Meeting & Managing Your Recovery Time and Recovery Point Objectives/SLAs

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Introduction: What Can an SLA Do for You?

For a lot of smaller businesses, a service-level agreement (SLA) may not be top priority. Maybe it seems overly formal or unnecessary, or too time-consuming a project. And it's true — an SLA is a binding document, and it takes time and thought to create a good one. But an SLA isn't meant only for big enterprises. Even a seemingly simple IT infrastructure becomes complicated when there's data loss or an outage. It's just as important for smaller organizations to have an agreement with the business side of the house to set expectations on data and system recovery and availability.

And these days, SLAs can help IT teams, which are feeling the heat like never before. Businesses rely on technology across the organization and are creating, storing and protecting more data

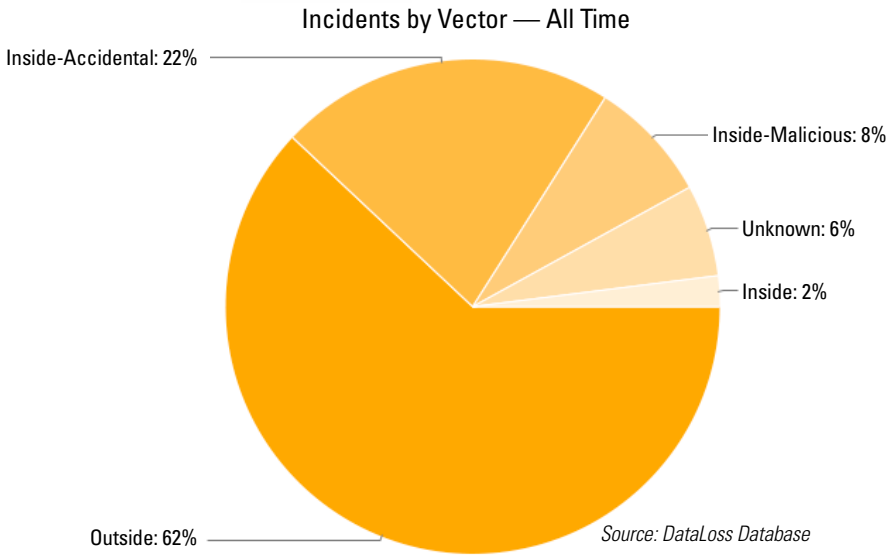
than ever before. New operating systems and applications mobile devices, and new technology like virtualization, all contribute to a complex set of IT challenges. If a system fails, or data is lost, the repercussions are serious. The impact of downtime can mean competitive failure, customer service nightmares and lost profits. And users look to IT for an immediate fix, while IT is already swamped with other projects and support requests.

That's where the SLA comes in. That single document sets formal expectations with end-users and helps IT justify the technology and resources needed to meet the SLA. An SLA adds clarity in tough situations. It reminds everyone involved of the reasonable recovery and availability goals previously agreed on. An SLA is a sort of insurance policy when disaster strikes, offering guarantees about the organization's most precious possession: its systems and data. It lays out some key numbers: the recovery time objective (RTO), which specifies the time it should take to recover after an unplanned outage or data loss. And it covers the recovery point objective (RPO), too, which is the amount of data a company is willing to risk — between performing periodic backups, snapshots or other data protection strategies. In the most extreme case, business units may insist on zero downtime and data loss, which would require a continuous data protection and high availability solution.

Downtime and Data Loss Grow

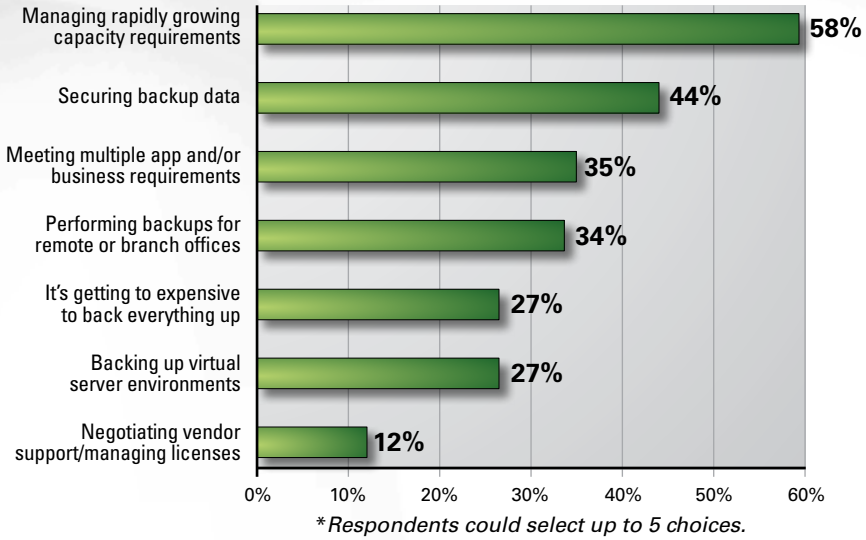
Data loss and system downtime are too often making headlines these days. IT administrators have to look out for threats coming from outside, like viruses or natural disasters, and those from within, like accidental corruption or data deletion. The DataLoss Database found that 62% of threats causing incidents come from outside an organization, while 22% come from inside — and are accidental. Any of those threats can cut into profits and reputation. And pressure on IT keeps growing: a Skyline Technologies survey found that 65% of respondents are putting increasing resources toward IT in the next year, with 91% naming IT as a key contributor of better business performance.

