P2 Server 4.0.0

Release Notes

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# Introduction

P2 Server version 4 reinvents the existing application, with new technologies allowing speeds and features that were never previously available. This is a vital first step towards an exciting and impressive future set of P2 applications, that will be based on this new P2 Server infrastructure.

Our Vision Statement

***P2 Server’s key reason for existing is to***

***get your data from any source***

***and show its relationships***

***all with impressive speed,***

***in a way applications can easily consume it.***

P2 Server has always been a great data retrieval tool, with Data Dictionary based relationship models built right in. Version 4 takes this to a new level, with enhancements to all areas, as well as the addition of entirely new features.

# New Features

This section describes each of the new features in this release.

The version 4.0 release is aimed at new installations that require only relational data sets. Future versions will bring time series data, calculations, and a variety of new features.

## Relational Data Set Features

Previous versions have been heavily designed around time series data, with a few extra components included to visualise sets or tables of information. Version 4 now includes native support for relational ‘data sets’ through the whole system, just as the previous versions did for time series ‘tags’.

These relational sets of data can be used to drive visualisation components, such as charts, in P2 Explorer.

## Time-Aware Hierarchies

Previous versions had always supported multiple hierarchies, but these have always been fixed structures. We have expanded this in version 4 to now allow these hierarchies to change over time. This means that as items are moved in the hierarchy, or added and deleted, this history is now all recorded and can be used to more accurately depict the real state of real world items that exist on site.

Related, but even more exciting, is being able to use this hierarchy and its new time-aware features inside calculations in the near future! With this, we will have the ability to perform a calculation such as, “Sum up the ‘Total Oil Produced’ amounts from all ‘Wells’ in ‘Field A’ for Jan 2014”. This will not only allow us to perform rollup-style calculations much easier than before, it will also be smart enough to not include wells that did not exist in the hierarchy at the time. This new feature is coming to a store near you soon!

## P2 Server API (previously called Web API)

The P2 Server API is the entry point into P2 Server to get any data or structure information, and is used for other P2 applications and third party applications.

This is an expansion on the existing P2 Web API interface that was provided by previous 2.6.x versions of P2 Explorer. It is important to note that some of the interfaces have changed in order to improve the architecture.

As with the previous versions, this new interface is also implemented using a RESTful web service interface. Via this interface, users are able to get information about real world objects in the system, the structure of these objects, and the relationships between objects.

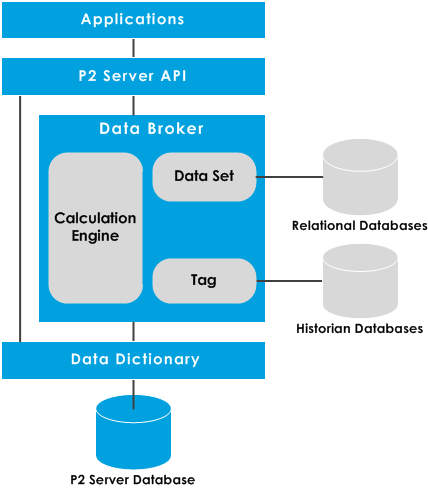
One of the big enhancements in the new Server API is the ability for other applications to plug into this infrastructure, to provide metadata about objects, and to provide relationship information that adds to the total relationship map provided. In this way, all other P2 applications can contribute to this relationship graph, expanding it out further than just the knowledge that is inside P2 Server. This exciting new ability means that the future of a single integrated platform is a big step closer, while still ensuring that the ‘System of Record’ for that data is still the only place that data is stored.

A part of this plug-in facility is the ability to define relationships to other known object types in the system, forming automatic links to other information that is related to an object in the system. This feature gives us the capacity to create a richer set of relationships, without having to manually define them all.

## New Architecture

P2 Server consists of several components that have been reorganised in comparison to previous versions, with the aim of optimising the communications between components in order to increase the speed and functionality of the system.

P2 Server API

The P2 Server API is the public API for P2 Server. It provides a RESTful web services interface that serves up the structure and data provided by the Data Broker and Data Dictionary. It also provides extension points and a way to model the relationships between objects from different P2 systems, giving the ability to aggregate at a higher level than the Data Dictionary.

Data Broker

The Data Broker aggregates data from multiple systems through a common interface. The data can be fetched either in a time series format or in a tabular format. The consuming application is abstracted from the source of the data, making it possible to represent data from several systems into a single coherent picture. The Data Broker also allows users to configure free-form calculations over the aggregated data in order to transform it.

Data Dictionary

The Data Dictionary is a conceptual component that exists in the database schema, and acts as a layer that allows users to configure a model of what each real-world object (such as a pump) should represent, as well as attributes that are common to that object.

P2 Server Database

The P2 Server database stores all of the information that is required by these other layers to operate.

## New Security Implementation

We have designed the new P2 Server system alongside our newest version of P2 Security. By keeping the speed of security in mind, we have been able to make huge improvements in the performance of the system, while also adding a more advanced and flexible security architecture.

This new common security model is also being used in P2 Explorer 4 and all other v4 applications.

## Technology Refresh

This version of P2 Server uses the latest technologies to provide the fastest, most reliable and secure communications possible. The external interfaces are based on new technologies that exist in modern web browsers and mobile web browsers, meaning that applications that use data from P2 Server can do so in a much easier way that was previously available.

The technology refresh will support a wide range of new features and visualization opportunities, and deliver significant performance improvements both now and into the future.

## Upgrade Information

Version 4.0 is designed to be used for new installations only.

In the next release, information and tools will be provided to facilitate an upgrade from the previous 2.6.x versions of P2 Server.

# General Notes

* The following characters have been reserved and should not be used in entity names:

**[ ] { } : ! , / \**

* The following words have been reserved and should not be used as an exact match for any object name (including entities):

**Entity**

* In future releases, the syntax for data fetching will be:

Entity**[**Template**]:**Attribute**!**Value

* In future releases, the syntax for data fetching in P2 products that use CER will be:

**{**tag1} + **{**tag2**,** sampleMethod = Raw**}**

* The maximum number of entities that can be selected in a hierarchy at one time is **1000**.

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Documents in the P2 Server technical documentation suite are:

|  |  |
| --- | --- |
| Title | Description |
| P2 Server 4.0.0 Release Notes | Release Notes for P2 Server version 4.0.0. |
| P2 Server Installation Guide | Installing P2 Server components and configuring P2 Server for use. |

You may also find the following documents useful:

P2 Explorer Installation Guide

P2 Security Installation Guide

P2 Security User’s Guide

These documents are available from P2 Customer Support.

# Customer Support

For all matters concerning this product, please call P2 Customer Support:

|  |  |
| --- | --- |
| **Phone:** | +61 8 9241 0314 (outside Australia) or  1300 739 969 (Australia only) |
| **Email:** | [support@issgroup.com.au](mailto:support@issgroup.com.au) or [iss.support@p2energysolutions.com](mailto:iss.support@p2energysolutions.com) |

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