Migration v2

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17^{th} August 2015

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```
xc: detail: xc_domain_restore: starting restore of new domid 1
xc: detail: xc_domain_restore: p2m_size = ffffffff00010000
xc: error: Couldn't allocate p2m_frame_list array: Internal error
```

Legacy Migration

```
int xc_domain_restore(xc_interface *xch,
...

if ( RDEXACT(io_fd, &dinfo->p2m_size, sizeof(unsigned long)) )
{
  PERROR("read: p2m_size");
  goto out;
}
DPRINTF("%s: p2m_size = %lx\n", __func__, dinfo->p2m_size);
```

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- Stream contents depends on compilation ABI
  - **Different between 32bit and 64bit**

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- Information (Currently x86 specific)
  - Common: Page Data, TSC
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- Suspend
  - Pause VM
  - Copy all memory
- Migrate
  - Enable logdirty
  - Copy all memory
  - — Query logdirty bitmap
  - — Copy dirty memory
  - — Loop
  - Pause VM
  - Copy remaining memory

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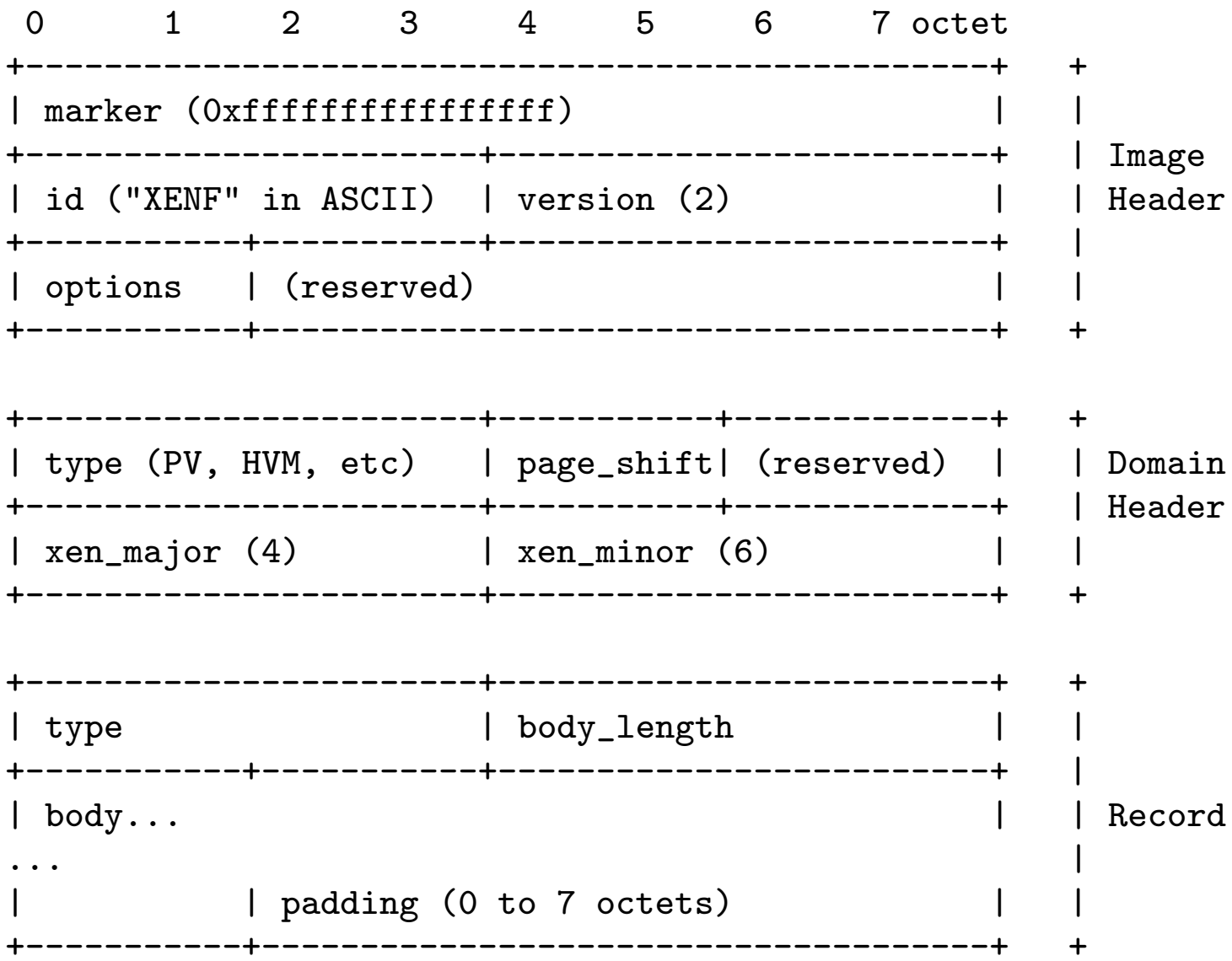
- Legacy conversion needed
  - `tools/python/scripts/convert-legacy-stream`
  - Reads in legacy stream
