

TM1 On-Premises to IBM Planning Analytics Transitioning Guidelines for IBM Customers

V3.2

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1. About this document

This document features guidelines for the conversion & transitioning from IBM Cognos On-Premises or IBM Planning Analytics Local to IBM Planning Analytics Cloud. The document introduces IBM Planning Analytics & differentiates IBM Planning Analytics vs. IBM Cognos TM1. This information may then be applied to the transitioning guideline materials as a means to evaluate and determine Cloud-readiness and transitioning options.

2. Important Links

- IBM Planning Analytics Cloud Shop: <https://www.ibm.com/marketplace/cloud/planning-and-analytics/us/en-us>
- IBM Planning Analytics Terms of Use: <http://www.ibm.com/software/sla/sladb.nsf/sla/tou/>
- IBM Planning Analytics Documentation: <https://www.ibm.com/support/knowledgecenter/SSD29G>
- Cognos TM1 for IBM Planning Analytics product documentation: <http://www.ibm.com/support/docview.wss?uid=swg27045298>
- **[FAQ on TM1 vs Planning Analytics](#)**
- [Getting Started with IBM Planning Analytics](#)
- Solution Accelerators: <https://www.ibm.com/web/portal/analytics/analyticszone/topics/performancemanagement>
- Activating your IBM Planning Analytics account and inviting other users: <http://www.ibm.com/support/docview.wss?uid=swg27047328>
- IBM Planning Analytics YouTube Channel: <https://www.youtube.com/channel/UCGYcFhVXoA29v8kSbspLudA>
- Changes to server parameters in TM1 for IBM Planning Analytics: <http://www.ibm.com/support/docview.wss?uid=swg27047055>
- Critical usage notes for IBM Planning Analytics: <http://www.ibm.com/support/docview.wss?uid=swg27047019>
- IBM Cloud Support: <https://support.ibmcloud.com>
- IBM Data Security and Privacy Principles available online: <http://www.ibm.com/cloud-computing/built-on-cloud/saas-security>
- IBM Software Products and Software-as-a-Service Privacy Statement: <http://www.ibm.com/software/info/product-privacy/>
- A Letter to Our Clients about Government Access to Data: <http://asmarterplanet.com/blog/2014/03/open-letter-data.html>
- IBM Business Conduct Guidelines: <http://www.ibm.com/investor/governance/business-conduct-guidelines.html>
- SaaS Handbook and Support escalation procedures: <http://www.ibm.com/software/support/handbook.html>
- [IBM Planning Analytics knowledge center](#)
- [IBM Planning Analytics local software downloads from passport advantage](#)

- [IBM Planning Analytics supported environments](#)
- [IBM Planning Analytics for Excel \(PAX\) and IBM TM1 Perspectives comparison/differences](#)
- [IBM Planning Analytics and IBM Cognos Analytics Integration](#)
- [IBM PA and CA integration technotes](#)
- [IBM Planning Analytics Digital technical engagement \(DTE\): Videos, product tours and hands on labs](#)

3. IBM Planning Analytics Introduction

3.1 What Is It?

IBM Planning Analytics is not just:

- A re-branding of TM1
- The name for the new TM1 release
- Just a new name for TM1 Cloud

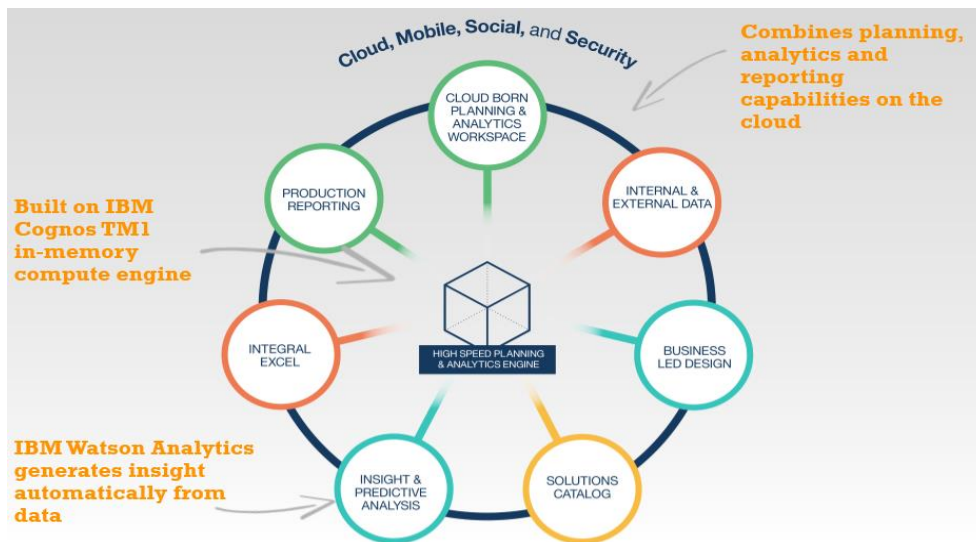
IBM Planning Analytics is:

- An all-in-one Cloud Solution for what we call Planning Analytics,
- consisting of integrated, latest generation Analytic Software Solutions & Platform Components,
- which include the **TM1 In-Memory OLAP Engine** (as the analytic core of IBM Planning Analytics),
- **Watson Analytics**, Cognos Analytics¹,
- Latest Generation Self-Serve Desktop Analytics with '**Planning Analytics for Excel**' (PAX),
- Latest-Generation Web-based, Self-Serve Analytics & Collaboration with '**Planning Analytics Workspace**' (PAW)
- and Hybrid-Cloud ready data integration & task automation tools²

=> IBM Planning Analytics is a fast, easy, flexible and complete

Planning & Analytics Cloud Solution

that helps you drive efficiency, deliver foresight and steer business performance



¹ Addtl. SaaS Subscription needed for Cognos Analytics

² *Cognos Command Center* provides a solution for streamlining and orchestrating recurring maintenance and administration tasks around Master-/Meta- & Fact-Data Management for TM1, hence unlocking significant DevOps productivity gains. *Cognos Integration Server* - in the context of MDM, Master- & Meta-data Governance, Data-Integration & Transformation - reduces the need for custom data integrations into TM1 and between TM1 instances and from Oracle Hyperion Essbase & HFM into TM1 that otherwise require custom integration development and therefore place a burden on IT resources. *Cognos Command Center* and *Cognos Integration Server* are built on cloud-compatible data integration technology and thereby allow process automation, management and data integration in a Hybrid Cloud environment (cloud to cloud, on-premises to cloud and vice versa).

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3.2 IBM Cognos TM1 vs. IBM Planning Analytics

Functional Component	Product	TM1 On Premises	IBM Planning Analytics	Cloud vs On-Prem.	Use Case, Function, Features, Advantages
OLAP Planning & Analytics Engine	TM1	X	X	Cloud	TM1 is the best Performance Management solution on the market for managing volatility , providing real-time responses to complex questions. Embracing Volatility: High volume contribution, What-if analysis, (Meta-)Data changes & refresh
Application Development	Architect/ Perspectives	X	X ³	RDP	Solution Modeling, Design & Application Development
	Performance Modeler	X	X	RDP & Desktop	
	Planning Analytics Workspace		X	Cloud	
Excel Desktop Integration	TM1 Perspectives	X	(X) ⁴	RDP	<ul style="list-style-type: none"> • First Generation Excel Add-In • Basic Cube Viewer
	PAX (formerly CAFE)	(X) ⁵	X	Desktop	Latest Generation Excel Add-In; PAX integrates IBM planning Analytics Seamlessly with Excel on the desktop!
Contribution Analysis & Reporting	TM1 Web	X	X	Cloud	<ul style="list-style-type: none"> • Excel Web-Sheet Deployment • Basic Web Cube Viewer
	TM1 Applications	X	X	Cloud	<ul style="list-style-type: none"> • Web Deployment of Contributor Workflow
	TM1 Mobile Contributor	X	X	On Device	<ul style="list-style-type: none"> • Mobile (Tablet) contribution
	Planning Analytics Workspace		X	Cloud	<ul style="list-style-type: none"> • Excel Web-Sheet Deployment • Latest Generation Cube Viewer • Collaboration & Workflow => One Web User Interface for all of Analytics => efficiency & productivity gains, higher end-user friendliness
	Cognos Analytics (BI)	X ⁶	X ⁷	Cloud	Enterprise Reporting Platform, feat. Report Studio, Cognos Workspace Advanced, Report Studio, Cognos Mobile, Bursting etc. => Best of Breed Enterprise Reporting Capabilities for Enterprise-Wide deployment of analytic content => productivity gains
Cognitive Computing / Advanced Analysis	Watson Analytics		X	Cloud	Latest Generation self-serve cognitive analysis & visualization, making it easy for everyone determine drivers, identify and analyze trends and anticipate the future => improved business insight
Proven Practices	Solution Accelerators		X	n/a	Blueprints, Accelerators, Examples, Templates
IT Tools	Cognos Command Center	X ⁸	X ⁹	On-Prem	One platform for orchestrating, streamlining and automating analytic data tasks, workflow & maintenance ¹⁰ , Eliminates the need for custom process & workflow orchestration ¹¹ => productivity gains
	Cognos Integration Server	X ¹²	X ¹³	On-Prem	A data bridge supporting automated, high speed data extraction to TM1, eliminating the need for custom ETL process creation & orchestration => productivity gains

