



Pyramid User Deployment Guide

Guidelines on how to deploy Pyramid to users in your organization

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Overview

Pyramid is a vast, end-to-end analytics platform for deployments in enterprise organizations. A key architectural achievement in the platform is the ability to deliver functionality that ranges from simple to sophisticated **in a single product**. In meeting that standard, the platform has been designed to cater for all the different types of users found in the enterprise, from the most peripheral non-technical users through to analysts, data workers and data scientists.

The following paper will explain how to identify different user types and match them with the different capabilities of the product and ultimately how to craft the right deployment strategy for Pyramid in the organization.

The User Onion

The first step in building the strategy is to identify the different types of users found in your organization. To help, Pyramid identifies six distinct user classes or types that are prevalent in most organizations.

Concentric layers or tiers (like an onion) is the best way to visualize these tiers, starting with the least technical skill and simplistic experience on the outside; moving inwards with more skill and functional power at the center. Obviously, depending on the business problem or scope of deployment, certain user types will not always be applicable.

Non-Technical User Tiers

Non-technical users are casual users of analytics who prefer to access data without in-depth knowledge of the tools and authoring processes behind analytics. They have typically received light training and are expected to be “spoon-fed” content. Non-technical users usually are given “viewer” licenses.

Peripheral Recipients

Peripheral Users are users who are disconnected from the platform and are sent analytic content in a static document format. As such they are better described as “recipients” rather than users. Analytic content is PUSHED to peripheral users, who engage analytic reporting in the most passive mode compared to all the other tiers.

Casual Viewers

Casual Viewers are light users who need to access specific content delivered in a host application like a web portal or third-party application. Delivered through EMBEDDING of live content, casual viewers are given the ability to interact with the content without making permanent changes to it. In effect, this user type (like the remaining user types) PULLS live content on demand.

Active Viewers

Active Viewers are regular consumers of analytic content. As such they login to the ‘light client’ of Pyramid to find and use reports and dashboards that have been prepared for them in advance. Like Casual Viewers, they PULL content on demand and are given the ability to interact with the content without making permanent changes to it. However, Active Viewers are also given more capabilities to comment on data, set personal data alerts and ask more data questions by using tools like the “Analyze Further” in-dashboard analytics tool.



Technical User Tiers

Technical users are deployed using the 'pro' user license type and login to the 'full' client. The defining difference between pro and viewers seats is the ability to create and author new content. Pro users are expected to be more data savvy and will receive more training on the tool sets.

Data Workers

Data workers are proficient users of data and analytics, often building their own reports or doing heavy investigative tasks with data in an ad-hoc reporting setting. While they may also consume pre-built content from others, data workers usually have the training and skill to delve further and use more advanced analytic features. Hence, they are often the people driving the exploration and discoveries - producing *descriptive* analytical content. Data Workers may also build ad-hoc data models, but generally prefer to pivot off existing data sets created by Data Scientists or BI Developers (see below). Data workers predominantly use live, interactive data and tools PULLING analytic content.

Data Scientists

Data Scientists are advanced users that generally focus on the construction of data models and the process of applying advanced scripting to generate new analytical insights. Although there is a big cross-over with data workers, data scientists find themselves manipulating data more and producing artefacts to drive *predictive or prescriptive* analytic content. They use machine learning algorithms, scripting platforms like Python and R and other advanced statistical methods. Often, data scientists are heavily involved in creating the baseline models and advanced calculations that are used downstream by data workers and other user types.

BI Developers

BI Developers are generally focused on building enterprise-certified content for others. Content from BI developers comes typically in two "flavors" for two main constituents (that are not necessarily mutually exclusive):

- Reports, dashboards and publications for non-technical users who simply want to work off pre-built content;
- Data models and calculations for proficient technical users who want the complexity of enterprise data models resolved before they use it.

