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Grant Nickle  
Director of Technology



## Underwriters Safety and Claims

### Situation

When Western Digital decided to end-of-life their newly acquired backup software product, Arkeia, Underwriters Safety and Claims was faced with the unexpected challenge of finding a new backup solution. Director of Technology for Underwriters, Grant Nickle, has had extensive experience with a wide spectrum of backup solutions, including Arcserve, Syncsort Backup Express, Symantec NetBackup, Symantec Backup Exec, vRanger, Veeam and Arkeia. Nickle was now tasked with finding a new backup solution to replace Arkeia.

### CHALLENGE

Overall, Nickle said Arkeia was actually a decent product, however, it was failing in one critical area. “We had issues encrypting a stream coming from a Novell volume, and if Arkeia tried to encrypt the stream, the agent would not work properly, so that was a major problem. By regulation, the data in our backups must be encrypted; we were going to have to figure something out to fix the Arkeia issues. I asked Arkeia support, and they responded by telling me they weren’t sure if they could resolve the problem. That is one of the reasons we bought the software; that was what it was supposed to do. Then a few weeks later I realized why I was told that, because Arkeia was gone.”

The top priority for Underwriters with every business related decision we make is reliability. Reliability for our customers and reliability in our own environment. “We have a very controlled environment so that there are not a lot of places where errors can create issues. Reliability is our number one factor when searching for any components of our business. Our approach is to service our customers the same way we service our own environment, by making each part completely reliable. The other big factor we always look for is flexibility. We do not want to be pigeonholed. Our business is growing, and we may acquire another company or we may decide we need a new insurance app that a vendor has that will only run on Linux. Anytime we look for any kind of software or business purchase we need flexibility. If we acquire a company that has Solaris, for example, we need to be able to go to our backup vendor and say ‘we need to back up Solaris’ and not have any problems,” explained Nickle.

## ENVIRONMENT

Underwriters' environment is 95 percent VMware with a few physical machines. They run mostly Dell servers connected via fiber channel to a Dell Compellent SAN. Inside the VMware structure, they have about 65 servers running everything from Windows 2008, 2012, SUSE, OES Linux, and some other various flavors of Linux as well. They primarily do snapshot, image level backups through the VMware API. However, they do perform several file level backups as well, so agents included in their new backup solution were a requirement. All data is backed up to their central data center, running over a LAN or through fiber channel.

## SOLUTION

Underwriters chose SEP as their new backup software vendor to back up their entire environment. Nickle explained one of the initial reasons why they looked at SEP was, "Because of the wide range of clients SEP supports. This says not only that SEP is open to supporting all of these clients, operating systems, applications, and so on, but it also says something about SEP as a company as a whole and its engineering philosophy. It says that SEP is not intimidated and is smart enough to realize the world is more than just Windows; there are all kind of applications that are running out there in the world. We didn't want to buy a piece of backup software, acquire a company and then have our new backup provider tell us they cannot back it up. What am I going to do then? That's a major problem, but with the level of flexibility with SEP, this will never be a problem."

## RESULTS

Underwriters has enjoyed great success with our SEP backup solution. "Moving to SEP was a great decision. It has solved all of our immediate business needs and provided the flexibility to solve needs that will come up moving forward. It has really been a great business acquisition, but more importantly, it is very fast. Compared to our last software, our backup windows with SEP are around 55 percent faster. It was actually so quick at first, I was shocked! After we first installed the software and it started running backups, it was so fast that I literally started thinking, 'it can't be this quick; it can't be right.' So we looked at several things, verified them, restored them, looked through what had been catalogued and it was right. SEP really is that fast. SEP has reduced our nightly backup window by at least six hours. On the weekends, when we basically snapshot everything, which is about 65 servers and around 14 TB of data, SEP backs everything up in 40 percent of the time it took with Arkeia. So that is 60 percent faster! Before it took around 24 hours and now it only takes 10," Nickle remarked.

SEP's bandwidth utilization is just one component that makes SEP a lightning fast backup solution. "SEP uses almost 100 percent of the bandwidth it is given. SEP is the only vendor that has ever said we will use as much bandwidth as you give us and they are definitely telling the truth. I have seen it through Ethernet and through fiber channel. SEP is streaming the data as fast as whatever piece of hardware we have will give it to them. Running SEP truly is like doing a copy, there is absolutely no overhead from SEP's agents. With most other agents we have used in the past, there is a cost to running each agent. For example, with Arkeia, the cost in Linux was CPU utilization. When we would stream a backup from a Linux machine, or a Windows machine, quite often the machine would run at 85-90percent utilization to stream the backup, so there was all of this overhead that impacted the performance of the machine. With SEP, not only does SEP use our bandwidth to run the backup, but the servers' CPU usage is a small fraction of what it was with Arkeia. I'm not sure how SEP has written a software that uses all of this bandwidth over the network and doesn't use any of the CPU, but they have and it works and it is very fast," Nickle told SEP.

SEP's multi-streaming technology is so fast, in fact, Nickle thought it best in the beginning to roll back some of SEP's capabilities to remain cautious with the high performance ratios SEP provides. Nickle explained, "SEP's default is to run 25 simultaneous backup streams at one time, but when we set it up, I throttled that back to 5 streams simply for our own comfort. I didn't want to overwhelm our vCenter servers. But even with the reduction from 25 to 5, our backups are still over 50 percent faster with SEP. We are going to slowly increase that number up to the optimized number of streams for SEP to run even faster. And since SEP will literally use everything that is given to it in terms of bandwidth, I am sure if we are running 25 streams at one time, it may be 80 percent faster than what we have already seen.

