

Glencoe



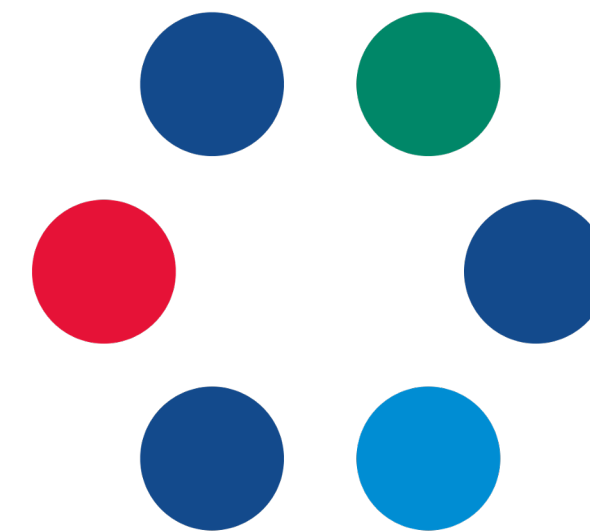
Software

Exclusive Commercial Partner of Open Microscopy Environment (OME)

Open Source Synergy

A Powerful, Exclusive Partnership

Glencoe
SOFTWARE



OME



COMMERCIAL LICENSES

