

LSI Logic Simplicity Software Evaluation

Evaluation report prepared under contract with LSI Logic Corporation

Introduction

LSI Logic Corporation commissioned Demartek to evaluate the ease of installation and use of its Simplicity Storage Manager software. Simplicity Storage Manager software manages LSI storage arrays such as the Engenio Simplicity 1333 storage systems and other SAS-based Simplicity systems that will be released in the future.

Evaluation Environment

This evaluation was conducted at the Demartek facilities, using two identical servers running Windows 2003 Server R2 Enterprise Edition, each with Intel Pentium D 950 processors (dual-core, 3.4 GHz) and 4 GB RAM. Two LSI SAS 3800X HBAs (dual-port), a SAS Engenio 1333 storage array, and four SAS cables were provided by LSI Logic. An additional desktop computer running Windows XP Professional was also used in testing out-of-band management functions.

Evaluation Summary

Our general findings were that Simplicity was easy to install and use. Some of the discovery functions were accomplished using the “automatic” feature with relatively few mouse clicks, while some had to be performed manually, requiring more interaction with the administrator. The management of volumes in the storage array was relatively easy and straightforward, requiring the administrator to decide which form of RAID to use, the desired capacity, and the desired host that should have access to that volume. Simplicity supports clusters by allowing volumes to be assigned to more than one host at the same time. Volumes can be assigned to hosts running a variety of different operating systems.

Simplicity provides various configuration change functions, each of which was fairly easy to use.

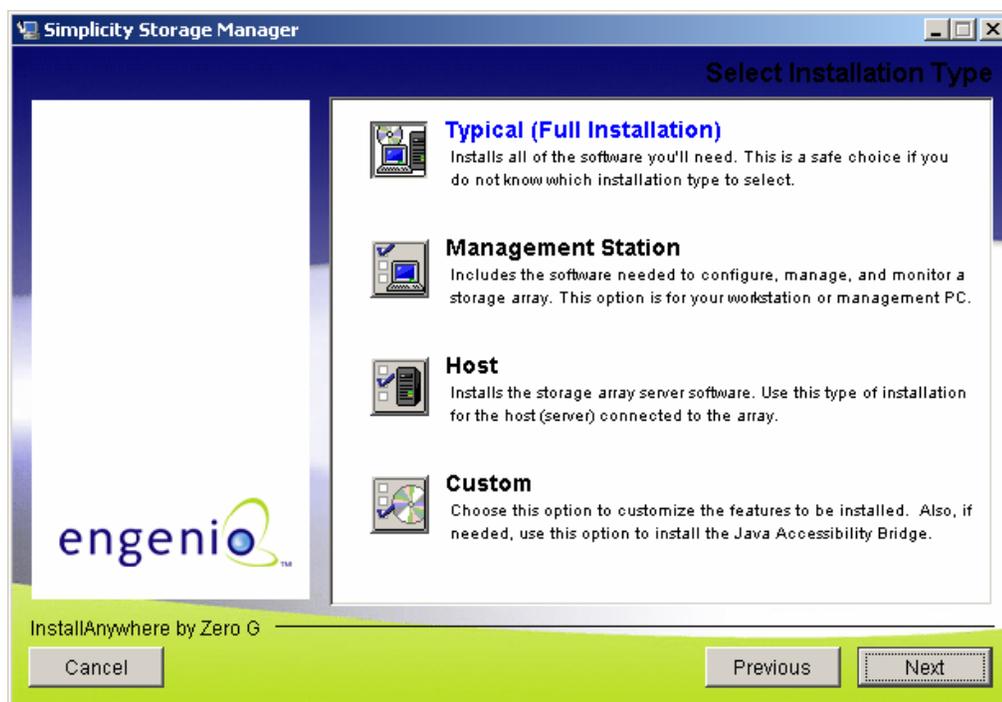
Simplicity can be used to manage the storage array either in-band via the storage interface, or out-of-band via an Ethernet interface. Both methods were used and the Simplicity screens are the same using either method.

Overall, Simplicity was easy to install and deploy.

