



iStor Networks, Inc.[®]

TechTIP61808 –integraSuite Management Center v2

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Introduction

The purpose of this Tech Tip is to help existing customers transition to the newly released v2 Software. The v2 Software release marks an essential functional enhancement to how the integraStor system deals with iSCSI Target Nodes and mapping of Logical Units to those Target Nodes. The main benefit behind this enhancement is to simplify the user experience when configuring and managing an integraStor system.

The scope of this document is to provide an overview of this new approach and to describe tips on making the transition easier.

Prior to the v2 Software release, iSCSI Target Nodes, SCSI LUNs (Logical Unit Numbers), and LUN maps are entities that the user is required to have knowledge about in order to manage an integraStor system. After a user has created a volume, he must understand that an iSCSI Target Node must be created, and then subsequently the volume needs to be mapped to the iSCSI Target Node using a LUN map.

An additional enhancement to the current Target Nodes schema is the format of the name which is exposed to the initiator. Currently, the format exposed from an integraStor is:

“naa.1234567890abcdef1234567890abcdef”

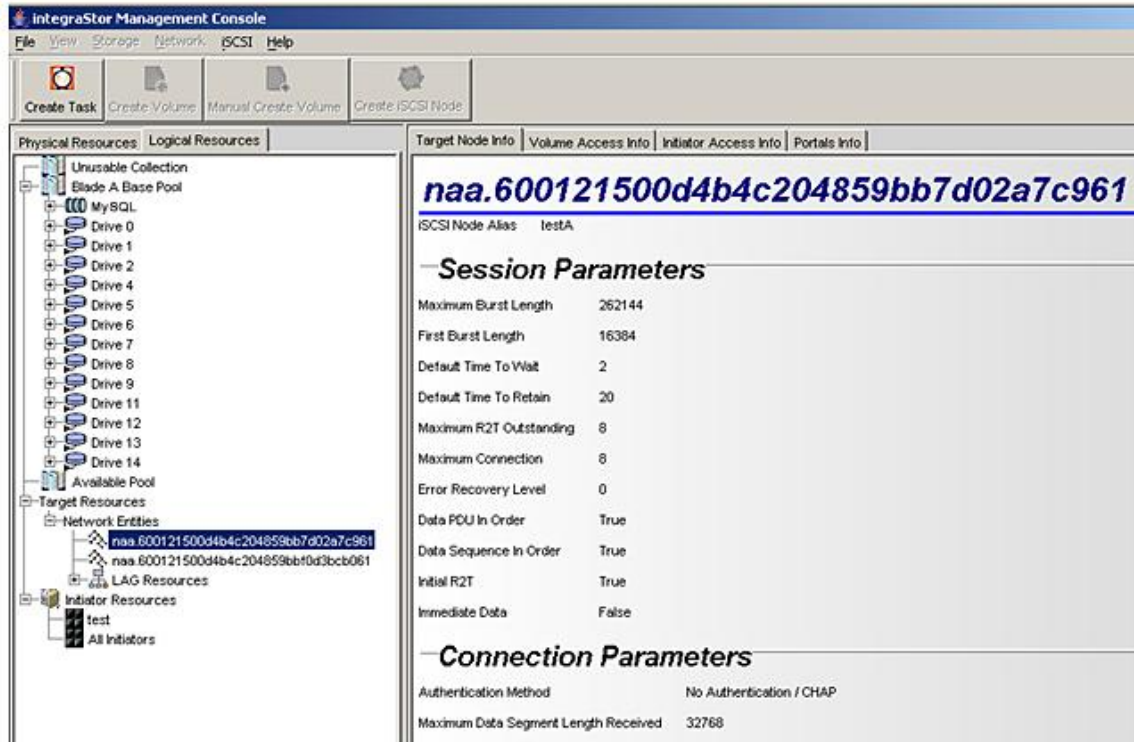


Figure 1: Target Node Information in previous Software releases – the “naa” name has no correlation to a given volume, which makes it difficult for the user to configure their initiator when logging in to targets exposed by the integraStor system (e.g. which volume corresponds to which target node).