Exclusive provider of commercial licenses for OMERO Plus and Bio-Formats



CUSTOMIZATION

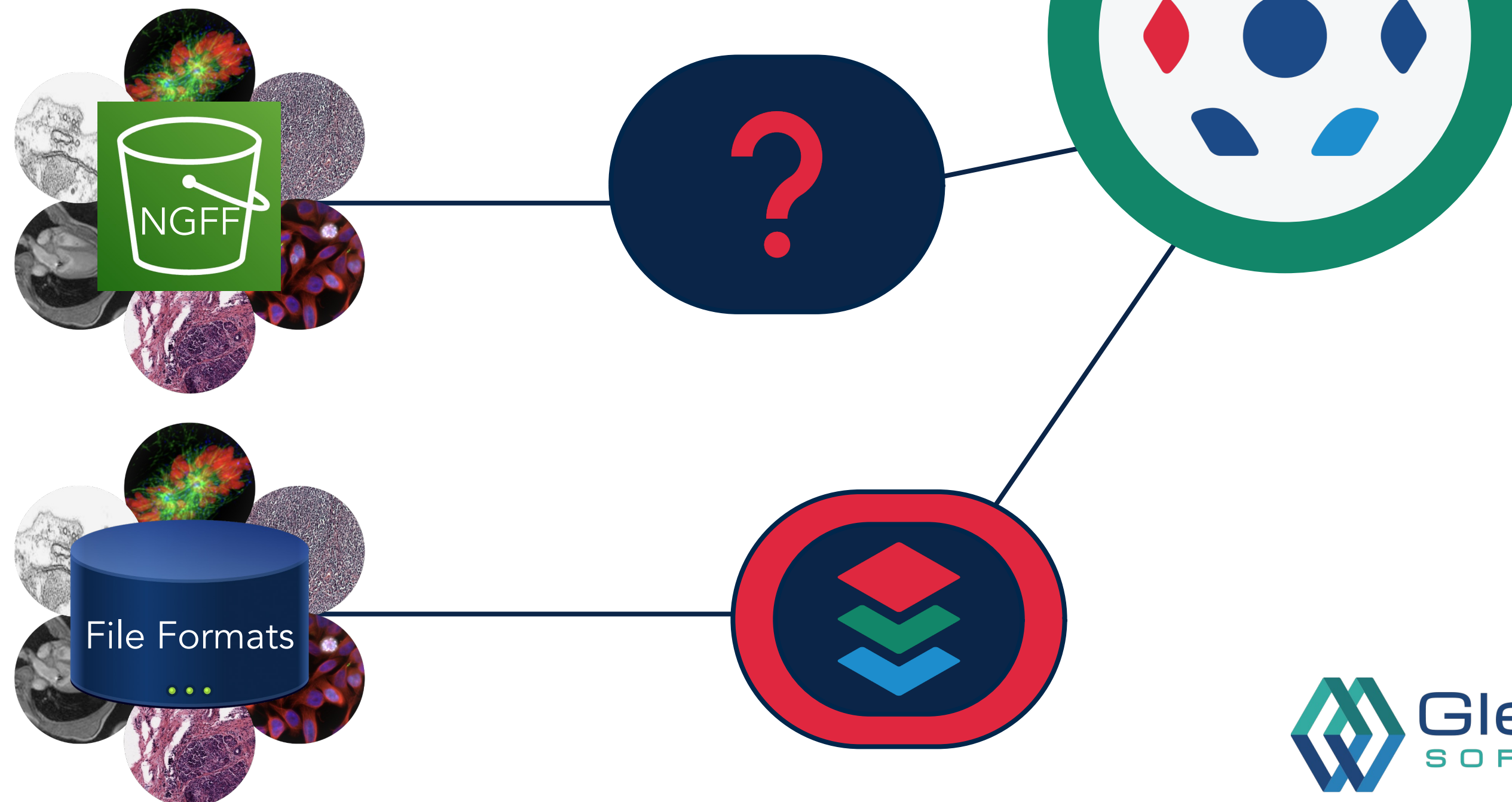
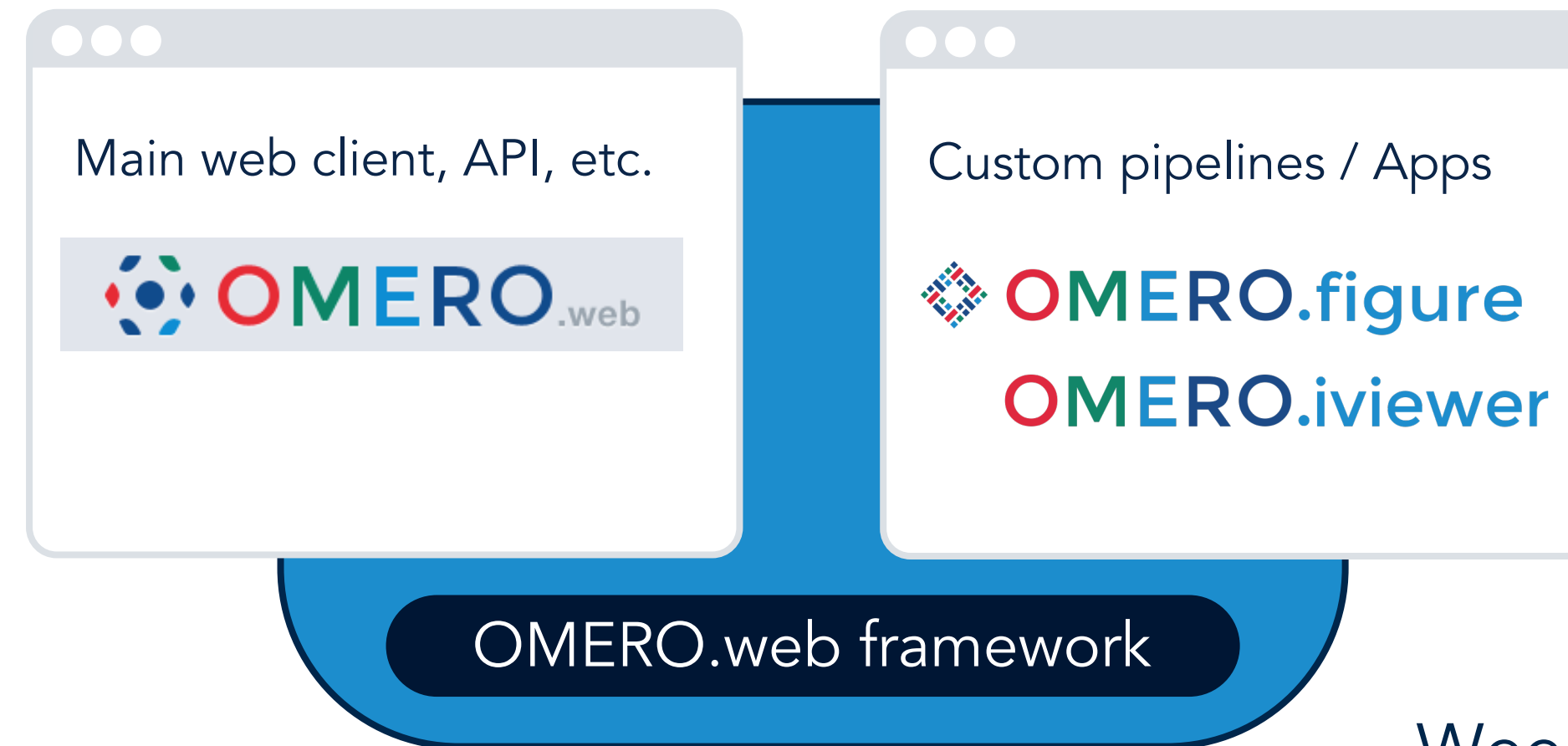
New interfaces and integrations – both open source and commercial licenses



