

Six Steps to Effective Service Availability Management

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Below the Surface: The Hidden Challenges of Service Availability

Hidden risks are inevitable in any IT environment.

Ensuring continuous service availability and data protection across the entire IT environment is easier said than done. As the IT landscape grows in size and complexity, it is practically impossible for all IT teams to ensure 100% compliance with vendor best-practices in all areas of your production environment.

In addition, ongoing and frequent configuration changes across all layers of the IT infrastructure inevitably result in discrepancies between production and High Availability (HA)/ Disaster Recovery (DR) environments, introducing risks that remain hidden until disaster strikes. A recent survey conducted by Continuity Software reveals that 41% of the organizations surveyed did not meet their service availability goals for mission-critical systems in 2012.¹

You already monitor your infrastructure 24x7.

When an outage occurs, you know about it the second it happens, and your IT teams can immediately start troubleshooting the issue.

But what if you could prevent the outage altogether?

The good news is that the vast majority of unplanned outages can be prevented.

This eBook offers six steps to successful service availability management that will help your organization transition from a fire-fighting mode of operations to a preventative approach, reducing downtime and data loss risks while increasing the productivity of IT resources.

¹ [2013 Service Availability Benchmark Survey](#)

When Outage Strikes: Stories of Real Companies

"American Airlines grounds flights nationwide due to glitch"

"American Airlines grounded flights nationwide on Tuesday due to problems over several hours with its computerized reservation system. The decision also resulted its regional affiliate, American Eagle, holding flights at Dallas Ft. Worth, Chicago's O'Hare and New York LaGuardia -- all major airports for the carrier's domestic operations.

The glitch caused big delays and flight cancellations for the company.

American CEO Tom Horton apologized to the customers in a video Tuesday evening, saying that the glitch was "a software issue impacting both primary and backup systems."

(CNN, April 16, 2013)

"Data center outage takes French state financial system offline for four days"

"A storage failure lasting less than an hour resulted in a four-day outage in an SAP system used to pay state suppliers.

The incident took the core of a SAP system with 25,000 users offline... (Four days later) the agency sent orders to the Bank of France to make 13,400 delayed payments totaling 181 million euros (US\$232 million)."

(computerworld.com, June 24, 2013)

When Outage Strikes: Stories of Real Companies

"Largest Bank in China 'Paralyzed' on Sunday"

“The bank’s over-the-counter, automated teller machine, Internet, and mobile services were all affected in the outage, which hit the cities of Beijing, Shanghai, as well as the provinces of Guangdong, Hubei, Sichuan, and Liaoning.

Online Internet shopping payments, bank card payments to shopping centers, supermarkets, and hospitals were also impacted; in some areas, even China UnionPay, the country’s largest bank card network, was also affected.

According to China Central Television, an official mouthpiece, “the paralysis lasted up to 45 minutes,” though accounts by netizens online indicate that it may have been longer. Whatever the length, the sudden lapse in service by the largest bank in China—and the largest in the world in market value—was worrying to many.”

(The Epoch Times, June 23, 2013)

"BlackBerry faces sanctions in Indonesia following outage"

“This is the fourth outage for BlackBerry since April 2013. The outage on Wednesday affected BlackBerry Messenger and may hinder the company's efforts to sustain its market share in Indonesia. BlackBerry has about 6.3 million subscribers in Indonesia.”

(zdnet.com, July 5, 2013)

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Step 1: Detect

Dispersing the Fog

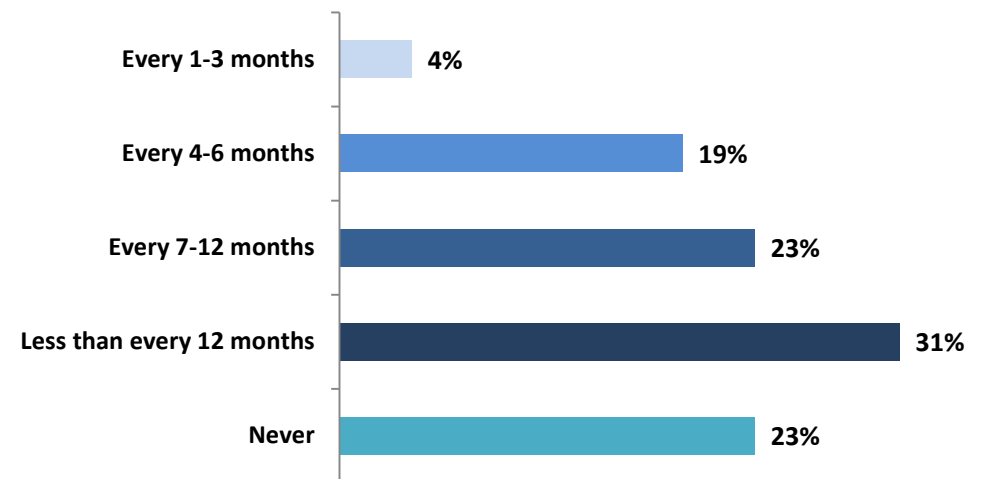
With limited visibility across infrastructure layers, IT organizations have been challenged to detect problems ahead of time and prevent them from disrupting the business.

