2003 HP User Groups BC-DR Survey Responses

Dr. Bruce D. Holenstein

President and CEO

ITI Shadowbase

Malvern, Pennsylvania

Chance favors only the prepared mind. – Louis Pasteur

Dr. Bruce D. Holenstein is president and CEO of ITI Shadowbase. He began his career in software development in 1980 on a Tandem NonStop I. His fields of expertise include algorithms, mathematical modeling, availability architectures, disaster recovery and avoidance, data replication, pattern recognition systems, process control, and turnkey software. He can be reached at bholenstein@iticsc.com

Overview

The following report is a summary of the responses to a survey of all HP user group members on their Business Continuity/Disaster Recovery experiences and practices. The survey was administered from 28 March 2003 through 30 August 2003, and was conducted in two parts. The "ITUG" part was distributed to the ITUG community, and the "All Other" part was distributed to the HP Interex EMEA, Encompass, DECUS, and Interex communities.

There were 84 valid ITUG responses and 125 valid All Other responses. The results are reported side-by-side even though there were some differences in the questions asked on the two parts. Please see the Online Advocacy column in this issue of *The Connection* for a brief overview of results from the survey.

Survey Introduction

The introduction to the survey said in summary: *Many disasters are an unavoidable part of business. How we deal with them, however, is under our control. It has been said that using HP systems is the cornerstone of a "Survival of the Fittest" approach to company longevity. But, there are other factors that complete the picture. It all starts with upper management support of Business Continuity (BC) and Disaster Recovery/Avoidance (DR) initiatives.*

We need your help to complete this short survey on BC and DR practices. The purpose of this survey is to collect information in order to develop a report that systems administrators can use to compare their situation and state of readiness to other similar firms. Depending on your circumstances, the report may help convince upper management to support BC and DR initiatives. So, it is very important that we get a good statistical sample in order to produce the best report possible. The final report will be posted to the ITUG DR SIG Web site and parts may be published in The Connection *and other HP forums. Your answers will be statistically combined with the responses of others and will not be reported separately, assuring anonymity.*

Survey Results

The following table contains the tabulated survey data. All results were rounded to the nearest percent.

QUESTION	POSSIBLE ANSWERS	ITUG	All Other
1. Are you a member of:	ITUG	86%	7%
	HP Interex EMEA, Encompass, DECUS	5%	84%
	Interex	1%	6%
	None of the above	9%	11%
	No answer	1%	0%
2. How long have you been a user of HP NonStop™ Servers?	Less than one year	1%	
	Two to five years	6%	
	Six to ten years	16%	
	More than ten years	75%	
	No answer	1%	
3. Are you in the systems administration/operations area and involved with Business Continuity (BC) or Disaster Recovery/Avoidance (DR) activities at your company?	Yes	84%	94%
	No, though we have these activities in our company. (If so, please forward to the most appropriate person in your company.)	11%	3%
	No, we have no such activities in our company.	5%	3%
	No answer	1%	0%
4. Type(s) of NonStop systems and data used in production applications (Check all that apply.)	NonStop K-series	53%	
	NonStop S-series	82%	
	TMF-protected Enscribe	68%	
	Non-TMF-protected Enscribe	71%	
	TMF-protected SQL/MP	67%	
	Non-TMF-protected SQL/MP	19%	
	SQL/MX	14%	
	OSS	49%	
	No answer	2%	
5. Type(s) of Operating systems used for production applications: (Check all that apply)	HP-UX		13%
	Tru64 UNIX		30%
	OpenVMS		83%
	MPE		2%
	Linux		22%
	Windows NT or Windows Server		71%
	Other		21%
6. Types of Database in use: (Check all that apply)	Relational Database		82%
	Hierarchical Database		18%
	Codasyl Database		6%
	ISAM file store		18%
	Other		14%
7. Does your company have a BC/DR plan encompassing NonStop-based applications?	Yes, a formal plan (completed)	59%	
	Yes, an informal plan (completed)	20%	
	Not yet, a plan is in process (specify the completion date)	9%	
	No	11%	
8. Does your company have a BC/DR plan for all applications?	Yes, a formal plan (completed and updated regularly)		29%
	Yes, a formal plan but it is more than a year since it was updated		12%
	Yes, an informal plan (completed)		29%
	Not yet, a plan is in process (Specify the completion date)		12%
	No		18%
9. Does your company have a BC/DR plan for its business operations?	Yes, a formal plan (completed and updated)		25%
	Yes, a formal plan but it is more than a year since it was updated		14%
	Yes, an informal plan (completed)		35%
	Not yet, a plan is in process (Specify the completion date)		8%
	No		18%
10. Did your company use outside help for your BC/DR planning?	Yes	28%	25%
	No	58%	62%
	Not applicable	12%	13%