³Via Remote Desktop Protocol (RDP)

⁴ Modelers only via Remote Desktop Protocol (RDP)

⁵ CAFE only; PAX as of Planning Analytics Release

⁶ TM1 Data Sources only

⁷ Requires addl. SaaS Subscription for use of Cognos Connection, Cognos Workspace, Cognos Workspace Advanced, Report Studio, Cognos BI Mobile, Bursting against Planning Analytics TM1 DBs. Full BI (other data sources) can be provisioned with separate licensing

⁸ With PM Advanced License

⁹ Cognos Command Center Starter Edition is included as of Planning Analytics 2.0.4. Unlimited use with Planning Analytics = (Unlimited PA Cloud Server Connections). Cognos Command Center Server plus Server Connection License required for (non-Planning Analytics) servers.

¹⁰ integrated with TM1, RDBMS, Oracle Essbase, HFM, QlikView

¹¹ hence allows for drastic simplification of the TM1 TI processing environment

¹² With PM Advanced License

¹³ Cognos Integration Server Standard Edition is included as of Planning Analytics <>. Unlimited use with Planning Analytics = unlimited connections to and from Planning Analytics. Cognos Integration Server plus Source Connection License required for data integration that does not include Planning Analytics as either a source or target system.

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3.3 Interface Transformation

TM1 Web, Perspectives, Architect, Applications, Performance Modeler & Server Explorer are on an interface-transitioning path: **Planning Analytics Workspace, combined with PAX as the cloud integrated Excel Interface for the desktop, has become the main Planning Analytics (TM1) interface**, encompassing functionality such as

- Input & Contribution
- Reporting & Analysis
- Visualization
- Collaboration & Workflow
- Modeling

3.3.1 Latest-Generation Web-based, Self-Serve Analytics & Collaboration with 'Planning Analytics Workspace'

'Planning Analytics Workspace' (PAW) is IBM's latest generation web-user-interface for self-serve TM1 data analysis & collaboration. PAW is available in the cloud as well as on-premises.¹⁴ PAW brings capabilities to deliver interactive dashboard capabilities (including mobile), incorporating visualizations to end users and executives which can combine data from multiple TM1 Servers. Particularly due to its ease of use and comprehensive functionality in the areas of self-serve analysis & collaboration, as well as the ability to embed other TM1 UIs (TM1 Excel Web Sheets, Applications) and other web content as well as files, PAW is ideally suited as the primary UI for an Analytics Data Mart such as the Financial Data Hub. Compared to traditional Cube Viewer UIs and Reporting & Analysis interfaces, PAW features

- Significantly higher and faster end-user adoption (better analytic capabilities & ease-of-use compared to legacy UIs)
- Significantly lower Deployment & Maintenance Cost (very little to no involvement by DevOps with PAW UI work due to self-serve capabilities)
- Lower end-user training cost.¹⁵

Planning Analytics Workspace

The New Face of TM1: Visual, Intuitive, Insightful, Social, Mobile



¹⁴ on premises with 'IBM Planning Analytics Local 2.0'; Cloud-Release: 'IBM Planning Analytics'

¹⁵ Comprehensive online video training/enabement material is available for free on the [IBM Planning Analytics YouTube channel](#).

3.3.2 Latest Generation Self-Serve Desktop Analytics with 'Planning Analytics for Excel' (PAX)

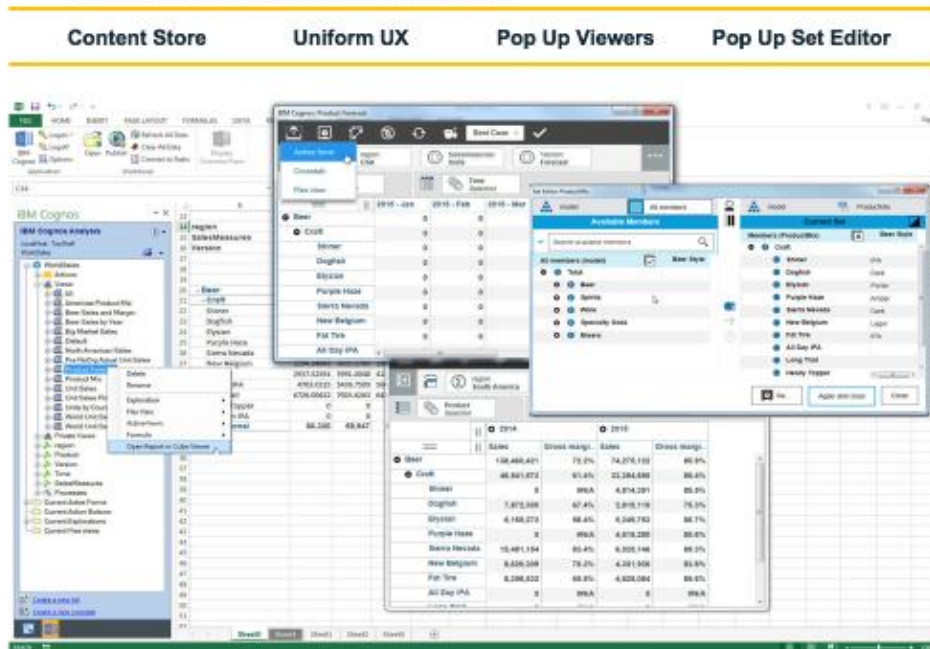
'Planning Analytics for Excel' (PAX) is IBM's new Excel interface for TM1-based data. PAX is available in the cloud as well as on-premises.¹⁶ PAX Features:

- a) Superior performance over WANs and hence does not require deployment via Citrix or remote Desktop (PAX was developed for optimum performance even over WAN environments) => reduction of TM1 Citrix footprint.
- b) A significantly higher user-friendliness for Reporting, Analysis & Write-Back of TM1 Data compared to the TM1 Perspectives Excel client => reduction in help desk support hours. Comprehensive online video training/enablement material is available for free on the [IBM Planning Analytics YouTube channel](#).
- c) Compatibility with TM1 Perspectives Worksheets & Workbooks, Action Button Support, Active Forms, Web-Upload and Update of Excel Sheets to TM1 (Web)
- d) Superior functionality for self-serve, ad-hoc analysis and reporting => vastly improved user experience & productivity compared to the legacy TM1 Excel Add-In
- e) Copying data & Pasting (and writing back to) into TM1 via Excel is more functional in PAX (PAX does not require formulas to retrieve and write data from TM1 and does not require the use of DBS or DBSW formulas for linking to data that was pasted into Excel), and - last, but not least -
- f) Interoperability with Planning Analytics Workspace, in that a user can seamlessly switch an analysis between PAW (Web & Collaboration) to Desktop (Excel) and back from Desktop (Excel) to PWA (Web & Collaboration), while staying connected to the TM1 environment at all times.

