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Announcement

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## Technology bonuses in InterSystems IRIS Grand Prix Contest

Hi Developers!

Here're the technology bonuses for the [InterSystems Grand Prix Contest](#) that will give you extra points in the voting.

Group	Bonus	Points
General	Docker	2
	ZPM	2
	Unit Testing	2
API and languages	REST API	2
	ODBC/JDBC	2
	Embedded Python usage	4
	Native API in Java, Python, .NET, node.js	3
Multi-model	Globals (key-value)	2
	SQL	2
	Object	2
	New model	3
Analytics	IRIS BI	2
	IRIS NLP	2
	InterSystems Reports	3
AI/ML	Integrated ML	4
	Python or Julia Gateway	3
Interoperability	BPL	3
	Custom Adapter	2
	PEX	4
	Workflow Engine	2
FHIR	FHIR Server REST API	3
	FHIR SQL Scheme usage	2
	Healthcare Data Transformations	3
Total		58

Below are the details and useful links on all the technical bonuses.

### General bonuses

#### ZPM Package deployment - 2 points

You can collect the bonus if you build and publish the ZPM(ObjectScript Package Manager) package for your Full-Stack application so it could be deployed with:

```
zpm "install your-multi-model-solution"
```

command on IRIS with ZPM client installed.

[ZPM](#) client. [Documentation](#).

## Docker container usage - 2 points

The application gets a 'Docker container' bonus if it uses InterSystems IRIS running in a docker container. Here is [the simplest template](#) to start from.

## Unit Testing - 2 points

Applications that have Unit Testing for the InterSystems IRIS code will collect the bonus.

Learn more about ObjectScript Unit Testing in [Documentation](#) and on [Developer Community](#).

## InterSystems IRIS API

### InterSystems IRIS REST API usage - 2 points

You get the bonus if you access InterSystems IRIS via REST API in your Full-Stack application. You either can build the REST API by yourself, or use any built-in or install it via ZPM. [Learn more on InterSystems REST API](#).

### Embedded Python usage - 4 points

Embedded Python needs a certain docker image, e.g. this one:

```
intersystemsdci/iris-ml-community:2020.3.0.302.0-zpm
```

See [the related video](#).

[Here is the template](#) which shows how Embedded Python works and how to make a ZPM package to deploy it.

### InterSystems Native API usage - 3 points

You get this bonus if you access the data in your Full-Stack application using any of the InterSystems Native API options: [.NET](#), [Java](#), [Python](#), [Node.js](#). Learn more [here](#).

### InterSystems JDBC usage - 2 points

InterSystems IRIS provides a JDBC driver to access the data. You get the bonus if you refer to the data in your Full-Stack application using SQL and InterSystems JDBC.

## Multi-model bonuses

### InterSystems Globals (key-value) - 2 points

InterSystems Globals are multidimensional sparse arrays that are being used to store any data in InterSystems IRIS. Each Globals node could be considered a key, which you can set a value for. InterSystems IRIS provides a set of APIs, including ObjectScript commands and Native API to manage Globals.

Tools:

- [Managing globals in the management portal](#)

Documentation:

- [Using Multidimensional Storage \(Globals\)](#)
- [Using Globals](#)

Articles:

- [Globals are Magic Swords for managing data](#)
- [The art of mapping Globals to Classes](#)

Videos:

- [Globals QuickStart](#)

You can collect 2 points for using Globals via ObjectScript or Native API in your

## InterSystems SQL - 2 points

InterSystems IRIS provides SQL access to data via ObjectScript, REST API, JDBC.

Tools:

- [VSCode SQL Tools](#)
- [DBeaver](#)
- [SQL in Management Portal](#)
- [Other SQL tools](#)

Documentation:

- [SQL Access](#)
- [InterSystems SQL Reference](#)

Articles:

- [Class Queries in ObjectScript](#)

Videos:

- [SQL Things you should know](#)

Collect 2 bonus points by using InterSystems SQL in your application.

## InterSystems Objects - 2 points

InterSystems IRIS provides the way to store and change instances of objects in globals via ObjectScript/REST API, Native API for Java/.NET/Node.js/Python, and XEP for Java/.NET.

Documentation:

- [Object Access](#)

Get 2 bonus points for the usage of Object Access in your application.

## Your data model - 2 points

InterSystems IRIS can be used as a data platform that exposes your own data model API. You are able to use ObjectScript, REST API or Native API to expose your own API which provides any special data model, like Time-Series, Spatial, Graph, RDF/Triple, Column store, Document store.

Introduce any of the new data-model API and collect 2 bonus points.

## IRIS Analytics Bonuses

### InterSystems IRIS BI - 2 points

InterSystems IRIS Business Intelligence is a feature of IRIS which gives you the option to create BI cubes and pivots against persistent data in IRIS and deliver then this information to users using interactive dashboards. [Learn more](#).

The basic [iris-analytics-template](#) contains examples of IRIS BI cube, pivot, and a dashboard.

