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TECHNOLOGY

# VTrak<sup>®</sup> G1100

## NAS Gateway SR3.3

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*Release Notes for Service Release 3.3*

*NAS Gateway Build 01.12.0000.03*

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## VTrak G1100 Release Summary

The Vtrak G1100 NAS Gateway version 1.12.0000.03 is a Service Release that works in conjunction with the A-Class A3800 or A3600 Shared Storage Appliances. The A-Class firmware version should be version 1.16.0000.00 (A-Class SR3.3) or later. For A-Class and SAN Client SR2 Product Limitations or Requirements refer to the “A-Class SR3.3 Release Notes” available on the Promise Support Website.

## Product Overview

The VTrak G1100 NAS Gateway in conjunction with the VTrak A-Class offers End to End Workflow for your Audio Video intensive applications such as:

- Ingest
- Edit
- Playout
- Content Delivery
- and
- Archiving

The VTrak G1100 NAS Gateway is:

- Fast – Featuring High-speed 10GbE connectivity
  - Simple – Utilizing a unified web based management interface
- and Reliable Featuring a scaled out NAS with no single point of failure

When working in unstructured data and rich media environments with varying bandwidth needs, high bandwidth fibre connections can be complemented with a VTrak G1100 NAS Gateway for access to files via Ethernet. Combined with a Fibre Channel Switch, the VTrak G1100 NAS Gateway creates a unified storage solution for the VTrak A Class SAN storage system.

## General G1100 Product Information

- Interface - Two ports x 10GbE, four ports x 1GbE Ethernet ports
  - Two ports x 8Gb FC backend ports
- Network Protocols - NFS, SMB/CIFS
- Number of NAS Clients supported – Unlimited (tested for 100,000 clients)
- Management Interface - Configured, managed, and monitored with VTrak A-Class SAN management software

- Support for up to 2 NAS Gateway Clusters with a total maximum of 4 NAS Gateway Nodes providing load balancing and high availability for the NAS features
  - 1 Cluster can be configured with up to 4 Nodes
  - 2 Clusters can be configured with 2 Nodes each (total nodes is 4)
- The A-Class Shared Storage Appliance can be configured with up to 9 J830 Expansion Chassis or 3 J930 Expansion Chassis or combinations that support up to 240 Physical Drives.
- Support for up to 7 attached Vtrak EX30 Storage Nodes. Each can be configured with up to 9 J830 Expansion Chassis or 3 J930 Expansion Chassis or combinations that support up to 240 Physical Drives.
- OS Support – Mac OS X 10.10, 10.11, and 10.12  
Windows 7, 8, 10, Windows Server 2008 and 2012  
Linux RHEL 6.6, 6.7 and SUSE 11 SP2 and SP3 64-bit
- LDAP support is for both Active Directory and Open Directory

### Notes on Current Network Protocol Support for Supported Operating Systems

- Current testing and support for **Mac OS X** and **Microsoft Windows** is for the **SMB/CIFS** network protocols.
- Current testing and support for **Linux** is with the **NFS** network protocol.

### Note for those using Open Directory (OD) on Mac OSx:

OD users are required to authenticate to the NAS Gateway website before an SMB mount is allowed. This can be done by entering the NAS Gateway address in Safari through secure http (<https://<NAS Gateway IP Address>>). Fill in the user names and passwords for all of the users as requested on the screen. Do this for one user at a time. Then click the “login” button for each.

### Recommended Settings for Mac OSx

For both Mac OSx 10.8.5 and 10.9.x, it is recommended that the user make the following environment modifications.

If you are connecting to the **Vtrak G1100** through a **Promise SANLink2 10G**, reduce the delay ACK of the TCP connection to improve the NFS and Samba performance. This is done by modifying the sysctl.conf file. For instance, using the vi editor in a terminal window:

```
#vi /etc/sysctl.conf
```

Then add the following line to the file:

```
net.inet.tcp.delayed_ack=0
```

### Recommended Settings for Linux

Only an NFS hard mount is recommended.