Planning Analytics for Excel

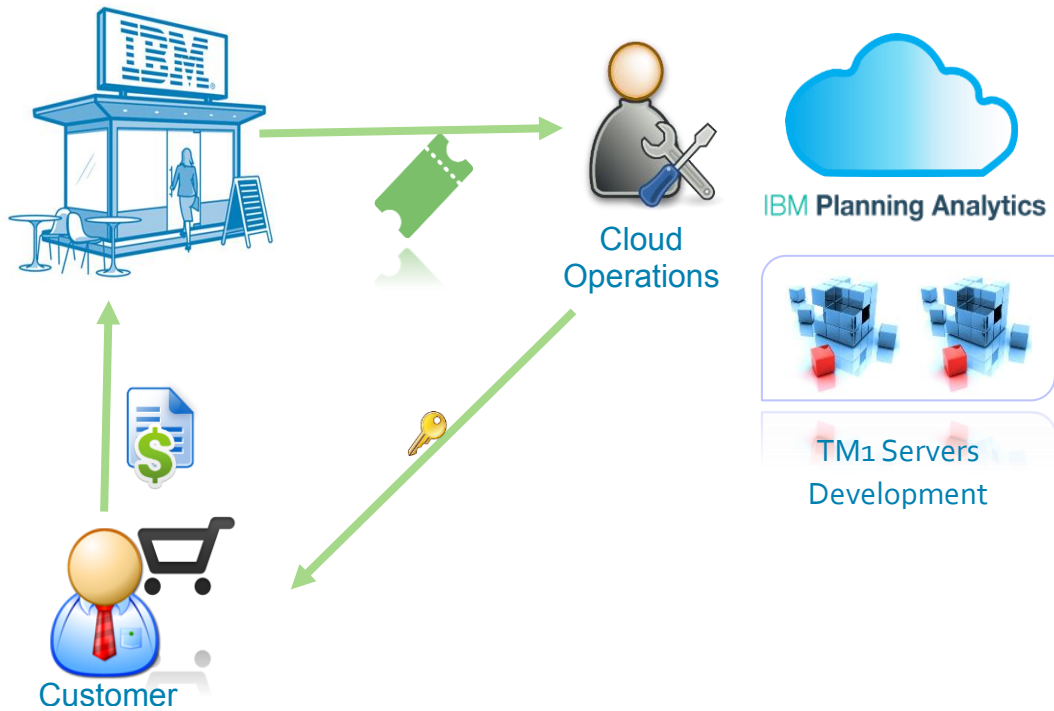
The ultimate Excel UI for FOPM:

- Ultra-fast self-serve analysis & contribution, even over WAN
- Interoperability with Workspace



¹⁶ on premises with 'IBM Planning Analytics Local 2.0'; Cloud-Release: 'IBM Planning Analytics' Transitioning from IBM Cognos TM1 to IBM Planning Analytics (Cloud): Transitioning Guide for IBM Customers, V3.2

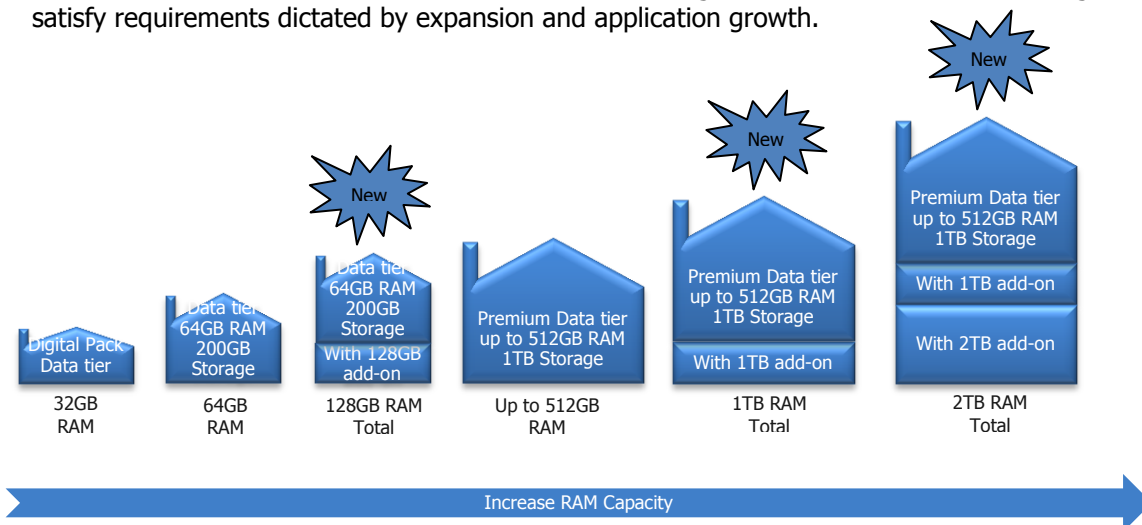
3.4 Provisioning



Once the system is provisioned, the customer is contacted and receives a password-secured welcome letter with URLs, tm1 passwords, rdp passwords, ftp password etc.¹⁷

3.5 Deployment

- Deployments come with a tiered architecture that includes a multi-tenant application tiers and a single tenant Cognos TM1 database tiers.
- Customers can start with one TM1 Database tier offering and transition to other offerings to satisfy requirements dictated by expansion and application growth.



¹⁷ See [Controlling access to shared folder](#) on how to create other users with different permissions to the file share folder. For changing other user names and passwords, Cloud Ops needs to be contacted via the Cloud support channels. See <Support>

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3.6 Enhancements, Upgrades, Patching

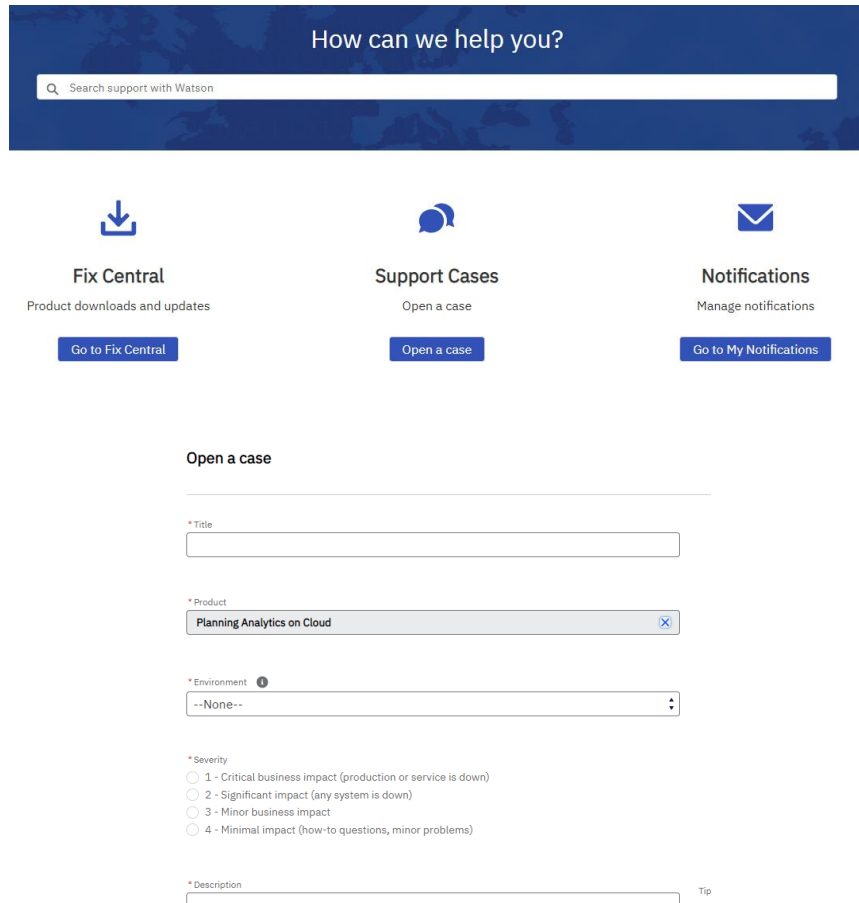
- **Workspace** is deployed using continuous development practices. Clients benefit from gaining access to fixes and features frequently. Updates occur every 4 weeks with advance notification on content and timing. Multi-tenant Workspace updates are for all customers. See <https://www.ibm.com/communities/analytics/planning-analytics-tag/pa-whats-new/>
- **Single Tenant** components updates occur roughly every quarter. If desired, Operations will update your development environment first to allow you to test it with your data. Can be arranged during a mutually agreeable time with operations. We recommend that clients always adopt the latest release, but clients are allowed to stick 2 versions behind, roughly 6 months lag. Note that security and compliance may dictate a forced upgrade (for example, GDPR).
- **Scheduled maintenance windows** - to apply critical patches – occur on the third Saturday of every month. The maintenance includes security updates, hardware upgrades, and other activities that require downtime. Notifications for the maintenance include:
 - 7 days before maintenance window
 - 72 and 24 hours before maintenance window
 - Day of maintenance, a reminder is sent to the clients before the start of maintenance, at 0500 hours Eastern time
 - Another email is sent once maintenance is complete

