



Intel[®] Entry Storage System SS4000-E

Software Release Version 1.2: Release Notes

Document Revision 1.3

September 2006

Storage Systems Technical Marketing Engineering

Document Revision History

Date	Revision Number	Modifications
3 Mar 2006	1.0	Initial Release
31 May 2006	1.1	Updated to reflect information pertinent to the latest 1.1 release.
19 June 2006	1.2	Removed section 2.5
15 Aug 2006	1.2-01	<ol style="list-style-type: none"> 1. Added section 5 2. Section 1 was updated to include information regarding the Korean language version
03 Oct. 2006	1.3	Updated all sections with information pertinent to 1.2 release

Disclaimers

THE INFORMATION IN THIS DOCUMENT IS PROVIDED "AS IS" WITH NO WARRANTIES WHATSOEVER, INCLUDING ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY WARRANTY OTHERWISE ARISING OUT OF ANY PROPOSAL, SPECIFICATION, OR SAMPLE.

Information in this document is provided in connection with Intel® products. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, life saving, or life sustaining applications.

Intel retains the right to make changes to its test specifications at any time, without notice.

The hardware vendor remains solely responsible for the design, sale and functionality of its product, including any liability arising from product infringement or product warranty.

Copyright © Intel Corporation 2006. All rights reserved.

Intel, the Intel logo, and EtherExpress are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

*Other names or brands may be claimed as the property of others.

Table of Contents

1.	Introduction.....	5
2.	New, Modified, or Deleted Features.....	6
2.1	New features.....	6
2.1.1	Microsoft® Active Directory™ authentication mode.....	6
2.2	Modified features.....	6
2.2.1	Folder types.....	6
2.2.2	Object instances allowed by the firmware increased.....	6
2.2.3	Client Backup and Recovery utility.....	7
2.2.4	Recovery CD.....	7
3.	SPECIFICATION UPDATES/CLARIFICATIONS.....	8
3.1	Updates.....	8
3.1.1	Modifying a user's access rights to a share while the user is connected to the share does not take effect immediately.....	8
3.1.2	Active Directory built-in 'Administrators' and 'Users' group members cannot access shares when given group-level access rights.....	8
3.1.3	The Web UI formatting has been changed from a fixed width.....	8
3.1.4	Clients occasionally lose FTP connection during heavy I/O transfers.....	9
3.1.5	Possible system failure if power cord removed improperly.....	9
3.2	Clarifications.....	10
3.2.1	Active Directory Implementation.....	10
3.2.2	Client Backup and Recovery.....	12

This page intentionally left blank.

1. Introduction

The following “release notes” provide information about current limitations in the most recent release of the Intel® SS4000-E Entry Storage System Management Software, the Client Backup and Recovery Software, the Storage System Console and the Recovery CD application. The release version 1.2 is the version number of the overall software package. The version numbers of the various software components in this release are as follows:

Table 1: Component version numbers for Release v1.2

Component	Release Version	Build	Package
Intel SS4000-E Entry Storage System Firmware	1.2	522	BCFv12b522
Client Backup and Recovery	3.5	532	CBRv35b532
Storage System Console	1.0	116	SSCv10b116
Recovery CD Application	3.0	368	RCDv30b368

****Note: This release contains no updates to the Korean language version**

2. New, Modified, or Deleted Features

2.1 New features

The following items are new features that are additional to those in releases v1.0 and v1.1.

2.1.1 Microsoft® Active Directory™ authentication mode

In addition to its “Local” authentication mode, the SS4000-E now supports authentication via Microsoft® Active Directory™ (AD) domain controllers. When placed in AD authentication mode, the SS4000-E is able to recognize existing users and passwords located and administered on the AD domain controller. System administrators can apply changes to security policies and user privileges that are synchronized automatically with the SS4000-E. When in AD authentication mode, the SS4000-E does not maintain its own copy of the user/password database thus avoiding data inconsistency between the SS4000-E and the AD domain controllers on the network. Active Directory™ support will also allow a domain user seamless access to data on the SS4000-E. Once SS4000-E users have logged into and authenticated with the domain, the users will not have to enter their credentials again when they access data on the SS4000-E that they have the proper access rights to.

Important! Please refer to [section 3.1](#) and [section 3.2](#) of this document for more detailed information regarding possible issues when changing from “Local” to “Active Directory” authentication mode.

2.2 Modified features

The following items have been modified since the previous 1.1 release.

2.2.1 Folder types

Previously, separate folders were required for CIFS sharing and NFS sharing. This update will move all folders to a single folder type accessible to both CIFS and NFS clients simultaneously.

