

ZenPM™ Real Time Performance Management



ZenPM™ is a real time next generation performance management solution for wireless and fixed line networks operating across multiple vendors, technologies and domains. It is able to collect and analyse terabytes of network and service platform performance data in the raw format delivered by each device, to report on network traffic, performance and quality in an integrated and real-time manner.

The Business Challenge

The challenge for Communication Service Providers (CSPs) in today's maturing markets is to achieve growth and profitability against a backdrop of increased competition and the increasing demand from consumers to deliver digital content over converged services to anyone, anytime, anywhere.

Performance Management is key to this challenge and in achieving the following objectives:

- Enhance network and service performance
- Increase subscriber satisfaction
- Enable dynamic report creation
- Future proof to support rapid growth and network evolution
- Control and reduce operating costs
- Support capacity planning and optimization
- Empower users with rich visualisations and simple dashboards

ZenPM™ enables CSPs to meet these objectives, providing real time intelligence into network performance and service quality.

Enhance Network and Service Performance

ZenPM™ offers a new and highly innovative approach to Performance Management, maximizing the Service Assurance benefits that can be derived from performance data. State of the art reporting, analytics and intelligent real time monitoring of KPIs and KQIs enables CSPs to proactively manage the quality and performance of their networks and services.

ZenPM™ at a glance

- ❖ *Next Generation Performance Management Solution*
- ❖ *Operates across multiple vendors, technologies and domains.*
- ❖ *Supports multiple PM data types including measurements and xDRs*
- ❖ *Real-Time KPI/KQI Monitoring*
- ❖ *High Performance and Scalability*
- ❖ *Cutting edge PM analytics data warehouse*
- ❖ *Simple intuitive visualisation & reporting*
- ❖ *Low Cost of Ownership*



Increase Customer Satisfaction

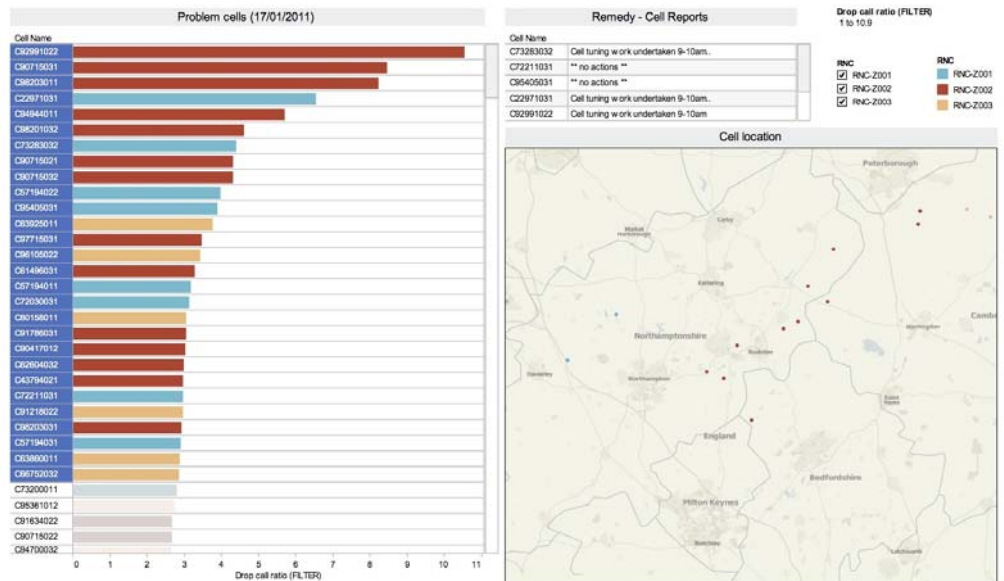
Keeping a complex network running at full capacity requires massive amounts of data to be analysed in real time. ZenPM™ provides many advanced benefits that are key to enhancing network and service performance:

- Identify performance issues that are affecting customers now
- Improve Customer Care – problem visibility before the customer calls
- Enable pro-active problem management
- Confirm when performance issues are fixed
- Predict performance degradation, outages and bottlenecks
- Long term performance monitoring of network and services
- Support decisions on new investments and utilisation of resources
- Support network planning functions and prediction of future trends
- Validate rollout of new sites and equipment
- Validate configuration parameter changes
- Analyse networks geographically to find inefficiencies
- Assemble and analyse data in minutes instead of days
- Avoid major risks by performing what-if analyses

Real Time KPI/KQI Monitoring

- ❖ Utilises Zen™ Proximity Correlation Technology
- ❖ Real time correlation of PM counters, associated metrics and xDRs against defined KPI/KQI thresholds
- ❖ Over large time periods, millions of counters, metrics and xDRs
- ❖ Configurable KPI/KQI scope – e.g. device, site, region, network, customer etc.
- ❖ Ensures you are alerted of performance issues in your network in real-time
- ❖ Generates threshold breach alerts for output to FM systems or via email, SMS etc.

ZenPM™ enables a customer-centric approach to assuring networks and services. It supports customer aware data aggregation enabling end user report generation and real time KPI/KQI threshold monitoring and alerting for customers.





Compound Visualisation and Report Creation

ZenPM™ provides simple and intuitive visualisation and reporting, for analysing performance data, including historical data at the atomic level. It analyses the traffic and service quality offered by the network, with interfaces into all required data sources, providing visual information and analysis of the network quality and performance.