New Target Node Functional Enhancements

With the new (v2) Software release, integraSuite Management Center software presents a simplification where iSCSI target nodes have a one-to-one relationship with volumes. The user no longer needs to create or delete target nodes as done in previous software releases. When a volume is created, an iSCSI target node will be automatically created and a mapping will be created to the new volume. When a volume is deleted, the corresponding target node will be deleted. The user will no longer need to map a target node to a volume.

The impact on some current configurations will be that it is no longer possible to support multiple volumes mapped to the same target node (e.g. non LUN 0 mappings). Once the target node is automatically created, the user will still have the ability to modify the parameters of it, i.e. CHAP password, header/data digest, etc.

This new release does not require configuration of target nodes, rather the parameters are simply attributes of the volume.

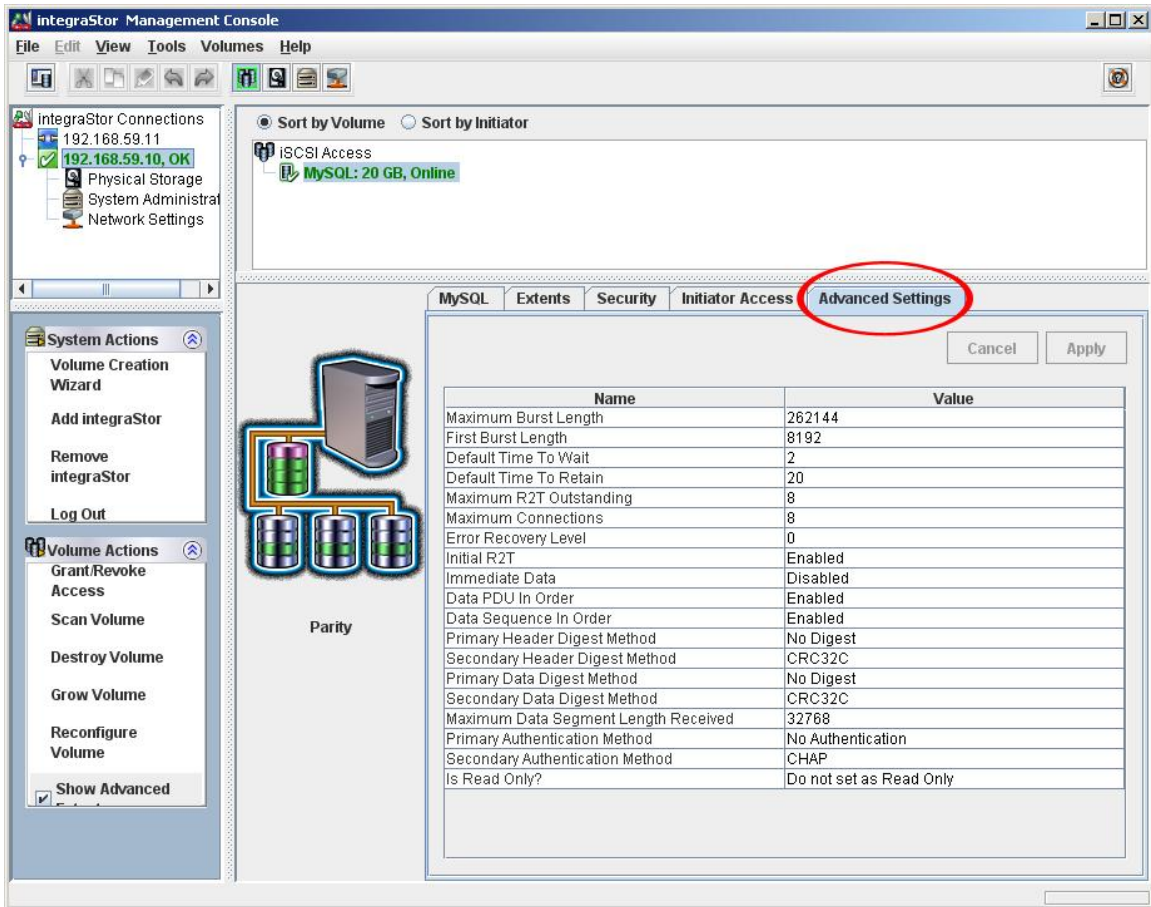


Figure 2: Volume view in new (v2) Software release - Once the target node is automatically created, the user will still have the ability to modify the parameters such as security (CHAP password), header/data digest, etc. via the 'Advanced Settings' tab

