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Svarog Business Platform

*Lightning fast automation of
your businesses process
and spatial datasets*

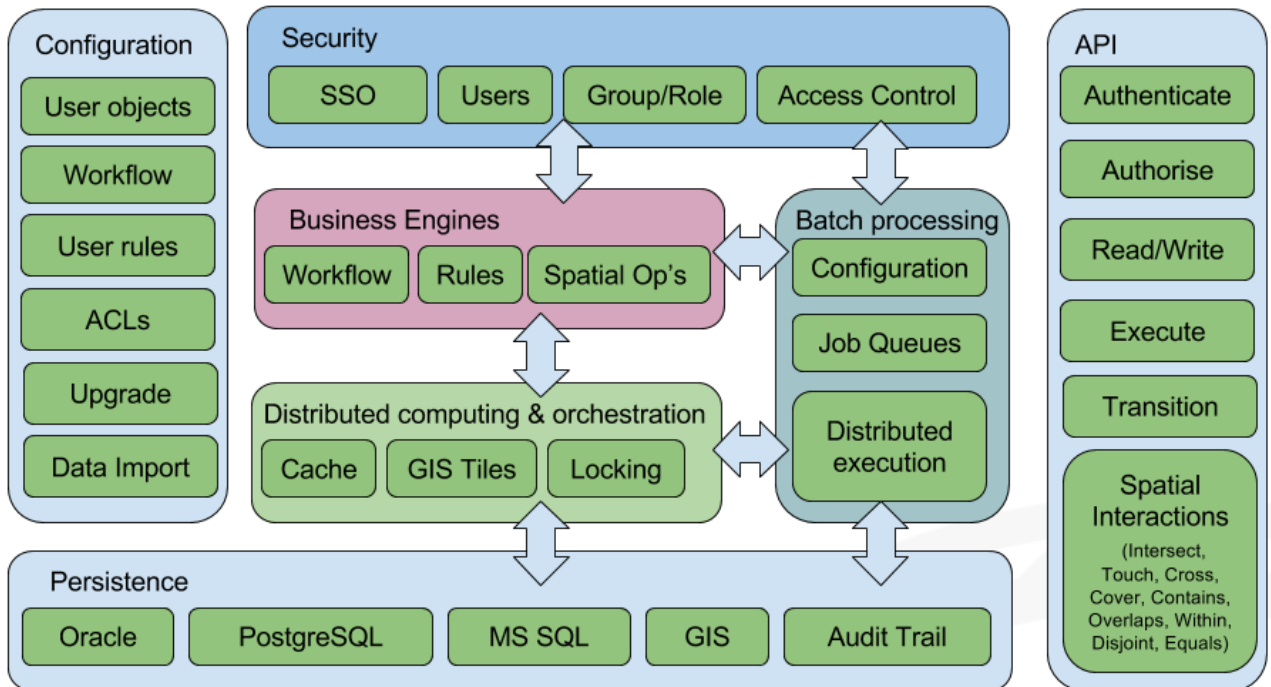
There is no silver bullet for all challenges you are facing. While being cost effective, we address the need for a stable route to automating operations within a reasonable timeframe. The 80/20 rule is at the heart of Svarog Business Platform, providing fast, stable solution to the most common causes of your challenges



Overview

Svarog Business Platform provides a stable basis for building your business applications and automating your operations. Svarog has been underpinning public administrations and private organisations more than ten years. Its stable and mature for production management of terabyte databases containing billions of objects.

Svarog Business Platform Architecture



SBP provides the core features for building an enterprise grade system:

- Cross-platform Persistence services
- Clustering and Distributed Computing services
- Batch Processing of large amounts of data
- Workflow Automation integrated with Rule Engine
- Security Services
- API implementing the JSON industry standard
- Configuration Management



Cross-platform Persistence services

Benefits	Features
No hidden infrastructural costs. Make full use of the potential of your existing infrastructure investments in Unix, Windows or Linux.	Supports the major Operating Systems: <ul style="list-style-type: none">● Windows (2008 and later)● Linux (RHEL, CentOS, Ubuntu)● Unix (all flavours able to run Tomcat 7 and later)
No single vendor lock-in. Use your database of choice which fits best into your infrastructure and company strategy.	Supports the major Commercial and Open Source databases: <ul style="list-style-type: none">● Oracle 11g, 12c● Microsoft SQL Server 2012 and later● PostgreSQL 9 and later
Focus on the important bits of your business process! Data is stored flawlessly through tried and tested methods.	Provides single entry point for object persistence. Every persistent change to an object is handled by applying distributed locking mechanisms enabling flawless concurrent access by multiple SBP instances.
Never compromise about auditing only specific tables or processes. SBP tracks all changes to objects so you know exactly who did what and when.	Provides version control storing all historical changes over every object managed by SBP.
Cross platform spatial storage is not a myth! SBP makes full use of the internal spatial engine to perform all spatial operations out of the database.	Provides Spatial Data Storage using native data types (Oracle Spatial, PostGIS, SQL Server Spatial)

