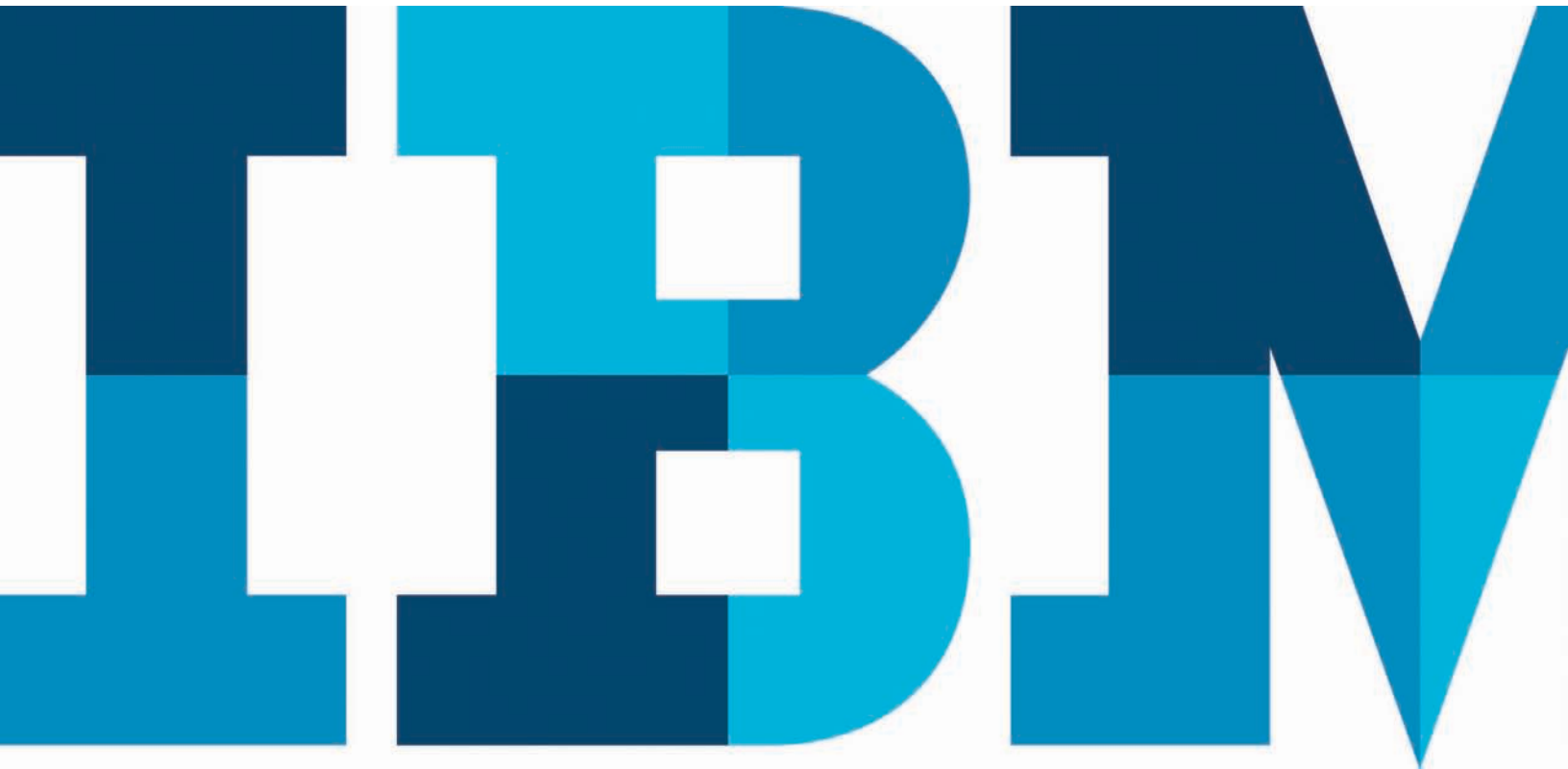# Cloud-based data protection services for managed service providers

*Three innovative scenarios, along with simplified, cost-effective ways to deploy them*

## Contents

## Introduction

Today's explosion in data growth is so great that it is impacting neighborhood grocers and family dentists—not just large enterprises.