The format of the Target Node names will also change in the new paradigm. The new format of a Target Node will be:

`"iqn.2002-09.com.istor:TargetAlias:1-234567-890abcdef-1234567890abdef"`

The target alias will initially be taken from the volume that the Target Node is mapped to, although the user will have the ability to change this after creation. NOTE: the volume name / target alias will be transformed into a valid iSCSI name by removing spaces and punctuation characters. The portion following the volume name will be the durable name of the volume that the Target Node is mapped to in order to guarantee worldwide uniqueness.

This change to the format of the Target Node provides the user an easier experience when discovering and logging into a volume on an integraStor system, because the name of the volume is now present in the target name that is displayed by the initiator. See Figure 3 below.

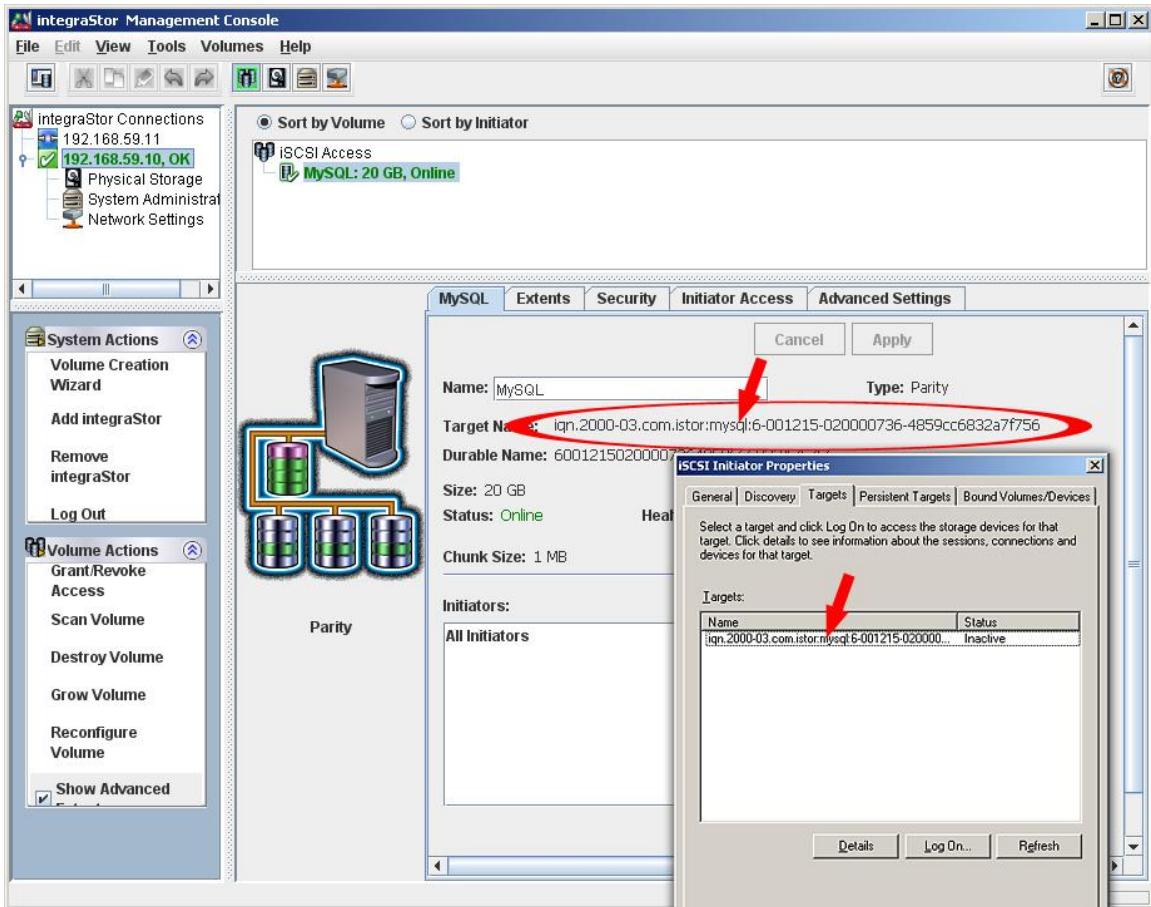



Figure 3: Target Name in v2 Software & Microsoft iSCSI Initiator – notice that the volume name is now included as part of the Target Name

How This Release Affects Your Existing Configuration

