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Subject: [PATCH COMMIT] diff-merge-2.6.16.15-20060510

Posted by [xemul](#) on Wed, 10 May 2006 10:28:57 GMT

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Added to 026test012

Patch from OpenVZ team <devel@openvz.org>

Merged 2.6.16.15 from /linux/kernel/git/stable/linux-2.6.16.y

From: OpenVZ team <devel@openvz.org>

Date: Wed, 10 May 2006 10:24:44 +0000 (+0400)

Subject: Merged 2.6.16.15 from /linux/kernel/git/stable/linux-2.6.16.y

X-Git-Url:

<http://10.11.12.17/cgi-bin/gitweb.cgi?p=kernel;a=commitdiff;h=ffddb9a5b8a9dabfcbf8fcf0e86884e52c762fef>

Merged 2.6.16.15 from /linux/kernel/git/stable/linux-2.6.16.y

---

--- a/fs/smbfs/dir.c

+++ b/fs/smbfs/dir.c

```
@@ -434,6 +434,11 @@ smb_lookup(struct inode *dir, struct den
    if (dentry->d_name.len > SMB_MAXNAMELEN)
        goto out;
```

```
+ /* Do not allow lookup of names with backslashes in */
```

```
+ error = -EINVAL;
```

```
+ if (memchr(dentry->d_name.name, '\\', dentry->d_name.len))
```

```
+ goto out;
```

```
+
```

```
    lock_kernel();
```

```
    error = smb_proc_getattr(dentry, &finfo);
```

```
#ifdef SMBFS_PARANOIA
```

```
--- a/include/net/sctp/structs.h
```

```
+++ b/include/net/sctp/structs.h
```

```
@@ -702,6 +702,7 @@ struct sctp_chunk {
```

```
    __u8 tsn_gap_acked; /* Is this chunk acked by a GAP ACK? */
```

```
    __s8 fast_retransmit; /* Is this chunk fast retransmitted? */
```

```
    __u8 tsn_missing_report; /* Data chunk missing counter. */
```

```
+ __u8 data_accepted; /* At least 1 chunk in this packet accepted */
```

```
};
```

```
void sctp_chunk_hold(struct sctp_chunk *);
```

```
--- a/net/sctp/inqueue.c
```

```
+++ b/net/sctp/inqueue.c
```

```
@@ -149,6 +149,7 @@ struct sctp_chunk *sctp_inq_pop(struct s
```

```
    /* This is the first chunk in the packet. */
```

```

    chunk->singleton = 1;
    ch = (sctp_chunkhdr_t *) chunk->skb->data;
+   chunk->data_accepted = 0;
}

    chunk->chunk_hdr = ch;
--- a/net/sctp/sm_statefuns.c
+++ b/net/sctp/sm_statefuns.c
@@ -636,8 +636,9 @@ sctp_disposition_t sctp_sf_do_5_1D_ce(co
 */
    chunk->subh.cookie_hdr =
    (struct sctp_signed_cookie *)chunk->skb->data;
-   skb_pull(chunk->skb,
-   ntohs(chunk->chunk_hdr->length) - sizeof(sctp_chunkhdr_t));
+   if (!pskb_pull(chunk->skb, ntohs(chunk->chunk_hdr->length) -
+   sizeof(sctp_chunkhdr_t)))
+   goto nomem;

/* 5.1 D) Upon reception of the COOKIE ECHO chunk, Endpoint
 * "Z" will reply with a COOKIE ACK chunk after building a TCB
@@ -965,7 +966,8 @@ sctp_disposition_t sctp_sf_beat_8_3(cons
 */
    chunk->subh.hb_hdr = (sctp_heartbeat_hdr_t *) chunk->skb->data;
    paylen = ntohs(chunk->chunk_hdr->length) - sizeof(sctp_chunkhdr_t);
-   skb_pull(chunk->skb, paylen);
+   if (!pskb_pull(chunk->skb, paylen))
+   goto nomem;

    reply = sctp_make_heartbeat_ack(asoc, chunk,
    chunk->subh.hb_hdr, paylen);
@@ -1860,8 +1862,9 @@ sctp_disposition_t sctp_sf_do_5_2_4_dupc
 * are in good shape.
 */
    chunk->subh.cookie_hdr = (struct sctp_signed_cookie *)chunk->skb->data;
-   skb_pull(chunk->skb, ntohs(chunk->chunk_hdr->length) -
-   sizeof(sctp_chunkhdr_t));
+   if (!pskb_pull(chunk->skb, ntohs(chunk->chunk_hdr->length) -
+   sizeof(sctp_chunkhdr_t)))
+   goto nomem;

/* In RFC 2960 5.2.4 3, if both Verification Tags in the State Cookie
 * of a duplicate COOKIE ECHO match the Verification Tags of the
@@ -5151,7 +5154,9 @@ static int sctp_eat_data(const struct sc
    int tmp;
    __u32 tsn;
    int account_value;
+   struct sctp_tsnmap *map = (struct sctp_tsnmap *)&asoc->peer.tsn_map;
    struct sock *sk = asoc->base.sk;

