FICO Xpress Optimization Newsletter for 1/2018

Immediately after we sent out our newsletter on 1/11/2018, one of our service providers had an outage. This caused many of the links in our newsletter to break. We apologize for this inconvenience and we are happy to report that the service is up and running again. Thank you for your interest in FICO Xpress Optimization!

FICO Xpress Mosel is Now FREE and OPEN

FICO Xpress Mosel, the premier analytic orchestration, algebraic modeling, and programming language is now FREE and OPEN.

FICO is deeply committed to the field of mathematical optimization. By providing Xpress Mosel FREE to use, our industry-leading modeling language is now accessible to *everyone*. We believe that every optimization or analytics project can benefit from the power of Xpress Mosel.

Today optimization professionals create models in a wide variety of proprietary modeling languages or open source languages. With the release of FREE Xpress Mosel, *anyone* can use the same technology as market leaders such as **Southwest Airlines**, **Honeywell** & **Nestle** without a fee.

Not only is Xpress Mosel FREE, but it is now OPEN to connect to 3rd party solvers (not just **FICO Xpress Solver**). Optimization professionals choose their solver technology based on their specific problem characteristics and their personal preferences. We believe OPEN Xpress Mosel is the best choice for modeling any problem type and then solving it with any solver technology available.

We invite the community to develop and share connectors to 3rd party solvers. We look forward to supporting you with your questions on the **FICO Xpress Community site**.

Get Xpress Mosel for FREE by downloading the **FICO Xpress Community License** today! Read the full announcement **here**.

Introducing the FREE FICO Xpress Optimization Community License

Are you a student, academic, operations researcher, data scientist, business analyst or solution developer? Are you looking to solve highly complex problems with mathematical modeling and optimization tools used by some of the world's most efficient companies? Now you can develop, model and deploy the same industry-leading **FICO Xpress Optimization software** that is used by enterprises such as **Shell**, **American Airlines** & **Avis** free of charge.

Download the free software **here**.

New Naming and Packaging for FICO Xpress Optimization

FICO recently updated its naming and packaging for its optimization technologies and solutions. The new naming unifies the products under one name, FICO Xpress Optimization. It includes four components:

- **FICO® Xpress Insight** (formerly Optimization Modeler) enables businesses to rapidly deploy optimization models as powerful applications. It allows users to interact with models in business terms and runs all FICO Xpress Optimization Solutions, including Decision Optimizer.
- **FICO® Xpress Executor** provides standalone support for optimization execution services, allowing businesses to deploy and execute optimization models quickly and easily.
- **FICO® Xpress Solver** provides the widest breadth of industry-leading optimization algorithms and technologies to solve linear, mixed integer and non-linear problems.
- **FICO® Xpress Workbench** is an Integrated Development Environment (IDE) for developing optimization models and complete solutions. FICO® Xpress Workbench integrates with Xpress Insight for seamless development and deployment of complete optimization solutions. It includes Xpress Mosel, the market-leading modeling, programming and orchestration language.

In addition, all software solutions developed using FICO Xpress Optimization technology have been grouped together under the name - FICO Xpress Optimization Solutions.

Learn more about our new naming and packaging **here**.

What's New in FICO Xpress 8.4?

FICO has moved to a quarterly release cycle and our latest release is FICO Xpress 8.4. While this release delivers new capabilities to all components of FICO Xpress Optimization, these are the major advancements:

Xpress Insight 4.9

- Xpress Insight includes usability and performance enhancements specifically designed to make solutions development easier and faster for our customers. Please see the **Xpress Insight 4.9 Release Blog** for more details.

Xpress Executor 2.1

- Xpress Executor now includes Rules execution for the fast and repeated execution of rules within an optimization model run. This feature is used in solutions that need to run a very high number of rules with a very low latency while running an optimization model in the cloud.

Xpress Solver 8.4

- Xpress Solver includes significant performance enhancements. With these algorithmic enhancements, FICO runs up to 25% faster in linear programming benchmarks and up to 20% faster in mixed integer programming benchmarks compared to 6 months ago. With this release, FICO has regained its #1 position in LP benchmarks.

Xpress Workbench 2.1

- Xpress Mosel, FICO's market-leading analytic orchestration, algebraic modeling, and programming language, is now OPEN and FREE. It is now open to connect to 3rd party solvers (not just **FICO Xpress Solver**) and it is free of charge.
- The 2.1 update also includes several additional usability and performance enhancements, including an updated IDE (Integrated Development Environment). For technical details, please see the **Xpress Workbench 2.1 Blog**.

Decision Optimizer 7.2

- Time series equation component support - functionality that allows users to create equations that undertake a series of calculations, such as a Time Series calculation for example, to calculate deprecation of an asset over a number of years or collections action over a number of days. In addition to bringing back this functionality from 6.0, the support in 7.2 also adds the ability to identify outputs created during the series calculation as temporary. This allows users to remove data created during the different series steps, which helps to reduce clutter and improve performance.
- Tree aware optimization treatment constraints - this fully replicates the 6.0 functionality, but also provides a simpler, more visual user interface for setting criteria. Tree aware optimization allows users to define both *eligibility criteria* and *consistency criteria*. *Eligibility criteria* allows users to define which end nodes of a tree qualify for which treatments. *Consistency criteria* allows users to define which treatments can be assigned to each end node based on the rank ordering set on a decision tree variable or variables. This functionality will help users get to a final refined Decision Tree Strategy more quickly, potentially saving

days during a professional services development project.

- Project and scenario package importation and export - this new capability will significantly help users export and import whole DO7 projects for sharing, review, etc. A Project Export / Import will now support all the core details of the Decision Impact Model, Scenarios and Results. It will make the moving and upgrading of DO7 projects much more efficient.

If you would like to stay abreast of our technology updates, please follow our **Releases** page and our **Product Patch Notification** page on the **FICO Xpress Community site**.

New Community Site for FICO Xpress Optimization

FICO redesigned its **Xpress Optimization Community site** just for you! **Join us** to interact with the Xpress product team, share best practices with Xpress users across the globe and discuss trending topics such as Xpress integration with the latest in AI and machine learning. By joining the FICO Xpress Community, you can be the first to know about our **new product releases**, **patches** and **videos**.

Our recent community redesign creates a unified, yet user-driven experience that benefits everyone from operations research experts and data scientists, to solution developers and line of business teams. At its core, it is a one-stop shop for FICO Xpress Optimization technical content, use case examples, user best practices and support requests. If you're a business user or analyst, you'll appreciate our industry content and client stories reflecting how even non-technical folks can transform their businesses with Xpress Optimization.

Join us today!

FICO WORLD¹⁸
The Decisions Conference
APRIL 16 – 19, 2018 [MIAMI BEACH, FL]