This is good news for managed service providers, especially those working with small and mid-size businesses. Thanks to increasing bandwidth and lower costs, a huge opportunity exists in the cloud-based data protection space. While traditional forms of backup are growing slowly, the growth in cloud-based backup is moving toward double digits in most parts of the world.

## Cloud-based protection for proliferating data

Cloud-based data protection can take a number of forms, and IBM is making it easier for managed service providers to choose among possible scenarios by bundling and repricing its proven family of IBM Tivoli® Storage Manager solutions. This software, which has successfully protected the data of large enterprises across the globe for nearly 20 years, now enables multiple scenarios, including:

- Data protection in private and public clouds
- Data protection in backup/disaster recovery clouds
- Data protection in computing clouds

Designed specifically for managed service providers, the IBM Tivoli Storage Manager Suite for Unified Recovery provides simplified licensing, management and pricing, along with a new program and incentives for IBM Business Partners.

Let's look at the three cloud-based data protection scenarios in more detail.

*Scenario 1: Data protection in private and public clouds*
In this scenario, managed service providers ensure they have a robust disaster recovery solution protecting their own infrastructure by moving data to an existing Tivoli Storage Manager-based disaster recovery cloud. Providers can cut storage costs—and therefore licensing costs—each step of the way by using the software's advanced data reduction and data replication techniques.

| Existing recovery infrastructure | Via cloud gateway network acceleration partners | Storage cloud provider |
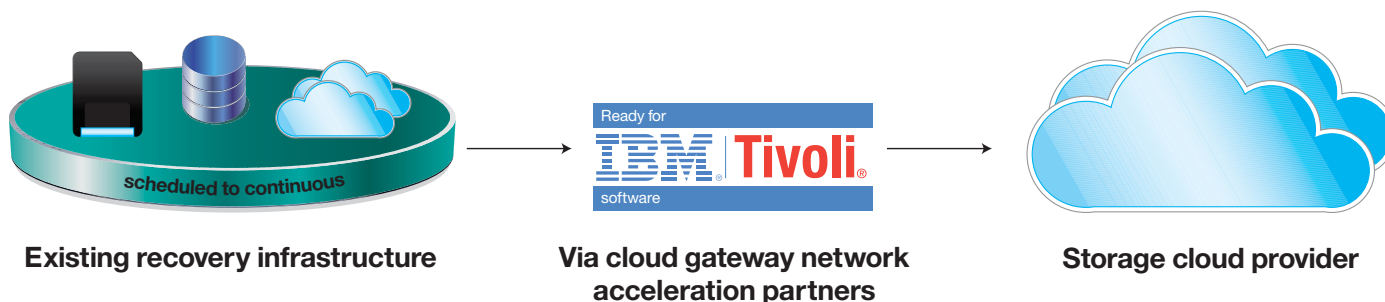
Acting as a backup/recovery cloud, IBM Tivoli Storage Manager software can create a remote electronic vault that provides backup management to third-party providers, while also providing cloud-based data protection for end customers.

To service existing Tivoli Storage Manager users by replicating backup data and metadata to a hosted Tivoli Storage Manager environment, one Tivoli Storage Manager server in the service provider's data center can be configured to support many client environments. When needed, wide area network (WAN) accelerators can be used to reduce replication time, bandwidth requirements and cost.

### Scenario 2: Data protection in backup/recovery clouds

To serve end customers who want someone to maintain their data protection and recovery infrastructure for them, managed service providers can use Tivoli Storage Manager to put a virtual datacenter into a cloud hosted by a third-party managed service or cloud provider. The data in the cloud is backed up in another Tivoli Storage Manager cloud.

Alternatively, a customer might take advantage of the IBM SmartCloud™ Managed Backup Service, which offers safe, affordable, offsite data backup that is scalable and continuous with simplified restore capabilities and a pay-as-you-go pricing model.