Administration

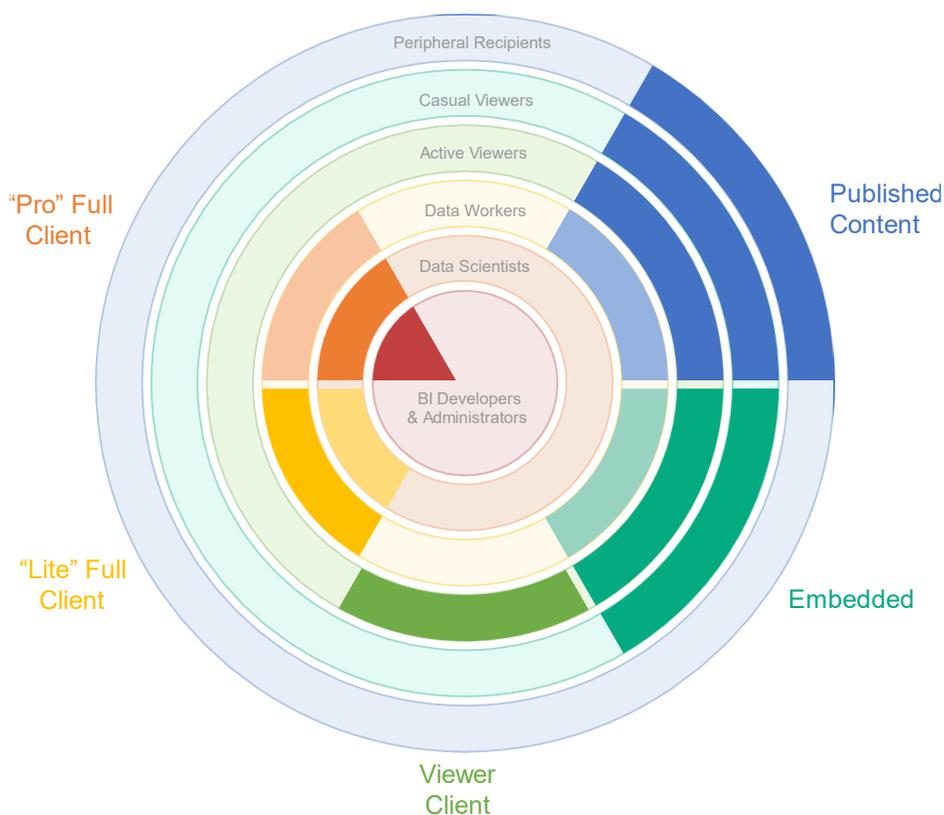
Often the roles of BI Developer and Administrator are mixed. Regardless, administrators manage system access and performance tweaking. More significantly though, administrators work with the BI development role to deploy pre-built content and data to the various user tiers in a secure, functional method.

Managing Functionality

Pyramid has been carefully designed to allow administrators to stratify the deployment of functionality to the different types of users in the most effective way, without making the permutations overly complex.

In close alignment with the user ‘onion’, the application’s different functional capabilities are layered from the least sophisticated to the most, with many customizable options in between. The core layers are:

- **Published content** – static reporting output
- **Embedded** – live, interactive content hosted in another application
- **Viewer Client** – live, interactive content presented inside an uncomplicated “viewer” interface
- **Lite Full Client** – live, interactive content with simplified authoring capabilities inside the “lite” interface
- **Pro Full Client** – live, interactive content with sophisticated authoring capabilities inside the “pro” interface



While its easy to assume that each tier only uses one access point to the apps, its very typical, that different user types access multiple app entry points, regardless of their tier (as shown below). For example, while published content is geared for peripheral recipients, its not unusual for almost all user types to get rendered content (lie viewers and data analysts).

Mobile access is a specialized live interface into the application for tablets and phones and is separately available in addition to the above content modalities

Published Content

Content that is PUSHED to users via the Publication mechanism in Pyramid is designed to be untethered to the platform. The content is produced dynamically, but the output is static reports rendered in a variety of document formats: PDF, Word, Excel, PowerPoint, CSV, XML, JSON and HTML. Using the report bursting capabilities, the output can be personalized and automatically distributed to recipients via email. Alternatively, the content can be exposed to users in other tools by using Pyramid’s APIs which will allow developers to create handles to rendered content.

