

Q: When I archive and unarchive an IXStore object, I am able to write it to a typedstream, but reading it back in gives me a memory protection failure with the following backtrace.

```
Program generated(1): Memory access exception on address 0xe
(Protection failure).
0xa025f46 in -[IXStore read:] ()
(gdb) where
#0 0xa025f46 in -[IXStore read:] ()
#1 0x500c9be in InternalReadObject ()
#2 0x500f0f8 in NXReadObject ()
```

Why?

A: The memory smasher occurs in InternalReadObject() (the archiving code) when that method tries to send an **awake** message to the unarchived store, which has been freed. The store was freed because it didn't have transactions enabled and hence was

in a partially updated state. To fix this problem, you can, for example, call **commitTransaction** in the **write:** method of your store object to finish all outstanding transactions before archiving. Note that this is only necessary if transactions are not enabled. If transactions are enabled, the store can be archived with incomplete transactions pending, and reading it back drops the uncommitted changes. See the code snippet below:

```
/* Make a new storage object with a brand new IXStore */
- init
{
    [super init];
    storage = [[IXStore alloc] init];
    return self;
}

/* Archiving myself */
- read:(NXTypedStream *)stream
{
```

```
    [super read:stream];
    storage = NXReadObject(stream);
    return self;
}

- write:(NXTypedStream *)stream
{
    [super write:stream];
    /* A convenient place to finish outstanding
       transactions. Not needed if transactions are
       enabled.
    */

    [storage commitTransaction];
    NXWriteObject(stream, storage);
    return self;
}
```

Please note that this program crasher has been fixed in Release 3.2, and an exception error is raised instead. However, you still need to follow the above guideline to

properly archive an IXStore object.

QA901

Valid for 3.1, 3.2