

What's New in this Version

This topic lists all the additions and improvements incorporated in ICMLive® Operator Client 2023.1 which were not available in previous versions.

Support for database versions 2023.0 and above in the latest version of the software

When you previously installed a new version of ICMLive Operator Client, you were required to update your [master database](#) to the latest version of the database as only the latest version of the database was supported. This is no longer required when using database versions 2023.0 and above as you can now use multiple versions of the database with the latest version of the software.

When you use an older version of a database than the latest one, you may not be able to access all the features available in the latest version of the software. The availability of a new feature depends on whether or not it requires database tables or fields that are only available in the latest version of the database, or there have been other changes that may affect results. Such restrictions could be because we have added new database items or properties. However, non-database or results related features, such as performance improvements, will be available even when you use an older version of the database.

For example, if the version of the software that you use is 2023.1 and you open a 2023.0 master database, you will benefit from the [clip meshing improvements](#) but the [Inlet and Outlet properties](#), that are new for 2023.1, will not be displayed. If you want to display these properties or use any of the other new features that may have a database version restriction, you can [update](#) the 2023.0 database to 2023.1. When you update a master database, it cannot be used by you, or any other user, in an older version of the software.

Support for different database versions is only available for database versions 2023.0 and above.

Version selection when updating a standard master database

When you update a standard workgroup or standalone master database, you can now choose which version of the database you want the master database to be updated to. A new Update to dropdown has been added to the [Open Master Database](#) dialog.

When a database is updated to the selected version, you, and other users of the updated database, will be able to access all features available in applicable version of the software but no one will be able to use the updated databases in older versions of the software.

As support for different database versions is only available for database versions 2023.0 and above, the oldest version you can update to is 2023.0.

See [Master Databases](#) for further information.

Version selection for new master databases

Each major release of ICMLive Operator Client includes a new version of the database. Previously, when you created a new [master database](#), it would automatically be created using the latest version of the database. For example, a master database created with version 2023.0 of the software will have a database version of 2023.0. However, you can now choose which version of the database is to be used when you create a new master database. This can be especially useful if you collaborate with other users who do not work with the same version of ICMLive Operator Client as you.

In order to choose a database version, a new Database version dropdown, has been added to the [New master database](#) dialog.

As support for different database versions is only available for database versions 2023.0 and above, the oldest version you can select is 2023.0.

Culvert inlets and outlets

To improve the process of defining culvert inlet and culvert outlet losses for an InfoWorks network, a new field - Culvert code - has been added to their properties. This code is based on the culvert shape and material, and inlet and edge types, as defined in the [Hydraulic Design of Highway Culverts, Third Edition](#), published by FHWA. Note that for a culvert outlet, the Culvert code field is only displayed when its Reverse flow model is set to INLET.

See [Culvert Inlet Data Fields](#) and [Culvert Outlet Data Fields](#) for further information.

Culvert type of conduit

A new option Culvert has been added to the Conduit type field for a [conduit](#). This option indicates that this conduit acts as a culvert and its inlet and outlet losses have been specified as part of the [conduit properties](#).

Exceedance results for InfoWorks subcatchments

Two new exceedance results, Exceedance flow and Exceedance volume, have been added for any subcatchment included in a simulation that has its Limit drain to capacity box checked. See the [Subcatchment Results Data Fields](#) for details.

2D Zone results

A new result, Volume error, is now included in the [2D Zone Mesh Element Properties](#) dialog. It provides the accumulated water volume error at a mesh element during the simulation. See [2D Zone Results Data Fields](#) for further information.

2D flow direction results in radians

To provide more precise results, any 2D result attributes for flow direction now have their value, in radians, given to three decimal places rather than one. The applicable attributes include ANGLE2D, MAXANGLE2D, MINANGLE2D, MAXHAZANGLE2D, MAXDEPTHANGLE2D, and MAXVELDEPTHANGLE2D. See [Network Results Object Results Data Fields](#) and [2D Zone Results Data Fields](#) for further information.

Support for 4K screen resolution

The display of ICMLive Operator Client is now enhanced on high resolution, 4K screens.

External Data Server

The External Data Server (EDS) has been deprecated, and as external data items can no longer be associated with a network object, the External data option on the toolbar in the [Object Properties Window](#) has been removed.