Manual detection of downtime and data loss risks is practically unmanageable in any sizeable IT environment. While many organizations rely on periodic testing, it leaves great portions of the environment vulnerable and exposed to risks.



Only 46% the organizations we surveyed conduct a complete disaster recovery test annually or more often, and as many as 23% don't ever conduct a complete test.

Automated detection in a non-intrusive manner is the only method that can provide adequate cross-domain visibility to risks across the entire IT infrastructure—physical, virtual, and hybrid—in a timely fashion.



Frequency of Complete DR Tests

Step 2: Anticipate

An Ounce of Prevention is Worth a Pound of Cure

Waiting for bad things to happen is never a good idea. Once a system is down, the damage to the business cannot be undone. Highly visible outages tend to send the entire organization into a frenzy, and troubleshooting and recovery efforts become extremely costly and disruptive to ongoing operations.

Fortunately, most downtime and data loss incidents follow known patterns that can be documented and identified in advance. Continuity Software's Risk Signature Knowledgebase™ contains over 5,000 such risks, and the number grows daily.

With automated daily verification of your environment against this knowledgebase, relevant IT teams have an up-to-date view of the organization's readiness state. They can identify areas of risk and focus their attention and resources on fixing these issues before they impair business operations and turn into a costly undertaking.

Scan	Business Entity	Data Risk	Availability Risk	Optimization	SLA
83%	Billing	Total: 4 A:N/A M:-	Total: 10 A:N/A M:+1	Total: 1 A:N/A M:+1	Total: 0 A:N/A M:-
93%	ERP Scanning issues: 1	Total: 9 A:N/A M:-2	Total: 8 A:N/A M:+1	Total: 12 A:N/A M:+1	Total: 5 A:N/A M:-
83%	QA	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-
100%	Web Scanning issues: 1	Total: 10 A:N/A M:-1	Total: 9 A:N/A M:+2	Total: 5 A:N/A M:+2	Total: 0 A:N/A M:-
100%	LAB	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-
79%	DWH	Total: 2 A:N/A M:-	Total: 0 A:N/A M:-	Total: 2 A:N/A M:-	Total: 0 A:N/A M:-
100%	CRM	Total: 5 A:N/A M:+3	Total: 5 A:N/A M:+1	Total: 7 A:N/A M:+5	Total: 0 A:N/A M:-
100%	CBR	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-
100%	CMR	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-	Total: 0 A:N/A M:-

Review overall and newly detected risks and assign them to the appropriate teams

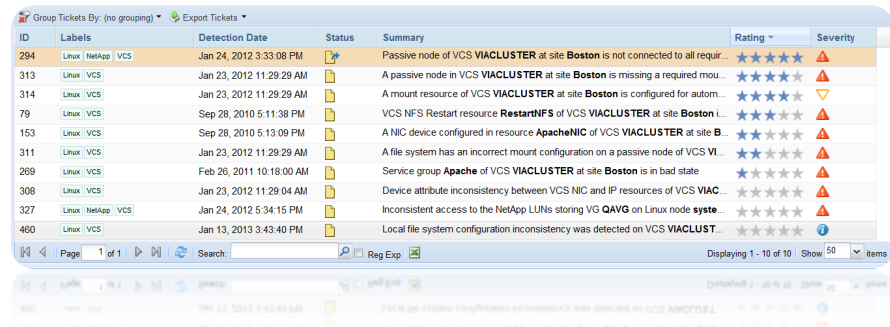
Step 3: Alert

Closing the Gaps

Automated notifications and alerts that are generated when availability or data loss risks are uncovered—including the ability to drill down into the symptoms, root causes, potential business impact, and suggested solutions—allow your IT teams to take action in a proactive manner.

