**Infrascale**™

Blue Saffron
more than just IT

# HYBRID CLOUD BACKUP 101
## Top Five Benefits of Cloud-Connected Appliances

" **Hybrid cloud backup solutions will grow at a compounded average growth rate of more than 80%.** [a]

TANEJA GROUP
TECHNOLOGY ANALYSTS

# Introduction

Most businesses recognize the importance of data management, backup and disaster recovery, but lack the right backup solution to meet their business needs.

According to Gartner, only **35%** of small and medium businesses have backup plans and **70%** aren't confident with the following statement, "Our backup and disaster recovery operations are well managed and planned."

This is a yesterday's backup and it's a risk that enterprises and SMBs can't afford. What would an hour of downtime cost your business?

The average cost of downtime, according to IDC research is at least $20,000 per hour or more for **80%** of the companies surveyed. 20% of the companies surveyed put the cost per hour at $100,000 or more. And according to the Institute for Business and Home Safety, an estimated **25%** of businesses never reopen following a major disaster.

## Data Growth Challenges

It's a different world for IT managers today and data backup is more complex than ever. As data sizes and types increase, and servers and operating systems change, companies are spending more on data protection, both in terms of IT resources and real costs.

Forcing the heart-to-heart with their current solution, forward thinking leaders are turning to hybrid cloud backup solutions to alleviate data growth challenges, drive backup efficiencies, and increase cost savings.

## Are you ready for Tomorrow's Backup?

So where to begin? Navigating the crowded hybrid cloud backup market appears daunting but it doesn't have to be. This guide will explain hybrid cloud backup basics and provide a deep dive into the top 5 benefits. Let's get started, shall we?
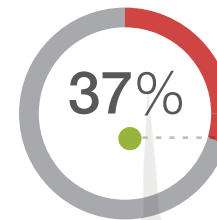
## Why is yesterday's backup failing?

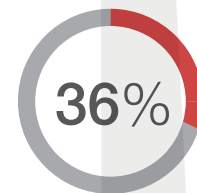**40%** IS THE YEARLY PROJECTED DATA GROWTH RATE, CAUSING COMPANIES TO ROUTINELY MISS THEIR BACKUP WINDOWS. [b]

**98%** OF ORGANIZATIONS CAN'T GO MORE THAN 1 DAY WITHOUT CRITICAL DATA. [c]

**37%** OF COMPANIES SURVEYED HAVE TO COME TO TERMS WITH VIRTUAL, PHYSICAL AND CLOUD-BASED SERVERS. [d]

**54%** OF THE SAMPLE GROUP HAVE TO MANAGE TWO OR MORE HYPERVISORS. [d]

**36%** OF COMPANIES DO NOT BACK UP VIRTUAL SERVERS AS OFTEN AS THEIR PHYSICAL SERVERS. [e]

Please see page 23 for the sources of the above statistics.

# What is Hybrid Cloud Backup?

A hybrid cloud backup solution leverages the benefits of an on-premise appliance and overcomes many of the traditional shortcomings and latency issues of cloud-based backup. Emerging in the industry are two categories of hybrid backup: **appliance-centric and cloud-centric.**

**Cloud**
Centric

**Appliance**
Centric

These hybrid solutions simply integrate with some existing backup platforms and add the cloud storage as an alternate target.

These solutions are the most common in the market and have been created by traditional backup appliance manufacturers like EMC, Commvault, and Unitrends.

These hybrid solutions treat the local appliance as a simple gateway to cloud storage.

The appliance functions as a local cache that provides local storage for your mission critical data while streaming all data to the cloud – making the cloud an archive.

With recent studies indicating that 90% of data in your network can be considered reference data, with minimal need to be accessed, the cloud is a more affordable and efficient repository for long-term storage.

Cloud-centric hybrid appliances can give you the protection and cost efficiencies of cloud storage with local access to critical data over LAN speeds.

# How Do Hybrid Backup Solutions Work?

Hybrid cloud backup promises to solve the latency issues of cloud-only backup and the scaling issues of an on-premise disk-based backup appliance. Typically a hybrid cloud backup solution consists of an on-premise appliance that has enough capacity to hold several full backups, and the incremental backups that would be created between those fulls. The hybrid appliance becomes the point of first restore, since it is disk-based and on-site.