Yet another variation of this scenario allows third-party service providers to quickly deploy cloud-based data protection services—under the provider's own brand—including branded billing and administration. This option is tailored for IBM Business Partners who want to expand their business model from selling hardware and software to selling backup cloud services with a recurring revenue stream.

In this scenario, Tivoli Storage Manager software acts as the backbone of the data protection services, but it is managed by third parties and remains virtually invisible to their customers.

To consolidate, block and file workloads into a single system to simplify management, lower costs and provide highly scalable capacity with high availability, this scenario might also leverage the IBM Storwize® V7000 Unified Storage System.

An interesting example of this scenario was developed by an IBM Business Partner, the Danish company Front-safe. Turning what is usually viewed as a cost center into a revenue center, the
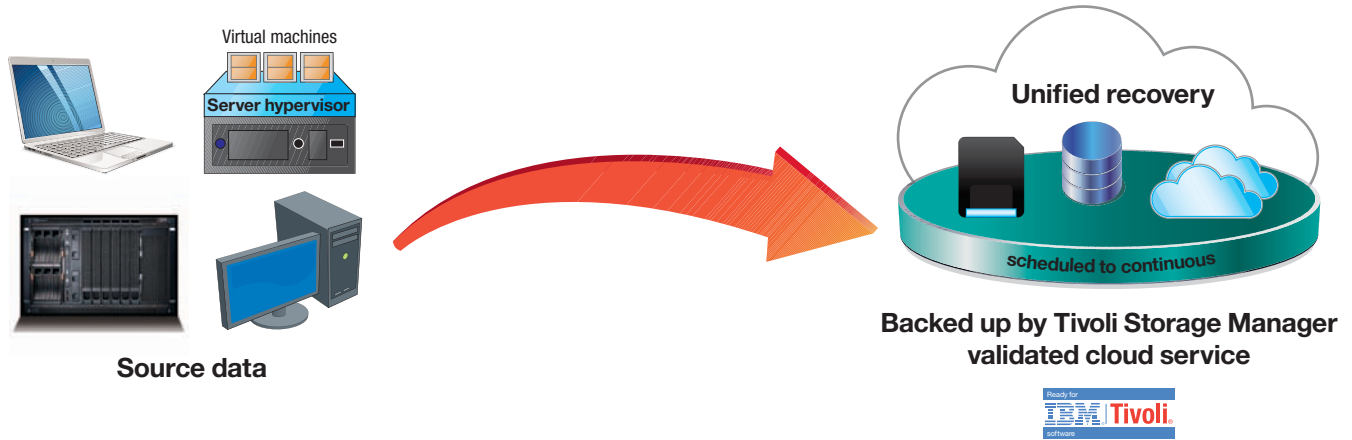
Portal owners, such as Front-safe, can create their own "Backed up by IBM Tivoli Storage Manager" validated cloud services for managing and protecting data across an extended network of dealers, partners and end customers.

portal owner Front-safe first signed up a number of dealers. Each dealer then signed up one or more partners, and each partner signed up multiple end customers.

This approach allows small and mid-sized organizations to take advantage of Tivoli Storage Manager's robust capabilities simply and cost-effectively by subscribing to services provided by Front-safe or its dealers. Initially, Front-safe used this model to provide data protection services to many small dental offices in Denmark, but it has since expanded it to seven countries, with more than 170 dealers and partners serving more than 3,000 end customers.

Using the software's integrated billing capabilities, Front-safe gives all entities—itself as portal owner, plus dealers and partners—monthly files containing the information each party needs to create invoices. The files include cost prices from the level above (for example, a dealer) and selling prices for the level below (for example, a partner). Pricing can be on a gigabyte-per-month basis or on a node-per-month basis.