QUESTION	POSSIBLE ANSWERS	ITUG	All Other
11. Do you have a Service Level Agreement (SLA) specifying the length of time within which you are required to restore critical functions?	Yes	69%	47%
	Internal to my organization		47%
	With HP		6%
	With a third party		42%
	No	21%	45%
	No answer	9%	8%
12. If yes, how confident are you your recovery plan will fulfill your SLA?	Very confident = 5	27%	26%
	4	38%	36%
	3	17%	23%
	2	9%	10%
	Not at all confident = 1	9%	4%
13. Overall, how long would it take to resume main business functions in the event of a service outage?	Less than 10 minutes	14%	10%
	1 hour	20%	6%
	1-4 hours	22%	13%
	4-12 hours	8%	10%
	12-24 hours	11%	18%
	24-48 hours	12%	14%
	3-7 days	6%	19%
	7+ days	4%	9%
	No answer	4%	2%
14. How long do you think that your main business functions can be unavailable before it becomes a reportable event in the newspapers?	Less than 10 minutes	9%	3%
	1 hour	28%	8%
	1-4 hours	13%	9%
	4-12 hours	16%	10%
	12-24 hours	8%	14%
	24-48 hours	6%	24%
	3-7 days	4%	20%
	7+ days	8%	11%
	No answer	7%	1%
15. In the event of a major disaster affecting your servers, are you confident that your company would be able to update all business activities undertaken during the loss of service on restoration of service?	Not at all confident = 1		10%
	2		17%
	3		17%
	4		34%
	Very confident = 5		22%
16. Stranded transactions are the result of the DR target system not being caught up to the source system in the event of a takeover. In the event of a disaster, are stranded transactions a source of significant exposure for your firm?	Not at all serious = 1	18%	
	2	16%	
	3	24%	
	4	20%	
	Very serious = 5	16%	
	No answer	6%	
17. Do you think that your firm could survive a catastrophic (total) loss of its primary data center?	Not at all confident = 1	12%	11%
	2	7%	10%
	3	19%	26%
	4	32%	21%
	Very confident = 5	27%	32%
	No answer	4%	0%
18. Does your company operate standby/secondary sites for disaster recovery?	Yes	68%	43%
	No	29%	57%
	No answer	2%	0%
19. If yes, please specify the maximum separation distance in kilometers: (1 mile = 1.6 km)	0 – 1 km	8%	6%
	1.1 – 5 km	18%	20%
	5.1 – 25 km	26%	28%
	25.1 – 100 km	26%	18%
	100.1 – 1000 km	14%	24%
	1000.1 and over	8%	6%