Simplicity Installation

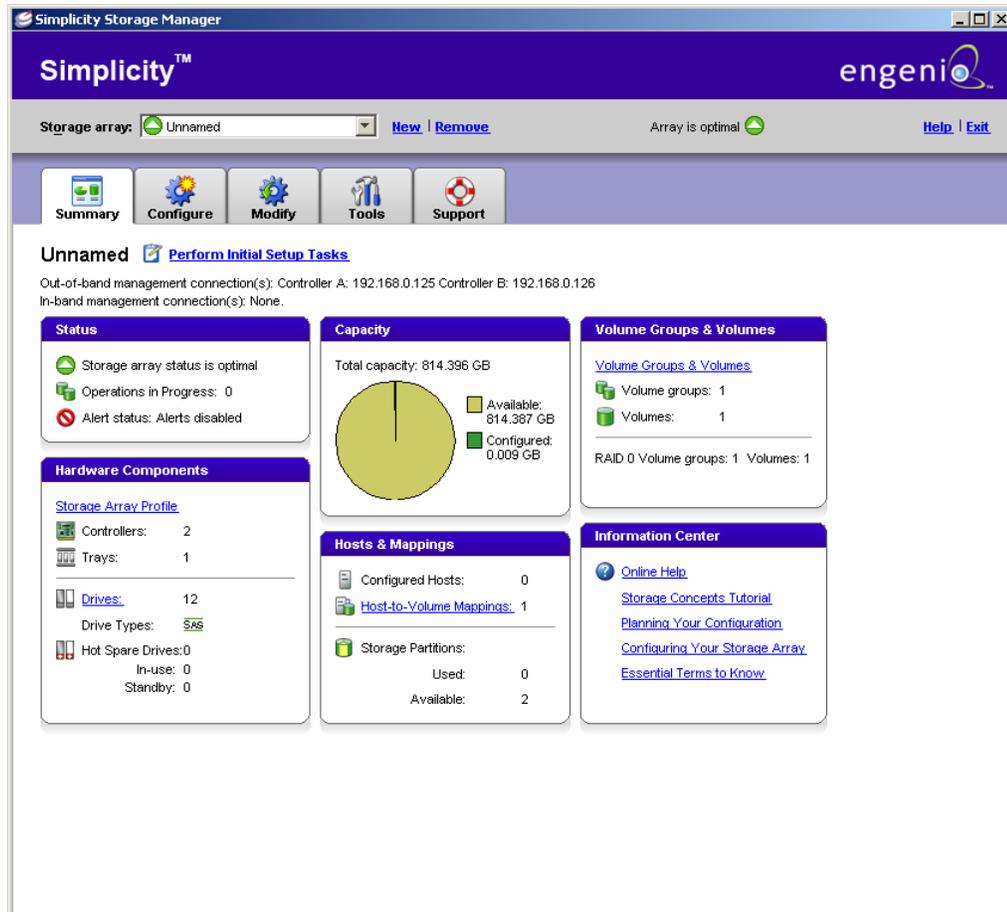
For many storage arrays from a variety of vendors deployed in Windows 2003 Server environments, the most recent StorPort driver is required. Microsoft hotfix KB916048 (June 2006) was applied before installing Simplicity.

With the correct drivers installed, the installation of Simplicity took approximately two minutes and nine mouse clicks and was followed by a required system reboot. The full installation was chosen. Alternatively, just the management station portion of Simplicity could be installed. The installation choices are shown below.

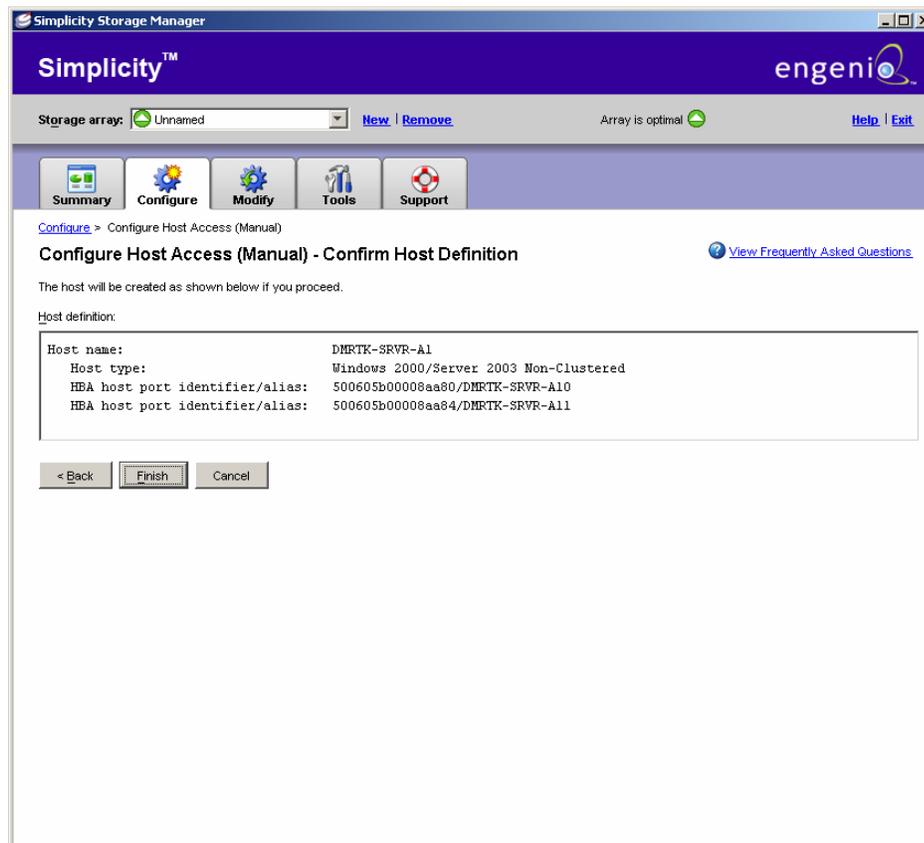


Simplicity Configuration

After the reboot described above, Simplicity was started. Automatic discovery of the SAS array took place with two mouse clicks in approximately one minute. After discovering the array, Simplicity displays the following screen along with a smaller window that has hotlinks to initial setup tasks.



Simplicity can show the association between hosts and their respective HBA port addresses. Simplicity's discovery of the HBAs in the hosts had to be performed manually. The host port addresses for each HBA had to be chosen from a list and associated with the correct hosts. The first host port address is printed on a sticker on each HBA. The second port address is just a few bits different than the first address. The completion of this task for the first host is shown below.



The creation of volumes on the storage array was relatively easy, requiring the administrator to decide which form of RAID to use, the desired capacity, and the desired host that should have access to that volume. Volumes can be assigned to more than one host for cluster implementations.

Once the volumes were created in the storage array and assigned to a host, then they become visible to the host. Using standard Windows Disk Manager, the volumes became visible, were assigned drive letters and formatted, and were ready for use.

Conclusion

Designed for part-time storage administrators or inexperienced users who do not have a great deal of time to devote to storage management, Simplicity does the job. It performs basic disk array management functions in a simple and intuitive fashion.