3.7 Responsibility Matrix: Cloud vs. on premises (local)

	Activity	SaaS		PA Local	
		IBM	Customer	IBM	Customer
R Responsible Has the duty and the obligation to do the work. Also, has a duty to exercise independent judgement to raise appropriate issues I Informed Is informed of progress, key decisions and deliverables by the "Responsible" party	Installation	R	I		R
	Application Configuration	I	R		R
	Application Maintenance – Hotfixes	R	I		R
	Application Upgrade	R	I		R
	Infrastructure Configuration	R			R
	Infrastructure Maintenance	R	I		R
	Infrastructure Procurement	R			R
	Infrastructure/System Monitoring	R	I		R
	License Support Software (Monitoring)	R			R
	Disaster Recovery	R	I		R
	Backup Process	R			R
	System Security	R			R
	Application Monitoring		R		R
	Application Security		R		R
	Importing Data		R		R
	Preparing Data to be Loaded		R		R
	User Management		R		R

3.8 Support

Cloud Support Portal: <https://www.ibm.com/mysupport/>



Support procedures are similar to “on premises” TM1: Issues are raised with Support, and from there,

- Delivery issues raised to Cloud Operations team, and
- Product issues escalated to the Product team.

Tasks that require engagement of the Cloud Ops team:

- Changing directory permissions and setting up new file share users
- Setting up new TM1 servers
- Review TM1 Web settings or gaining access to TM1Web log files
- Restoring a file from backup
- Installing hotfixes, fix packs and new releases on the data tier
- Adjusting available resources (RAM, Cores) on the data tier
- Change security to customers Active Directory (SAML2)
- Setup Whitelisting

3.9 Hosting Environments



IBM Planning Analytics content* is stored in one of four regions: USA, Canada, Australia, Europe (Germany, Netherlands and United Kingdom)

*IBM id content is stored in the USA, NPS content is stored in Ireland and Germany
 United Kingdom only stores content backups for Disaster Recovery for EU customers.

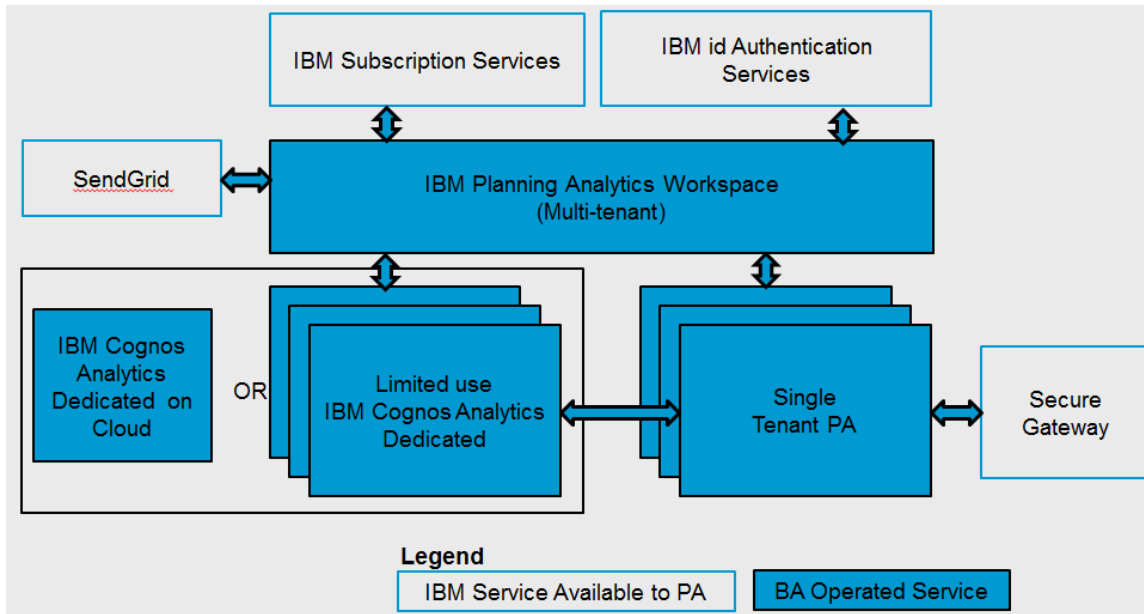
IBM Cloud is the IaaS provider

3.10 Security

- TM1 on Cloud SSAE16 SOC 1 third party audit available upon request. The audit is yearly, next one will be Planning Analytics.
- SoftLayer data center SOC 2 audit report available upon request.
- ISO27001 compliant and certification currently in process.
- Sellers are now able to sell to FFIEC regulated customers.
- IBM Data Security and Privacy Principles available online: <http://www.ibm.com/cloud-computing/built-on-cloud/saas-security>
- IBM Software Products and Software-as-a-Service Privacy Statement: <http://www.ibm.com/software/info/product-privacy/>
- A Letter to Our Clients about Government Access to Data: <http://smarterplanet.com/blog/2014/03/open-letter-data.html>
- IBM Business Conduct Guidelines: <http://www.ibm.com/investor/governance/business-conduct-guidelines.html>
- GDPR Readiness

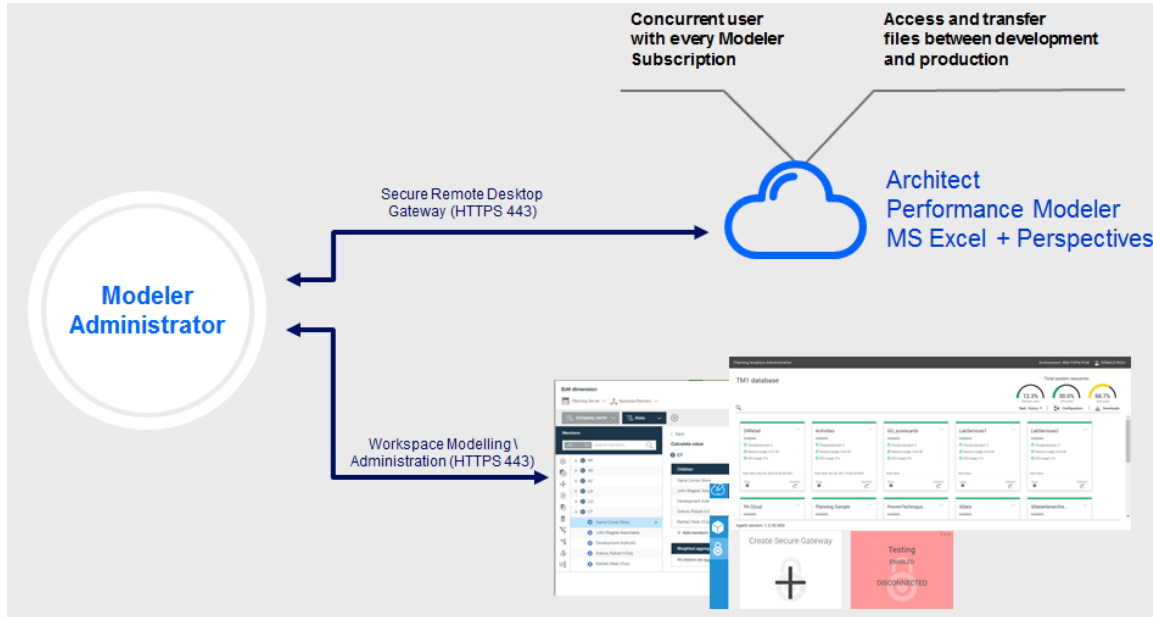
Transitioning from IBM Cognos TM1 to IBM Planning Analytics (Cloud):
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3.11 IBM Planning Analytics Cloud Architecture