QUESTION	POSSIBLE ANSWERS	ITUG	All Other
20. Have you worked with your suppliers and customers in ensuring your BC/DR plans allow continued links between yourselves?	Yes - and all plans are linked		13%
	Yes - we share copies of our plans		17%
	We tried but the other organizations didn't think it necessary		15%
	Not considered important		50%
	No answer		5%
21. Is a maximum recovery time specified in the Service Level Agreements with your external service providers should they have a disaster? (Credit Card Authorization, Credit Checking, etc.)	Yes, all providers	18%	6%
	Yes, some providers	35%	29%
	No	20%	25%
	Not applicable	22%	39%
	No answer	5%	1%
22. Does your company use a third-party DR provider (i.e., SunGard, IBM Global Services, etc.)?	Yes	26%	15%
	No	69%	82%
	No answer	5%	2%
23. If yes, if access to systems on those sites is first come, first served (i.e., if someone else beats you to the systems you need, they get priority) how widely known is it that the time you can continue operations on those systems is in many cases severely limited?	Few people know	36%	40%
	Most people know	23%	40%
	Everyone knows	5%	0%
	Not applicable to our situation	36%	20%
24. What would be the reception of senior management of your company to outsourcing the management and running of your DR systems to a trusted 3rd party if the above issues of access could be reasonably addressed?	No interest = 1	52%	47%
	2	18%	20%
	3	14%	21%
	4	7%	5%
	Strong interest = 5	4%	5%
	No answer	6%	2%
25. Are you subject to any laws or regulations stating the level of BC/DR you need to have?	Yes, please provide a brief description of applicable law/regulation.	35%	14%
	No	54%	86%
	No answer	11%	0%
26. Thus far, how fully have you attained compliance to BC/DR laws/regulations?	Not at all complete/just starting = 1	5%	5%
	2	7%	6%
	3	5%	6%
	4	22%	9%
	Very complete = 5	11%	3%
	Not applicable	39%	71%
	No answer	12%	0%
27. Has anyone in your company computed the cost of downtime per minute, hour, or day for your main business functions?	Yes	45%	23%
	If you know, what is the downtime cost?	Range: USD $1000/hr up to $14M/day to company out of business	Range: $40k/day to $26M/day
	No	52%	75%
	No answer	4%	2%
28. In the past 10 years, has your company experienced a critical services outage or disaster affecting your main business function?	Yes	35%	27%
	No	58%	71%
	No answer	7%	2%
29. Please indicate the duration and brief description of the financial impact and/or consequences.			

Responses to question 29 (duration and description of financial impact and/or consequences.)

ITUG

1. ATM outage. All communications down. Now dual-sourced.
2. Approx. one-hour outages due to operator errors. I can't give details.
3. A/c failure in computer room duration = 12 hours.
4. Off the air for six hours due to an NonStop Kernel OS bug. The backup system was used to recover data. There was no financial impact.
5. Half a day.
6. Failure of UPS units, 30-45 minutes per failure, six failures over four month period. Needless to say, UPS was replaced.
7. Internet access down, lasted three days, probably $50,000 cost.
8. Not able to provide trader on the trading floor to.
9. Duration approx 30 minutes. Financial impact limited to time taken away from other projects for support and development personnel and management in resolving the problem and managing customer enquiries.
10. Confidential.
11. 1994 Northridge Earthquake. One day. Recovered very well.
12. We experienced a 12-hour power outage, this was prior to implementation of our DR plan.
13. Three day power outage.
14. Happened before I started so I don't know the details. There was a severe flood in the data center, which is why DR is very important now.
15. Failure on SAN caused Mainframe downtime in order of 12 hours.
16. .Details are confidential.
17. The duration – four hours. No impact as the DR site kicked in and output/processing was provided to customers.
18. The coastal Bureau was lost. We had to fly all input to the main site in Johannesburg at great expense.
19. Duration/impact unknown (before my time).
20. Four hours.