As well as reporting on performance management data, ZenPM™ supports the import and blending of other data sources, such as Prioritisation, Fault Management and Trouble Ticket data, enabling this to be included in performance reports and dashboards.

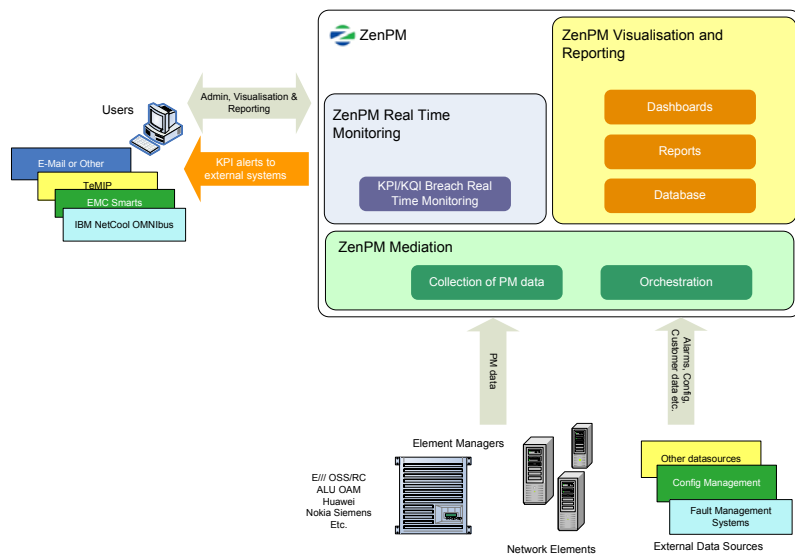
As many networks now comprise equipment from more than one provider, ZenPM™ is designed to manage network equipment from different providers, acting as an umbrella PM solution for multi vendor data handling.

Visualisation and Reporting

- ❖ Cutting edge PM analytics data warehouse
- ❖ Loads and queries data in real time
- ❖ Store and report on raw PM data for as long as you like - no need for Data Aggregation
- ❖ Browser-based analytics for PM data visualisation that anyone can use.
- ❖ Supports presentation of data on Geographic maps
- ❖ Share live, interactive data visualisations, dashboards, reports and workbooks via secured web server

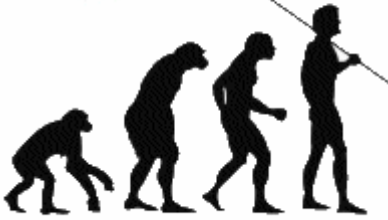
Mediation Layer

- ❖ Configurable high speed processing of raw PM data
- ❖ Library Interface Packages for different Vendor equipment
- ❖ Supports import of data for visualisation blending



ZenPM™ Desktop runs on the user's PC and provides a drag and drop interface for creating and publishing interactive charts, graphs, dashboards, reports and workbooks for presentation of performance data. This includes presentation of performance data and metrics on geographic maps.

ZenPM™ Web Server makes sharing live, interactive data visualisations, dashboards, reports and workbooks from ZenPM™ Desktop fast and easy. With enterprise-class security and performance to support large deployments, it facilitates collaboration, interaction, filtering and customisation of performance data views via a web browser.



The web server holds published reports and dashboards categorized and grouped by project. Projects can be set up to support any type of categorization e.g. by technology, user group, customer etc. User access to projects is controlled by a sophisticated permissions policy.

Future Proof Performance and Scalability

ZenPM™ is resilient, reliable, highly available, and has sufficient capacity to handle load without performance problems.

It is able to provide Real-Time Performance management thanks to its revolutionary approach and state of the art technology. The Zen™ correlation engine, mediation layer, analytics database and reporting tools use cutting edge technology that are widely used for applications where there is a requirement to load, process and query massive volumes of data in Real-Time.

To support networks that are rapidly growing and evolving, ZenPM™ is fully scalable to accommodate expansion without impact on system functionality. Thanks to the plug and play architecture and its ability to distribute and load balance, it can easily be extended to accommodate future expansion of the network, increased performance data volumes, new vendor equipment types and additional users.

The combination of Real-Time KPI/KQI threshold processing, Real-Time analytics and the performance and scalability of the solution are key differentiators for ZenPM™ over other Performance Management solutions available on the market today.

Revenue Protection

- ❖ *Faster restoration of revenue generating services*
- ❖ *Outage prediction – operators can intervene to prevent the problem*
- ❖ *Problem prioritisation – focus on VIP, Corporate customers and high revenue services*
- ❖ *Reduces the risk of incurring SLA breach penalties*

Flexibility

- ❖ *Platform independent*
 - ❖ *Deploys in weeks – easily integrates into your environment*
 - ❖ *Quick implementations due to our Library authentication programme.*
 - ❖ *Short lead time to bring new equipment under management*
 - ❖ *Different price models available to suit different budgets*
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Control and Reduce Operating Costs

- Flexible pricing model with the ability to start with a small deployment and expand incrementally as networks and services evolve.
- Runs on commodity hardware with a small hardware footprint, dramatically reducing data centre costs.
- Price book delivery model and short lead times for equipment interface packages and upgrades, giving full cost of ownership predictability.
- Simple and intuitive visualisation and reporting - end users do not require IT skills to produce and distribute dashboards and reports.
- Can support all technology domains and vendors, offering the possibility to further reduce operational costs by rationalising other performance management tools.