As shown in the diagram above, published content can be used for all user types, but is less and less relevant to the power users at the center of the “onion”.

Modulating the Experience

As described, published content can be pushed to all user types - not just ‘peripheral recipients’. The reports are presented in a fully rendered format complete with charts, text, dynamically generated infographics and natural language generated text elements. Given that the rendered results are static, there is little that can be configured in the publications, other than the design and logical flow of the content itself. The simplicity of the medium means the end user needs no technical skill to consume the analytic content.

Embedded Content

Embedded content is live content hosted in another application. The process of embedding content is relatively simple, but it still requires effort by BI developers to deploy the content inside a third-party application. This exercise is technical even if the final experience is geared towards non-technical users. Since the overall end experience is light, embedding is usually aimed at casual viewers.

As shown in the diagram above, embedded content can be used for all interactive user types (casual viewer and below) but is less relevant to the power users at the center of the “onion”. By definition peripheral recipients don’t get casual viewer access.

Modulating the Experience

The end user accesses the third-party host application to consume the analytic content – so data is live and tethered to Pyramid by definition. The content is usually interactive by default, so the end-user may need some training on how to manipulate the analytic visuals to drive follow-up analysis. BI Developers can use ‘runtime settings’¹ in the design of content to heavily redact interactive capabilities and options – thereby simplifying the experience for non-technical users.

Viewer Client

The viewer client is live content presented to users inside the simplified “viewer” application - specifically designed for active users that want to consume content without creating it. Report and dashboard data is live and tethered to Pyramid and the underlying data sources and are fully interactive by default, so the user may need some training on how to manipulate the analytic visuals to drive follow up analysis. The user may also need some very basic training on how to navigate the viewer client – although it has been presented in a simplistic, familiar context. Because of the added capabilities, the viewer is best suited to active viewers who will find the benefit of the training well outweighs the extra cost of learning how to use it.

As shown in the diagram above, the viewer client is only applicable to active viewers since power users at the center of the “onion” have the full client, while casual and peripheral users may not have access to it.

Modulating the Experience

The viewer requires little configuration. Instead, there are options to simplify the reporting and dashboarding experience for users by keeping the content organization clear and simple (folders, names, descriptions etc.). Also, BI Developers can use the ‘runtime settings’ in the design of content to heavily redact interactive capabilities and options – thereby simplifying the experience for non-technical users.

¹ As of version 2019.

Full Client

The full client (both lite and pro) is live content presented inside the full interface and is designed for users that want to both consume and create analytic content. As such, it appeals to data workers and data scientists. It also represents the main toolset for BI development in Pyramid. Since the full client offers numerous capabilities that range from simple wizards to advanced coding functions, user training is recommended on the interface. As shown in the diagram above, the full client is only applicable to all users with “pro” access: Data workers, Data Scientists and BI Developers at the center of the “onion”.

Lite vs Pro

The capabilities of the full client can be heavily modulated (as described below) for each user tier. Critically, the full client can be split into the “lite” interface and “pro” interface. Both allow users to author content, but with different degrees of access to the sophisticated options.

Modulating the Experience

Given the vast breadth of functionality in the full client, there are various tools and approaches to better earmark functionality for each of the various user types.

Profiles

The use of profiles represents the key mechanism for customizing and simplifying the user experience for pro users. Profiles allow administrators to turn entire sections of the application on or off by user or role – thereby hiding complex or unneeded functionality from different user types. (See online [help](#) for more details on setting up profiles.) This is also the venue to deciding whether a user is presented with the “lite” interface and tools or the more advanced “pro” experience.

For example, the data modeling tools may be removed from data worker profiles if they are not going to build data mash-ups. Alternatively, a very basic profile that eliminates all applications except the Present app, would allow less skilled data workers (aka “data consumers” who need more than active viewer capabilities) to build new presentations without the complexities of data modeling, calculation formulations, illustration or publication designs.

Data Scientists, on the other hand, may have access to the Present, Publish and Illustrate apps removed because they have no interest in these graphical tools and instead want an uncluttered user experience focused solely on Data Modeling, Discovery and Formulations.