```

```

+ int rcvbuf_over = 0;

data_hdr = chunk->subh.data_hdr = (sctp_datahdr_t *)chunk->skb->data;
skb_pull(chunk->skb, sizeof(sctp_datahdr_t));
@@ -5162,10 +5167,16 @@ static int sctp_eat_data(const struct sc
/* ASSERT: Now skb->data is really the user data. */

/*
- * if we are established, and we have used up our receive
- * buffer memory, drop the frame
+ * If we are established, and we have used up our receive buffer
+ * memory, think about dropping the frame.
+ * Note that we have an opportunity to improve performance here.
+ * If we accept one chunk from an skbuff, we have to keep all the
+ * memory of that skbuff around until the chunk is read into user
+ * space. Therefore, once we accept 1 chunk we may as well accept all
+ * remaining chunks in the skbuff. The data_accepted flag helps us do
+ * that.
*/
- if (asoc->state == SCTP_STATE_ESTABLISHED) {
+ if ((asoc->state == SCTP_STATE_ESTABLISHED) && (!chunk->data_accepted)) {
/*
* If the receive buffer policy is 1, then each
* association can allocate up to sk_rcvbuf bytes
@@ -5176,9 +5187,25 @@ static int sctp_eat_data(const struct sc
account_value = atomic_read(&asoc->rmem_alloc);
else
account_value = atomic_read(&sk->sk_rmem_alloc);
-
- if (account_value > sk->sk_rcvbuf)
- return SCTP_IERROR_IGNORE_TSN;
+ if (account_value > sk->sk_rcvbuf) {
+ /*
+ * We need to make forward progress, even when we are
+ * under memory pressure, so we always allow the
+ * next tsn after the ctsn ack point to be accepted.
+ * This lets us avoid deadlocks in which we have to
+ * drop frames that would otherwise let us drain the
+ * receive queue.
+ */
+ if ((sctp_tsnmap_get_ctsn(map) + 1) != tsn)
+ return SCTP_IERROR_IGNORE_TSN;
+
+ /*
+ * We're going to accept the frame but we should renege
+ * to make space for it. This will send us down that
+ * path later in this function.
+ */

```

```

+ rcvbuf_over = 1;
+ }
}

/* Process ECN based congestion.
@@ -5226,6 +5253,7 @@ static int sctp_eat_data(const struct sc
    datalen -= sizeof(sctp_data_chunk_t);

    deliver = SCTP_CMD_CHUNK_ULP;
+ chunk->data_accepted = 1;

/* Think about partial delivery. */
if ((datalen >= asoc->rwnd) && (!asoc->ulpq.pd_mode)) {
@@ -5242,7 +5270,8 @@ static int sctp_eat_data(const struct sc
    * large spill over.
    */
    if (!asoc->rwnd || asoc->rwnd_over ||
-    (datalen > asoc->rwnd + asoc->frag_point)) {
+    (datalen > asoc->rwnd + asoc->frag_point) ||
+    rcvbuf_over) {

/* If this is the next TSN, consider renegeing to make
    * room. Note: Playing nice with a confused sender. A
@@ -5250,8 +5279,8 @@ static int sctp_eat_data(const struct sc
    * space and in the future we may want to detect and
    * do more drastic renegeing.
    */
- if (sctp_tsnmap_has_gap(&asoc->peer.tsn_map) &&
-    (sctp_tsnmap_get_ctsn(&asoc->peer.tsn_map) + 1) == tsn) {
+ if (sctp_tsnmap_has_gap(map) &&
+    (sctp_tsnmap_get_ctsn(map) + 1) == tsn) {
    SCTP_DEBUG_PRINTK("Reneging for tsn:%u\n", tsn);
    deliver = SCTP_CMD_RENEGE;
    } else {
--- a/net/sctp/sm_statetable.c
+++ b/net/sctp/sm_statetable.c
@@ -366,9 +366,9 @@ const sctp_sm_table_entry_t *sctp_sm_loo
/* SCTP_STATE_EMPTY */\
{.fn = sctp_sf_ootb, .name = "sctp_sf_ootb"}, \
/* SCTP_STATE_CLOSED */\
- {.fn = sctp_sf_bug, .name = "sctp_sf_bug"}, \
+ {.fn = sctp_sf_discard_chunk, .name = "sctp_sf_discard_chunk"}, \
/* SCTP_STATE_COOKIE_WAIT */\
- {.fn = sctp_sf_bug, .name = "sctp_sf_bug"}, \
+ {.fn = sctp_sf_discard_chunk, .name = "sctp_sf_discard_chunk"}, \
/* SCTP_STATE_COOKIE_ECHOED */\
{.fn = sctp_sf_do_ecne, .name = "sctp_sf_do_ecne"}, \
/* SCTP_STATE_ESTABLISHED */\