To increase the transfer size in NFS when mounting NFS, use the rsize and wsize settings of 1048576. This is done similarly to the following mount command example:

NFS hard mount:

```
#mount -t nfs -o  
relatime,vers=3,rsize=1048576,wsize=1048576,namlen=255,hard,proto=tcp,timeo=600,retrans=4,sec=sys,mountv  
ers=3,mountproto=tcp,nolock xx.xx.xx.xx:/nasmnt/fs1 /Volumes/fs1
```

Where xx.xx.xx.xx/nasmnt/fs1 is the IP address and export directory of the NAS Gateway and /Volumes/fs1 is the name of your mountpoint.

As an example:

```
#mount -t nfs -o  
relatime,vers=3,rsize=1048576,wsize=1048576,namlen=255,hard,proto=tcp,timeo=600,retrans=4,sec=sys,mountv  
ers=3,mountproto=tcp,nolock 10.10.10.1:/nasmnt/fs1 /Volumes/fs1
```

## Supported Hardware

Support is for the following PROMISE A-Class models:

Model	Description	Supported FW
VTrak A3800fSL	4U/24 FC, single controller	1.16.0000.00 or later
VTrak A3800fDM	4U/24 FC, dual controller	1.16.0000.00 or later

The supported Client Operating Systems include:

Vendor	Platform	Type
Microsoft	Windows 7	x64
	Windows 8	x64
	Windows Server 2008 R2 SP1	x64
	Windows 2012 R2 Server	x64
	Windows Server 2008 R2	x64
Mac	OS X 10.9	x64
	OS X 10.10	x64
	OS X 10.11	X64
Redhat	RHEL 6.6 (kernel 2.6.32-504 x86_64)	x64
	RHEL 6.5 (kernel 2.6.32-431 x86_64)	x64
	RHEL 6.4 (kernel 2.6.32-358 x86_64)	x64
SUSE	SUSE 11 sp2 (kernel 3.0.13-0.27-default x86_64)	x64
	SUSE 11 sp3 (kernel 3.0.76-0.11 x86_64)	x64

The supported Promise Expansion subsystems include:



Vendor	Platform	Type
Promise	VTrak J630s	3U/16-bay 6Gbs SAS
	VTrak J830s	4U/24-bay 6Gbs SAS
	VTrak J930s	4U/60-bay 6Gbs SAS
	VTrak J5320s	2U/24-bay 12Gbs* SAS, 2.5" bays
	VTrak J5300s	2U/12 -bay 12Gbs* SAS
	VTrak J5600s	3U/16 -bay 12Gbs* SAS
	VTrak J5800s	4U/24 -bay 12Gbs* SAS

\*12Gbs expansion subsystems operate at 6Gps when connected to Ex30

## G1100 Fixes and Enhancements since Last Release

Ref#	Note
<u>225436</u>	Fixed bug seen when creating Users for an Internal LDAP server, the first user created after a Group was created was not available on the Folder Share list
<u>228049</u>	<p>The default smb parameter currently only allows usernames to be all CAPITALIZED or all lowercase on the AD Server. So SMB clients can not authenticate if there is only one capitalized character in the username on AD server.</p> <p>The higher the number of combinations that can be tried, the slower the discovery of usernames will be.</p> <p>If discovery speed is not an issue and the user wants the option, the new code allows the user to activate a new smb.conf by setting 'username level = 2'.</p>
<u>228935</u>	Change made so that a Mac NAS Client can Create or Append the Folders & Files created from a SAN Client mounted via SMB Protocol. On the SAN Client, the user should set Squash to "All" permission(using Exportfs command)
<u>228416</u> , <u>228417</u>	Fixed Aclass CLI bugs where the "gwnode" commands wouldn't return an error for non-existent nodes or clusters.