The key difference between disk backup and hybrid cloud backup is what happens after the backup is complete. The hybrid systems add an extra step and replicates backed up data directly to the provider's cloud or to a public cloud provider like Amazon Web Service or Azure.
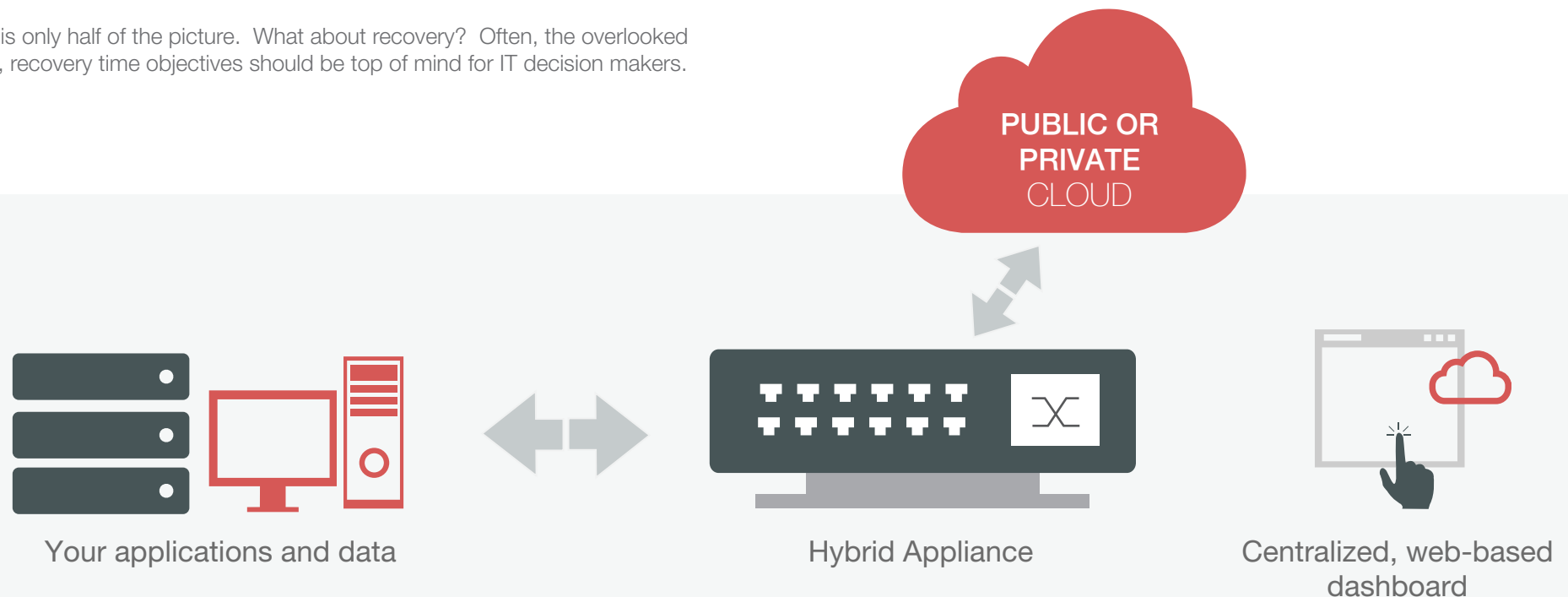
**Is recovery a blind spot for hybrid cloud backup?**

But backup is only half of the picture. What about recovery? Often, the overlooked middle child, recovery time objectives should be top of mind for IT decision makers.

Relying on the status quo, "if the data is there, then we can get it back" isn't sufficient when your data is the lifeblood of your organization. Most companies would be significantly impacted if the recovery time took days, instead of hours.

With hybrid cloud backup, the most critical data and applications are available locally on the appliance allowing administrators to recover quickly over a LAN connection (instead of a slower Internet connection to the cloud).