```

```

@@ -380,7 +380,7 @@ const sctp_sm_table_entry_t *sctp_sm_loo
/* Sctp_STATE_SHUTDOWN_RECEIVED */\
{.fn = sctp_sf_do_ecne, .name = "sctp_sf_do_ecne"}, \
/* Sctp_STATE_SHUTDOWN_ACK_SENT */\
- {.fn = sctp_sf_bug, .name = "sctp_sf_bug"}, \
+ {.fn = sctp_sf_discard_chunk, .name = "sctp_sf_discard_chunk"}, \
}/* TYPE_SCTP_ECN_ECNE */

#define TYPE_SCTP_ECN_CWR { \
@@ -401,7 +401,7 @@ const sctp_sm_table_entry_t *sctp_sm_loo
/* Sctp_STATE_SHUTDOWN_RECEIVED */\
{.fn = sctp_sf_discard_chunk, .name = "sctp_sf_discard_chunk"}, \
/* Sctp_STATE_SHUTDOWN_ACK_SENT */\
- {.fn = sctp_sf_bug, .name = "sctp_sf_bug"}, \
+ {.fn = sctp_sf_discard_chunk, .name = "sctp_sf_discard_chunk"}, \
}/* TYPE_SCTP_ECN_CWR */

#define TYPE_SCTP_SHUTDOWN_COMPLETE { \
@@ -647,7 +647,7 @@ chunk_event_table_unknown[SCTP_STATE_NUM
/* Sctp_STATE_EMPTY */\
{.fn = sctp_sf_bug, .name = "sctp_sf_bug"}, \
/* Sctp_STATE_CLOSED */\
- {.fn = sctp_sf_bug, .name = "sctp_sf_bug"}, \
+ {.fn = sctp_sf_error_closed, .name = "sctp_sf_error_closed"}, \
/* Sctp_STATE_COOKIE_WAIT */\
{.fn = sctp_sf_do_prm_requestheartbeat, \
.name = "sctp_sf_do_prm_requestheartbeat"}, \
--- a/net/sctp/ulpqueue.c
+++ b/net/sctp/ulpqueue.c
@@ -279,6 +279,7 @@ static inline void sctp_ulpq_store_reasm
static struct sctp_ulpevent *sctp_make_reassembled_event(struct sk_buff_head *queue, struct
sk_buff *f_frag, struct sk_buff *l_frag)
{
struct sk_buff *pos;
+ struct sk_buff *new = NULL;
struct sctp_ulpevent *event;
struct sk_buff *pnext, *last;
struct sk_buff *list = skb_shinfo(f_frag)->frag_list;
@@ -297,11 +297,33 @@ static struct sctp_ulpevent *sctp_make_r
*/
if (last)
last->next = pos;
- else
- skb_shinfo(f_frag)->frag_list = pos;
+ else {
+ if (skb_cloned(f_frag)) {
+ /* This is a cloned skb, we can't just modify
+ * the frag_list. We need a new skb to do that.

```

```

+  * Instead of calling skb_unshare(), we'll do it
+  * ourselves since we need to delay the free.
+  */
+  new = skb_copy(f_frag, GFP_ATOMIC);
+  if (!new)
+    return NULL; /* try again later */
+
+  new->sk = f_frag->sk;
+
+  skb_shinfo(new)->frag_list = pos;
+ } else
+  skb_shinfo(f_frag)->frag_list = pos;
+ }

/* Remove the first fragment from the reassembly queue. */
__skb_unlink(f_frag, queue);
+
+ /* if we did unshare, then free the old skb and re-assign */
+ if (new) {
+  kfree_skb(f_frag);
+  f_frag = new;
+ }
+
+ while (pos) {

    pnext = pos->next;

```

## File Attachments

1) [diff-merge-2.6.16.15-20060510](#), downloaded 443 times

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