In another example, Discover Lite and Present Lite may be the only tools given to less technical users who want to author content, but do not want to access all the other functions of the product.

New installations of Pyramid include sample profiles in the installation – showing the different ways the profiles can be setup and configured.

Folder Access

Using content security and access controls, users can be directed to where and how they create and share content. Although this is usually used to manage the way people access content, it is also a way to manage user functionality. By limiting write access controls on PUBLIC domain content, administrators can ensure that data workers and data scientists are not exposed to the added complexities of publishing and securing content to other users beyond their own needs.

Administrative Rights

Each pro user can be independently given administrative rights in the application. These rights allow the user to manage the application from system access to system configuration. There is no limit on the number of administrators that can operate in the application and this functionality is not separately licensed.

There are two administrator types: Domain and Enterprise.

- **Domain Admins:** These admins are used to manage users, roles, data sources and content (including folders and security). In a multi-tenant deployment, domain admins only operate within their own tenancy or domain.
- **Enterprise Admins:** These admins have the same capabilities as domain admins, with added controls of system settings and platform wide configuration. In a multi-tenant deployment, enterprise admins operate ACROSS tenants.

Mobile

The mobile application is separate from the main interfaces described above. It is deployed in two modes: tablet and phone.

- The tablet experience is identical to the desktop and matches the light client and full client described above. Embedded content can be consumed on the tablet like any other web-based element as well.
- The phone on the other hand, has a unique user experience that closely matches the light viewer. Except it is represented in a format that better suits the smaller device form factor.

Modulating the Experience

Administrators can block access to Pyramid using the native mobile apps. If accessible, the tablet app reflects the same functional modulation options found in the desktop experience (described above). The phone, like the light client, has little need for configuration.

Deployment Scenarios

Given the different user types and the different methods for modulating the functionality of the application, there are obviously numerous deployment permutations available. The following two example scenarios show deployments that have been observed. To provide clarity on the sub variations, we have added sub-tiers in the deep example.

Simple Stratification Example

Most customers deploying Pyramid often start with the following simpler approach, customizing the profiles and access for the different sub-tiers of user as they continue to roll out the platform.

Tier	Sub Tier	Features	Control Mechanism	Description
BI Developers / Admins	BI Developers / Admins		Administrative designation	Full access to the entire application – including server settings, security, content, data sources etc. Workflow is targeted at the viewer community, building pre-built dashboards and publications
Data Scientists	Code Crunchers		Profiles and Content management.	Access to all Pro tools for authoring data, reports and calculations only. Apps focused on presentation of data to consumers are removed (irrelevant). Advanced options in all tools are exposed including scripting in Python, R or SAS. Can share content in certain parts of the public domain.
Data Workers	Proficient / Advanced		Profiles and Content management.	Access to all Pro tools for authoring new content except Publish. Advanced options in all tools are exposed except those related to scripting and ML. Data modeling is focused on classic business-user data preparation issues. Cannot share content in public domain.
	Explorers		Profiles and Content management.	Access to the Discover Lite and Present Lite tools for authoring new reports using the simplified 'Report Builder' wizard. Access to pre-existing dashboards with the 'Analyze Further' feature and many dashboard runtime options for richer analysis. Cannot share content in public domain.
Active Viewers	Inquisitive		Content management and Present 'runtime' settings.	Live, interactive dashboard content embedded in the viewer client. Allows the user to choose which content to use and when. Includes individual Discover reports as well as dashboards. Includes the 'Analyze Further' feature for a more inquisitive approach with basic dashboard runtime options like commenting on data and personalized data alerting.
Casual Viewers	Casual		Present 'runtime' settings.	Live, interactive dashboard content embedded in another host application. Few or no Dashboard runtime options for a simplified user experience.
Peripheral Recipients	Active		Publication design and distribution	Published report in rendered PDF, Word or PowerPoint documents.

- Model Pro
- Discovery Pro
- Discover Lite
- Smart Reporting
- Formulate

- Present Pro
- Present Lite
- Publish Pro
- Illustrate
- Presentation Viewer

- Embedded Content
- Discover Report viewer
- Rendered Publications
- Content Management
- Administrative Console

Deep Multi-tier Stratification Example

This example provides an insight into how the application can be heavily customized functionally for a variety of different user types and deployment use cases.

