



## **Proactive Performance Management: The Foundation for Successful ITIL Process Development.**

### **Correcting the Misalignment between IT and the Business**

As successful businesses continue to look more closely at the amount of money they are spending on IT, they question whether or not the goals of business and IT are properly aligned. Too often, IT measures service delivery in a way that is too technical in nature, and as such, not useful to business managers. IT should focus on metrics that clearly demonstrate the service they provide in terms that are familiar and easily understood by business managers. Many companies are looking to the IT Infrastructure Library (ITIL) to provide a framework for consistent and continuous IT process improvements that address IT alignment costs and benefits.

Unfortunately, there is no outside company or tool that can instantly create a successful process. However, automated software solutions can complement and accelerate process development, acceptance and reduce the time-to-results by presenting the right information about service delivery. The right tool can become a building block for success. It's not a process, it's a process catalyst.

Data service delivery is generally the largest component of overall response time easily consuming over half of the total resources. It is also where the vast majority of performance problems arise. It is incumbent upon IT to measure, analyze and report the components of service delivery to clarify issues and be proactive by predicting future performance requirements. This information is invaluable to developing and managing Operational Level Agreements (OLA) and guiding the Service Level Agreement (SLA) process.

*"To be truly effective and successful for the long term, today's IT manager can't afford to excel only at maintaining a single technology and reacting after a problem has disrupted service. IT management needs to be **proactive and focus on results that matter to the business, such as, consistent service delivery.** Solutions such as the BEZ PPM platform are a big step in that direction."*

***Jasmine Noel of Ptak, Noel & Associates***

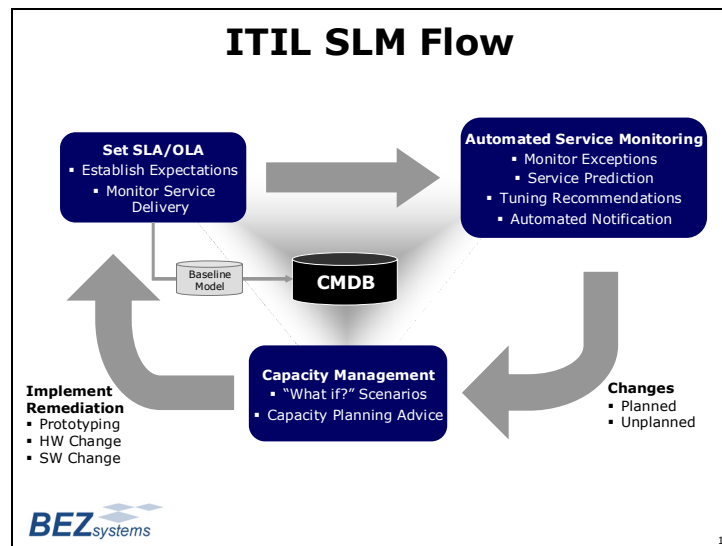
### **BEZProphet: A powerful catalyst for ITIL process development**

BEZProphet™ for Oracle provides automated management solutions for IT to deliver high performing, uninterrupted, database services to the business. It empowers companies to manage change, set realistic performance expectations, justify corrective actions and ensure the delivery of consistent, uninterrupted data service to the business at the lowest cost. BEZProphet provides a unique, pragmatic solution to help kick-off new ITIL initiatives or complement existing ITIL programs.

Service delivery is the primary *flashpoint* between IT and the business. The service delivered by IT to the business is primarily in the form of an application; not merely

the application code and logic, but collectively all of the infrastructure hardware and software involved in delivering the business function to the desktop of the user. The key to cost-effective delivery and value is measuring and managing the application service delivery.

BEZProphet provides unique capabilities for organizing and managing DBMS service based on business priorities in concert with ITIL processes, particularly when it comes to Proactive Performance Management (PPM) including, among others, service level management, capacity management, continuity management, and availability management.