Systems that already exist in the field will have their Target Nodes migrated to the new single volume per target paradigm. Therefore, a new Target Node will be automatically created for all existing volumes. Any existing Target Nodes will have their parameters automatically transferred to the new Target Nodes. In the situation in which an existing Target Node maps to multiple volumes, a new Target Node will be created for each volume, and each of the new Target Nodes will inherit the previous Target Node's parameters.

If you currently have two or more Target Nodes mapping to the same volume, only the first Target Node's parameters will be transferred to the new Target Node. The parameters from the other Target Nodes will need to be saved and restored manually. This situation is not expected to occur very often in the existing field systems since it is not good practice to have multiple Target Nodes connected to the same volume as data corruption can occur.

	<p>Although the Target Nodes are automatically transferred after you upgrade your existing v1 software to v2, there is one very important item to address on the host side. This change requires users to update their initiators that have 'Persistent Targets' set in order to successfully login to the newly created Targets since the volume name is now included as part of the Target Node name.</p>
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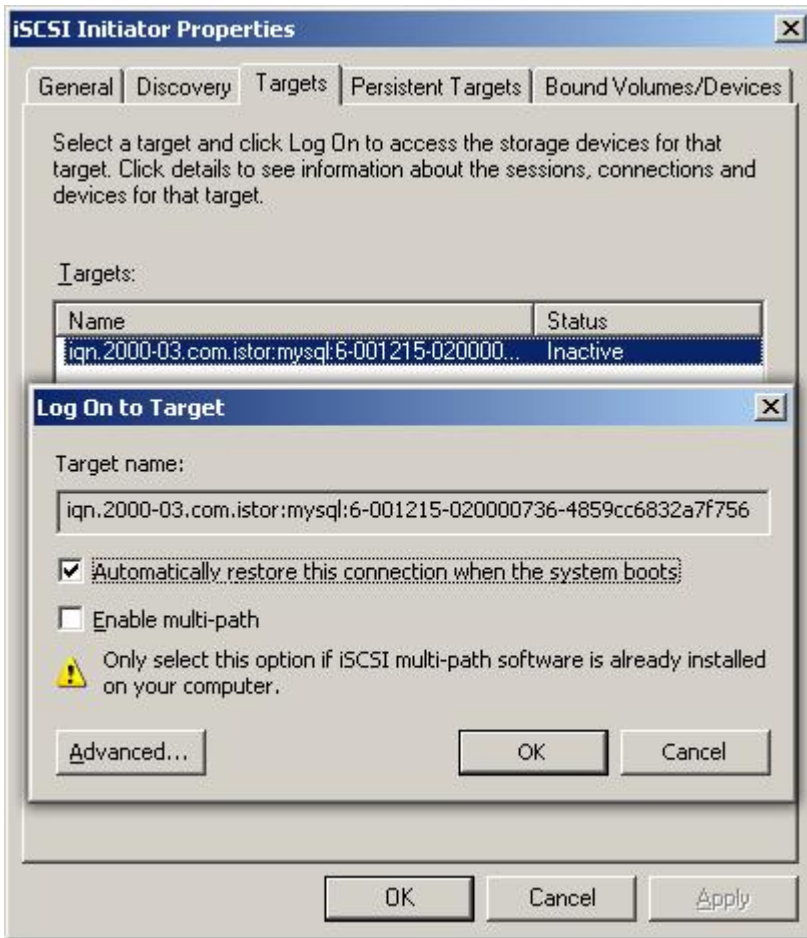