2.2.2 Object instances allowed by the firmware increased

The following increases were made to the total object instances allowed by the SS4000-E firmware for a single system:

Table 2: Object instances allowed by firmware user interface

	BC 1.0	BC 1.1	BC 1.2
Users	128 (64 CIFS + 64 NFS)	128 (64 CIFS + 64 NFS)	256 (128 CIFS + 128 NFS)
Folders	32	32	128
Groups	16	16	128
Backup Clients	16	16	16
Backup Disks	32	32	64
Backup Disks per Backup Client**	16	16	16
FTP	8	8	8

****Note:** Although the Backup software will not prevent the creation of more than 16 backup disks for any client, the supported limit is a maximum of 16 backup disks per backup client. Exceeding the supported limit can result in unexpected behavior such as, but not limited to, data not being backed up as expected! It is also recommended that client backups be scheduled to occur at different times to minimize the impact on performance.

2.2.3 Client Backup and Recovery utility

2.2.3.1 Client Backup and Recovery utility and SS4000-E firmware interoperability

The Client Backup Recovery (CBR) v3.5 does not support SS4000-E firmware v1.0. Firmware versions 1.1 and 1.2 require CBR v3.5 or later. Please refer to the latest Tested Hardware and OS List (THOL) for the latest versions of software and hardware located at:

<http://support.intel.com/support/motherboards/server/ss4000-e/index.htm>

2.2.3.2 Previous backups may not be detected after updating to release v1.2

After upgrading the SS4000-E firmware and the client software, you may not see the backups previously done under the earlier versions when selecting “Protect A Disk”. To correct this you must repair the connection, using **Repair Connection**, from disks/partitions that were protected using earlier versions.

2.2.4 Recovery CD

2.2.4.1 Reordered how backups/snapshots are displayed in the UI

The latest backup/snapshot is now placed at the top of the list of backups in descending order based on time and date that the backup was completed.

2.2.4.2 Driver support for additional devices

The Recovery CD has added drivers for more devices and platforms (please see the latest THOL for the complete supported list of devices at <http://support.intel.com/support/motherboards/server/ss4000-e/index.htm>)

3. SPECIFICATION UPDATES/CLARIFICATIONS

3.1 Updates

3.1.1 Modifying a user's access rights to a share while the user is connected to the share does not take effect immediately

Description: If an administrator changes the access rights (e.g. remove access totally or change access level) of a user to a shared folder on the SS4000-E while the user is connected to the shared folder, the user will continue to have the same access rights that were present when he originally connected to the share. The access rights are persistent until the connection and the session are terminated. Once the session is terminated the new access rights will take effect.

Affected SW Releases: All software release versions.

Workaround: None. The new access rights will take effect once the current session is terminated by the user.

3.1.2 Active Directory built-in 'Administrators' and 'Users' group members cannot access shares when given group-level access rights

Description: If a share is created and access is assigned to the built-in 'Administrators' or 'Users' group, when trying to access the share by a member of the Administrator group, that user will be denied access.

Affected SW Releases: Version 1.2.

Workaround: To assign share access to members of the Active Directory built-in 'Administrators' and 'Users' group, assign the access to individual members of the groups instead of by group access.

3.1.3 The Web UI formatting has been changed from a fixed width

Description: The Web UI is no longer a fixed width. It stretches to fit the browser screen when the browser window is maximized. This effect gives the Web UI a different look than previous firmware releases when viewing at different video resolutions.

Affected SW Releases: Version 1.2.

Workaround: None. This change was done to better accommodate different video resolutions and character sets. You can resize the browser window for your desired Web UI width.

3.1.4 Clients occasionally lose FTP connection during heavy I/O transfers

Description: When transferring files via FTP with the SS4000-E, your session may terminate unexpectedly. This behavior is most likely but not limited to instances when multiple clients are connected to the SS4000-E via FTP and performing high I/O transfers. As a result file transfers can be incomplete.

Affected SW Releases: All software release versions.

Workaround: After each transfer session the user should check the FTP client to confirm that the transfer was completed successfully.

3.1.5 Possible system failure if power cord removed improperly

Description: When powering off the SS4000-E, the system may fail if the power cord is removed from the unit or wall outlet before it completely powers down.

Affected SW Releases: All software release versions.

Workaround: Ensure that the unit powers off completely before removing the power cord. All front panel and HDD carrier LEDs should be unlit and no cooling fan activity.

3.2 Clarifications

3.2.1 Active Directory Implementation

The following list clarifies how the software release v1.2 for the SS4000-E implements certain components of the Active Directory authentication process.

3.2.1.1 Shared folders not detected after changing authentication mode

When the user changes the authentication mode of the SS4000-E, shared folders are no longer detectable by the Storage System Console. Once the authentication mode has completed the change over process, the user will need to go to the Shared Folders tab and reassign access rights to the shares. If authentication changes from “local” to “Active Directory”, there will be a list of users detected from the Active Directory domain tree. Use existing user accounts or create new ones to be assigned to the SS4000-E shared folders. If authentication changes from “Active Directory” to “local”, the user will have to create user accounts locally on the SS4000-E to be assigned access to the shared folders.