Tier	Sub Tier	Features	Control Mechanism	Description
BI Developers / Admins	Admins		Administrative designation	Full access to the entire application – including server settings, security, content, data sources etc.
	BI Developers		Profiles and Content management.	Access to all tools for authoring new content – targeted at the viewer community getting pre-built dashboards and publications. Has rights to push content to public folders.
Data Scientists	Code Crunchers		Profiles and Content management.	Like data miners below except includes access to tools for scripting in Python, R or SAS. Can share content in certain parts of the public domain.
	Data Miners		Profiles and Content management.	Access to all tools for authoring data, reports and calculations only. Apps focused on presentation of data to consumers are removed (irrelevant). Advanced options in all tools are exposed except for scripting in Python, R or SAS. Can share content in certain parts of the public domain.
Data Workers	Advanced		Profiles and Content management.	Access to all Pro tools for authoring new content except Publish. Advanced options in all tools are exposed except those related to scripting and ML. Data modeling is focused on classic business-user data preparation issues. Cannot share content in public domain.
	Proficient		Profiles and Content management.	Access to Discover Pro, Formulate and Present Pro tools for authoring new content. Advanced options in all tools are hidden. Data modeling is removed (use of pre-existing models only). Publication and Infographic authoring tools are hidden too. Cannot share content in public domain.
	Introductory		Profiles, Present 'runtime' settings and Content management.	Access to the Discover Lite and Present Lite tools for authoring new reports using the simplified 'Report Builder' wizard. Access to pre-existing dashboards with the 'Analyze Further' feature and many dashboard runtime options for richer analysis. Cannot share content in public domain.
Active Viewers	Inquisitive		Content management and Present 'runtime' settings.	Similar to 'light touch' active viewers below but also includes individual Discover reports as well as dashboards. Includes the 'Analyze Further' feature for a more inquisitive approach with more dashboard runtime options like commenting on data and personalized data alerting.
	Light Touch		Content management and Present 'runtime' settings.	Live, interactive dashboard content in the viewer client. Allows the user to choose which content to use and when. Few or no Dashboard runtime options for a simplified user experience.
Casual Viewers	Casual		Present 'runtime' settings.	Live, interactive dashboard content embedded in another host application. Few or no Dashboard runtime options for a simplified user experience.
Peripheral Recipients	Active		Publication design and distribution	Similar to passive peripheral recipients but may also include content in Excel so users can play with result sets.
	Passive		Publication design and distribution	Published report in rendered PDF, Word or PowerPoint documents.

- Model Pro
- Discovery Pro
- Discover Lite
- Smart Reporting
- Formulate

- Present Pro
- Present Lite
- Publish Pro
- Illustrate
- Presentation Viewer

- Embedded Content
- Discover Report viewer
- Rendered Publications
- Content Management
- Administrative Console

User Volumes & Licensing

In planning a deployment, it is often helpful to get an idea of the volume of each user type that can be expected. Every deployment is different, and depending on the project, there can be an infinite number of variations. The following rough guide is based on the volumes that have been observed over the years. (The numbers are not meant to add to 100%).

Type	Tier	From	To
Technical (pro)	BI Developers / Admins	0.5%	1%
	Data Scientists	1%	3%
	Data Workers	20%	50%
Non-technical (viewer)	Active Viewers	40%	70%
	Casual Viewers	50%	90%
External	Peripheral Recipients	NA	NA

Licensing

Licensing in Pyramid has been kept simple and clean:

- Technical users need 'pro' seats; non-technical users need 'viewer' seats.
- Advanced data science functionality and administrative tools and rights are included in the pro seat for free – leaving the customer to delegate those rights to various users as needed without requiring an upgraded license type.
- Casual viewers entering through embedded content need the 'embed' licensing option.
- Report bursting capabilities, to external peripheral recipients, needs the 'bursting' licensing option.

Contact sales for other miscellaneous licensing options.