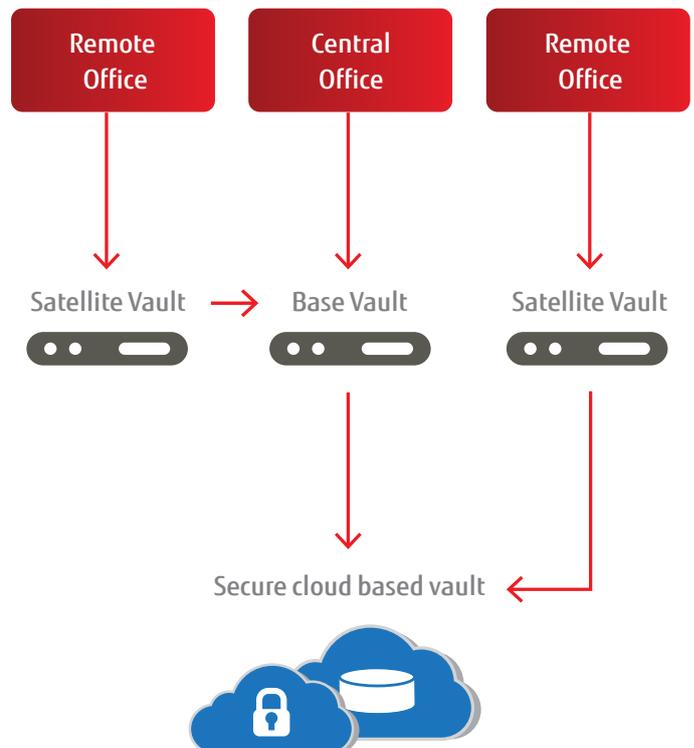
Maximizing bandwidth efficiency

FUJTISU Backup as a Service Appliance uses delta block-level processing technology for WAN-optimized fast and efficient replication of data. This means that only new or changed blocks of data in the onsite vault will be sent to the cloud vault. The system automatically recreates and holds them as synthetic full backups – reducing the size of each backup by as much as 98%. Using bandwidth throttling also minimizes the network traffic required for backup and restore – and eliminates daily business operations during backup and recovery processes.

Ensuring the smallest possible backup window

FUJITSU Backup as a Service Appliance uses market leading adaptive compression with data compression rates adjusted dynamically. Bandwidth availability is balanced against the CPU utilization of the system that is being backed up. Adaptive compression optimizes the use of bandwidth to maximize backup transfer speed and help maintain the smallest possible backup window.

Supporting multiple platforms and applications

FUJITSU Backup as a Service Appliance supports a broad range of platforms and applications, including Windows, Linux, VMware, IBM iSeries, Unix, Microsoft appliances and Oracle. It makes it easy to implement consistent backup and recovery strategies across a big platform and application variety.

Securing your data at all times

FUJITSU Backup as a Service Appliance provides the strongest levels of data security to ensure maximum protection of your data. It's built with four layers of security:

i) Front-end encryption: data is encrypted using National Institute of Standards and Technology (NIST) certified 256-bit Advanced Encryption Standard (AES) prior to being sent on the network
ii) Over-the-wire encryption: backup and restore activities are encrypted to ensure security when transmitting over the Internet
iii) At-rest encryption: data remains encrypted while in Fujitsu tier 3 rated and ISO-certified data centers
iv) No back-door encryption keys: only the client key holder can supply the correct code to decrypt data

Putting you in control

An intuitive web-based self-service portal enables simple and efficient management of backup and restoration processes. It makes it easy to configure your backup schedule, retention periods, view job progress and alerts, and also ensures your data is always available if you need to conduct an immediate restore. As a result, it reduces efforts and related costs.

All the support your business needs

Our 24x7 service desk will provide all the expertise and support you need to maximize the value of FUJITSU Backup as a Service Appliance to your business. Break fix for the appliance is covered by a Fujitsu product warranty, coordinated through the Service Desk, delivered by experts in your country.

Reaping the benefits for your business with FUJITSU Backup as a Service Appliance

Respond to changing business demands
Rapidly respond to changing business needs using a pre-configured, stable, resilient and scalable data protection platform.

Enable comprehensive protection
Take advantage of automatic off-site protection while keeping a local backup of your data for faster backup and recovery.

Know that your data is secure
Secure your data with the highest levels of protection: including military-grade encryption for all data – locally, in the cloud and in transit.

No increased network costs
Market leading compression technology and bandwidth throttling, along with optimized storage footprint, minimizes the impact on your network.

Concentrate on what you do best
Pre-configuration of hardware, storage and server makes it simple to deploy and manage – reducing risks, labor and costs.

Reduce total cost of ownership
By supporting multiple platforms and applications, you can consolidate your backup effort reducing total cost of ownership. In addition, flexible pay-as-you-use commercial terms reduce capital expenditure.

All the support you need
Global support ensures maximum protection for your data, at all times. The appliance is managed by certified fujitsu vault administrators – allowing you to concentrate on your business while fujitsu takes care of the backup tasks.

A trusted leader in
backup and recovery services

FUJITSU Backup as a Service Appliance builds on our breadth and
depth of expertise – and more than 30 years of experience in the
delivery of backup and recovery services to private and public sector
organizations across the globe. Today we manage over 250,000
servers and 196 Petabytes of data for our clients worldwide.

FUJITSU Backup as a Service Appliance complements Fujitsu's range
of Data Protection services – including traditional approaches to
backing up IT. We can support the different needs of organizations
– from the simple to the most complex requirements.