All Other

1. Fire that burnt down the Head Office and all servers. Company was smaller than it is now but all systems recovered OK - but this event occurred during a slow part of a seasonal business.
2. Network and LAN outages have cause extra shift to be run with associated increase in shipping costs.
3. Loss of raid controller - downtime one day - no significant impact.
4. SLAMMER shutdown network activity for about 6 hours and recovery took another six hours.
5. Large revenue loss (confidential).
6. SLAMMER – six-hour network outage and another 10 hours to recover.
7. 9/11 took out the NYSE for a couple of days.
8. None - vms clustering provided continuous operation.
9. Flood in one of the data center and the hospital's emergency room.
10. Power failure in ice storm in the plant - but computers have not been touched.
11. Complete power outage for one day. Was unable to support our customers fully, but was able to give them limited support via mobile phone support.
12. Three-day power outage at one campus. 1,000 staff and 5,000 students sent home.
13. Several times for up to four to five hours and one time for three days.
14. Three days, loss of about $100K.
15. Two False Inergen Fire Prevention Triggers.
16. Fire and destruction of the entire Head Office building including the computer room.
17. A power outage of the data center for 36 hours. A diesel motor alternator was rented and hooked up with four hours to meet the need.
18. E-mail systems down for a day.
19. Power outage to campus - had to switch to alternate site. Minimal loss of efficiency.
20. Power was restored before non-redundant systems were critically backlogged.
21. Hardware fault destroyed data in the disk subsystem. Failed all clients based in that datacenter to other datacenter for the several days it took to isolate and repair the problem along with restoring the several TB of data. No impact except we had to run several business days with no backup datacenter.
22. Three day power outage.
23. Less than four hours for main function, a few days for non-critical programs.
24. Two-day outage before I joined the company.
25. Fifteen minute outage. Minimal financial and business impact.
26. There was a database corruption that stops the service for 24 hours. No financial impact information have been given.
27. Loss of building power due to substation failure.
28. Main HIS server non-functional due to software problems for three to four days - not down due to disaster.

QUESTION	POSSIBLE ANSWERS	ITUG	All Other
30. What is your estimate of BC/DR spending by your company, as a percent of total IT budget?	0 – 5%	43%	39%
	6 – 10%	13%	16%
	11 – 20%	15%	29%
	21 – 30%	24%	7%
	31% and up	4%	8%
31. Do you consider this to be about the correct amount?	Yes		40%
	No		40%
	No answer		20%
32. Who at your company from upper management is involved with funding BC/DR activities and initiatives? (Check all that apply.)	CEO/President/General Manager	41%	40%
	CFO	26%	22%
	CTO	30%	20%
	CIO	37%	43%
	VP Operations	39%	29%
	Other	11%	16%
33. How committed do you believe your upper management is to BC/DR planning?	Not at all committed = 1	7%	12%
	2	6%	17%
	3	29%	25%
	4	25%	24%
	Very committed = 5	26%	18%
	No answer	7%	4%
34. Have you ever presented your needs for BC/DR planning to upper management?	Yes	52%	56%
	No	40%	40%
	No answer	8%	4%
35. If so, do you have any pointers for other individuals about to do so?			

ITUG

1. None as my success has not been very good.
2. Stress the cost of downtime in terms of immediate financial loss and longer term through bad publicity.
3. Senior Management has to own it.
4. DR was a directive from our upper management. That makes it kind of easy to implement.
5. Make sure they understand that an unavailable system has ZERO performance, hence the costs associated with BC/DR may be incalculable (read expensive). Also, read the Dr. Highleyman Connection series on Availability (Nov/Dec 2002 issue of the ITUG Connection).
6. Focus more on the realistic what if scenarios that are more likely to affect your company and the realistic solutions you are more likely to implement.
7. The most important things to remember is how the cost of not having a system is going to impact business. Once that is identified, it easy to show a need.
8. Get buy in.
9. 1) Compute approximate cost of downtime 2) Show additional value for DR systems (load balancing, QA, etc.).
10. Yes...DR is more than technology...it is about your total business. Anyone interested in getting more info can contact us.
11. Refresh their memory regarding recent events (9/11, hurricanes, tornadoes, etc.).

All Other

1. It all comes down to cost, you do not want to skimp but to make the cost palatable you do. It should be costed over two to three years to fully implement, trying to get it all in place at once is not feasible.
2. Make sure that you have upper management support ahead of time for BC/DR planning. Explain the need for plans covering different levels and types of disasters. Informal discussions may be appropriate at first. Bringing articles of other failed companies as examples will get their attention.
3. Get their buy in early in the process. They need to understand that the cost of the plan goes up as the time to recovery goes down.
4. None.
5. First, the customers/managers need to be educated about the issues. This includes both a realistic review of business consequences and an education about mission critical concepts and operational procedures. As an expert in MC Design, I believe the IT industry (and journalism) as a whole lacks a fundamental, balanced understanding of MC Design issues (with the exception of MC specialists such as VMS and NSK engineers). The problem starts with the problem that the information scientific (Informatics) language has been perverted by marketing interests. For example: Try talking to a manager, IT Salesman, consultant, or journalist about clustering. They will quickly show that they both think they know what they are talking about, and don't have any idea what you are talking about. They will all understand something different.

