API Changes in Structure 4.0

1. Minor Java API Release

There are a few moderate changes coming with this release. The changes are backwards-compatible, so any code using API 16.x should work fine.

JIRA Version	New API Version
7.1+	16.3.0

See Structure API Versions for full version information and downloads.

2. Compatible Changes in the Java API

2.1. `BigDecimal` and `BigInteger` support for NUMBER attributes

Number attributes (see `ValueFormat.NUMBER`) are allowed to provide instances of `BigInteger` and `BigDecimal` as a result. The appropriate support was added to `NumberAccumulator` for calculating totals. We're limiting the precision of the numbers to `MathContext.DECIMAL64`.

Note that if your code used NUMBER attributes before and assumed that the result is either `Long` or `Double`, this assumption may be incorrect now.

2.2. Additional methods for formatting data in export API

The following methods were added to provide more power to the exporting code:

- `ExportColumn.setRounding()`
- `PrintableColumn.setDurationAsCalendarTime()`

2.3. Miscellaneous

- Additional factory methods in `CoreIdentities`.

3. Web Items

3.1. Extendable Export Menu

We have added a new web item location that lets you insert web items into Structure's Export menu.

Location name: `structure.export.menu`

To add a menu item, declare a `<web-item>` in that location and declare the following sub-elements:

- `label` - the name of the menu item, supports i18n, mandatory.
- `link` - the URL of the target page, mandatory. You can use `${forestSpec}` in the URL, which will be replaced with the URL-encoded JSON representation of the forest spec currently opened. If your URL does not have `${forestSpec}` in it, then forestSpec will be added to the URL as a query parameter.
- `tooltip` - the tooltip shown when mouse hovers over the item, supports i18n, optional.
- `styleClass` - a space-delimited CSS class names for the <i> icon element before the name, optional, defaults to a Structure-provided icon.
- `weight` attribute - defines the order of appearance of the links, optional.
- `condition` / `conditions` - can be used to display the links conditionally.
- `context-provider` - can be used to add additional variables to the link labels or URL.