*Scenario 3: Data protection in computing clouds*
In the third scenario, Tivoli Storage Manager software not only backs up data to a cloud, but also works with the rest of the Tivoli portfolio to protect and manage the applications and data within the cloud. So if a managed service provider provisions storage in a computing cloud—for example, using the IBM SmartCloud Foundation or another cloud offering, such as VMware vCloud Director—Tivoli Storage Manager software can back up the virtual images and recover them. This can apply to clouds that other parties, including IBM, have created, as well as to the managed service provider's own cloud.
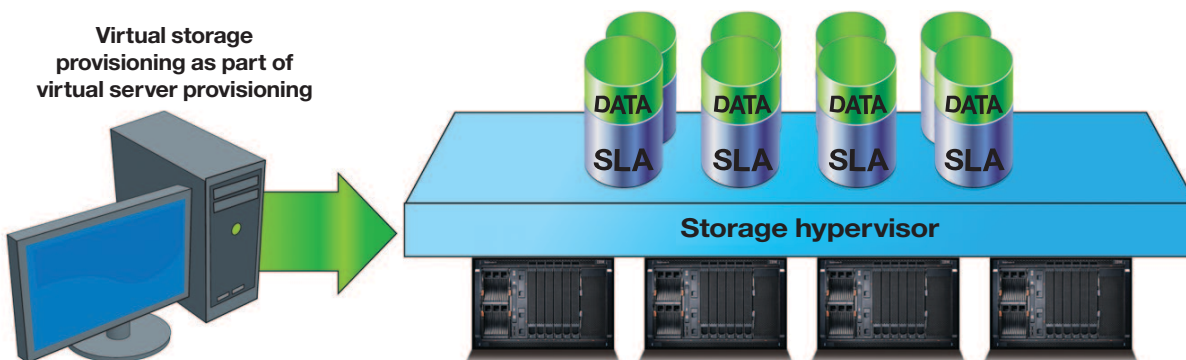
Leveraging IBM Tivoli Storage Manager software, managed service providers can use the storage hypervisor equivalent, IBM SmartCloud Virtual Storage Center, to virtualize, manage and optimize storage resources and data in a computing cloud.

Managed service providers can also virtualize and manage storage within computing clouds using the equivalent of a storage hypervisor, known as IBM SmartCloud Virtual Storage Center. This approach can help maximize storage utilization and ensure that business-critical data is easily accessible and available from the highest performing level of storage regardless of where the storage is located or what type of environment it resides in—IBM or non-IBM.

Virtualization also offers other benefits, such as integrated service management, automation, rapid provisioning, image management and self-service, all of which can help improve resource utilization and administrator-to-server and administrator-to-storage ratios. Virtualization also provides greater visibility and control across the cloud infrastructure. SmartCloud solutions and SmartCloud services are available to help managed service providers achieve these benefits.

## Robust data protection with easy, cost-effective management

Underlying all three of these cloud storage scenarios is the Tivoli Storage Manager Suite for Unified Recovery, which bundles ten proven data protection and recovery software products, simplifying their licensing and management. Thousands of large enterprises have used these products for years to protect a wide range of systems—including virtual machines, file servers, email, databases, desktops and laptops—from a single administrative console. Now managed service providers can deploy any of the ten components in any location and quantity under a simplified license that measures only the amount of data being managed. The software can scale from small to large installations with up to four billion data objects in a single server, and can support more than 50 operating system versions and hundreds of heterogeneous server and storage devices.

The bundled capabilities of Tivoli Storage Manager Suite for Unified Recovery include:

- Core backup/restore for a wide range of operating systems, tiers of storage, Network Data Management Protocol (NDMP), IBM DB2® and IBM Informix® support, source and target deduplication and advanced disaster recovery planning
- Consistent and centralized online backups for Oracle, SQL and SAP environments, along with the protection of vital enterprise data infrastructure
- Protection of data on email servers running IBM Lotus® Domino® or Microsoft Exchange
- Automated discovery and non-disruptive backup of VMware virtual machines with near-instant recovery of individual files and disk volumes
- Replacement of inactive data with important active data to reclaim online disk space, thereby freeing administrators from manual file system pruning tasks and delaying the purchase of additional disk storage
- High-performance backup and restore by removing data transfer from the Local Area Network (LAN)
- Efficient block-level incremental backup and near-instant restore for critical Microsoft Windows and Linux servers and applications
- Ability to recover individual Microsoft Exchange objects such as email, attachments, calendar entries, contacts and tasks
- Operating system volume recovery following a disaster or catastrophic server failure, fully restoring Windows and Linux systems within an hour