4. IBM Planning Analytics Transitioning Guide

4.1 Modeling and Administration: Overview



4.2 Modeling

4.2.1 PAW Modeling

[TM1 Development and Modeling in Planning Analytics Workspace](#)

4.2.2 Modeling and Development with TM1 Perspectives & Architect

Available for Modelers, via RDP. Further information for Remote Desktop Protocol Connection:

- only available over https, i.e. Secure RDP only (RDP over 3389 disabled by default)
- cloud welcome kit describes how to connect
- support for Windows, RHEL, Mac OS X
- *.rdp files placed on folder share for convenience
- option for customers to go from https to over 3389 per request

4.3 Administration & Monitoring

4.3.1 Administration in PAW

[TM1 Administration, Configuration and Monitoring via Planning Analytics Workspace](#)

While PAW is the recommended interface for administration, configuration and monitoring, TM1Top and TM1 Operations Console are still supported.

4.3.2 (Hybrid-Cloud) Process Orchestration

[Cognos Command Center \(Introduction\)](#)

[Cognos Command Center Guides, Orientation, Tutorials](#)

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4.4 User Interfaces with IBM Planning Analytics

4.4.1 Planning Analytics for Excel (PAX)

4.4.1.1 TM1-Perspectives to PAX Transitioning

On the Cloud, TM1 Perspectives may only be used by modellers (those with Remote Desktop access to the IBM Planning Analytics instance). In the context of IBM Planning Analytics deployments, a conversion & transition from TM1 Perspectives to PAX is needed in areas where end-users are currently leveraging the TM1 Perspectives Excel add-in to work with TM1 data.

4.4.1.1.1 PAX vs. Perspectives: General Differences in implementation

Some TM1 Perspectives features are implemented differently in IBM Planning Analytics for Microsoft Excel:

- Instead of slicing from the Cube Viewer into an Excel worksheet, in IBM Planning Analytics for Microsoft Excel you can right-click a view and insert it as the type of report you want. If you want to manipulate the view first, insert it as an Exploration View, manipulate the view, and then convert it to the type of report you want.
- When you refresh a Dynamic Report, the formatting is updated only if the number of rows in the data area was changed or if a value in the ID column of the format range was changed. Otherwise, rebuild the Dynamic Report (ALT+F9) to update the formatting. In TM1 Perspectives, the formatting is updated when you recalculate (F9) a Dynamic Report.
- When you rebuild a Dynamic Report, rows and columns are inserted or deleted from the existing rows or columns. In TM1 Perspectives, all rows and columns are deleted and then re-added.
- In Dynamic Reports, any change to the header row (the row with the TM1RPTROW formula) of the report requires you to recreate the report. For example, if you change the formula or add a column, you must re-create the Dynamic Report to see the results.
- In Dynamic Reports with nested rows, the member names in the nested rows are not grouped. Instead, the member names are repeated.
- Zero suppression is done based on the column tuples that are present. In TM1 Perspectives, zero suppression is done based on the product of the members of each dimension on the column (symmetric column).
- Writeback mode for formulas is enabled by default in the IBM Planning Analytics for Microsoft Excel configuration file.
- A blank dimension element in a DBRW argument is displayed as an empty result in TM1 Perspectives, but is displayed as #VALUE in IBM Planning Analytics for Microsoft Excel. This difference is because IBM Planning Analytics for Microsoft Excel returns a true error response to an invalid element, which is displayed as #VALUE. For information on how to correct a #VALUE error, see <https://support.office.com/en-us/article/how-to-correct-a-value-error-15e1b616-fbf2-4147-9c0b-0a11a20e409e>.

4.4.1.1.2 First steps with PAX

[Enable Trust Access to the VBA project Object Model](#)
[Opening an IBM TM1 Perspectives Workbook](#)

4.4.1.1.3 Converting Action Buttons from Perspectives to PAX

Existing Perspectives action buttons can be converted from Perspectives to PAX via a simple [conversion procedure](#). Notes on Action Buttons in PAX:

- Action buttons in PAX are not a custom control (will improve sizing/control issues)
- PAX Action buttons are triggered via Macro (a macro attached to a text box triggers the action button to fire) => PAX worksheets with Action Buttons need to be saved in .xlsm format

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- To edit an existing action button, you need to access it from the side view panel under the Current Action Button folder on the bottom of the list

4.4.1.1.4 Other current limitations and differences

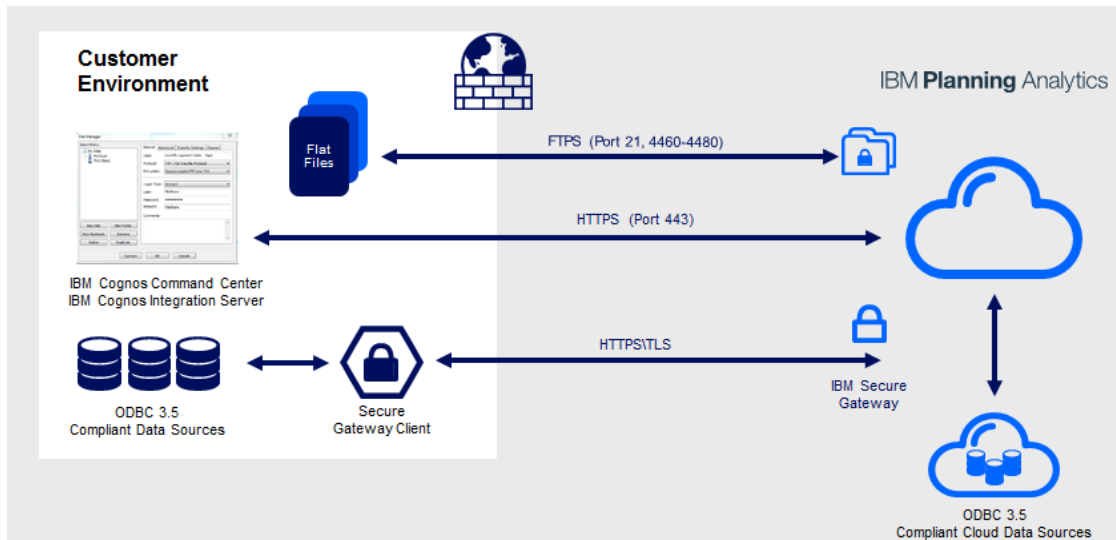
PAX has general Functional Parity with Perspectives, except for

- Modeling is not available. Instead, use a modeling tool, such as IBM Cognos® TM1 Performance Modeler to create and maintain models, applications, and security permissions.
- The TM1 macro functions are not available. Instead, you can use the IBM API.
- The following methods to spread data are not available: Relative Proportional Spread, Relative Percent Adjustment.
- Dynamic Reports are supported in IBM Planning Analytics for Microsoft Excel, except for cell and password protection.
- User defined consolidations are not available. This includes the usage of DBRW worksheet functions that use subset names as a dimension element reference.
- Holds in formula reports are not visible in IBM Planning Analytics for Microsoft Excel.
- Referencing non-default hierarchies is not supported in formula or legacy reports. The default hierarchy must be the same-named hierarchy.
- In the future, it is planned for PAX to support API functionality on parity with Perspectives. A conversion from Perspectives to PAX API calls will not be offered.

Click [here](#) for PAX the latest updates, new features & functionalities.