### InterSystems IRIS NLP (iKnow) - 2 points

InterSystems NLP a.k.a. iKnow is an InterSystems IRIS feature and is a library for Natural Language Processing that identifies entities (phrases) and their semantic context in natural language text in English, German, Dutch, French, Spanish, Portuguese, Swedish, Russian, Ukrainian, Czech and Japanese.

[Learn more about iKnow on Open Exchange](#).

Examples:

- [Covid iKnow Text Navigator](#)
- [Samples Aviation](#)
- [and more](#)

Use iKnow to manage unstructured data in your analytics solution and get 1 bonus point.

### InterSystems Reports - 3 points

InterSystems Reports is a feature of InterSystems IRIS which lets you design printing reports, send them via email by schedule, and deliver interactive reports for clients. InterSystems Reports is a repackaging of Logi Report (formerly named JReport®), a product of Logi Analytics®. [Learn more in Documentation](#).

Check the [Github repo with examples](#) of InterSystems Reports.

Also, watch [the video with the demo](#) of InterSystems Reports and try [with the Learning Lab](#).

You can download InterSystems Reports designer and server in the [WRC](#) download section.

License keys for InterSystems Reports Designer and Server will be available in [Discord](#).

## AI/ML

### IntegratedML - 3 points

IntegratedML is a feature of InterSystems IRIS that expands SQL with a set of ML instructions that let you simplify and automate AI and Machine learning calculations for your solution. Learn more on [IntegratedML](#).

You need special images of IRIS to use IntegratedML, [check it here](#).

Examples:

- [A basic integratedML template](#)
- [Several examples on Open Exchange](#)

Usage of IntegratedML in your IRIS Analytics solution gives you one extra point.

## 2. Python Gateway usage - 2 points

[Python Gateway](#) is an addon to InterSystems IRIS which gives you the way to use Python in the InterSystems IRIS environment:

- Execute arbitrary Python code.
- Seamlessly transfer data from InterSystems IRIS into Python.
- Build intelligent Interoperability business processes with Python Interoperability Adapter.
- Save, examine, modify and restore Python context from InterSystems IRIS.

Learn more [about Python Gateway](#).

You can use the [Python Gateway template](#), which includes IntegratedML too.

## Interoperability Bonuses

### Business Process BPL or Business Rules Usage - 2 point

One of the key features of IRIS [Interoperability Productions](#) is a business process, which could be described by BPL (Business Process Language).

[Learn more on Business Processes in the documentation](#).

Business Rule is a no-code/low-code approach to manage the processing logic of the interoperability production. In InterSystems IRIS you can create a business rule which you can create visually or via the ObjectScript representation.

You can collect the Business Process/Business Rule bonus if you create and use the business process or business rule in your interoperability production.

- [Business Rule Example](#)
- [Learn more on Business Rules in the documentation](#)

### Custom Interoperability Adapter Usage - 2 point

InterSystems Interoperability production can contain inbound or Outbound adapters that are being used to communicate with external systems by business services and operations of the production. You can use out-of-the-box adapters (like File, or Email) or develop your own.

You get the bonus if you develop your own custom inbound or outbound adapter and use it in your production.

- [Example of an adapter](#)

- [Learn more on adapters](#)

## Production EXTension (PEX) Usage - 4 points

PEX is a Java or .NET extension of Interoperability productions.

You get this bonus if you use PEX with JAVA or .NET in your interoperability production.

- [PEX Demo](#)
- [Learn more on PEX in Documentation](#)

## Workflow Engine Usage - 2 points

Workflow Engine is a part of IRIS Interoperability which could be used to automate the distribution of tasks among users.

You get this bonus if you use include the usage of Workflow Engine in your interoperability production.

[Learn more on Workflows in Documentation](#).

There are Community modules [WorkflowAPI](#) and [WorkflowUI-ngx](#) which provide a nice UI layer on Angular for the Workflow engine.

## FHIR Bonuses

### FHIR Server REST API usage - 3 points

You get the bonus if you use the REST API endpoint of the FHIR Server in InterSystems IRIS for health. You can take the [IRIS-FHIR-Template](#) which prepares the FHIR server during the docker image building. The documentation for FHIR API 4.0.1 could be found [here](#). Learn more in [InterSystems IRIS for Health documentation](#).

### FHIR SQL Schema usage - 2 points

You can collect this technology bonus if you use FHIR SQL Schema in the SQL queries of your application. You can use this schema e.g. for making an FHIR Analytics solution. Use HSFHIRI0001R for resources schema for full resources and HSFHIRI0001S schema to search with SQL for resources. Check the examples in the [template](#).

### Healthcare standards transformations - 3 points

InterSystems IRIS for Health contains Healthcare Interoperability modules that help to perform data transformations from different healthcare standards to FHIR and vice-versa. Make CDA to FHIR, HL7v2 to FHIR, or any other transformations in your application to collect this bonus. See the examples of [HL7v2 to FHIR](#) and [CDA to FHIR](#) transformations. [Learn more in the documentation](#).

The list of bonuses is subject to change. Stay tuned!

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Source URL: <https://community.intersystems.com/post/technology-bonuses-intersystems-iris-grand-prix-contest>