So, now that you understand how hybrid cloud backup works, let's explore some of the benefits of a cloud-centric hybrid backup solution. Understanding these five benefits will help you ask the right questions of a would-be vendor and ensure you choose the right hybrid cloud backup solution for your needs.
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**PUBLIC OR PRIVATE CLOUD**

Your applications and data

Hybrid Appliance

Centralized, web-based dashboard

# 5 Benefits of Hybrid Cloud Backup

# BENEFIT #1
## Solving the Hardware Conundrum

# Solving the Hardware Conundrum

Data explosion might be the buzzword of the moment, but its impact is being felt across all IT departments. IDC projects that the number of files will grow 75x over the next 10 years. But industry forecasts for storage capacity is only growing at 2.6X - creating a significant capacity challenge for companies.

With IT budgets remaining flat and staffing challenges continuing, companies need to figure out how to bridge the growing capacity chasm without lots of hardware.
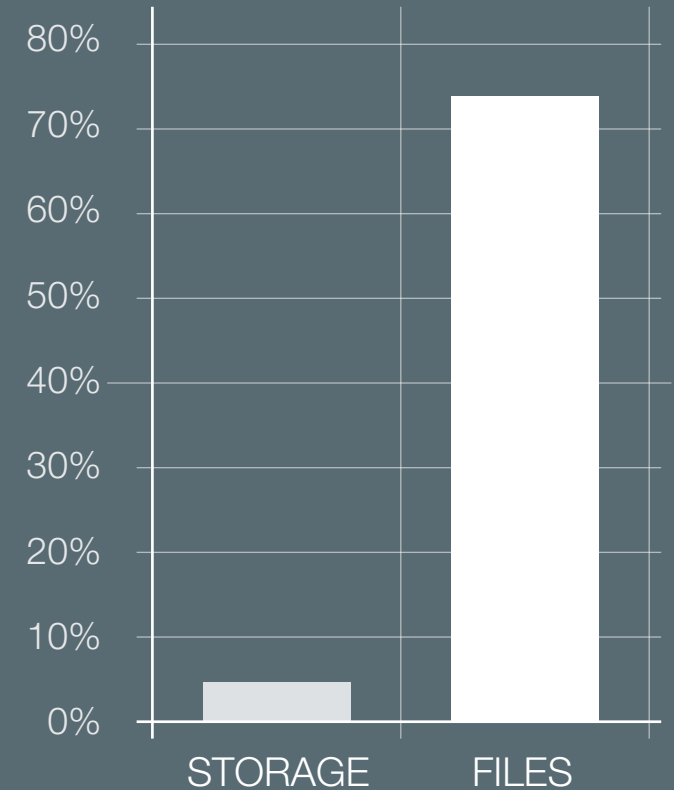
## Data Explosion

# 75X

growth of files over 10 years. (IDC)

## Storage Capacity Forecast

# 2.6X

storage capacity growth in 10 years.
- 5%-10% per year between 2011-2014

## 10-Year Growth Trend

# 01

## How do companies get off the hardware hamster wheel?

Hybrid Cloud Backup solves the hardware conundrum by capitalizing on new technology so you can stream data to the cloud based on age and value. This new approach understands than not all data requires expensive local capacity, which means you buy more cloud for storage needs.

