Gartner

Industry Research

Publication Date: 11 February 2009 **ID Number: G00164764**

Cost-Cutting IT: Should You Cut Back Your Disaster Recovery Exercise Spending?

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Government CIOs are under increasing pressure to reduce the cost of disaster recovery (DR) testing and exercises while satisfying government-sanctioned schedules. Exercising DR plans is a critical element of an overall viable recovery capability. Doing so facilitates the identification of plan deficiencies and helps organizations evaluate the staff's ability to implement recovery plans. Of course, it takes money and resources to exercise and evaluate these plans.

Key Findings

- Exercising IT-DR is a "must do" and not a "would like to do" activity, so reducing the number of activities, frequency and cost of full-scale exercises and supplementing them with more frequent and targeted tabletop exercises may produce a 5% to 10% reduction in overall IT-DR exercise expenses.
- Gartner survey data estimates that governments spend a total of $562 per employee on IT budget items such as security and disaster recovery (includes spending on software, hardware, personnel, training, disaster recovery and facilities).
- DR planning is based on technology, political preferences and cost implications.

Recommendations

- We recommend governments perform more-targeted IT-DR exercises by drafting or revising classification schemes for supported service levels and associated costs, and aligning these schemes with future decisions regarding IT-DR exercises.
- Governments should focus the majority of their IT-DR spending on mission-critical applications and reduce spending on non-mission-critical applications where possible.
- Governments should reduce internal and external coordination training to twice annually and rely on more partial or component IT-DR exercises to provide a level of comfort when end-to-end exercises are not fully funded.

ANALYSIS

Governments maintain IT-DR planning/exercises to protect the organization if all or part of its operations and/or computer services are rendered unusable. Traditionally, these IT-DR exercises often have consisted of little more than trial runs or tests restoring application and data backup tapes to show that the IT organization could restore data and perform some basic application inquiries and transactions. However, these types of exercises are at times not realistic due to the lack of participation by key staff, making them inadequate for ensuring effective recovery. IT-DR is a far more multidisciplinary and complex challenge spanning multiple types of systems, applications, databases and even organizations. The most important challenge is to ensure that post-recovery IT operations are as stable as predisaster IT operations, to the extent that is possible. As a result, IT-DR annual exercise budget allocations ticked upward from $20,000 to more than $150,000 annually, depending on size, location, number of participants, scope of exercise and organizational structure of the governmental unit. (These IT-DR costs include hardware, software, personnel, travel expenses, data center usage, client desktops and peripherals, help desk, and voice and data networks.)

CIOs are being asked to review IT-DR plans to evaluate the viability of the recovery activity. Each individual departmental line of business identifies mission-critical data (including data stored on servers outside the main production data center) that is to be replicated. In essence, the lines of business prioritize the necessary investments for bringing systems and data back online according to mission-critical needs. However, these approaches provide limited opportunities for critical staff to understand IT-DR and its place within the overall government continuity-of-operations plan, and at times can provide an incomplete view of the organization's total risk. As a result, CIOs will still have to plug "coverage holes" with IT-DR policies and plans that emphasize maintenance, training and exercising. Spending less requires smarter spending where risks can be appropriately balanced against threats.

When considering what and where to cut IT-DR, remember there is no true common checklist that can be applied universally to meet the needs of every organization. For example, some opt to relocate their IT systems and operations to alternate backup sites, others recover IT functions on-site, and others have service agreements with outsourced entitles to switch cost centers and expertise externally. CIOs must ensure that their IT-DR exercise program provides the organization with a realistic view of the state of the business strategy and how to ensure continued success as business practices change over time. What are the minimum activities required in IT-DR exercising that can still provide due diligence for recovery but at a reduced cost? Governments generally have two options: increased tabletop and more-targeted full-scale functional exercises (see Table 1).

Table 1. Comparison

Tabletop	Full-Scale Functional
A facilitator presents a scenario and asks the participants questions related to the scenario, which initiates a discussion among the participants of roles, responsibilities, coordination and decision making. The number of internal and external participants can be controlled and the types of questions asked of the participants during the course of this type of exercise can be tailored to match the skill level of the personnel.	A validation-based approach where personnel test their operational readiness for emergencies by performing their duties in a simulated operational environment. The participants are personnel with roles and responsibilities under the plan that will be needed to help ensure that the exercise meets its stated objectives, which may or may not require additional participants to supplement critical staff. Both senior-level personnel and operational-level personnel will participate.

Tabletop	Full-Scale Functional
This discussion-based approach allows personnel to meet in groups to discuss their roles and responses to a particular emergency situation or set of situations as they emerge.	This approach varies in complexity and scope, from validating specific aspects of a plan to full-scale exercises that address all plan elements.
The duration of tabletop exercises typically lasts from two to eight hours, depending on the operational-level, and can be conducted in person or in virtual environments.	The duration of functional exercises typically lasts from several hours to several days, depending on the event's objectives and the complexity of the plan being exercised.
The objectives of tabletop is to test clarity in multiuser roles as specified in IT-DR plans as well as the effectiveness of preprogrammed scenario responses.	The objectives of full-scale functional is to test specific team members, procedures and assets involved in one or more functional aspects of an IT-DR plan (such as communications, emergency notifications and IT equipment setup). Additional situations are often simulated during the course of the exercise.
The scope of the tabletop exercise can be determined based on the target audience.	The scope of the full-scale functional exercise is determined by the objectives of validating the content of the IT-DR plan, validating participants' roles and responsibilities as documented in the plan, validating the interdependencies documented in the plan, and providing an opportunity for participants to get hands-on practice in executing their functions.