"With VMware snapshot files, SEP can multi-stream and run 4, 5, 6, 7, 10, etc. simultaneously. That is the biggest increase in efficiency and speed we have seen because we are now able to stream all of these snapshots at one time. If we are running a backup through a fiber channel and we are running 10 snapshots at one time, we will get efficiency from however much bandwidth through that fiber channel we will give the software; so this reduction is significant. Another thing we really liked about SEP, was the fact that you get an agent with this really robust VMware API snapshot type backup. You are almost always going to do your file level backup, because you may have just one or two files you need or have a physical machine that you can't virtualize."

**RESULTS  
(Cont'd.)**

“But the SEP agent seems like a more holistic approach compared to vRanger or Veeam, where they may only be applicable if you are in a Hyper-V or VMware bubble. I can definitely say solutions like vRanger and Veeam are far harder to install than SEP, far more difficult to manage, and they have high setup requirements. Anything that is Microsoft-centered, like Backup Exec, Veeam, and vRanger, require external Windows services. For instance, there may be a SQL server required, or you may need to have 2 or 3 Windows servers to do the same thing and the resources you have to give to then are 3 or 4 times the resources we have given to SEP. They are just problematic, not nearly as reliable as SEP so far.”

SEP was also able to provide a few other capabilities that were missing in Underwriters' backup solutions in the past. “We have lots of big imaging volumes that have millions of tiny little files and SEP may be the only vendor that I have seen that can actually back that up at the file level. Every other vendor I have used can't inventory it to restore it,” remarked Nickle. “We are a very big Novell shop, so we also need to look for that support. We have really liked the level of Novell support we have had with SEP, and we have also appreciated how fast the software is with our Novell products. It is faster than Arkeia was backing up OES servers and the fact that SEP can snapshot and pull files out of NSS volumes is pretty much unheard of. The level of thought for engineering SEP has put behind its products says something about who SEP is as a company.”

“One of the things that always got under my skin about Arkeia, was there was no easy way to back up the actual backup server's configuration. So if we were ever to lose the primary backup server, there was no easy way to get that back. SEP does that right out of the box. It backs up its own catalogue and is built into the solution as a job it runs. That shows you how well thought out everything is in the SEP software. This is something that seems so simple, that I would think every vendor would do, but that is not the case. SEP has a different kind of philosophy about the way it handles things,” Nickle added.

Nickle mentioned he would very much recommend SEP to anyone and has, in fact, already done so. “This software is unbelievable compared to what I have dealt with before,” said Nickle “This software is like driving around in a Mercedes versus driving around in an old, rusty pickup truck, there is just no comparison. What it comes down to is, SEP is extremely purpose built. It does what it does very well, there is nothing extra in its interface, there is not a lot of clutter, there is nothing that you don't need, it doesn't look piece-built together and it is very well engineered and well thought out. For me personally, that is so refreshing because I see a lot of software that I think people have just pieced together and no one ever really sat down and thought about it from beginning to end to make it flow nicely. Other backup software like Backup Exec is unbelievably difficult to understand and is so cluttered that it becomes difficult to use, but not SEP.”



SEP Software is the premier technology leader providing high-performance backup and disaster recovery solutions for professional IT infrastructures of all sizes. SEP delivers seamless solutions with one central interface to easily manage backups for heterogeneous environments.

SEP's software ensures that data security for both virtual and physical environments can be easily and cost-effectively achieved. SEP is the ultimate expression of German engineering and attention to detail. Design and programming originate from SEP offices in Weyarn, near Munich, Germany, where overall performance and reliability are of the utmost concern.

### FAVORITE FEATURE

"SEP's interface is very well thought out. It runs from top to bottom, it's clear, it's very fast, it's very simple to figure out, and it's purpose built. The best thing about the whole solution is its usability; everything comes down to the interface. If a software is easy to use and easy to get around, you'll obviously want to use it. When I looked at SEP as a new piece of software for the first time, it did not take very long at all to see the method behind the way SEP operates. I figured out the entire interface without reading anything, just by looking at the interface and figuring out how to operate it.

"One piece of SEP that is really nice is the format of the emails you receive from jobs. The logs are far easier to find and much easier to sift through than other solutions. The format in which you get them is similar to an excel grid and that makes it very quick to look through. With Arkeia, you would get logs that were just monstrous regardless of what happened. Every day you would sometimes get 40 pages and it takes a lot of time to go through that. With SEP, looking through an executive summary is easy, you can get what you need and you're done," stated Nickle.

### INSTALLATION & SUPPORT

Nickle reflected on the installation and support he has received from SEP. "Installing the software took about 10 minutes. We spent about one hour verifying that everything was working. Overall, it was very easy, very fast, and it was done basically as one install. On the agent side, once we removed the old Arkeia agents, the SEP agents were light, quick to install, and we didn't have to reboot any machines, which is a very good thing. The requirements that we needed for the install were very minimal so the install was fairly simple. One surprising thing, was that we use an autoloader tape system as well as backing up to disk and SEP's ability to control the autoloader and manage it is very fast. Most of our time during the install was spent testing the autoloader and making sure it was actually working.

"[SEP] Support has been great, and we are very pleased. The interesting thing about talking to SEP's guys is not only do they help you with your question, they use their software all the time, so they may even interject insight into your situation. In one instance, after I explained what I was trying to do, [SEP support] said 'Well, why don't you try it like this and see how it does.' I thought, well yes, you are right. That is a better way to look at it. So working with them has been filled with pleasant surprises."

### ABOUT UNDERWRITERS SAFETY & CLAIMS

Underwriters Safety and Claims is a nationwide insurance agency and service provider with offices in 13 states. Founded in 1941, the innovative company has built a strong reputation as a quality provider of workers compensation, commercial and personal insurance products and services, and third party administration for medical claims. For more information, visit <http://www.uscky.com/>.