4.5 Data Integration, Movement & Update with IBM Planning Analytics

4.5.1 On-Premises to Cloud / Cloud to On-Premises



4.5.2 File-based data sources

File based data sources require FTPS-transfer to a shared folder on Cloud. Files can then be consumed/loaded/processed by TM1 on Planning Analytics Cloud. You can use a File Transfer Protocol with Secure Socket Layer (FTPS) client to connect to:

<yourPlanningAnalyticsEnvironment>.planning-analytics.ibmcloud.com

Port: 21

Protocol: You may need to select "ftpes" on some clients

Note that IBM Cognos Command Center supports FTPS and hence – via its automation and orchestration capabilities - can greatly improve productivity and efficiency of ETL, FTPS, and TI-Load tasks and procedures

4.5.3 ODBC(SQL)-based data sources

On-Premises ODBC-based data sources can be leveraged by TM1 on Planning Analytics Cloud via use of IBM Secure Gateway technology. A detailed guide 'IBM Planning Analytics - Secure Gateway - Installation and Configuration Guide.docx' is available [here](#).

In addition, Planning Analytics can directly and natively leverage data from on-premises RDBMS Star Schemas created by Cognos Integration Server:

4.5.4 Other (Oracle Hyperion, SAP, ...)

[Cognos Integration Server](#) provides Data Integration between Planning Analytics Cloud and

- Oracle Essbase,
- Hyperion Financial Management,
- Hyperion Planning,
- SAP BW,
- TM1 On Premises,
- Other Planning Analytics Cloud environments,
- DB2, Oracle RDBMS, SQL Server On-Premises

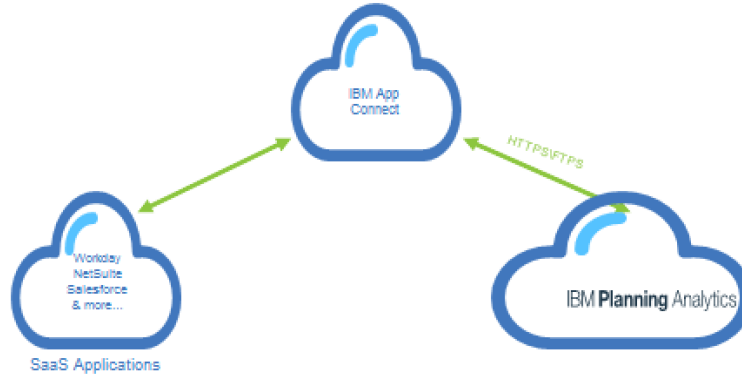
Additional integration is available via IBM App Connect (see below)

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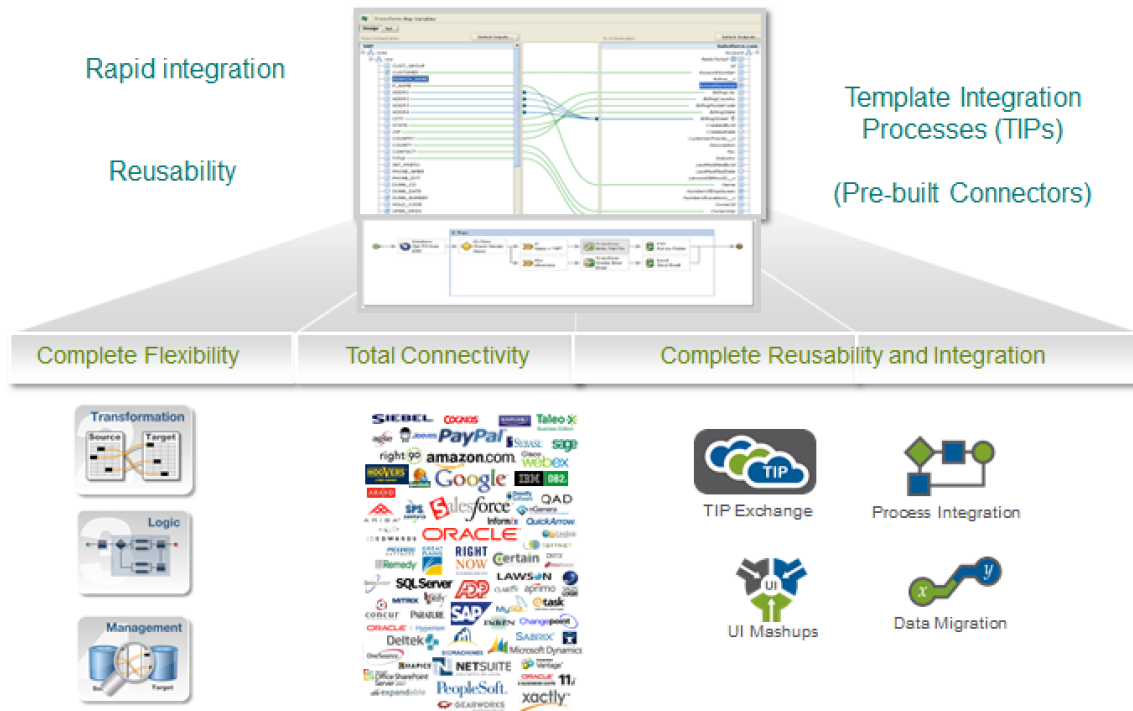
4.5.5 Cloud Applications & Other

4.5.5.1 IBM App Connect (WebSphere Cast Iron)

[IBM App Connect](#) (formerly called WebSphere Cast Iron) provides integration with Cloud and On-Premises Systems:



IBM App Connect integrates with TM1 on PA Cloud via the TM1 Rest API.



4.5.5.2 DashDB

A new TM1 Turbo-Integrator ODBC connector for DashDB is planned for the future.

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4.6 Integration of On-Premises and Cloud Infrastructure/Data

4.6.1 IBM Planning Analytics Cloud to Hybrid-Cloud Integration

Data-Integration between TM1, IBM Planning Analytics Cloud, IBM Planning Analytics Local (on premises) Instances, and from IBM Planning Analytics to RDBMS is best achieved via Cognos Integration Server. Click [here](#) for more information on Cognos Integration Server.

4.6.2 IBM Planning Analytics to On-Premises Data Integration via ODBC

As of IBM Planning Analytics, ODBC connections from On-Premises ODBC/SQL data sources to the Cloud are supported via secure gateway.

4.6.3 IBM Planning Analytics to On-Premises ODBC drill-through

As of IBM Planning Analytics, Drill-Through from TM1 on Cloud to on Premises ODBC data sources is supported via secure gateway.

4.6.4 Cognos Analytics on Cloud to Planning Analytics Cloud

Cognos Analytics Cloud instances may access Planning Analytics Cloud via a new connection method/type 'IBM Planning Analytics', which leverages the TM1 Rest API. Click [here](#) for more information, plus further guidance on proven practices related to Cognos Analytics with IBM Planning Analytics.

4.6.5 PAX

PAX On-Premises Clients can access TM1 on the Cloud directly.

4.6.6 TM1 Perspectives

On-Premises TM1 Perspectives Excel Clients will not be able to access IBM Planning Analytics

4.6.7 Cognos Insight

Click [here](#) for information on supported connection modes with Cognos Insight

