

PYRAMID 2018

THE PLATFORM FOR SELF-OPTIMIZING DECISIONS



The PYRAMID 2018 RTM release is the initial version of a brand-new approach to business intelligence – an analytics platform designed to be THE Analytics Operation System. Building on the success of previous product versions, this platform comes with many capabilities and a special focus on data acquisition, artificial intelligence, and machine learning - as Pyramid Analytics starts delivering on its vision for analytics: Self-Optimizing Decisions.

The application fabric has been engineered to usher in a simple and robust client interface together with a backend server platform written in Java. Apart from the fabric, it includes options to operate natively with different data stacks, as well as data preparation for end-users and the techniques for modeling data well beyond Microsoft Analysis Services.

New Front and Back

The PYRAMID 2018 client interface, written in pure HTML5 + JavaScript, reflects a modern design that is easy-to-use, more intuitive, and smarter than any other platform with numerous acceleration features and capabilities. The client is designed to run in any HTML5-compliant browser and includes full gesture support to run on tablets. The single interface supports the entire analytics workflow as well as management. The organization guides users and administrators to best practice options that might have been missed and forgotten in a traditional layout.

Better Content Framework

All elements of the analytic space are “first-class citizens,” which means models, discoveries, presentations, publications, illustrations, and logic formulations all coexist in the same centralized virtual file system and benefit from the sharing, collaboration, and management framework. This not only makes system-wide management easier for both users and admins alike; it also makes the workflow more robust and logical.

Universal Access

The client interface provides the same full capabilities on desktops as well as tablets including gesture support; a mobile specific interface will become available in a subsequent release.

Streamlined Administration

The administrative functionality is built directly into the client, offering simple access for admins. It also includes the best method for handling multiple tenants, as well as all typical issues such as security and content access.

WHAT'S IN THE BOX

	MODEL	End-user data preparation and modeling with deep AI & ML capabilities
	DISCOVER	Data visualization, querying & report building
	PRESENT	Dashboards & BI applications
	PUBLISH	Report bursting & analytic narratives
	ILLUSTRATE	Data-driven infographics & dynamic text
	FORMULATE	Business logic formulations, KPI builder & AI/ML scripting

Data Stacks

SQL and PQL

PYRAMID 2018 includes a query engine that natively queries in both SQL and MDX. The engine is driven through a smart querying layer called Pyramid Query Language or “PQL” (pronounced prequel). PQL is designed to bring the analytic magic of a language like MDX to the power, ubiquity, and elegance of SQL. By combining both frameworks, the user gets the best of both worlds effortlessly.

Using PQL with natively generated SQL (or MDX), PYRAMID 2018 can directly query almost any ANSI SQL-compliant database technology, Microsoft’s Analysis Services, the in-memory engine, and a variety of Apache Big Data engines like Presto, Drill, or Impala.

In-Memory Engine

PYRAMID 2018 includes an in-memory engine that is designed to deliver incredible performance and scalability. With 8-10x compression and SQL-based querying, the in-memory option coupled with PQL analytic options makes in-memory a highly effective and competitive solution versus other, more expensive options.

Data Modeling

Data Preparation

The platform includes an end-user toolset for data preparation – “business user ETL”. Apart from offering users a point-and-click environment for fixing, conditioning, and improving incoming data, PYRAMID 2018 offers the ability to schedule the data prep operations and blend structured and unstructured information in numerous ways in a modern UI without scripting.

AI and Machine Learning

A key element of the data preparation tool is the opportunity for end-users to inject AI and machine learning algorithms into their data before it is modeled and materialized. This is a fundamental shift in how AI can be used in analysis, by allowing complex algorithms to be run at the right place - in the data stack, and at the right time – before querying.

The platform delivers a number of prebuild machine learning libraries including Weka, MLib, and propriety Pyramid libraries. R scripting capabilities are available and Python, Ruby, and other scripting options are in development and will be available in subsequent releases. And to further accelerate the uptake, ML scripts can be shared like all other business logic elements of the analytic platform. A nascent marketplace has been added by Pyramid for downloading common script elements from the public domain. The marketplace will be seeded by Pyramid and partners and will expand to third parties and customers.

Modeling

The data preparation layer has the flexibility to build and materialize models BACK into multiple technologies: from the in-memory engine and Microsoft’s Analysis Services to any ANSI SQL-compliant database technology and various Apache Big Data engines like Presto and Drill. These options will allow users to build “analytics in place,” rather than extract them to inconvenient, intermediary engines.

Engines

Deployment Options

The PYRAMID 2018 platform includes robust engines for handling queries faster and more efficiently – for greater throughput and concurrency. As a Java-based platform, the product will be able to run natively on multiple platforms across Windows, Linux, and OSX and will include docker images.

Hybrid Capabilities

PYRAMID 2018 includes a “Pulse” engine that will allow customers with hybrid cloud deployments to query data stores hosted on premises (or vice versa) without complex networking or security solutions. The easy-to-deploy system is completely secure yet flexible while remaining fast and fully governed.

PYRAMID 2018 Release Notes

PYRAMID 2018 is now available for download. It is a complete release with functionality covering the entire workflow.

Deployment

The PYRAMID 2018 RTM release is delivered as either a simple standalone installer designed for a single, Windows 64-bit deployment or server installer for one or more machines in a cluster.

