Reduce downtime to increase ROI: 3 actions executives can take *now* to reduce downtime

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Software

Introduction

Working out the potential return on investment on a new server or application is relatively straightforward – if it enables you to do more in less time, profits are likely to go up, making it worth buying.

If there are no obvious benefits, however, and no immediate gains, then the computation is far more challenging. This has always been the case in the realm of backup and recovery, where the chief benefit is the ability to maintain operations (measured in uptime), rather than enhance the bottom line.

The trouble is, although essential to business continuity, backup and recovery systems are often neglected because they do not directly generate revenue or reduce costs.

However, we can calculate what downtime means to your organization:

Cost of downtime	
Average yearly compensation per employee	$65,000
Total hours that F/T employees work per year	2,080 hours
Hourly compensation	$31 per hour
Number of employees unable to work due to the disaster	100 employees
Number of hours of downtime	8 hours
Total cost of downtime	**$24,800**

This example demonstrates the cost of a disaster that causes 8 hours of downtime during normal business hours.

Lost revenue	
Company's total yearly revenue	$10,000,000
Hours of operation	2,600 hours
Average revenue generated every hour	$3,846
Number of employees unable to work due to the disaster	100 employees
Total revenue lost	**$30,768**

You would also need to calculate your company's lost revenue.

Non-recurring costs (per event)	
Employee overtime / contractor pay to restore operations	$2,000
Vendor charges	N/A
Hardware repairs	$5,000
Total cost of downtime	**$7,000**

Be sure to add non-recurring costs associated with restoring operations, like hardware repairs, vendor charges (some less scrupulous vendors charge for the amount of data recovered), contractor pay, and employee overtime.

The total cost of eight hours of downtime in this particular example is $62,568. And if the downtime affects a customer-facing website or application, these numbers don't even begin to calculate the costs of customer frustration, a flood of calls to your customer support teams, or giving your customers an opportunity to consider alternatives. The outcome of your calculation will be different, but the key principles of how to calculate the value of DR are the same.

Causes of downtime

While defining downtime in general is relatively simple – the time during which one or more resources (in this case related to your IT environment) are unavailable – the root cause of downtime can take many forms. Some scenarios, such as natural disasters, power outages, equipment changes or maintenance, can be planned appropriately, while others cannot.

This lends an element of uncertainty to planning, yet identifying the causes of downtime is critical to establishing an intelligent and detail oriented plan to reduce downtime. The majority of organizations have established plans or procedures to recover from things like natural disasters, power outages and even malware and malicious attacks. Yet many sources report the number-one cause of downtime is human error. (The Uptime Institute, for example, reports that human error is the cause of more than 70 percent of data center downtime).

The take away here is: "Sweat the small stuff." You are probably prepared for a natural disaster, but are you prepared for the contractor that will inadvertently rub against a meekly-protected "kill switch," shutting down the data center? Or are you prepared for animals chewing through cords? Or police shutting down the block and denying access to your racks? These are all scenarios we have seen, and they are just the tip of the iceberg of the potential list of possibilities that can leave you stranded.

Resort management company saves $80,000.

By carefully assessing, planning and executing a comprehensive data protection plan, a mid-sized resort management company was able to streamline backup costs, eliminate previous monthly fees, and reduce storage costs by 75 percent.

- The company **saved $80,000** in monthly fees over three years.
- Storage costs went down **75 percent**, thanks to a compression ratio of 58 percent.
- With the company's choice of hourly snapshots, **data loss** is limited to less than an hour rather than up to a day.
- **Recovery is reliably quick** — systems are back up in 30–45 minutes rather up to 48 hours.
- The company plans to replicate data offsite for even more **comprehensive disaster recovery**.

Solutions

To balance an ROI equation – even the hypothetical one posed here – we also need a solution side of the equation. There are many different kinds of technological solutions to consider for reducing downtime and maximizing your backup and recovery environment – software, appliances, physical machines, virtual machines, the cloud. Nearly every organization has different needs, and needs different capabilities. One size rarely, if ever, fits all in this world, but there are things to consider when looking at solutions:

- **Ease of use**: Self-explanatory here, but if your staff spends less time installing, learning and maintaining a given system, the more time they will have to perform more important functions. Time is money, and saving time saves money.
- **Automation**: As technologies mature, more and more functions are being automated. Again, if you can make previously manual processes automated, you are saving your staff time.
- **Speed**: Recovery speed is critical in reducing downtime. Let's face it – you will have downtime. How quickly you can restore can mean the difference between a "mild inconvenience" and a "potential disaster."
- **Solution maturity**: Sometimes overlooked, one common cause of downtime is software bugs or loss of functionality. Backup and recovery is so critical to business continuity, solutions need to be bullet-proof.
- **Specific features**: In planning your environment, understand your needs and pay attention to technologies and features that will help maximize resources. Features like compression and deduplication can reduce stresses on other infrastructure elements and help manage data growth – in turn simplifying your environment and reducing costs.

IT security company slashes storage requirements and staff time for increased ROI.

A small IT security company in the US was able to improve compliance and save money by reducing storage costs and saving IT staff time by taking advantage of technologies such as compression and deduplication.

- The company **reduced** the threat of data loss and improved compliance.
- IT staff **saves time**, since they no longer spend 10 percent of their time babysitting backups.
- **Storage costs are down**, with 78 TB of data protected using only 2.55 TB of physical storage, a 31:1 ratio.

The company can recover an entire file share server (9 TB) in less than **20 minutes**.

3 steps you can take now

So given everything you've read up to now, what can you, an IT leader, do today to help reduce downtime and ensure your team is in the best position to succeed?

Approach your data protection environment as you would any major system and lay out a clear path for improvements. Objectively and meticulously assess your environment; create a definitive plan with specific and reachable goals; and execute that plan.

Assessment:

- **Identify points of failure**: As discussed earlier, you can't plan for every mishap that may cause downtime, but you can plan for the most predictable types of downtime you may experience.
- **Review existing operations**: Take careful stock of what is working and what isn't, both on a day-to-day basis and in the long haul. Previous ad-hoc fixes may be getting you through the day, but those types of solutions can frequently make recovery more difficult in the event of an unusual outage or event.
- **Determine special circumstances**: Get a firm grasp of special circumstances your organization may have. Do you have, or will you have, certain compliance regulations to adhere to? Are you located in an area where power outages may be more commonplace? Are you working with regulated, critical data?
- **Assess data criticality**: Assessing how critical each set of data is to the organization must be done with a critical eye. Rank your applications and types of data by how long you could possibly function without them. Indeed, all data is important, but some is mission-critical to your hour-by-hour operations (read: revenue generation).

Plan

- **Set goals**: Make your goals specific and time-related. What is needed immediately? What is needed within the year? Within three years? Within five years?
- **Write it down**: Too often IT executives learn what they want and need and keep it to themselves. Take the time to write a plan and share it with your team. And don't neglect it – update it as goals are reached and new goals are added.

Execute

- **Communicate**: Be clear with your team as you roll out your plans.
- **Take small bites**: Your plan may be quite broad. Take it one step at a time to avoid deployment issues. Reducing downtime is an ongoing endeavor and to achieve the greatest results, you must plan for the long haul.

Your people

When assessing, planning and executing your plan, don't overlook your most valuable resource – your people. Your IT administrators, regardless of specific title, are well versed in your environment and can provide crucial information in all phases the process. Their worst scenario is downtime too, and they most likely have a better view of the day-to-day operations and logistics. Ask for and use their input.

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Dell Software
5 Polaris Way
Aliso Viejo, CA 92656
www.dellsoftware.com

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