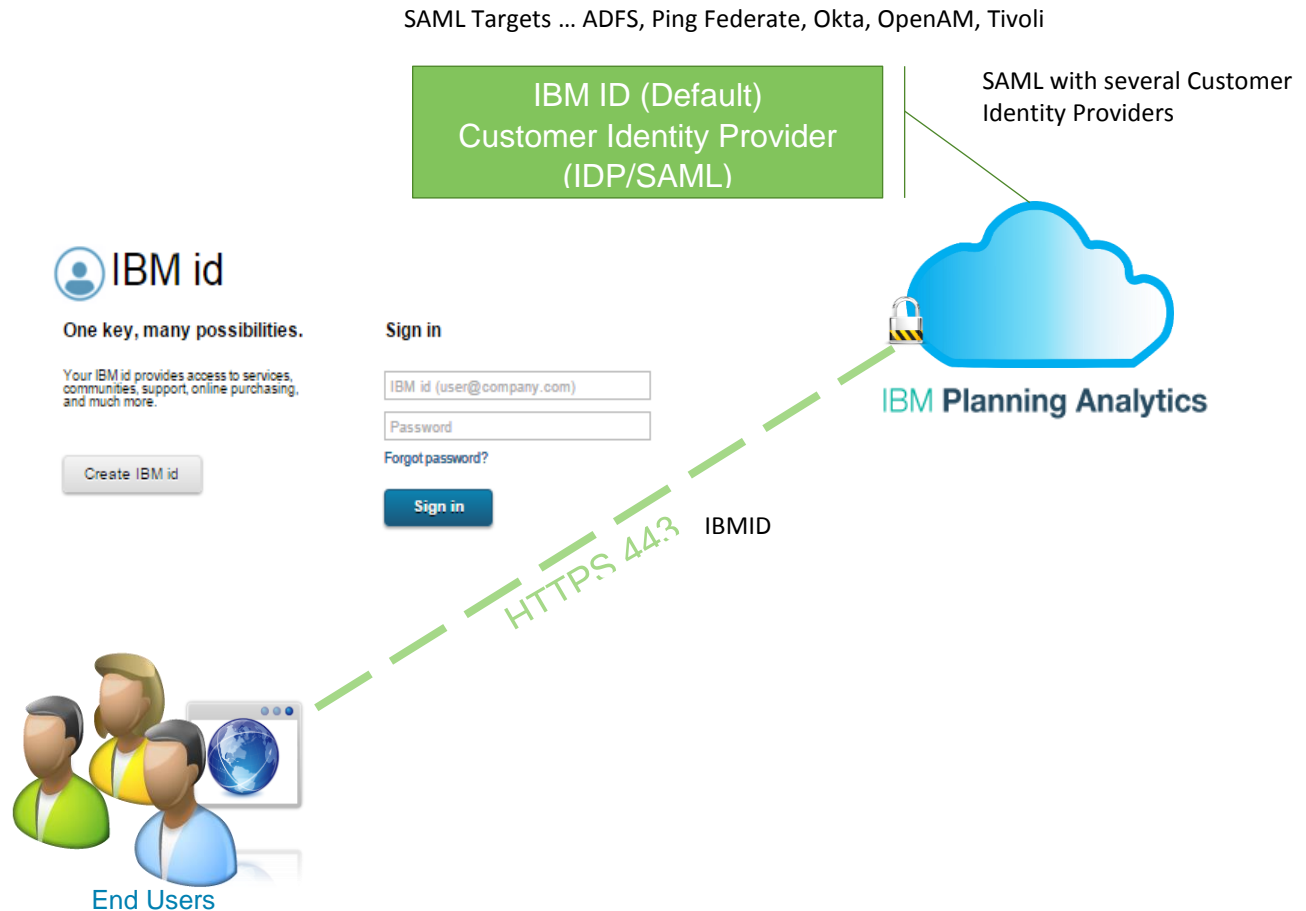
4.6.8 Third Party Data Access

Third party On-Premises or 3rd party Cloud SW solutions may access TM1 on the Cloud if the 3rd party SW uses the REST API to access TM1.

4.7 Security Authentication Options and Transitioning

4.7.1 IBM Planning Analytics Security Authentication Options

As of IBM Planning Analytics, the default authentication Method is SAML via a custom Java Authentication Provider (CJAP) for Planning Analytics. The IBM ID is used for authentication against the security provider (CJAP):



Customers can connect to their own LDAP system using SAML2. The following SAML providers are supported: Okta, Ping Federate, Tivoli, OpenAM, Active Directory Federated Services (ADFS).

4.7.1.1 Single Sign-On (SSO)

SSO is supported via SAML 2.0 Identity Provider (IdP) initiated single sign-on (SSO).

4.7.1.2 Native TM1 Security

IBM Planning Analytics supports native TM1 Security for TM1 authentication only.

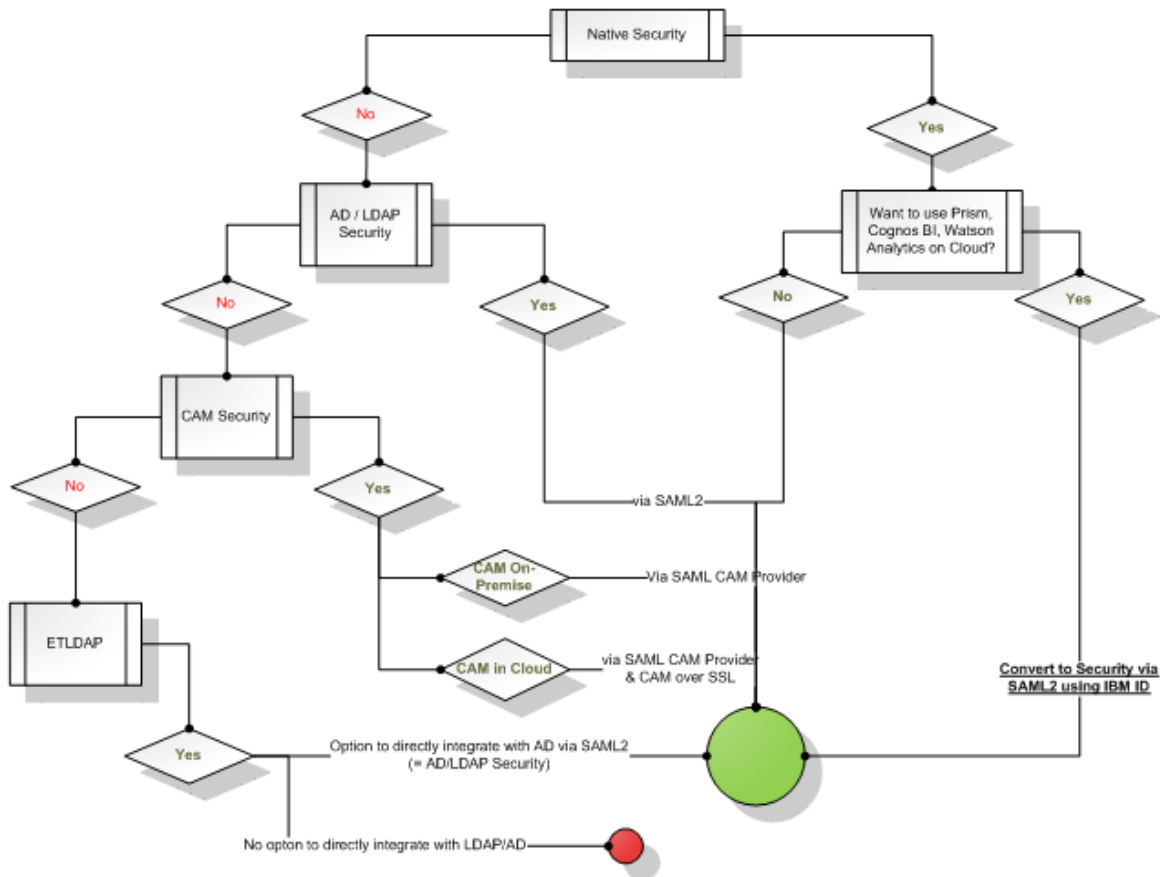
4.7.1.3 CAM¹⁸ Security

CAM Security & SSO is supported via new SAML CAM Security provider that is used for establishing a CAM Security authentication regime.¹⁹ When using CAM Security in a case where an On-Premises Cognos BI instance is to be integrated with a Cloud TM1 instance, the CAM Security provider needs to be exposed externally via HTTPS on port 443.

4.7.1.4 Active Directory

Active Directory authentication (On-Premises AD to IBM Cloud) is supported via SAML2.