Source: Gartner (February 2009)

Obviously, full-scale functional IT-DR testing is the more expensive of the two options. Because of limited time, expense and personnel resources, many governments cannot now perform full-scale functional testing as they would like. Governments, particularly at the state and local level in North America, are opting for more tabletop exercises because they are inexpensive to conduct, do not require travel or setup at a recovery site, and intrude minimally into daily work routines.

Suggestions for Reducing Costs of Tabletops

- Conduct specific tabletop exercises rather than set up full-scale IT-DR exercises on a periodic basis. Gartner clients report saving from $10,000 to $20,000 by opting for more internal usage rather than having to spend for such items as data center time.
- Governments can save additional expenses by developing their own recovery scenarios, such as application/database corruption, disasters and hardware failures, and leveraging existing staff to act as facilitators. Gartner clients report saving from $50,000 to $80,000, which is a typical range for consulting fees to draft scenarios and faceplate IT-DR exercises by opting for this approach.
- Use internal facilitators to discuss actions as dictated by current IT-DR plans and focus on separate IT components.

Even though tabletop exercises can be cost-effective and less disruptive to ongoing operations, some critical success factors are worth noting: (1) The CIO or IT services director must ensure that all personnel with key responsibilities under the IT-DR plan participate in the exercise. (2) They should consider having senior-level teams and operational-level teams participate in separate tabletop exercises initially because of their different levels of responsibility. The two groups can then participate in a combined exercise to validate coordination between the groups. (3) The exercise should be a realistic test of the clarity of the roles and responsibilities of the

personnel involved, and should validate that the documented roles, responsibilities and interdependencies are accurate and current.

Full-scale functional exercises allow governments to better validate their IT-DR plans and their operational readiness for emergencies by performing their duties in a simulated operational environment. For example, governments should introduce cascading incidents for a functional exercise, such as a particular building's IT systems becoming unavailable and the participants then learning that the building is burning. However, many Gartner clients are being asked to reduce their IT costs and are not in positions to conduct IT-DR exercises in a perfect way with unrestricted resources. Therefore, we recommend a minimum set of actions that should be included in IT-DR full-scale exercise schedules.

Suggestions for Minimum Requirements for Full-Scale Functional Tests

- Review your recovery requirements, assumptions, expectations and risks annually. Doing so provides more-realistic exercise results; you know what will be excluded from the exercise if the gaps have not been closed.
- Every facility, such as the data center, has to comply with building codes, fire marshal rules and so forth. You will have to perform building evacuation tests as part of compliance programs. You can test your organization's emergency assembly site plan at the same time.
- Ensure that contact information and notification channels for your recovery teams are up to date. Reduce the testing of your notification channels and contact information to twice annually.
- The crisis-incident management team must be regularly trained, but other staff do not. Reduce internal and external coordination training to twice a year.
- Revert to tabletop tests with internal and external stakeholders or lines of business, especially if end-to-end exercises only include IT personnel. Reduce testing to twice annually: one for leadership teams and one for staff.
- If backup tapes are used, they do not have a long shelf life. The viability of that backup medium must be checked twice a year.
- Partial or component exercises can provide a level of comfort when an end-to-end exercise is not viable. Selecting which components to use can be tricky, and the frequency of exercises may depend on component or business process/recovery breakdown.
- Do not test every component independently.
- End-to-end exercises test the ability to recover the entire IT service/operation, not just recovering data to a server. Reduce end-to-end or full-scale testing to once every 18 to 24 months; if new applications are implemented into production, this time frame should be reduced to 12 months.
- Revise or draft a classification scheme of supported service levels and associated costs. Service-level definitions should include scheduled uptime, percentage of availability in scheduled uptime, and recovery time and point objectives. For example, Class 1 application services have a real-time enterprise strategy and the organization will suffer irreparable harm if these services are unavailable. As a result, real-time outage (RTO)

for Class 1 services can be as much as four hours, which may or may not be cost-effective for many. Not all applications in a critical business process should be grouped in Class 1 — rather, only those deemed most-critical or with the most downtime effect. Service levels for Class 1 should be 24/7, 99.9% availability with an RTO of less than four hours. To reduce costs some clients are developing component testing for these Class 1 systems once every other year, with a full-scale exercise every six to 12 months or only after major changes to either the application network or facility. Class 2 includes systems that can be classified as 24/6, 99.5% availability with an RTO of less than eight hours. Once classified, you can determine the type of exercise and frequency that would be most effective for that class of business service. Some government clients, in an effort to reduce costs, are now staggering full-scale exercises for Class 2 systems every 18 to 24 months, or only after major changes to either the application network or facility.

Conclusions

Governments that have undertaken these measures by using more tabletops and limiting the amount and frequency of full scale IT-DR exercises, have reported a 5% to 10% reduction in overall IT-DR exercise costs, such as travel, expenses and equipment leasing. Although many strategies exist for reducing the cost of IT-DR, the more important strategy is to optimize spending through the use of more tabletop exercises and more-selective use of full-scale functional testing.

RECOMMENDED READING

"Cost Cutting Disaster Recovery in 2008"

"Disaster Recovery Spending Trends"

"IT Key Metrics Data 2008: Key Information Security Measures: Spending & Staffing Including Disaster Recovery"

"Toolkit: IT-DRM Self-Assessment"

"Toolkit: Best Practices for a Successful Tabletop Recovery Test"

"Toolkit Best Practice: Making the Case for DRM Benchmarking"

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