Alerts are sent to the appropriate teams and help prioritize resources based on the severity of the risk and its potential impact on the business.

Trouble tickets can be also generated in your existing IT management system (e.g. HP OpenView, CA Unicenter, Tivoli), streamlining the integration of service availability management into standard IT processes and procedures.



ID	Labels	Detection Date	Status	Summary	Rating	Severity
294	Linux IHAApp VCS	Jan 24, 2012 3:33:08 PM	🔔	Passive node of VCS VIACLUSTER at site Boston is not connected to all requ...	★★★★★	🚨
313	Linux VCS	Jan 23, 2012 11:29:29 AM	🔔	A passive node in VCS VIACLUSTER at site Boston is missing a required mou...	★★★★★	🚨
314	Linux VCS	Jan 23, 2012 11:29:29 AM	🔔	A mount resource of VCS VIACLUSTER at site Boston is configured for autom...	★★★★★	⚠️
79	Linux VCS	Sep 28, 2010 5:11:38 PM	🔔	VCS NFS Restart resource RestartNFS of VCS VIACLUSTER at site Boston i...	★★★★★	🚨
153	Linux VCS	Sep 28, 2010 5:13:09 PM	🔔	A NIC device configured in resource ApacheNIC of VCS VIACLUSTER at site B...	★★★★★	🚨
311	Linux VCS	Jan 23, 2012 11:29:29 AM	🔔	A file system has an incorrect mount configuration on a passive node of VCS Vi...	★★★★★	🚨
269	Linux VCS	Feb 26, 2011 10:18:00 AM	🔔	Service group Apache of VCS VIACLUSTER at site Boston is in bad state	★★★★★	🚨
308	Linux VCS	Jan 23, 2012 11:29:04 AM	🔔	Device attribute inconsistency between VCS NIC and IP resources of VCS VIAC...	★★★★★	🚨
327	Linux IHAApp VCS	Jan 24, 2012 5:34:15 PM	🔔	Inconsistent access to the NetApp LUNs storing VG QAAG on Linux node syste...	★★★★★	🚨
480	Linux VCS	Jan 13, 2013 3:43:40 PM	🔔	Local file system configuration inconsistency was detected on VCS VIACLUST...	★★★★★	🚨

Tickets generated for each risk detected alert the appropriate teams to take action

Step 4: Collaborate

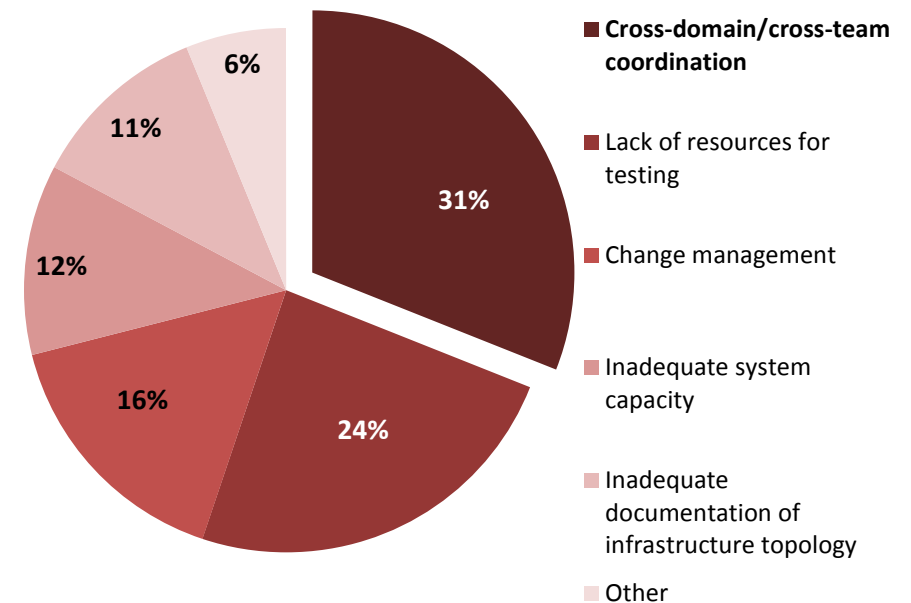
Breaking down the Silos

In an interconnected environment, problems tend to spill from one area to another. Consistent compliance with service availability goals requires tight collaboration and coordination among various IT teams.

It's not surprising that cross-domain and cross-team collaboration was cited in our survey as the top challenge for IT organizations trying to meet service availability goals.