Figure 1: **Threats causing data loss incidents**



IT teams have a lot on their plate, d more initiatives keep piling up. A recent *Storage magazine* survey showed that IT workers are overloaded with capacity requirements, remote office back-ups and cost overruns, among other backup and recovery issues.

Figure 2: **What are the biggest backup and recovery issues you're facing today?***



Source: Storage magazine, October 2010

And meeting RPOs and RTOs is a challenge. In another *Storage magazine* survey, just under half of respondents — 49% — met all RPOs and RTOs during their last test. Ten percent did not meet RPO and RTO goals at all during testing.

And in response to new recovery pressures, SLAs are making headlines, too. Eighty-five percent of organizations plan to boost their governance process and application investments in 2010, including SLA-related investments, according to a recent Ziff Davis-sponsored survey of IT execs.

Many of those 85% are counting on SLAs to alleviate the many negative effects of downtime and data loss. SLAs mean consistency across an organization. If there's a server failure, for example, an SLA lets all involved parties know when operations should be up and running again, using goals and benchmarks.

Building a Better SLA

A good SLA is part of good communication between IT and the other departments it serves, or between IT and outside service providers. Creating the SLA is a chance for IT and other business owners to work together. Pick a key person from each involved party to be the SLA manager; that person can act as ambassador and deal broker. The process is a series of negotiations, and the end result a compromise. How much time does IT realistically need to get a server back online? And how long should an application user realistically be able to wait for that data? How fast can a provider get data back to the company's headquarters? What technology and resources does IT require to meet the SLA? There's a happy medium for both sides — it's just a question of finding out what it is.

>> **View a sample SLA form**

SLA at a Glance (Short form)

SLA in Detail (Long form)

An SLA should include a list of the services that will be provided in case of downtime, as well as their timeframes. Include the responsibilities of both parties and escalation procedures that'll be involved. Don't forget to revisit the SLA on occasion to make sure it still fits in with your company's changing environment, especially as business grows.

And, get your priorities straight in the SLA. Which applications are really critical? It can be hard to sort that out, since every department might have their own can't-live-without app. But take a hard look at the overall business priorities, revenue stream and customers to figure out what you'll tackle first. Plus, cost is a major factor when building an SLA. Figure out what costs are associated with meeting an SLA's requirements, and balance those costs with the value of the data to set an RTO that is realistic and makes financial sense too.

Defining the RTOs of your SLA can be complex, and difficult. Quick recovery is what you're after, but just how quick is a big question. You might be looking at repairing a server, recalling a tape from the archive, then taking into account your RPO when getting the affected data back. Consider start-to-finish repair and restore time in the RTO.

RPOs are the other half of the equation, rounding out the work involved in meeting the RTO. Distinguish between accidental data loss and critical data loss in the SLA. A user's Word document does represent lost work, but the financial transaction log is essential to the bottom line.

When you're on the other side of an SLA, look on your IT department or 3rd-party service provider as a partner. They're committed to getting service back online after an outage.

The Highly Available Infrastructure and SLAs

The pressure on IT intensifies when there's system downtime or a disaster. High availability has become a must-have for any size organization with mission-critical applications. Today's SLAs take high availability into account — and they should, because an SLA that doesn't include high availability risks lost sales and customers, dissatisfied clients and low employee productivity. Reasonable RTOs and RPOs are the cornerstone of a solid SLA, but so are metrics that aim for the highest availability and continuous data protection that's possible given available budget, technology and resources.

Every SLA is different, because every business is different. What are your organization's particular needs and strengths? Look at the way your business is run to build your SLA. That'll include examining which applications need, and get, quick turnaround backups. And it'll involve identifying the Tier 1 applications that get extra attention and insurance — like continuous data protection and high-availability techniques. Plus, look at benchmarks or metrics for how different applications normally perform to figure out what goals you should aim for after an outage.

How to Have a Well Protected and Highly Available Infrastructure

Your organization doesn't need to go it alone to be protected and highly available to meet SLAs with ease. CA ARCserve Family of Products is designed around SMB infrastructures. CA Technologies built CA ARCserve® Backup with a modular architecture to let businesses pick and choose the functionality that they need, and add pieces as they grow. And, you'll appreciate a centralized management console and useful dashboards on a day-to-day basis. Those tools help spot

problems before they escalate, and make meeting SLAs more manageable if an outage or data loss does happen. Plus to help reduce backup storage requirements and costs, CA ARCserve® Backup includes built-in data deduplication and CA ARCserve® D2D uses infinite incremental snapshot backups to eliminate the need for multiple full backups, saving backup storage space. CA ARCserve D2D also provides bare metal restore, even to dissimilar hardware, for fast system recovery. If you need to rebuild servers, applications and data, those key features will make it less painless, and faster to get to your RTO goals.