Figure 4: Microsoft iSCSI Initiator – Persistent Targets are selected at the time your logon to the Target. You may not have this selected, but if after you upgrade to v2 Software and your server does not automatically see the Volume be sure to check this setting

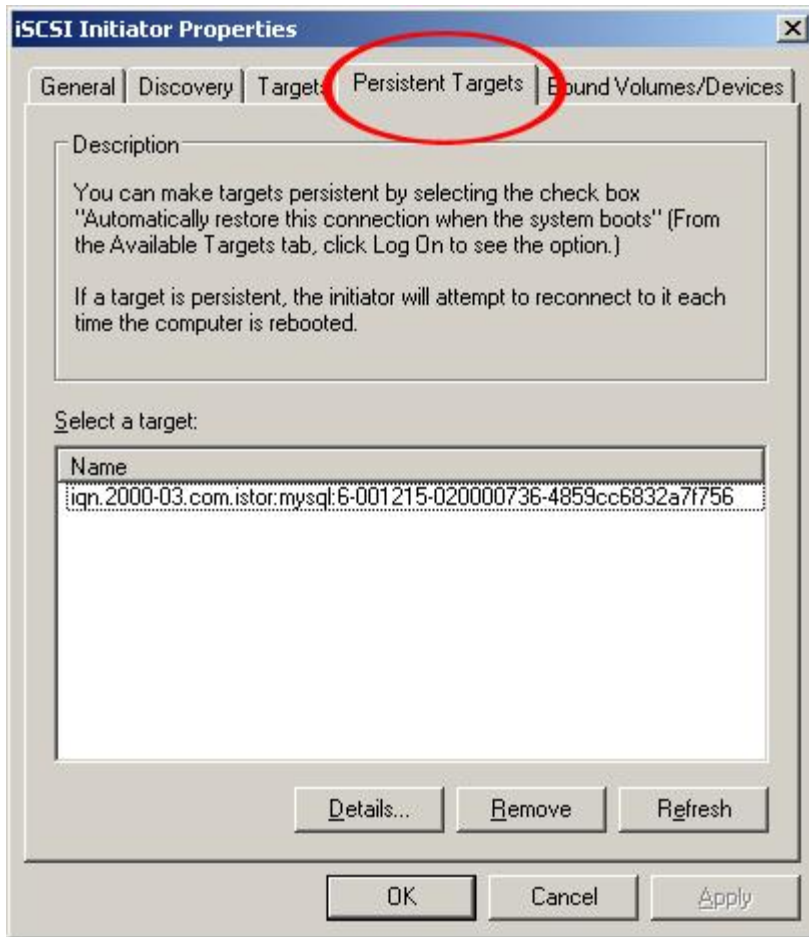


Figure 5: Microsoft iSCSI Initiator – Showing Persistent Targets that are configured. A quick check on the 'Persistent Targets' tab will let you know immediately whether or not you have this set. No entries on this screen indicate that Persistent Targets are not set and no further action on your part is required.

If you have Persistent Targets set, simply logoff the Target and then log back in. This works seamlessly assuming that the 'All Initiators' option is used.

Conclusions and Recommendations

The v2 integraSuite Software release marks an important step in the continuation of simplifying the configuration and management of integraStor series SAN solutions. Several essential recommendations that should be performed prior to upgrading to this release include:

1. Use the 'All Initiators' option for your existing Target Nodes (simply right-click on the Target Node and choose 'Modify Initiator List' and select 'All Initiators')
2. Make sure that your existing Target Nodes do NOT map to a common set of Volumes. In other words, ensure that they are a one-to-one mapping; Target A is mapped to Volume A, Target B is mapped to Volume B, and so on
3. On the host side, check for Persistent Targets as noted in this document