Clustering and Distributed Computing services

Benefits	Features
Reduce costs by taking advantage of commodity hardware. SBP ensures that the precious Database resources are never consumed without reasonable justification.	In-memory distributed object and relations cache provide instant access to the needed data, avoiding repetitive querying of the database if the dataset has not changed
Unparalleled Web Map user experience. Expanding the web map tile approach over geographical data	Vector Web Map Tile services for effective processing large amounts of spatial geometries. Pre-processed tiles are cached and served in compressed binary format without querying the



	database.
Prevent inconsistent data state. Big data needs many cluster nodes to be efficiently coordinated.	Distributed locking of objects between cluster nodes provides means for orchestration of processes between large number of servers

Batch Processing of large amounts of data

Benefits	Features
Massive batch processing out of the box.	Multi-threaded execution of different pre-defined job configurations. SBP enables defining different job configurations for different types of object mass processing.
Responsive user experience by using non-blocking operations running in a queue.	Queueing for jobs and their prioritisation provides means for achieving consistent response times.
Maximise infrastructure throughput.	Coordination of job executions over a cluster of SBP nodes will let you make most of the infrastructure. The distributed coordinator will ensure there are no idle nodes.

Workflow Automation integrated with Rule Engine

Benefits	Features
Workflow as you go! Adding workflow to objects doesn't require any change to your system.	Inherited workflow capabilities for every object in the system allowing us to mimic the real world where everything can be described as having a state.
Cost effective customisation	Stable path to upgrades and changes by customising SBP with user-defined rules and workflows. The Rule Engine allows execution of business rules (Java, SQL, Script) on object saving or transitioning between workflow states.



Spatial Data Operations & Validations at your immediate disposal

Spatial validations and metadata calculations for geometry types are built in the platform.

- Pre-calculated spatial interaction (DE-9IM) matrix,
- in-memory Spatial Indexing (R-Tree)
- Spatial cache engine

Security Services

Benefits	Features
Authenticate once and let SBP sort out the rest	Single Sign On services encompassing all SBP API
Complex access control made easy	<p>Fine grained access control over objects including access to specific properties in different workflow states. Control access over workflow transitions, rule engine executions.</p> <p>Support for the Power of Attorney concept allowing users to have horizontal empowerment over a single object in the list.</p> <p>Support for user groups containing different sets of access control lists</p>
Re-use existing authentication mechanisms.	Support for user authentication against built-in user database or third party authentication providers.

API implementing the JSON industry standard

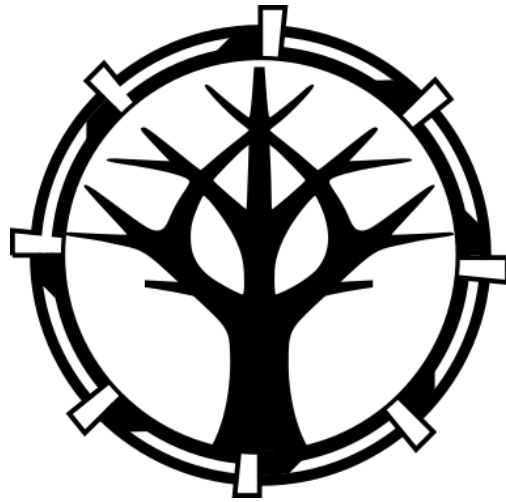
Benefits	Features
Open Standards for transparent integration	Rest services publishing all features using JSON format. All SBP dataobjects are easily serializable to/from JSON/XML
Low level data protection.	Authentication and Authorisation services ensure that your data is secure. Modern Web Applications run in the client browser being susceptible to attacks, the SBP core will ensure



	your data is protected on the server side, no matter what happens on the client.
Low learning curve due to simple API	Core reading and writing services enable access to the data in most efficient and performing way. Execution of business rules on demand or transitioning an object through the workflow. All done through few simple but powerful APIs.
High performance mapping experience	Spatial API enables reading the vector tiles in efficient binary compressed format and test for any spatial interaction between objects. The binary transfer format enable SBP to achieve up to 10 times better performance than using the classic GeoJSON.

Configuration Management

Benefits	Features
Customizable, Configurable, Open	The platform configuration services enable specific industry implementations by defining a custom data structure with configured relations to be used for business process implementation.
Flexible workflow and access management	Workflow objects define the way custom objects can change state or which rules are executed upon state change. The configured access control lists provide a security configuration over the custom objects which is enforced by the Security module
Deployment automation	SBP was built with DevOps principles at the core. Exporting and importing configurations is supported out of the box, enabling stable and verified migration through the Dev/Test/Prod pipeline.



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