▶

6. Present, present, present, repeat, repeat, repeat - learn to whine!

7. I am upper management - Buy-in at the top always makes life easier, get an advocate!

8. All are involved.

9. Get buy in.

10. Try to be very clear and precise. If the process can be broken down into several clear and definable stages that can be implemented over time, do that and include cost for each stage, time-frames and the benefits from competing each stage. This will also the expense to be spread over several years.

11. Be accurate.

12. Devise a three-dimensional matrix of likelihood of occurrence by severity of consequences by cost of remedy/prevention for events which could trigger loss of service. Work with your end-users to rate severity of consequences if possible. In the case of service-providers to you, do not take anything for granted: e.g. telecom vendor difference is no indication of circuit difference.

QUESTION	POSSIBLE ANSWERS	ITUG	All Other
36. A. In summary, please rate the overall degree of preparation for a disaster at your company.	Not at all prepared = 1	5%	
	2	13%	
	3	16%	
	4	45%	
	Very prepared = 5	15%	
	No answer	6%	
B. Factories or production plant up and running again	Not at all prepared = 1		14%
	2		18%
	3		30%
	4		23%
	Very prepared = 5		11%
	No answer		4%
C. Computer systems and databases up and running again	Not at all prepared = 1		7%
	2		19%
	3		24%
	4		29%
	Very prepared = 5		17%
	No answer		4%
37. What storage systems do you use?	We use direct attached storage		38%
	We use SAN storage		14%
	We use NAS storage		1%
	We use a combination of the above		48%
	No answer		0%
38. What data storage method do you use for your major applications and data?	We use single disks for data storage		13%
	We use RAID mirroring (0+1)		38%
	We use RAID five disk arrays		38%
	Other		10%
	No answer		1%
39. What method of Backup do you use?	We rely on RAID arrays for data integrity		0%
	We use backup to tape or CD		56%
	We use disk to disk copies and take a backup on tape or CD from the disk copy		16%
	We use replication (local or to remote site) and take no alternate backups		4%
	We use replication (local or to a remote site) and take backups to tape or CD as well		24%
	No answer		0%
40. Are Senior Management within your company aware of how long it would take to recover your systems in the event of a BC/DR incident requiring restore from backup?	Yes and they have agreed to the plan		33%
	Yes they are aware in principle		43%
	No they are not aware of the time for recovery		22%
	No answer		2%
41. Please indicate your primary industry type:	Banking/Financial Services	55%	16%
	Brokerage	2%	3%
	Emergency Services	2%	0%
	Health Care/Hospital	5%	10%
	Manufacturing	7%	15%
	Telecommunications	5%	6%
	Travel and Entertainment	1%	2%
	Other	16%	45%
	No answer	5%	2%

QUESTION	POSSIBLE ANSWERS	ITUG	All Other
42. Company Size	Less than 250 employees	21%	25%
	250 - 1000	19%	25%
	1001-5000	18%	26%
	5000 - 25000	20%	12%
	25001 & up	15%	12%
	No answer	7%	1%
43. Country (converted to region)	Asia Pacific	8%	5%
	Europe	28%	33%
	Middle East/Africa	2%	1%
	North America	59%	62%
	South America	2%	0%

Postscript

The results of this survey have been presented to the DR SIG meetings at both the 2003 ITUG European Conference and the ITUG Summit 2003. Since the purpose of this survey was in part to provide facts that may help systems administrators convince upper management to support BC and DR initiatives, the Online Advocacy and DR SIG leaders would like to learn about your experiences with the results. Please write directly to the author or go online to www.itug.org and click on Advocacy.

Many individuals contributed to the design of this survey. Included among them are Alan Dick, Robert Cline, John Dennis, Mark Faithful, Michael Heath, Bill Highleyman, Paul Holenstein, Carl Niehaus, George Reed, Julie Scherer, Harry Scott, and the ITUG staff.