## Current G1100 Product Limitations or Requirements

Ref#	Note	Workaround
<b>General G1100 Information</b>		
	The Quick Setup Guide (QSG) Link Aggregation Option 2 is not a recommended configuration.	Use Link Aggregation Option 1 from the Quick Setup Guide (QSG)
<a href="#"><u>213579</u></a>	When permissions are set for a file by an Open Directory user, they don't get saved in the Mac OS X environment. This is a limitation of SMB2 used by Mac OS X and Windows.	
<a href="#"><u>215567</u></a>	<p>The G1100 doesn't support multiple groups for permissions. It chooses first group in LDAP content for that user, which may not be first group in the OD server.</p> <p>If there are many groups that a user belongs to, set highest permission for the group, and set the user with any individual permissions.</p>	If there are many groups that a user belongs to, set highest permission for the group, and set the user with any particular permissions.
<b>General NAS Clients</b>		
<a href="#"><u>220032</u></a> <a href="#"><u>219657</u></a>	When there are configurations with multiple NAS Gateway Nodes, if the primary node is rebooted, I/O will stop on mounted CIFS shares on NAS Clients and need to be restarted.	Restart the I/O operation on NAS Clients that have stopped.
<a href="#"><u>218675</u></a>	On a NAS Client, mounting a folder and one of its sub folders from the same NAS Gateway on different mount points can cause access to the same file not to be in sync	In general, avoid accessing the same file from 2 different mount points.



Ref#	Note	Workaround
<u>220620</u>	Under heavy prolonged I/O (several days) test conditions with NAS connected Clients accessing the SAN via the G1100 NAS Gateway, the NAS Clients can experience a sudden performance drop.	If the performance drop occurs after continued prolonged access of the SAN via the NAS clients accessing the G1100, simply unmount and remount the NAS client or restart the application.
Linux NAS Clients		
<u>215429</u>	With a RHEL 5.10 NAS client, following a reboot of both the A-Class A3800 and the G1100, if you also initiate a soft reboot of the RHEL 5.10 NAS client, it sometimes may hang during reboot with a "mounting nfs file systems [Failed]" message. It will be necessary to reboot the client.	Perform a hard reset on the RHEL 5.10 Client if it hangs on reboot with the "mounting nfs file systems [Failed]" message.
<u>214833</u>	If there is I/O running on multiple attached Linux NAS clients and the A-Class A3800 shuts down and reboots, it may be necessary to reboot some or all of the clients to get their mount points again	If the mount point is lost on a Linux NAS client and won't recover, reboot the NAS client.
<u>221669</u>	If there is I/O running on multiple attached Linux NAS Clients and a multiple node G1100 NAS Gateway is being upgraded from 1.02.0000.21 or 1.02.0000.00, the I/O on the clients will have to be restarted.	Restart I/O on Linux NAS Clients if the stop due to a G1000 firmware upgrade.
<u>212417</u>	With SUSE SLES 11 SP2 or SP3, if there is a lot of I/O activity and one of the G1100 clusters loses one of the G1100s, the SLES client can on some occasions freeze up and will need to be restarted. <b>This is a limitation with these versions of SLES and supposed to be fixed in SLES 11 SP4 when it has been qualified.</b>	Reboot the SLES 11 Sp2 or SP3 Client when it freezes following a G1100 failure.
<u>219692</u>	On some occasions, if a mounted NAS Gateway share is 100% full, the mount point on Linux Host becomes inaccessible. Remove some files from the NAS Gateway share to gain access.	Remove some files from the NAS Gateway share to gain access.
Mac OSX Clients		



Ref#	Note	Workaround
<u>211791</u>	With a Mac OSX NAS client, if there is an A-Class failover between controllers, an attached Mac OSX NAS client may temporarily lose the mount point. When the mount point is reestablished, it will be given a new mount point. This as part of the OSX behavior. To continue, the user may have to restart the I/O on the new mount point.	If the user knows that there has been a halt in the I/O due to failover activity, restart the I/O on the new mount point.
<u>209473</u>	In the Chrome browser, the user needs to press the "Cancel" button of NFS Share twice for it to work.	Press Cancel button again in the Chrome browser if the first doesn't succeed.

## Contacting Technical Support

PROMISE Support Website at [http://www.promise.com/support/support\\_eng.asp](http://www.promise.com/support/support_eng.asp)

PROMISE E-mail Support at <http://support.promise.com/>

## PROMISE Disclaimer

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