SERVICE & SUPPORT

Direct support relationships with Glencoe customers enables key maintenance work

OMERO Ecosystem



Weekly meetings for key components:

- **OMERO.web**: OME, Glencoe Software, GerBI
- **OMERO.server**: OME, Glencoe Software
- **Bio-Formats**: OME, Glencoe Software
- Even more contributors to NGFF and other apps – more on this later!

Key successes:

- More people enabled to run testing and to make releases of these key components
- Releases have become more frequent (4 releases of OMERO.web in 2022, 8 releases in 2023!)

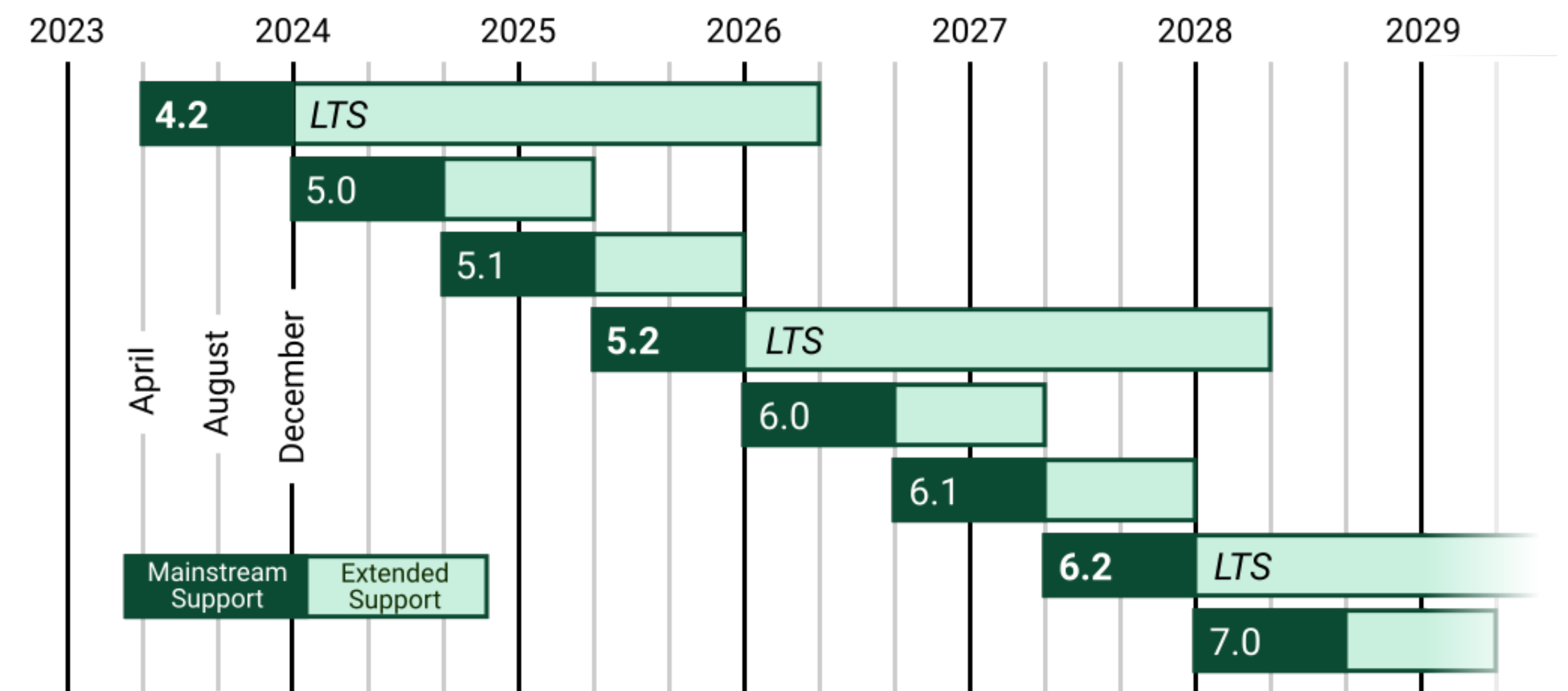
Service and Support

Glencoe Software's commitment to key maintenance work



Django upgrade:

- Django is an open source, Python-based web framework used by OMERO.web
- Compatibility introduced for LTS version 4.2 by Glencoe and OME in OMERO.web (April-July 2023)
- Django 4.2 ultimately required (October 2023) – coordination between OME, Glencoe, GerBI, and other community members to release compatible OMERO.web apps: omero-iviewer, tagsearch, autotag, parade, figure, mapr, and others



Service and Support

Glencoe Software's commitment to key maintenance work



```
Building wheels for collected packages: zeroc-ice
Building wheel for zeroc-ice (setup.py) ... |
```

ZeroC Ice dependency:

- Open source software, used by OMERO for client-server communication. Required on the server and the client (by system administrators and by developers).
- Required version 3.6.5 wheels are only available for EOL Python versions, requiring the package to be built to install it.
- Glencoe Software now makes available pre-built Ice package wheels for Linux, macOS, and Windows and various Python versions.

Service and Support

Glencoe Software's commitment to key maintenance work



Java version support

- Most server-side components use Java (OMERO.server, Bio-Formats, etc.). Some clients use Java as well (OMERO.insight, conversion tools, etc.)
- All latest releases require Java 8+, some require at least Java 11+
- Work on Java 17 and 21 support in 2024 – ongoing discussions and work between OME and Glencoe

		2024	2025	2026	2027	2028	2029
Java 8	Oracle JDK	[Support]					
	Eclipse Temurin	[Support]					
	Azul Zulu	[Support]					
	Amazon Corretto	[Support]					
	RedHat	[Support]					
Java 11	Oracle JDK	[Support]					
	Eclipse Temurin	[Support]					
	Azul Zulu	[Support]					
	Amazon Corretto	[Support]					
	RedHat	[Support]					
Java 17	Oracle JDK	[Support]					
	Eclipse Temurin	[Support]					
	Azul Zulu	[Support]					
	Amazon Corretto	[Support]					
	RedHat	[Support]					
Java 21	Oracle JDK	[Support]					
	Eclipse Temurin	[Support]					
	Azul Zulu	[Support]					
	Amazon Corretto	[Support]					
	RedHat	[Support]					



Customization

Open source contributions coming in 2024



OMERO.tables

- Currently uses PyTables as a backend
- Latest work from Glencoe Software uses OMERO.tables for “object-level” results (cell segmentation, spatial transcriptomics, etc.)
- Limited by the maximum number of columns and slow queries when row count is high
- Glencoe Software experimenting with new backends for OMERO.tables – come to the workshop!
- New developments in omero2pandas

Pageant Tonsil_P51_S01.ome.tiff (1901)

Filter Columns TABLES 1e2e7e7c-4cc7-4851-8991-a7d7b8fc4bb8_mask (16819) ITEMS PER PAGE 50

object	tile_in	POLYGON_CIRC_COMPACT	raster_09_CD8a_Argo602_intensity_mean	raste
1	1	7541577987916	170.578125	198.8
2	2	8634391262759	178.80243161094225	222.9
3	2	53673957269084	195.68265682656823	223.8
4	2	58802195509088	198.3559870550162	237.1
5	8	0254031164238	199.94166666666663	341.8
6	9	09324977897557	204.58695652173915	295.3
7	9	7913397695887	203.2787456445993	300.4
8	10	84417900827435	160.84666666666666	191.2
9	11	76391301331429	186.75087719298244	209.9
10	11	16782275657456	190.9792746113989	216.5
11	12	91975184050764	179.26979472140764	199.8
12	13	36906976161235	156.5147928994083	173.0
13	16	7597080344389	194.87150837988827	221.7
14	20	27763352002561	204.0246433203632	274.6

Visible: TILE_INDEX, POLYGON_AREA, POLYGON_PERIMETER, POLYGON_CIRC_COMPACT, RASTER_09_CD8A_ARGO602_INTENSITY_MEAN, RASTER_07_CD20_ARGO660L_INTENSITY_MEAN, RASTER_08_CD4_ARGO572_INTENSITY_MEAN, RASTER_15_FOXP3_ARGO784_INTENSITY_MEAN

Hidden: CENTROID

Columns: 9/107 (Max Columns: 20)

Apply Select All Deselect All

1218061 / 1218061 (100%)

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Thank you!