## OLD WAY

DATA

MORE SPACE = MORE HARDWARE

## NEW WAY
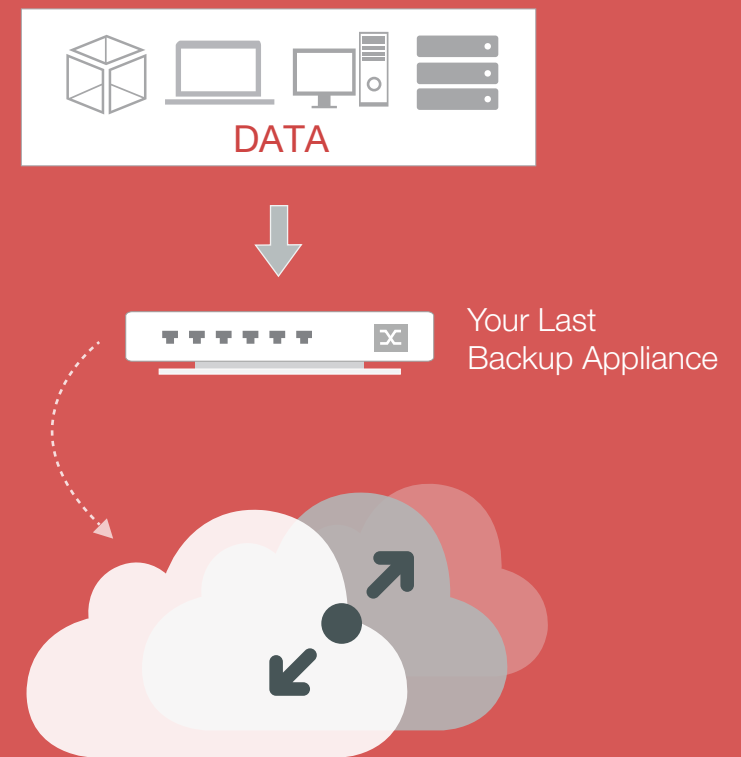
DATA

Your Last
Backup Appliance

MORE SPACE = MORE CLOUD

# BENEFIT #2
## Meeting backup windows in a Data Growth World

# 02

# Meeting Backup Windows in a Data Growth World

The problem of not meeting backup windows is a familiar scenario for IT departments.  Today, explosive data growth inside the enterprise has made it impossible for IT to backup all of the critical data.  Missing backup windows puts companies in a high-risk data protection category, as they can't recover critical data or meet compliance mandates.

For companies that want to use cloud backup, but have large amounts of data, a hybrid cloud backup solution can give you the best of both worlds: Cloud backup without missing backup windows.

Hybrid Cloud Backup allows you to use local storage for critical data that needs to be backed up so when the data replicates to a secondary unit (or cloud), advanced technology only uploads the changes, which reduced replication windows.

**ENDPOINTS**
SMARTPHONES & TABLETS

**WORKSTATIONS**
DESKTOPS & LAPTOPS

**FILE**
SERVERS

**APPLICATION**
SERVERS

Mission Critical Data Stored Locally...
Everything Copied to the Cloud

Benefits of Local Appliance
• Large datasets
• Fast RTOs
• High efficiency data deduplication

ENTIRE BACKUP HISTORY

# 40%

is the yearly projected data growth rate causing companies to routinely miss their backup windows.
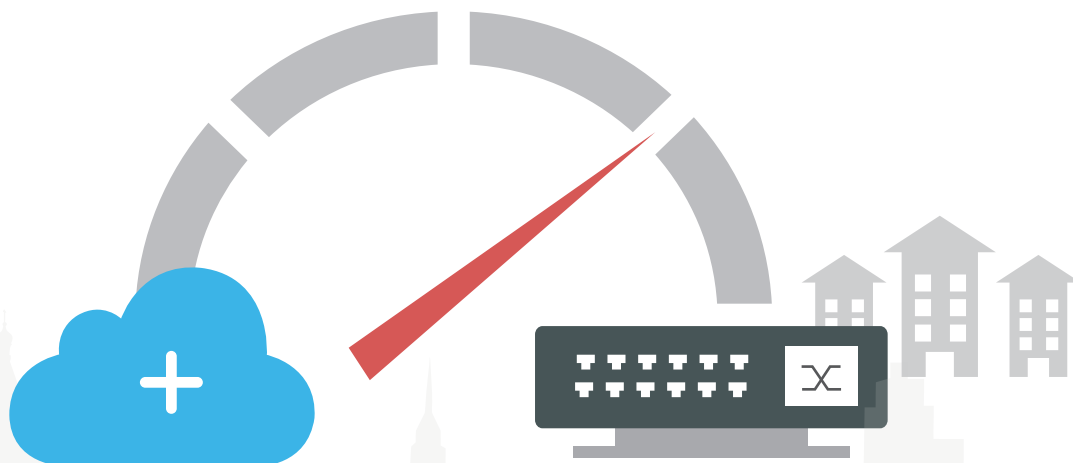
# BENEFIT #3
# No More Latency Issues for Cloud-based Backup

# No More Latency Issues for Cloud-based Backup

Many companies have turned to cloud-based backup to eliminate off-site physical storage costs and maintenance expenses.  The problem is that backup and recovery can take longer in the cloud.  With an average Internet connection (25 mbps) it would take a company **four days to replicate five terabytes of data**.  This places a practical limit of cloud-based replication to about three terabytes per day, making it impractical for larger companies looking to protect larger datasets.