A unified platform that provides all IT teams with actionable information about risks across all IT domains allows all parties involved to share information in real-time.

Integration with existing enterprise systems—email, portals, and incident management systems—further streamlines visibility and collaboration.



*Top Challenges to Ensuring Service Availability
 Cross-domain/cross-team coordination is the top challenge*

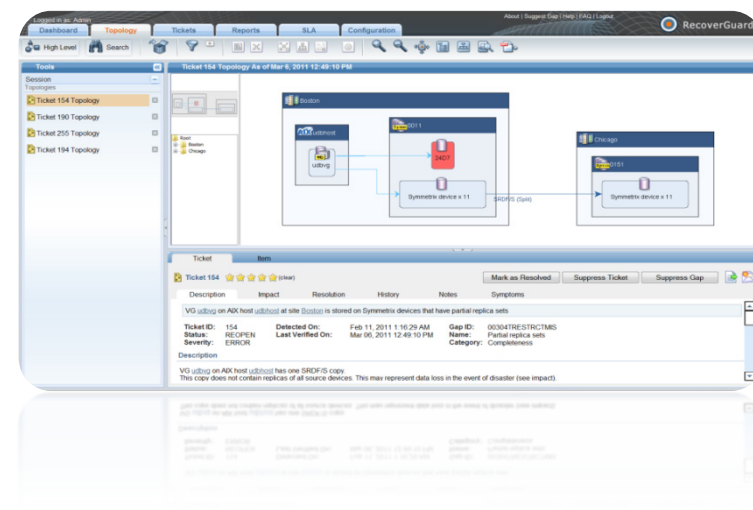
Step 5: Validate

Trust, but Verify

Given the high stakes involved in the continuity of business operations and the dire consequences of system breakdown, a comprehensive structure of checks and balances is critical to the overall robustness of service availability practices.

While there is no doubt that each IT team is doing its best to correct any uncovered risks, a closed-loop system must be put in place to independently verify the resolution and ensure that nothing fell between the cracks.

Only with such a system in place can you be assured that all issues are indeed completely resolved and the risks no longer exist.



Trouble tickets remain open until AvailabilityGuard automatically verifies that the issue has been resolved and the risk is removed

Step 6: Enumerate

"What's measured improves"

- Peter Drucker

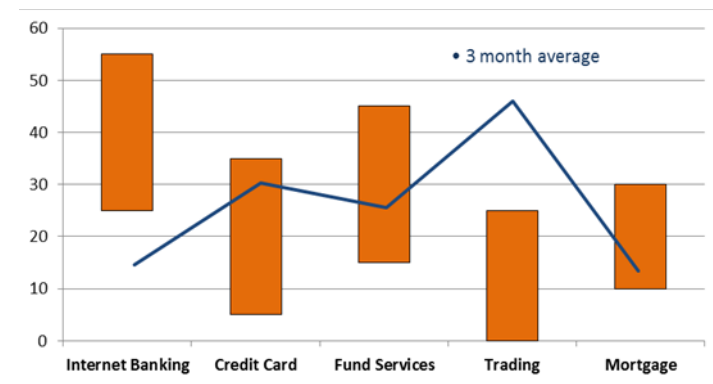
Measuring global KPIs is the only way to track the bigger picture.

Knowing which business services and IT systems are at risk will allow you to analyze risk trends and take corrective actions. With this information in hand, you can focus your attention on areas of emerging risks and coordinate activities among the relevant IT teams.

Measuring is also important for tracking the performance of the various teams you manage. In addition, your KPIs can highlight the systems that create the greatest availability risks, so you can proactively manage the relationships with these system vendors.

Last but not least, to support continuous process improvement, your KPIs can show what best practices

are most frequently compromised and whether processes are improving or deteriorating over time.



*Sample KPI Tracking:
Top five business services at risk (weekly high-low)*

Sign up for a Service Availability Assessment

- Find hidden risks that can jeopardize your business operations
- Test your environment against a database of 5,000+ documented availability risks
- Get actionable recommendations that will help you eliminate availability risks before they impact your business

100% of the companies that have performed the assessment uncovered vulnerabilities that were previously undetected!

Sign up today

About Continuity Software

Continuity Software is a leading provider of Service Availability Management solutions.

Our software helps many of the world's largest organizations eliminate downtime and data loss risks by monitoring production and remote replication environments to detect hidden vulnerabilities and gaps.

Using our solutions, you will be confident your service availability and data protection goals can be met on a consistent basis.

For more information

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