- This release includes all requisite components and capabilities to run as a standalone solution – without the need for third party data stacks or engines – including PostgreSQL for the repository and the In-Memory engine for analytics. Additional data sources and modeling environments can be added in the application post install.
- The server installer allows administrators to choose either installing with the default PostgreSQL or an alternative MS SQL instance to host the repository and to deploy a cluster of machines.
- The stand-alone instance is intended for evaluations or individual users who do not intend to share analytics in a group or collaborative environment. The standalone client is not intended to be an off-line extension of the PYRAMID 2018 server. Its suitability for that role may be limited.
- PYRAMID 2018 uses the internal database for authentication by default. Active Directory can be enabled from inside the admin console of the application. The installing user is the initial active account while other users can be added from the admin console.
- Additional deployment options and capabilities will be available when Docker images, Linux and Mac OSX installers and the PYRAMID 2018 Pulse Client are available in a subsequent release.

Analytics

Model

PYRAMID 2018 makes available a significant number of data-prep functions. These include, functions for importing and loading data into various relational engines as well as into the Pyramid In-Memory engine. Additional data-prep and ETL capabilities will be included in subsequent releases.

- Building of MS cubes or models is not enabled in the release.
- A full complement of machine learning libraries including Weka and MLlib are enabled, as well as R scripting and certain Pyramid ML engines. Pyramid Analytics will continue to add support for additional scripting languages including Python in subsequent releases.
- Intelligent one-click modeling and the advanced modeling interfaces are available. An additional step-by-step wizard will be added in a subsequent release.

Discover

The core discovery and querying engine is enabled for all SQL and MDX models. Additional MDX capabilities and modeling are planned for the next several releases.

- A number of disabled buttons have been included in the ribbon. These are reserved for additional and advanced features that will be made available in the next several releases. This includes certain analytic function buttons.
- Grids, Cartesian charts (column, bar, line and area), scatter plots (and bubbles) and segment charts (pies and donuts) are all enabled. Bubble and shape (choropleth) maps are available, including Marimekko and Circle Packing charts. Additional formatting aspects for some visualizations will be added in subsequent releases, depending on the visualization type.
- Element trees are functional and include the ability to create quick calculations for SQL data sources. Additional MDX-based “quick calcs” will be added in subsequent releases.

Present

The presentation engine is enabled for displaying dashboards and custom analytic applications on desktop and tablet devices. An additional interface to allow authors to designate the layout for mobile devices will also be added in a subsequent release.

- A large number of presentation design capabilities are enabled in this release, including master pages, general formatting, panels, positioning, and placement. All visuals created in Discover or content from Illustrate can be added to presentations, including slicers.
- Interactions between slicers and visuals are enabled using both the graphic interaction tool and interaction manager as well as sync interactions. These interactions will be extended with additional advanced interactions options within subsequent releases.

RECOMMENDED RTM RELEASE SETUP

- Windows 7/8/10 Desktop or Windows Server 2008R2 - 2016
- Screen Resolution: Full HD is recommended [Min. 720p 1280x720]
- Browsers: Chrome, FireFox, Edge, Safari, IE11, Opera [Min. any HTML5 compliant browser]
- Cores: 8
- Memory: 8Gb [16Gb+ is recommended]
- Disk: 1.5Gb. [SSD is preferable for the data drive]

Publish

The publication engine is enabled for report bursting and analytic narrative production. Advanced scheduling capabilities are enabled including multi-selections and triggered schedules. Publication formatting and content options enabled in this release are identical to the Present capabilities described above.

- The new “page repeater” engine is included in the release, however page and report triggers will only be available in subsequent releases.
- The scheduler in this release includes a new group condition switch for triggers.

Illustrate

The illustration engine is available in this release. It allows end-users to create and manage graphics and text. Additionally, users can build data-driven graphics and text without writing code or programming. Using these capabilities together, business users have the ability to create dynamic, data-driven infographic style content.

- A large number of the formatting options are included in this release, as well as query-driven capabilities. Note: Grid-based queries must be used when creating dynamic content with query-driven results.
- All illustrations can be embedded in both publications and presentations. They can also be used in conjunction with interactions.

Formulate

The scripting wizard and KPI wizard is available with core functionalities. Other logic options with additional capabilities will be available in subsequent releases.

Management

Content Management

The core content management system (CMS) is operational in the RTM release and covers role security, folder operations, file operations, and scheduling.

- The “Data Source Changer”, Import and Export features are available. Additional migration and management capabilities are planned for subsequent releases.
- The portal interface – for surfacing materialized content (like PDFs) - and the light interface – to simplify the learning curve for new or occasional users are both available.
- The new content “locker” for managing materialized content (which includes published reports, databases, machine learning models) is in the release. This also includes initial settings for metadata and security. More functionality will be added in subsequent releases.

Administer

The RTM release is installed with a full suite of administration capabilities.

- Full logging and auditing systems are included as well as performance and customization options like the theme editors subsequent releases.
- Users, Roles, and Tenants can all be managed as well as data source security. Authentication with AD is available too. Cross tenant content and data security will be enabled in subsequent releases, as will user provisioning and SAML authentication options.
- Metadata security has been added for data sources, additional metadata management and security features will be added with subsequent releases.