**Eliminating Latency Issues**

Hybrid cloud backup solutions eliminate these latency issues by including an on-premise appliance that can hold mission-critical data, so the appliance can be the point of first restore. Ensuring recovery takes place over LAN speeds instead of WAN speeds (with cloud based backup), companies can still have the costs savings from cloud-based backup and meet recovery time objectives.
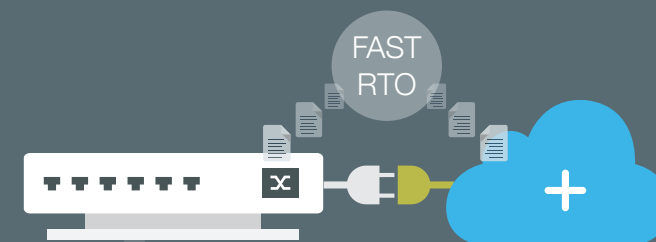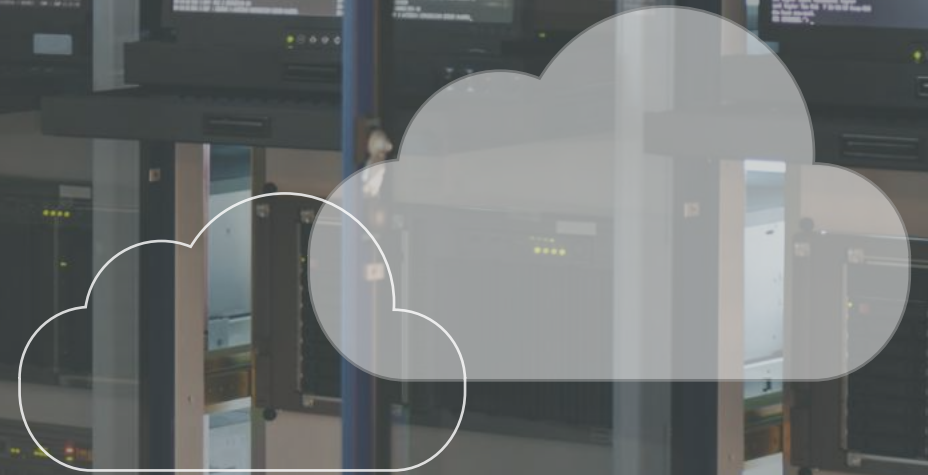
OLD WAY

**4 Days**

to replicate 5 terabytes of data to the cloud.

NEW WAY

FAST RTO

# BENEFIT #4
## Push-Button Disaster Recovery in The Cloud

# Push-Button Disaster Recovery in The Cloud

As a company's dependence on computer systems increases so does the need to ensure that business operations can be recovered with minimal disruption in case those systems go down.  In this competitive landscape, can any business afford downtime?

**Traditional DR Headaches**

For too long, companies have rolled the dice without a Disaster Recovery (DR) solution because it required a heavy infrastructure investment and additional IT resources to build and maintain an off-site DR environment.

DR complexity has also been a thorny issue for IT departments, as most traditional cloud backup vendors offer solutions requiring multiple steps, vendor interaction, and support only a limited number of environments.

**DR without the Heavy Infrastructure Investment**

Hybrid Cloud Backup solutions remove the cost barriers to a comprehensive DR solution and deliver one-click recovery, so that you can boot and run your systems and applications in the cloud in minutes.

## 35%
of small and medium business have backup plans.

## 70%
aren't confident with the statement "Our backup and disaster recovery operations are well managed and planned."

## How DR in the Cloud Works:

The hybrid appliance backs up your systems, typically performing a full backup every week and an incremental backup every night in between the full backups. These backups are stored on the hybrid appliance and also replicated to the cloud. Virtual machines are stored in their native disk formats. Physical Windows Servers are converted to virtual machines and then stored.
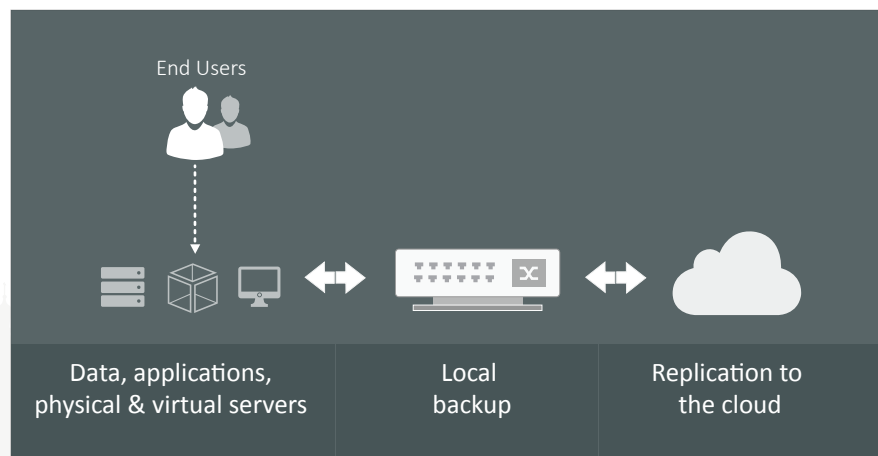
With this type of deployment in place, you'll be ready for any type of disaster or server outage.