## Simplified licensing, management and pricing

Mirroring the way managed service providers charge their clients, the new pricing structure for Tivoli Storage Manager Suite for Unified Recovery is based on the number of terabytes end customers back up—but it counts them only after the managed service provider has used the software's tools and techniques to minimize data volumes as much as possible. Designed to counteract data sprawl, these advanced capabilities include progressive incremental backup, which backs up only new and changed data, and compression techniques along with data deduplication, which backs up only one copy of data that is common to many users—instead of multiple copies of the same data.

By aligning pricing with value—customers license data stored in primary storage pools per terabyte—the program makes ongoing license compliance easy to forecast and manage.

## Special benefits for IBM Business Partners

Cloud and managed service providers that have developed and rolled out a Tivoli Storage Manager service are eligible to participate in the Backed up by IBM Tivoli Storage Manager Partner Program, which provides the following key benefits:

- They can use the "Ready for IBM" Tivoli software logo
- They can meet potential partners and customers through the "Ready for IBM" Tivoli catalog of data protection solutions

**Comprehensive data protection and simplified management**
When one of the world's leading IT hosting providers, PEER 1 Hosting, needed a cost-effective data protection solution to meet the needs of its more than 10,000 customers worldwide, it turned to Tivoli Storage Manager. Leveraging the software's progressive incremental backup feature, which backs up only files that are new or have changed, PEER 1 Hosting reduced data changes to about eight percent.

What's more, the company expanded its data protection service to include hourly backups of Microsoft SQL Server databases, integrating Tivoli Storage Manager software with Cristie Bare Machine Recovery software. As a result, the company has dramatically reduced backup failure rates to less than two percent, decreased the amount of new data at risk by 95 percent, decreased restore failure rates to nearly zero and improved performance by 40 percent.

At the same time PEER 1 Hosting has dramatically grown its capacity, it has also reduced its operating costs. The company estimates an administrator-to-server ratio of 1:1250 using Tivoli software and has passed these efficiencies along to its customers.

## Data protection services made easy

Leveraging any one of the three cloud-based data protection scenarios described above, managed service providers can take full advantage of today's data explosion—and the concurrent need for data protection—particularly among small and mid-sized organizations. They can use the robust, proven capabilities of the Tivoli Storage Manager Suite for Unified Recovery easily and cost-effectively, while also becoming an IBM Business Partner.

## For more information

To learn more about the IBM Tivoli Storage Manager Suite for Unified Recovery, contact your IBM representative or IBM Business Partner or visit: **ibm.com**/software/tivoli/products/storage-mgr-unified

You can learn more about the IBM SmartCloud Managed Backup Service at: **ibm.com**/services/us/en/it-services/managed-backup-cloud.html

For more information about the Front-safe portal, contact your IBM representative or IBM Business Partner, or read the IBM white paper "IBM Tivoli Storage Manager and Front-safe TSM Portal"

## About Tivoli software from IBM

Tivoli software from IBM helps organizations efficiently and effectively manage IT resources, tasks and processes to meet ever-shifting business requirements and deliver flexible and responsive IT service management, while helping to reduce costs. The Tivoli portfolio spans software for security, compliance, storage, performance, availability, configuration, operations and IT life-cycle management, and is backed by world-class IBM services, support and research.

Additionally, IBM Global Financing can help you acquire the software capabilities that your business needs in the most cost-effective and strategic way possible. We'll partner with credit-qualified clients to customize an IT financing solution to suit your business goals, enable effective cash management, and improve your total cost of ownership. IBM Global Financing is your smartest choice to fund critical IT investments and propel your business forward. For more information, visit:

**ibm.com**/financing