4.7.1.5 On Premises to Cloud Security Authentication Transitioning Overview



4.7.1.6 Security: Useful Links

- [Activating your IBM Planning Analytics account and inviting other users](#)
- [Adding Users to your Planning Analytics Environment \(in Planning Analytics Workspace\)](#)
- [Federated Authentication Guide](#)
- [Requirements and on-boarding process for IBMid Enterprise Federation](#)
- [Managing Users with Multiple Planning Analytics Workspace Tenants on Cloud](#)

¹⁸ Cognos Access Manager

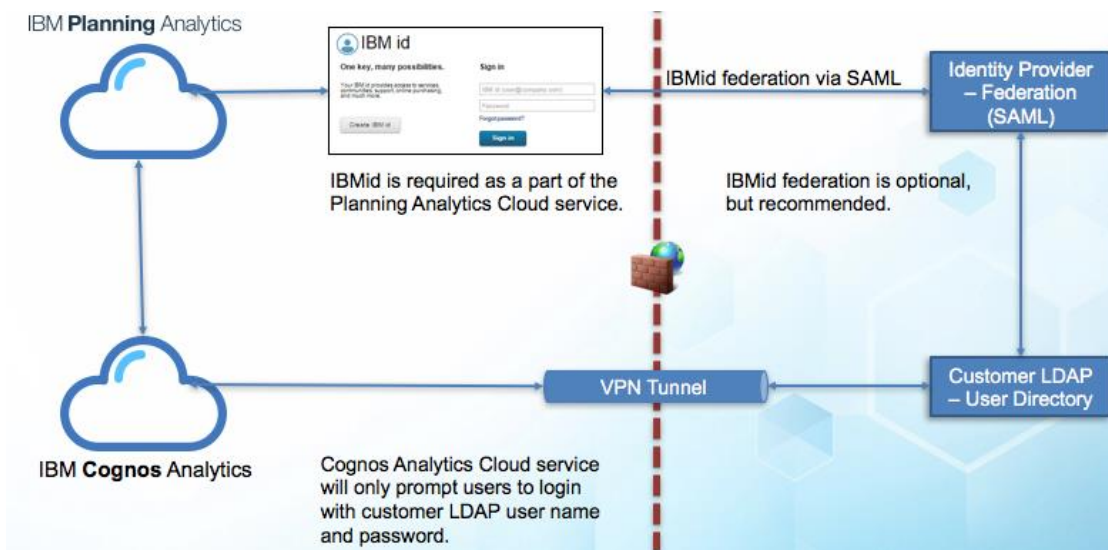
¹⁹ The user names and passwords will be stored in an OpenAM IDP hosted by IBM in the TM1 cloud.

4.7.1.7 Planning Analytics and Cognos Analytics Cloud: Security Authentication and Integration

4.7.1.7.1 Overview

Please click [here](#) for a corresponding PPT deck covering Cloud Authentication Considerations, User Experience, Administration of Data Sources, & User Management in Planning Analytics (PA) Cloud / Cognos Analytics (CA) Cloud environments.

While PA uses AD Federation via IBM ID and SAML2, and CA uses AD/LDAP based authentication via AD, both authentication methods can leverage AD. A user will not have to log in twice (if a user logs into PA, the CA login will occur automatically, and if a user logs into CA, the PA login will occur automatically).



4.7.1.8 User Management

The screenshot shows the 'Clients/Groups on EmptyModel' window with a table of user details. Callouts provide context: 'CA Enterprise users.' points to the top group of users, 'Planning Analytics users.' points to the bottom group, and a recommendation callout states: 'Recommendation is to use groups in the Cognos namespace to avoid defining security twice within Planning Analytics for each user'.

User Name	Security Settings			Max Connections	Status	Administrative Group Assignment		
	Password	Expiration	...			ADMIN	DataAdmin	SecurityAdmin
Admin	Undefined	No Expiration	0	0	Not Active	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DevOps/jmd	Undefined	No Expiration	0	0	Active	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise/azariahank@ca.ibm.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise/castellanetadan@ca.ibm.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise/hartmanphil@ca.ibm.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Enterprise/shearerharry@ca.ibm.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning Analytics/azariahank@yopmail.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning Analytics/cartwrightlancy@yopmail.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning Analytics/castellanetadan@yopmail.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning Analytics/hartmanphil@yopmail.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning Analytics/havnerjule@yopmail.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Planning Analytics/shearerharry@yopmail.com	Undefined	No Expiration	0	0	Not Active	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

After logging into CA directly, administration will have access to the LDAP namespace and its users.

The screenshot shows the IBM Cognos Administration console. The left sidebar contains navigation options: 'Users, Groups, and Roles', 'Capabilities', and 'User Interface Profiles'. The main content area is titled 'Directory > Enterprise > Users'. It displays a list of users with columns for 'Name', 'Modified', and 'Actions'. The 'Name' column lists users such as 'administrator (Administrator User)', 'asarahank@ca.ibm.com (Test User A)', 'carbenthancy@ca.ibm.com (Test User A)', 'castelentadan@ca.ibm.com (Test User A)', 'hartmarph@ca.ibm.com (Test User A)', 'kavnerjule@ca.ibm.com (Test User A)', and 'shearehary@ca.ibm.com (Test User A)'. The 'Modified' column shows timestamps like 'May 1, 2017 9:36:23 AM' and 'May 4, 2017 7:38:29 AM'. The 'Actions' column contains 'More...' links. A search bar at the top of the list shows 'Name: 9'. Two callout boxes are present: one on the left pointing to the search bar with the text 'Search only returns the Users that are in the LDAP/AD Directory (which is on premises)', and one on the right pointing to the 'Modified' column with the text 'Can see who has logged on and when'.

Name	Modified	Actions
administrator (Administrator User)		More...
asarahank@ca.ibm.com (Test User A)	May 1, 2017 9:36:23 AM	More...
carbenthancy@ca.ibm.com (Test User A)	May 4, 2017 7:38:29 AM	More...
castelentadan@ca.ibm.com (Test User A)	May 4, 2017 7:38:29 AM	More...
hartmarph@ca.ibm.com (Test User A)	May 4, 2017 7:38:50 AM	More...
kavnerjule@ca.ibm.com (Test User A)	May 4, 2017 7:38:05 AM	More...
shearehary@ca.ibm.com (Test User A)	May 4, 2017 7:38:05 AM	More...

4.8 Other Limitations

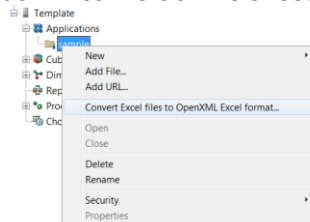
4.8.1 Email notifications with Contributor Workflow

Contributor Workflow uses an LDAP connection via CAM to retrieve emails of users. With SAML, that connection does not exist and the service can currently only retrieve email addresses of the current user. Alternative solutions to sending emails within Planning Analytics in the context of contributor workflow actions are available. Please contact IBM for details.

4.9 Notes on upgrading TM1 environments <10.2 to IBM Planning Analytics

In principle, one may transition to IBM Planning Analytics from any older TM1 Version. Any applicable conversion could be conducted in the cloud environment. Typical conversion scenarios would be:

- TM1 (Contributor) Applications: There were changes to TM1 Application deployment and rights-saving as well as ElementSecurity for TM1 Applications in (as of) TM1 10.2²⁰. Related conversions can be conducted in IBM Planning Analytics, i.e. an on-premises conversion to TM1 10.2 is not necessary prior to transitioning to the cloud. Any related & applicable changes will however have to be tested and validated.
- With TM1 10.2, TM1 Web technology has been changed from .NET to Java²¹. As a consequence, there will be slight changes in rendering behavior and other functionality between TM1 <10.2 and TM1 10.2 and higher (including Planning Analytics).
- Excel (Web) Sheets (section 6.6 in the Transitioning Guide): In TM1 environments <10.2 that are upgraded to IBM Planning Analytics and that will be leveraging IBM Planning Analytics, the TM1 Perspectives web sheets need to be converted to OpenXML (xlsx) to be compatible with TM1 10.2 Web technology. TM1 10.2 as well as IBM Planning Analytics include a built-in utility to convert web-sheets that will convert all xls sheets within an application:



While this method it will take <1 hour to convert all pre-TM1 10.2 xls sheets to OpenXML and hence make the web sheets compatible with TM1 10.2 & Planning Analytics Web, each web sheet should be validated individually after the conversion. Conversions can be conducted in IBM Planning Analytics, i.e. an on-premises conversion to TM1 10.2 is not necessary prior to transitioning to the cloud.

²⁰ See <http://www.ibm.com/support/docview.wss?uid=swg21659476> & <http://www.ibm.com/support/docview.wss?uid=swg21659499> for details.

²¹ See <http://www.ibm.com/support/docview.wss?uid=swg27039576> & <http://www.ibm.com/support/docview.wss?uid=swg27042071> for details