Suppose disaster strikes and your building catches on fire, taking out your primary storage and backup appliance. With DRaaS, you can log into a cloud-based dashboard, navigate to the specific servers destroyed by the fire, and right click on the systems that you want to boot up.
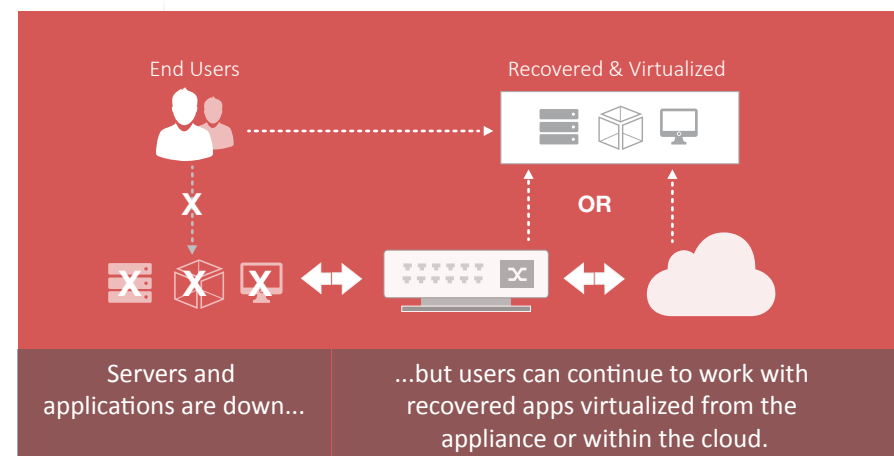
DRaaS will extract the systems from their backup storage, prepare them for boot up by injecting the appropriate drivers, enabling remote login, and other related actions, and then load them into our virtual environment. When the systems are ready, the affected users can receive an email notification that the system is ready for use.

When your production systems are back online, you can right-click the system to restore it to its production environment. The exact steps will depend on whether the system was originally a virtual machine or a physical server, but in all cases the systems will be restored including any changes or transactions performed in the cloud.

## BEFORE DISASTER

End Users

Data, applications, physical & virtual servers | Local backup | Replication to the cloud

## AFTER DISASTER

End Users        Recovered & Virtualized

X        OR

Servers and applications are down... | ...but users can continue to work with recovered apps virtualized from the appliance or within the cloud.

BENEFIT #5
**Eliminating Pitfalls of Tape and Disk-Based Backup**

# Eliminating Pitfalls of Tape and Disk-Based Backup

Two major challenges plague tape and disk-based backup methods: reliability and scalability. Tape's fragile nature and susceptibility to deterioration results in a high recovery failure rate.  It can also be difficult to manage and requires a significant investment in backup network architecture. Disk-based backup appliances are more reliable, but are often priced out of reach for most SMBs and are limited by the amount of storage space.  Once you fill up backup appliances, you typically need to upgrade to a bigger box or buy a second appliance.