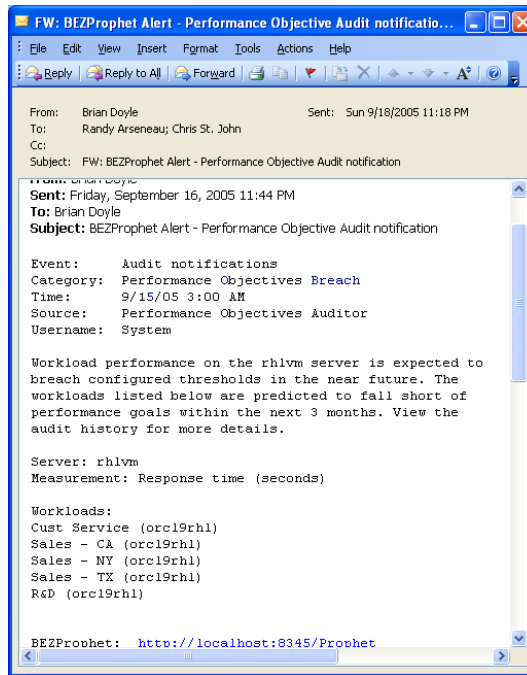
**BEZProphet provides valuable information for all stages of ITIL Service Level Management**

## BEZProphet and Service Level Management

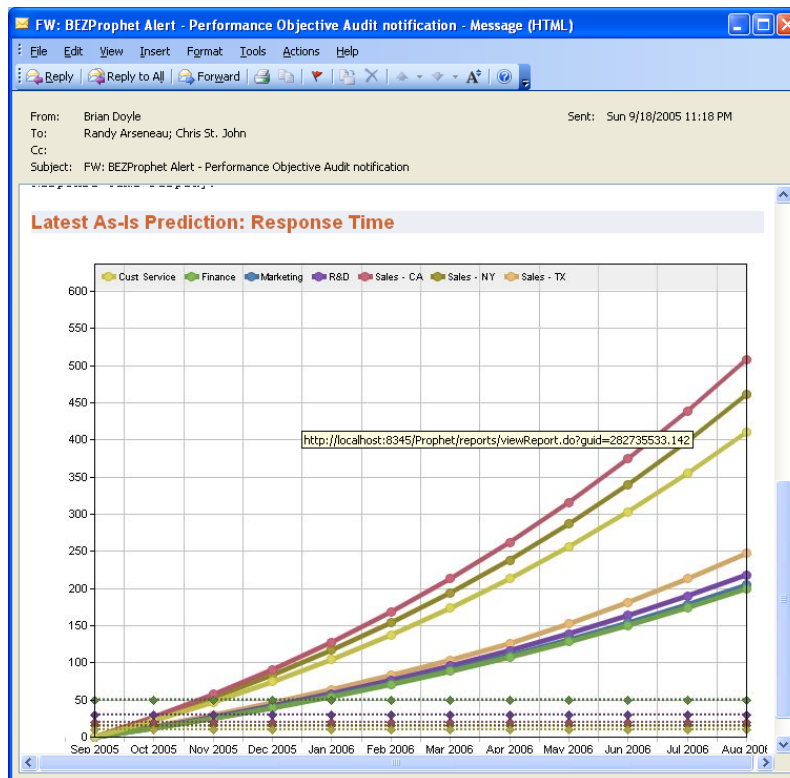
According to ITIL, Service Level Management is the primary management of IT services, ensuring that agreed services are delivered when and where they are supposed to be delivered. The Service Level Manager is dependent upon all the other areas of Service Delivery providing the necessary support that ensures the agreed services are provided in a secure, efficient and cost effective manner. There are a number of business processes that comprise Service Level Management. These are:

- Reviewing existing services
- Producing and monitoring the Operational Level Agreement (OLA)
- Negotiating service levels with customers
- Reviewing the underpinning contracts of 3rd party service providers
- Producing and monitoring the Service Level Agreement (SLA)
- Implementation of Service Improvement policy and processes
- Establishing priorities
- Planning for service growth
- Involvement in the accounting process to determine the cost of services and how to recover these costs

BEZProphet profiles complex database processing to understand data usage, resource consumption and workload throughput. BEZProphet notifies IT of current performance issues and provides a guided process to help identify, analyze and resolve service-level problems quickly. BEZProphet optionally accepts performance data collected from other tools and uses it to provide a current and forward-looking line-of-business view of data service delivery.