  - Writes out v2 stream

Stream format – libxc



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  - Describes exact binary layout
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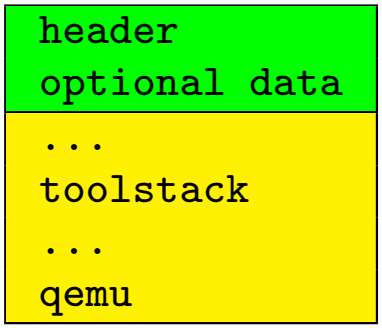
- Write from scratch
- Compatibility script extended
  - Able to write libxl migration v2 streams
  - 'Qemu' and 'Toolstack data' layered appropriately

Framing

Legacy Migration



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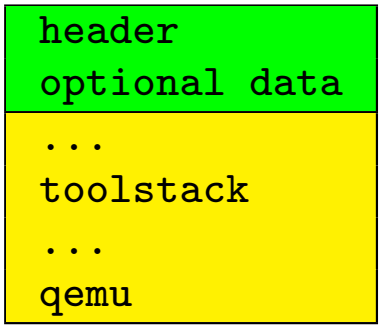

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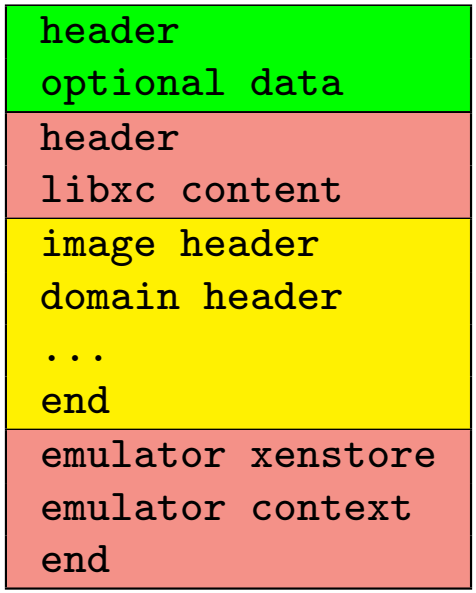

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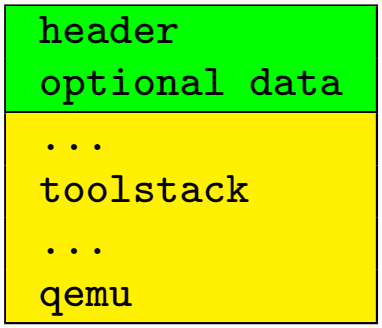

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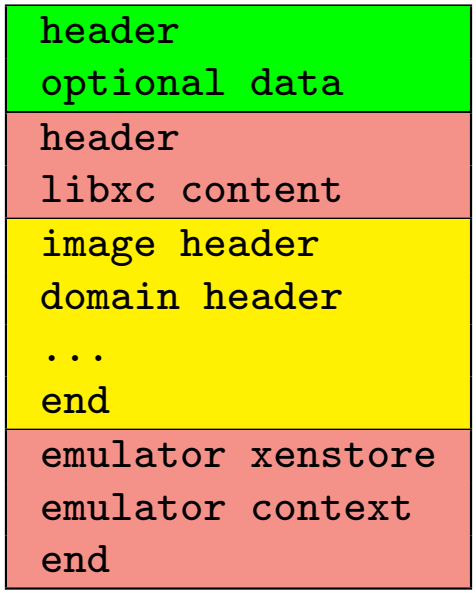
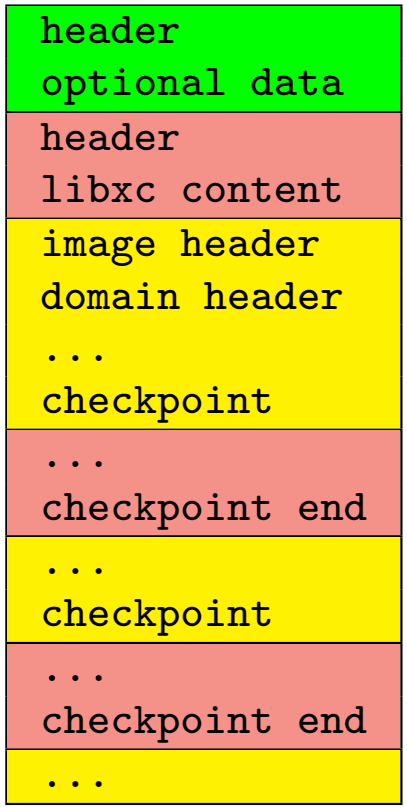


Remus Migration v2



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- Issues fixed
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- Areas for further work
  - Live migrate looping parameters
  - Linear P2M support

Status – Xen 4.6

- All committed
- Fully enabled (and tested)
- `xl save/restore/migrate/remus` function as before
- Legacy migration removed
- No noticeable difference to users

Migration v2

Any Questions?