With hybrid cloud backup, companies no longer have to take on the high recovery failure rate risks and high costs of these backup methods. By treating the cloud as an archive for lower priority data, they can eliminate a big chunk of traditional maintenance and storage costs.
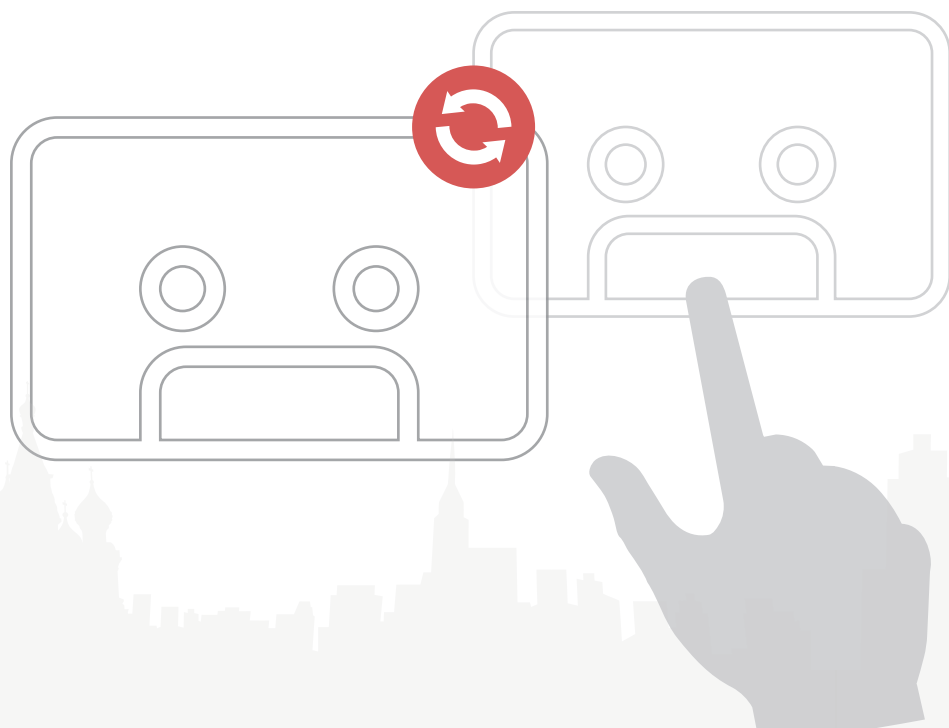
**34%** of companies test their tape backups.

**77%** reported finding failures.

# Key Take Aways

Yesterday's backup isn't equipped to solve the current complexity of data protection needs. It's time for tomorrow's backup. Embracing a hybrid cloud backup solution will enable organizations to replace antiquated backup and storage solutions to gain better data mobility and agility with higher operational resiliency in the cloud.

## A next-gen hybrid cloud backup solution will allow you to:

✓ Have LAN access to your most important data in terms of latency and bandwidth while giving you the protection and low cost of off-site cloud storage.

✓ Untether cloud storage from the appliance. This means storage on the hybrid appliance grows much more slowly, since it only needs to be large enough to store a few backups (and the associated incremental data) and your most critical data and applications.

A next-gen hybrid cloud backup solution puts the cloud at the center of your data protection universe. These solutions are far easier to implement, dramatically more affordable, and capitalizes on the efficiencies of the cloud.

"These capabilities, while rare to find in a single solution, are just the beginning. For example, companies like Infrascale can provide all of the above plus endpoint protection, collaboration and file sharing and this is a trend we expect to continue"

Storage Switzerland, LLC
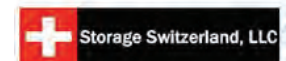
# 5 Benefits of Infrascale Hybrid Cloud Backup

Infrascale provides a hybrid cloud backup solution that changes how you think. Wickedly fast, scales the way the cloud was meant to, and so simple our customers tell us that they spend just a few minutes a week managing it. Infrascale is an entirely new approach to cloud backup and disaster recovery.

We created cloud software that allows you to protect your data – fast, smart, and bottomless. You can build your own cloud, use someone else's or a combination of both. You can buy our software or rent it. You can use our infrastructure or buy and build your own. No matter your desire, Infrascale delivers a cloud that fits how you want to do business.

## 01 GET OFF THE HARDWARE HAMSTER WHEEL

We understand that not all data requires expensive local capacity, which is why we built-in cloud spillover technology so you can stream data to the cloud based on age and value. With Infrascale, you'll never find yourself in the following scenarios:

- Needing to buy more and more appliance capacity as your data grows
- Over provisioning capacity with the initial appliance purchase
- Needing a second appliance for a replicated data store

## 02 ONE-CLICK DISASTER RECOVERY

With Infrascale, your company can boot and run your systems in less than 15 minutes, with one-click. Log in to the Infrascale web-based dashboard, from anywhere, right click on the desired system, and boot it up automatically. Never worry about server failure, since you can boot backup systems right on the appliance. Since our disaster recovery solution is baked into our hybrid cloud backup solution, it dramatically reduces the costs of building, maintaining and testing an off-site DR environment.