To take your backup to the next level, take a look at CA ARCserve® Replication for continuous Windows, Linux and UNIX data protection and offsite replication for disaster recovery. Its Data Rewind feature lets administrators rewind back to any known good point in time after data loss or damage, for fast and granular restore of data and databases — tailor-made for meeting tough RPOs and RTOs.

The clock starts ticking immediately when a system goes down and an SLA's requirements kick in. Periodic backup and restore alone can't meet SLAs that demand high availability. CA ARCserve® High Availability protects any Windows, Linux and UNIX mission-critical servers, applications and data, offering full-system high availability. At the first sign of server or application trouble, CA ARCserve High Availability automatically fails over to a standby server and redirects your workloads and end-users, typically before they even realize there's a problem. Push-button failover can be used in advance of an impending disaster or planned disruption like server maintenance, to eliminate any business downtime. And you also get all the CA ARCserve Replication technology for continuous data protection and near-instant recovery. The CA ARCserve Family of Products actually helps businesses grow and thrive in today's complex, high-pressure IT environments.

Conclusion

A good SLA is about meeting the needs of the business, for system, application, and data recovery and availability. Creating solid SLAs will let you save the day when the unexpected happens — and keep aggressive users at bay with a set of written expectations. And teaming up with CA Technologies and the CA ARCserve Family of Products will help you effectively meet your RPO and RTO SLAs while managing your costs per system, application or data set.

To learn more about the ARCserve Family of Products visit http://www.arcserve.com.

About CA Recovery Management

The Recovery Management and Data Modeling Business Unit of CA Technologies (NASDAQ: CA) delivers the acclaimed CA ARCserve and CA ERwin products. Providing much more than backup, the CA ARCserve Family of Products gives customers control over their changing business by delivering total protection, recovery and availability for systems, applications and data — across physical and virtual environments. These award-winning products come together under the Business Unit's commitment to a 100% channel business model driven by more than 10,000 partners worldwide.

Surveys

DataLoss Database: http://datalossdb.org/statistics

Storage magazine Oct. 2010:
http://searchstorage.techtarget.com/magazineFeature/0,296894,sid5_gci1519700_mem1,00.html

Storage magazine March 2009:
http://searchstorage.techtarget.com/magazineFeature/0,296894,sid5_gci1350170_mem1,00.html

Baseline Magazine/Ziff Davis 10 Trends for 2010:
http://www.baselinemag.com/c/a/IT-Management/10-Trends-for-2010-Piecing-Together-a-Technology-Strategy-190963/2/

Skyline Technologies IT value survey:
http://www.skylinetechnologies.com/about_us/news/Pages/measuringitvalue.aspx

Service-level Agreement for SMBs *Short form*

SLA at a Glance

Between IT department and _____ department
Date: _____

System: _____		**Goal**	**Actual**	**Difference**
SLA level: *Tier 1, 2 or 3*				
Availability		*e.g. 7am-7pm, M-F*		
Response time		*e.g. % of response within 10 seconds*		
Load		*e.g. transactions/minute during peak time*		
Accuracy		*e.g. # of errors allowed*		
Scheduled backups		*e.g. weekly full, daily incremental*		
Recovery time objective (RTO)		*e.g. 6 hours*		
Recovery point objective (RPO)		*e.g. to 15 minutes before outage*		
Other performance metrics		*Specifics or exceptions for system*		

Service-level Agreement for SMBs *Long form*
Detailed SLA

Between IT department and _____ department
Date: _____

1. Purpose and objectives
Why this SLA is necessary for these departments; what it should accomplish?

2. Parties to the agreement
Which departments are involved and who represents them?

3. Duration of the agreement
How often will the SLA be revisited for improvements?

4. Scope of service coverage
What can IT provide and what can't they offer this department?

5. Range of services covered by agreement
What will IT do for this department on a regular basis, and what will it do in an outage?

6. Benchmarks, targets and metrics
Which performance metrics are used now; what are reasonable targets and goals for recovery and performance?

7. Service availability
When are regular downtimes scheduled?

8. Response times
How soon will data be recovered; when can department expect IT response?

9. Incident escalation when a fault can't be fixed with anticipated response time
How soon will a meeting be scheduled; who else will become involved?

10. Records and reporting
How often will regular reports be issued; what reports will be included after an outage?

11. Approvals from department reps

Contacts:
IT department: _____
X department: _____

Approvals: **Date:**
IT department: _____
X department: _____