3.2.1.2 User account name limitations

“FTP” and “Anonymous” are names reserved for internal use by the SS4000-E. Do not use these names when creating user accounts in Active Directory. Doing so could cause unpredictable behavior.

3.2.1.3 Unexpected user accounts seen after changing to “Active Directory” authentication mode

The Web UI displays all users/groups synchronized from the Active Directory server, regardless if the user account is hidden, disabled, built-in, etc.

3.2.1.4 Active Directory authentication mode does not automatically include a “guest” account

If an SS4000-E is configured to use “Active Directory” authentication mode and there is no “guest” account created on the Active Directory server, the Storage System Console may not be able to list the shared folders of the discovered SS4000-E. The system will scan through available user accounts to determine if any have the proper security rights to access the shared folders on the SS4000-E. If successful, the Storage System Console will be able to detect and display the shared folders of the SS4000-E even if there is no “guest” account on the Active Directory server. However, if unsuccessful, it is recommended that the Active Directory administrator create a ‘guest’ account (use **guest** as the password) on the Active Directory server in order for the Storage System Console to be able to detect and list the shared folders of the SS4000-E.

3.2.1.5 The SS4000-E is unable to synchronize with the domain if the 'Admin' account password is changed

The SS4000-E requires an account on the Active Directory domain controller when it initially joins the domain. It uses this account to browse the OU (Organizational Unit) tree to retrieve accounts and security information. It also uses this same account on all subsequent synchronizations with the domain controller to update any changes to the accounts and security information. If the password for this account is changed on the domain controller, the SS4000-E will be denied access whenever it attempts any future synchronization with the domain. The following steps provide a workaround to this issue:

- a. Login to the SS4000-E
- b. Go to Users -> Active Directory Properties
- c. Manually update the password for the synchronization account

A good practice is to create an account for synchronization and give it "Read" access only to the OU that the SS4000-E is assigned to in the Active Directory tree. If the password is set to expire, always immediately update the password on the SS4000-E, using the above steps, whenever the password is changed on the domain controller.

3.2.1.6 Changing to a different Active Directory OU (Organizational Unit) requires rejoining the domain

Once the OU selection is made when joining an Active Directory domain, it is not that easy to change. Therefore, plan and make your OU selection carefully. However, if you need to change the OU, you must switch to "local" authentication mode then back to "Active Directory" authentication mode and rejoin the domain. However, once you rejoin the domain, the user rights to the shares will need to be setup again.

3.2.1.7 Startup and synchronization between the domain controller and SS4000-E

If the SS4000-E and the Active Directory domain controller are both rebooted and restarted, and the SS4000-E completes its startup before the domain controller completely starts all of its services, you will need to shutdown and restart the SS4000-E. This is required in order to properly synchronize with the domain controller and be able to map to Windows-accessible shares.

3.2.1.8 Time synchronization between the domain controller and SS4000-E

The time on the Active Directory domain controller and the SS4000-E need to be within 5 minutes of each other. In the case where they are greater than 5 minutes difference of each other, they may not synchronize. In this case, reset the SS4000-E to the same time as the domain controller and retry the synchronization.

3.2.1.9 Limitations when upgrading from firmware v1.1K (Korean language) to firmware v1.2

The SS4000-E firmware v1.1 supports web pages in both English and Korean. Upgrading from firmware v1.1K to firmware v1.2 is supported, although v1.2 only supports English web pages. Please note the following additional information and limitations of proceeding with this upgrade:

- Since v1.2 only supports English web pages, all v1.1 Korean web pages will be deleted once the upgrade is completed.
- Existing v1.1 Korean input fields (shared folder name, CIFS user name, CIFS group name, NFS computer description) will remain intact allowing all NAS functions to be performed (i.e. assign the Korean shared folder to a user/group, delete a Korean shared folder/user/group, etc.).
- Version 1.2 will allow the creation of new shared folders, users/group or computer descriptions in English only; not in Korean.

3.2.2 Client Backup and Recovery

3.2.2.1 Intelligent Management Agent installation

Client Backup and Recovery requires the Intelligent Management Agent (IMA) to be installed, and it is installed automatically during the installation of the Client Backup and Recovery utility. IMA requires that a C: partition exists on the machine where Client Backup and Recovery will be installed.

3.2.2.2 Partitions without drive letters

If you create a partition without assigning a drive letter to it, the name of the partition will not display correctly when viewing the available disk list. For example, if the third partition on a disk (Disk 0, Partition 3) has the volume label "Production" but does not have a drive letter associated with it, the Client Backup Recovery user interface will only display the partition's location on the disk (Disk 0, Partition 3).