

## Arvados - Task #2954

Bug # 2865 (Resolved): Reduce Keep server memory use

### Rewrite Get and Put to minimize unnecessary allocation

06/03/2014 03:18 PM - Tim Pierce

<b>Status:</b>	Resolved	<b>Start date:</b>	05/26/2014
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assigned To:</b>	Tim Pierce	<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	8.00 hours
<b>Target version:</b>	2014-06-17 Curating and Crunch		

#### Description

Both volume.Get and main.ReadAtMost use ioutil.ReadAll to read all available data. As Peter observed, ReadAll grows a buffer exponentially to read all available data, so in order to read a 64MB block it allocates a 128MB buffer.

Some things we can do to relax memory usage:

- Eliminate ioutil.ReadAll. Since we know the anticipated amount of data for both PUT (from the Content-Length header) and GET (from the file size on disk) we can allocate exactly the amount of space we need and use that buffer.
- Possibly: remove the requirement that Keep return a 402 Corruption error on a corrupt block. If Keep is allowed to return the block anyway and simply log an alert if the block is found to be corrupt, GET can allocate a relatively small buffer (e.g. 1MB) for reads.

#### History

##### #1 - 06/03/2014 04:58 PM - Tim Pierce

- Status changed from New to In Progress

##### #2 - 06/04/2014 11:02 AM - Tim Pierce

- Status changed from In Progress to Resolved

- Remaining (hours) changed from 8.0 to 0.0