**BEZProphet automatically notifies you of potential performance and capacity breaches before they become major problems. These early notifications allow you to adequately plan to minimize or completely eliminate shortfalls in service delivery.**



**“As is” prediction results are compared with the Performance Objectives that were set for each Workload to see if and when any performance objective breaches are on the horizon. The BEZProphet Notification Engine alerts designated users to upcoming performance breaches and provides assistance and recommendations on what can be done proactively to avoid this problem before it strikes.**

DBAs and performance analysts can use BEZProphet to produce performance reports and present them to management and business users with historical trend and

performance prediction results showing the relationship between delivered services and corresponding hardware configuration requirements.

By using BEZProphet to analyze the relationship between services delivered and the Total Cost of Ownership (TCO), IT managers can confidently set realistic objectives that both IT and business managers can agree upon.

BEZProphet performance prediction results, based on expected workload growth, provide reasonable expectations that can be used to create and develop Operational Level Agreements (OLA).

Analysts can exploit powerful BEZProphet features that compare actual with expected results and generate the corrective measures necessary to provide the foundation for organizing a continuous proactive process of Service Level Management.

### **BEZProphet and Capacity Management**

ITIL defines Capacity Management as the discipline that ensures IT infrastructure is provided at the right time in the right volume at the right price, and ensures that IT is used in the most efficient manner. This involves input from many areas of the business to identify what services are (or will be) required, what IT infrastructure is required to support these services, what level of contingency support will be needed, and what the cost of this infrastructure will be. Necessary inputs to the Capacity Management processes are:

- Performance monitoring
- Workload monitoring
- Application sizing
- Resource forecasting
- Demand forecasting
- Modeling Alternative Solutions

These processes define the results of capacity management, such as, the capacity plan itself, forecasts, tuning data and recommendations, and Service Level Management guidelines.

BEZProphet capacity management features support all phases of the application and system life cycle, including:

- Data collection
- Workload characterization
- Performance analysis
- Workload forecasting
- Advice
- Planning
- Performance prediction
- Configuration planning
- Service level management

BEZProphet allows IT to forecast future performance resource utilization and throughput, at an application workload level, to understand when service levels will be exceeded and throughput levels will degrade to stunt business growth potential.

BEZProphet is easy to install and uses agent-less data collection technology to provide hands-free "set and forget" push technology to predict future Oracle

response time and throughput levels without manual intervention. It notifies you when a future threat materializes.

Using advanced analytical closed-loop modeling, BEZProphet allows IT to anticipate problems with hands-free "As-Is Predictions"<sup>TM</sup>, explore and evaluate alternatives quickly with powerful "What-If...?" analysis capabilities, and then measure actual vs. predicted results for ongoing validation.

The screenshot shows a web browser window titled "Contention Points - BEZProphet - Microsoft Internet Explorer". The page displays a table of contention points. The table has columns for Workload name, Database, Contention period, Violation category, Metric breached, and Contention point. Each row includes a brief description of the issue, such as "CPU queuing time per request execution is too large for workload 'Cust Service' in database 'orc19rh1' because a) there are not enough devices and b) the total service time is too large for workload 'Sales - TX' in database 'orc19rh1'".

Workload name	Database	Contention period	Violation category	Metric breached	Contention point
Cust Service	orc19rh1	Nov 2005	Service Level Objective	Response time	CPU
Sales - CA	orc19rh1	Nov 2005	Service Level Objective	Response time	CPU
Sales - NY	orc19rh1	Nov 2005	Service Level Objective	Response time	CPU
Sales - TX	orc19rh1	Nov 2005	Service Level Objective	Response time	CPU
R&D	orc19rh1	Jan 2006	Service Level Objective	Response time	CPU
Finance	orc19rh1	Feb 2006	Service Level Objective	Response time	CPU
Marketing	orc19rh1	Feb 2006	Service Level Objective	Response time	CPU

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**BEZProphet automatically produces contention point analysis by line-of-business highlighting bottlenecks that may be affecting response time.**



Automated or “As-Is” predictions provide a 12 month performance roadmap of where application performance is heading. These types of predictions are also referred to as “do nothing” predictions to indicate that if no changes are made to the existing hardware configuration and if the application continues to grow in the manner it has been in the past, the path that the application is heading down is revealed.

## BEZProphet and Continuity Management

Continuity management, according to ITIL, is the process by which plans are put in place and managed to ensure that IT Services can recover and continue should a serious incident occur. It is not just about reactive measures, but also about proactive measures - reducing the risk of a disaster in the first place.

