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Subject: [PATCH 04/12] fuse: rework fuse\_readpages()  
Posted by [Maxim Patlasov](#) on Fri, 26 Oct 2012 15:48:51 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 ba7447d..9872acc 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;
```

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