As predictive analytics evolves into a key business process integrated within your IT systems, the efficient management of analytical operations becomes critical to meeting compliance and ROI commitments.

SPSS Predictive Enterprise Services improves the management of predictive models and related analytical processes within enterprise-wide business operations using an advanced services-oriented architecture. It extends the Clementine data mining workbench’s rapid model development and deployment capabilities to create more manageable predictive analytics solutions. By providing an integrated way to centralize and organize predictive models—and also automate predictive analytics processes—SPSS Predictive Enterprise Services helps you evolve analytical operations beyond ad hoc file systems and inefficient manual updates.

SPSS Predictive Enterprise Services includes three management modules for your predictive analytics processes:

- **Predictive Enterprise Repository**—Centralize and organize analytical assets
- **Predictive Enterprise Manager**—Automate and manage analytical processes
- **Predictive Enterprise Administrator**—Remotely control IT administration

**Increase predictive modeling productivity**

Predictive Enterprise Repository makes it easy to organize analytic assets for collaboration and reuse as part of your normal, everyday workflow—improving productivity across your organization. SPSS Predictive Enterprise Services’ close integration with Clementine enables you to check models into and out of the repository without having to switch to another interface. Checking a model into the repository automatically creates searchable metadata for the model version, input variables, model category, and algorithm type. Add additional custom metadata such as keywords, topics, and model annotations to match your existing processes and improve “searchability” even further. For example, you can label models by CRISP-DM or other data mining process phases to enable simplified searching.
The tasks associated with predictive model development and deployment are often repeated on a regular basis. The Predictive Enterprise Manager module provides you with true automation of enterprise-level predictive analytics operations such as model building, deployment, and report distribution. Schedule predictive analytics processes—including SPSS syntax or even analytics from other vendors—simply by dragging them from the repository onto the Predictive Enterprise Manager workspace. Predictive Enterprise Manager makes it easy to define analytical workflows to be executed on a time- or event-driven basis, with automated e-mail notification of results.

**Keep ROI on target by maintaining predictive accuracy**

The successful execution of model deployment plans to achieve business goals requires the ability to keep models and scores up to date, as well as control model versions. Premature deployment of models into business operations due to confusion over model status can have a disastrous effect on deployment ROI. Ensure that deployed predictive models are accurate by tracking and controlling model versions throughout the entire model lifecycle. Provide a common understanding of each model’s lifecycle status—from development through deployment, maintenance, and retirement.

Any member of your data mining team with authorization can search Predictive Enterprise Repository to find the model they need and collaborate in the model development process. Predictive Enterprise Repository enhances Clementine by providing integrated, Web-style model search functionality—search by business goal, model annotation, analytics used, and variables used to find the right model quickly.

Organize models into secure folder structures—by project, business goal, business unit, or any other intuitive labeling—to make valuable analytic assets even easier to find. For example, a common taxonomy for companies integrating predictive models within customer relationship management applications might include folders for customer acquisition, customer growth, and customer retention.
The ability to set different permission levels for each SPSS Predictive Enterprise Services user helps you control access to sensitive models and avoid costly mistakes, while protecting privacy. In addition to the protection provided by permissions, you can also protect models from being overwritten by forcing users to create new versions.

Models and deployed scores must be kept up to date to achieve the business goals of your predictive analytics solution. The Predictive Enterprise Manager module makes it possible for you to automatically update models with the latest data or to re-score databases—either on a regular basis or based on predefined event-trigger conditions. E-mail notifications can be set to alert you when manual intervention is required. All of the SPSS Predictive Enterprise Services automation and version controls help you maintain the predictive accuracy needed to deliver on your target ROI.

**Improve compliance with predictive analytics auditing**

Predictive models are the center of predictive analytics operations—often interfacing with other business-critical processes such as financial reporting and customer relationship management applications. Recent regulatory requirements, such as those imposed by the Sarbanes-Oxley Act, mandate that effective IT governance controls are in place for auditing these processes.

Log predictive analytics operations with complete histories that include:

- Files viewed, added, modified, or deleted within the repository
- Time stamping of when activities occur
- Versioning history for files and objects
- Changes in the security authorization assigned to an object
- Changes to authentication definitions such as group permissions
- Analytical processes executed by Predictive Enterprise Manager
- Failed and successful log-ins
- Person(s) involved in any of the above actions
Minimize predictive analytics IT costs
Apply the same standards used by other business-critical IT practices to predictive analytics. SPSS Predictive Enterprise Services utilizes an advanced services-oriented architecture to reduce total IT costs—centralizing your enterprise predictive analytics operations for easy administration and auditing. The Predictive Enterprise Administrator module’s thin-client interface provides IT staff with easy access to enterprise-wide predictive analytics administration.

Centralize and control model access
Ensure that authorized users throughout your organization have the most up-to-date predictive models at their disposal. Predictive Enterprise Repository centralizes predictive analytics administration—giving IT complete control over which end users have access to models. This centralized repository also makes it possible to apply database functionality to back up predictive analytics projects.

Secure valuable analytic assets
Your organization’s predictive models and analytical processes may provide access to sensitive data within your database—such as financial and customer data. Financial data integrity is essential to compliance with financial reporting requirements. Customer data must also be protected to ensure privacy commitments. To protect predictive models and prevent potential misuse, SPSS Predictive Enterprise Services includes two forms of security:

- **Authentication and authorization**—Control user access to models using existing Windows Active Directory Services or LDAP. Provide model- and folder-level authorization to individual users and user groups.
- **Secure Sockets Layer (SSL) protocol**—The SSL protocol is the de facto standard for the encryption of traffic between Web servers and browsers. The Predictive Enterprise Repository server is SSL-ready, allowing you to apply another level of security to sensitive models traveling between distributed users over the Web.

Low implementation cost per desktop
Data miners and IT staff access Predictive Enterprise Repository with Clementine or a thin-client Web interface—so you don’t waste time installing and maintaining additional software on individual workstations. Data miners simply access Predictive Enterprise Repository directly from the Clementine interface they’re already familiar with. IT staff access administration tools via Predictive Enterprise Administrator’s intuitive Web interface. The Predictive Enterprise Manager module’s rich-client interface—which is required to provide data miners with advanced analytical process automation and management functionality—uses a one-click installer to minimize implementation costs.

To learn more, please visit [www.spss.com](http://www.spss.com).
For SPSS office locations and telephone numbers, go to [www.spss.com/worldwide](http://www.spss.com/worldwide).

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