
Subject: [PATCH 04/11] fuse: rework fuse_readpages()
Posted by [Maxim Patlasov](#) on Wed, 19 Sep 2012 16:32:16 GMT
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The patch uses 'nr_pages' argument of fuse_readpages() as heuristics for the number of page pointers to allocate.

This can be improved further by taking in consideration fc->max_read and gaps between page indices, but it's not clear whether it's worthy or not.

Signed-off-by: Maxim Patlasov <mpatlasov@parallels.com>

fs/fuse/file.c | 16 ++++++++
1 files changed, 14 insertions(+), 2 deletions(-)

```
diff --git a/fs/fuse/file.c b/fs/fuse/file.c
index 214e13e..a618371 100644
--- a/fs/fuse/file.c
+++ b/fs/fuse/file.c
@@ -641,6 +641,7 @@ struct fuse_fill_data {
     struct fuse_req *req;
     struct file *file;
     struct inode *inode;
+    unsigned nr_pages;
 };

 static int fuse_readpages_fill(void *_data, struct page *page)
@@ -656,16 +657,25 @@ static int fuse_readpages_fill(void *_data, struct page *page)
     (req->num_pages == FUSE_MAX_PAGES_PER_REQ ||
      (req->num_pages + 1) * PAGE_CACHE_SIZE > fc->max_read ||
      req->pages[req->num_pages - 1]->index + 1 != page->index)) {
+    int nr_alloc = min_t(unsigned, data->nr_pages,
+        FUSE_MAX_PAGES_PER_REQ);
     fuse_send_readpages(req, data->file);
-    data->req = req = fuse_get_req(fc, FUSE_MAX_PAGES_PER_REQ);
+    data->req = req = fuse_get_req(fc, nr_alloc);
     if (IS_ERR(req)) {
         unlock_page(page);
         return PTR_ERR(req);
     }
 }
+
+ if (WARN_ON(req->num_pages >= req->max_pages)) {
+     fuse_put_request(fc, req);
+     return -EIO;
+ }
+
     page_cache_get(page);
```

```

    req->pages[req->num_pages] = page;
    req->num_pages++;
+ data->nr_pages--;
    return 0;
}

```

```

@@ -676,6 +686,7 @@ static int fuse_readpages(struct file *file, struct address_space *mapping,
    struct fuse_conn *fc = get_fuse_conn(inode);
    struct fuse_fill_data data;
    int err;
+ int nr_alloc = min_t(unsigned, nr_pages, FUSE_MAX_PAGES_PER_REQ);

```

```

    err = -EIO;
    if (is_bad_inode(inode))
@@ -683,7 +694,8 @@ static int fuse_readpages(struct file *file, struct address_space *mapping,

    data.file = file;
    data.inode = inode;
- data.req = fuse_get_req(fc, FUSE_MAX_PAGES_PER_REQ);
+ data.req = fuse_get_req(fc, nr_alloc);
+ data.nr_pages = nr_pages;
    err = PTR_ERR(data.req);
    if (IS_ERR(data.req))
        goto out;

```