## 03 PROTECT EVERYTHING

Infrascale's cloud backup solution includes backup, archiving, and disaster recovery and protects your entire environment:

- Physical and virtual servers
- Laptops, desktops, and mobile devices
- Supports more than 50 versions of operating systems, including Windows, Unix, Linux, VMWare, and Mac

## 04 FAST RTO

Infrascale's built-in cloud spillover automatically streams data from the appliance to the cloud, and grows per your data retention rules, delivering fast RTO for mission critical data.

## 05 Eliminate the Pitfalls of Tape and Disk-Based Backup

With Infrascale's hybrid cloud backup, companies can make smarter use of the cloud for long-term storage, but leverages a local appliance for mission-critical data and applications. This overcomes the shortcomings of tape and disk-based backup (maintenance and storage costs), but exploits the power of the cloud.

# Getting Started with Infrascale

**Blue Saffron**
*more than just IT*

We are one of London and the UK's leading independent suppliers of services to businesses, managed communications and IT. Headquartered in London, with a nationwide customer base, we help companies to rationalise, improve upon and realise enhanced business benefits from IT and technology through the provision of managed services and outsourced IT management.
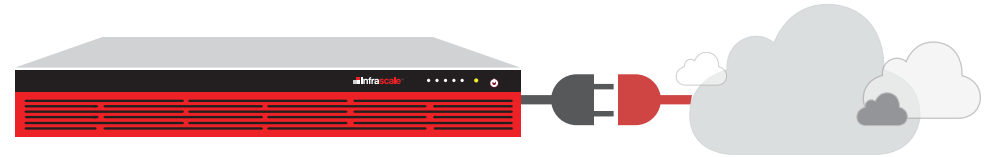
To discover how easy it is to get started with Infrascale, and learn more about our hybrid cloud backup solution, visit: www.bluesaffron.com

" Infrascale is making the cloud the centerpiece of its hybrid backup model and leveraging appliances as efficient gateways to accelerate cloud-based data protection, while offering user-configurable policies that govern what data is retained locally."

**Gartner**

**Gartner 2015 CoolVendor**

Each year, Gartner identifies new Cool Vendors in key technology areas and publishes a series of research reports highlighting these innovative vendors and their products and services. Infrascale has been designated as a Cool Vendor for Business Continuity and Disaster Recovery for 2015.

# Sources

a. **HYBRID CLOUD BACKUP SOLUTIONS WILL GROW AT A CAGR OF MORE THAN 80%.**
The Taneja Group: Taneja Group Emerging Market Forecast (January 2011)

b. **40% IS THE YEARLY PROJECTED DATA GROWTH RATE, CAUSING COMPANIES TO ROUTINELY MISS THEIR BACKUP WINDOWS.**
IDC: The Digital Universe of Opportunities: Rich Data and the Increasing Value of the Internet of Things (April 2014).
http://www.emc.com/leadership/digital-universe/2014iview/executive-summary.htm

c. **98% OF ORGANIZATIONS CAN'T GO MORE THAN 1 DAY WITHOUT CRITICAL DATA.**
(June 2012)
http://bumi.com/press-releases/98-of-organizations-unable-to-tolerate-more-than-one-day-without-access-to-critical-data-2/

d. **37% OF COMPANIES SURVEYED HAVE TO COME TO TERMS WITH VIRTUAL, PHYSICAL AND CLOUD-BASED SERVERS.**
**54% OF THE SAMPLE GROUP HAVE TO MANAGE TWO OR MORE HYPERVISORS.**
IDC Report: Complexity and Data Growth Driving Small and Medium-Sized Environments Toward a New Generation of Data Protection (June 2014).

e. **36% OF COMPANIES DO NOT BACK UP VIRTUAL SERVERS AS OFTEN AS THEIR PHYSICAL SERVERS.**
InformationAge: Why backup and recovery needs to be strategic not siloed (February 2015).