

ISSUE: ***What is the difference between running NetWare® alone versus when protected by the Alexander SPK?***

## ***Quote from Bank One 2004***

*“Deploying the Alexander SPK NetWare at BankOne reduced system downtime for 1,100 servers by 70% over a 3 year period.”*

## ***Turning Hard Crashes into Soft Crashes***

- ◆ When NetWare declares an abend call, it does so because it has encountered a condition which, if not interrupted, could cause serious damage. When the SPK is on the server, the Edna module intercepts this call and works immediately to protect the server from having to actually go down. This can be done in two ways:
  - 1) Edna knows of certain conditions where NetWare will think that it must abend *but that conclusion is erroneous* so the call to abend is countermanded.
  - 2) There are many conditions whereby a misbehaving module can be suspended thus preventing the abend from being necessary
- ◆ When NetWare attempts to prevent an abend from bringing the system down it suspends a thread. The module that owns that thread is still in memory but cannot be depended upon because one of its hands is tied via suspension. It cannot be unloaded. The only way to recover its use is to down and restart the server which interrupts office productivity.

With Edna running the *entire module* is suspended instead of just the thread. Then she provides a special prompt that allows you to actually unload the module and reload it in seconds without interrupting anyone or anything and with out downing and restarting the server (often the problematic module has been corrupted in memory so the ability to unload and reload it fully refreshes the code in memory). This unload process is so thorough that Edna ascertains what system resources can be released and which cannot. For instance the module might share some resources with another module, these will not be freed so that the other module does not become hobbled. This is a powerful feature not found any other environment.

## ***When Hard Crashes Cannot be Prevented***

- ◆ When a hard crash cannot be prevented, Edna protects the server by working to turn the crash into as orderly a shutdown as possible, thus reducing the likelihood of damage. This in turn increases the likelihood that the server will be able to fully recover without human intervention.
- ◆ Whenever the system is restarted and Edna then loads, she cleans out all crash related files in the DOS partition regardless of who created them and places them safely in individual subdirectories under sys:\edna\ . This is important because it means that the DOS partition will always be clear to allow for the occasional need to save a core dump image.
- ◆ When the system is then up again Edna generates SNMP traps for each event telling what happened, when, on what system, and where to locate the crash report.
- ◆ With NetWare alone, a core dump can only be created by a person being there at the box. In contrast, Edna allows you to set a switch which instantly dynamically configures her to make a core dump for you anytime the system abends.
- ◆ NetWare creates an abend.log file by default for each crash event. These logs may contain many events but each one represents about 25k data. In contrast, the Edna Crash File (ECF) for a typical NW6 server averages about 20 MB per event. That is a tremendous difference in providing needed data. *Continued* ==>>>

## ***Comprehensive Crash Reports***

## Simplified Crash Reports

- ◆ Reading an abend.log file is awkward and often lacks sufficient information to resolve the cause of the crash. In contrast, an ECF file typically takes under 60 seconds.
- ◆ Customers as well as other software vendors supporting Novell have long reported that they can *resolve the cause of most crashes in under 10 minutes with no outside help*.
- ◆ A simple, free Windows viewer organizes information, enables sorting, and even for data to be copied and printed so that it can be added into internal or external reports.
- ◆ Edna displays all screens from all modules running showing their state the microsecond the crash occurred. This would only be available by looking at a core dump with a debugger.
- ◆ Edna enables you to sort instantly through all loaded modules and locate, for instance, oldest, etc.
- ◆ Analyzing a NetWare core dump takes a 3rd level support engineer using a debugger 3 hours while analyzing an Edna ECF file can be done by \*anyone\* in under 1 minute using a simple Windows viewer
- ◆ Edna will create a complete Windows based crash report complete with your (network administrator) contact information, any comments that you wish to add, a place to insert a Novell support incident number, and the Edna viewer too. Send it to Novell or to whomever you are turning to for support and they do not need our software -- they just double-click and the report opens up in front of them complete with your contact information, the complete crash file, etc. This enables ANY LEVEL support staff to immediately help solve the problem.

## Quote from Veritas 1998

*"We completed a financial study recently and found an anomaly: There is one group of Backup Exec customers that cost less to support than any other group. We looked into this and found that they were using BE on NetWare servers protected by the Alexander SPK.*

*There were 3 reasons for this: 1) They had fewer crashes so they called less often; 2) When they did have a crash they were able to resolve 70% of the crashes themselves in under 10 minutes with no outside help, another reason they did not need to call, and; 3) When they had a crash too complex for them to resolve, they sent the SPK Crash Report which our engineers used to solve the problems, typically in a matter of minutes."*

The SPK supports NetWare 6.5 - 3.11, single processor, multiprocessor, mirrored systems, and cluster servers. It does not affect system performance. It operates in the background. Deployment is simple and quick.