To: Distribution

From: Larry Johnson

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Subject: Design Discussion of MTB-261,
           Master Directory Control

Minor issues

1. The create_dir command is inconsistent on the -quota argument between master and upgraded directories. If creating an upgraded directory, the quota defaults to 1, while if creating a master directory, -quota must be specified. It would be better to force the -quota argument to be used in both instances.

2. There should be a delete_mdir_quota command to remove a name from the list of quota accounts for the volume.

Major and/or unresolved issues

1. Should M access on a parent directory be required to set a master directory quota? The consensus seems to be no.

2. Lack of administrative control. Quota is managed today by moving quota down from some point in the hierarchy. In general, the person managing this quota is able to force access to anything charged against the quota he is responsible for. This feature(?) is not available with master directories, because is is possible that someone with quota on a logical volume could create a directory at a point in the hierarchy not accessable by the volume executive who gave him that quota. A solution to this problem is to allow the volume executive to specify a directory (or maybe a list) and require that all master directories created fall below the point specified.

3. What does it mean to set a master directory quota? The logical thing would be to interpret the quota specified as the quota for the entire tree charged against that master directory. If the master directory is not terminal, this would be inconsistent with quota operations on a normal directory.

4. How will logical volumes be used? One view is that the creation of master directories is a privlidged system function, restricted to volume executives. If so, quota accounts and ring 1 management of quota are not necessary. This can be achieved using the mechanism described in MTB-261 by only giving quota accounts to volume executives. It is not known, however, if anyone will make use of quota accounts to give general users the ability to create master directories. If not, much of this proposal is not needed.