Continuity management is regarded as the recovery of the IT infrastructure used to deliver IT Services, but many businesses these days practice the much further reaching process of Business Continuity Planning (BCP), to ensure that the whole end-to-end business process can continue should a serious incident occur. Continuity management involves the following basic steps:

- Prioritizing the businesses to be recovered by conducting a Business Impact Analysis (BIA)
- Performing a Risk Assessment for each of the IT Services that identify the assets, threats, vulnerabilities and countermeasures for each service
- Evaluating options for recovery
- Producing the Contingency Plan
- Testing, reviewing, and revising the plan on a regular basis

BEZProphet identifies database objects used by critical applications and workloads which should be a part of the Disaster Recovery Plan. Database workload monitoring can be used to identify and include new objects in the Disaster Recovery plan as a regular part of Disaster Recovery monitoring. BEZProphet's performance prediction results can be used to show the expected performance level, including response time and throughput, that can be supported for critical workloads by alternate systems in case of a disaster.

## **BEZProphet and Availability Management**

ITIL defines Availability Management as the practice of identifying levels of IT Service availability for use in Service Level Reviews with Customers. All areas of a service must be measurable and defined within the Operational Level Agreement and Service Level Agreement (SLA). To measure service availability, the following areas are usually included in the SLA:

- Agreement statistics – such as what is included within the agreed service.
- Availability – agreed service times, response times, etc.
- Help Desk Calls – number of incidents, response times, resolution times.
- Contingency – agreed contingency details, location of documentation, contingency site, 3rd party involvement, etc.
- Capacity – performance timings for online transactions, report production, numbers of users, etc.
- Costing Details – charges for the service, and any penalties should service levels not be met.
- Availability is usually calculated based on a model involving the Availability Ratio and techniques such as Fault Tree Analysis, and includes the following elements:
  - Serviceability – where a service is provided by a 3rd party organization, this is the expected availability of a component.
  - Reliability – the time for which a component can be expected to perform under specific conditions without failure.
  - Recoverability – the time it should take to restore a component back to its operational state after a failure.
  - Maintainability – the ease with which a component can be maintained, which can be both remedial and preventative.
  - Resilience – the ability to withstand failure.
  - Security – the ability of components to withstand breaches of security.

BEZProphet user-defined dashboard elements provide valuable information for Availability Management. BEZProphet performance measurement data clearly shows critical application and workload trends. A built-in Statistical Process Control feature provides valuable information for tracking satisfaction of OLAs and SLAs. BEZProphet's powerful exception monitoring features for service time, response time, throughput and usage of data provide valuable information for Availability Management tracking, monitoring, and reporting.



**BEZProphet user-defined dashboards can be set up easily for many different aspects of Service Level Management. A built in Statistical Process Control feature helps separate real problems from background "noise".**

## Summary

Major process development frameworks, like ITIL, are providing IT with the prime opportunity to better align itself with the business. For organizations of all sizes, this can be a daunting task. BEZProphet for Oracle provides a solid starting point for process development and serves as a catalyst for initiating an ITIL program or sustaining an existing ITIL effort by providing a structured analytic view of service delivery. BEZProphet is an ideal solution for developing OLAs, negotiating SLAs, determining future hardware and software requirements and tracking their on-going compliance.

While this paper has focused on a subset of ITIL requirements, BEZProphet has the features and facilities to contribute to a wide variety of ITIL guidelines. Perhaps the most important aspect of BEZProphet is its ability to serve as a catalyst to initiate a process development effort by supplying a solid baseline for service delivery and promoting a dialogue for better IT/Business alignment through a common understanding of these complex computing environments.

### About BEZ Systems

Since 1993, BEZ Systems has been offering innovative Proactive Performance Management (PPM) solutions that provide a line-of-business view of application resource utilization for today and tomorrow. These solutions allow enterprises to accurately profile application performance, compare 'change and growth' alternatives, and forecast future requirements. Future performance predictions are an invaluable component of verifying that business objectives and performance goals can be met, thereby minimizing any shortfalls in service.

**For more information, contact us:**

**BEZ Systems, Inc.**  
**345A Summer St.**  
**Boston, MA 02210**  
**617.532.8800 – [info@bez.com](mailto:info@bez.com) – [www.bez.com](http://www.bez.com)**