

Making real-time performance information actionable





Performance Management Comes Full Circle

Powerful and Simple Reporting for Today's Information Overload

Explosive growth in information, some of it redundant, is inundating businesses. The key to agile and effective decision making is to intelligently identify what information is important and to transform it into actionable insights.

Today's networks and communication environments generate huge amounts of data, much of it centered on performance and quality. Providers of these communication and IT services often struggle to get the information they need at the right time to ensure consumers and end users are getting the right experience from their applications and services.

Systems, applications and solutions designed to alleviate complex data scenarios must address a number of key concerns if they are to provide expected levels of customer awareness and operational and cost efficiency. They must be able to:

- Provide an understanding and visualization of all aspects of a customer's service
- ► Streamline and abstract data into user-personalized views
- ▶ Remain in-step with infrastructure and service configuration
- ▶ Help to enable cross-organizational access to customer data
- ▶ Reduce the amount of cross-application navigation
- ► Help to maintain cost and operational efficiency while enabling innovation



Vista360° is a powerful new application from InfoVista that extends our solutions and complements our user interface. It has been developed to meet our customers' demand for actionable real-time data that can be personalized while helping them to operationally simplify the use of network, service and application performance information.

Vista360° is an innovative Web 2.0 application that brings flexible and simplified management of operational and customer reporting. It enables a proactive performance-based approach to operational management of next-generation services, complementing traditional but reactive fault-based systems while enabling service providers to focus on real-time customer experience issues. The application sits across any of InfoVista's network, server and application reporting solutions and leverages the VistaFoundation® platform.



Figure 1. Graphical map—geographic resource and service placement

Self-Service Dashboards

Service provider operations teams across the world struggle to have the right information available at the right time, when dealing with day-to-day customer service management. Time lost in creating relevant views can significantly impact reactiveness and, in turn, customer satisfaction. The key to removing this frustration is to have the right tools at hand and ready for any occurrence.

This instant empowerment is delivered in the form of ad-hoc reporting, which refers to the capability—for an end user—to freely and simply define what subset of the data they want to look at and how they want to look at it. With ad-hoc reporting there's no creation of new data—all of the information is already available; it is extracted based on user criteria and then displayed based on user preferences.

With a Web 2.0 simple user interface and drag-and-drop functionality, users in an operations environment can create custom, on-demand reports—without relying on IT or system administrators. This user-friendly interface and functionality also enables more granular awareness of potential impacts to quality of service, while improving total cost of ownership and customer satisfaction. It's really about doing more with less.



Figure 2. Creation of a customer-specific dashboard

Have you ever needed to keep an eye on a specific customer's services or specific site-to-site applications?

How about needing an insight into the applications consuming high-value VPN bandwidth?

What about an understanding of whether abnormal network behavior is a trend or just a spike?

How about quickly correlating utilization and response-time?

Vista360 enables users to easily create these perspectives and allows the saving of all parameters and visualizations of an ad-hoc request for later reuse in an end-user-specific context.

The Power of Automation

The environments in which services and applications are running are dynamic, as they have to handle changing end-user application requirements, fluctuating volumes of data and user mobility. Place this "dynamicity" at carrier-scale and it's easy to see that topology, resources and service configuration can be in constant flux. This is why systems, applications and solutions need to stay perfectly instep with infrastructure- and service-related developments in order to correctly monitor and track customer service performance.

Vista360 interfaces and remains concurrent with the VistaFoundation network and service database: VistaMart. Any changes discovered within the InfoVista solution associated with topology, resources and services are instantly leveraged by the Vista360 dashboards, eliminating the need for costly integration with third-party systems, ensuring that operators are always working with the very latest information and creating a low maintenance, operationally efficient toolset.



Figure 3. Comprehensive resource and service dashboard

A powerful feature of Vista360 automation is its ability to automatically update and refresh dashboard views when they are accessed. This is enabled by the creation of a simple query—based on search criteria—for a specific customer's resource or service topology. When the dashboard is opened it will automatically run the query and add any new resources to a user's defined view.

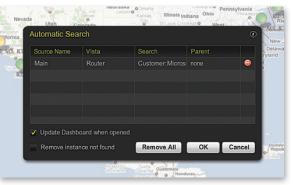


Figure 4.
Automated
search and
discovery

Powerful and Intuitive Views

A customer's service has multiple touch points across the network and generates a wealth of technical performance data that needs to be collected, analyzed, interpreted and abstracted into usable and pertinent information. Usually the skills required to perform these tasks are held by one or two individuals, which can put the service provider or enterprise at risk if these individuals—who have an important role in customer-service troubleshooting, operations or support—suddenly become unavailable. A better approach would be to increase visibility into customer-centric data across the organization, at an abstracted level and with increased simplicity, so that customerexperience issues can be viewed in a manner relative to a user's role.



Figure 5. Setting personalized user preferences

Vista360 enables new kinds of users to take advantage of InfoVista data, effectively unleashing the value of VistaFoundation's capabilities, by exposing InfoVista's rich data set to a larger audience. The intuitive

functionality of Vista360 is demonstrated through the variety of end-user defined views available in the application.

The role of the customer service agent (CSA) is an ideal example where flexibility and the ability to react to customer experience issues is vitally important. Customer service agents regularly need to access and present pertinent individual customer information—sometimes on short notice or on an ad-hoc basis.



Figure 7. Applying customer threshold indicator preferences

Another functional area that would benefit from a flexible and simplified approach to collecting and displaying data is that of customer, or end-user, reporting. In many organizations, the definition of customer-facing reports or portals can be an arduous and time-consuming task. Hence, a reporting system needs to identify pertinent information relative to specific end users, while ensuring that the information is actually of value to them.

When discussing flexible and easy access to information it's important to consider financially aware executive lines of business, especially where there has recently been great pressure placed on cost control and return on investment (ROI). Irregular and impromptu requirements to see—at first hand—the use of an organization's resources, general service quality and product uptake will be useful in creating justification for further investment. This level of reporting is not the responsibility of operational teams and in many cases can prove to be difficult, particularly when it involves selecting the limited but specific information needed for executive-facing reports. Such a challenge highlights the requirement for simplified and end-usercustomizable reporting.

Whether you are a *service manager* paying attention to particular customers, a network and service *operations professional* needing quick access to service troubleshooting, *executive management* keeping a watchful eye on critical activity and key performance indicators (KPIs) or an *end user* requiring frequent access to a changing data set, Vista360 has a view for you.

"One Click," the Power of Simplicity

Customer experience and customer satisfaction can be partly measured by the responsiveness of the provider's support or operations department. Valuable time is regularly and unnecessarily wasted in switching between applications to get the perspectives and information needed to form the full picture of a customer's service.



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Figure 6. Customized and grouped data for a specific customer

Figure 8. High-level visualization of a customer service topology

A simple and powerful way to improve operational efficiency is to implement and leverage a "single pane" for linking customer experience to services, applications and the network infrastructure. InfoVista's Vista360 delivers this simple but powerful navigation by intelligently unifying the data available in VistaFoundation and InfoVista's 5View™ Service Data Manager into user-friendly dashboards.



Figure 9. One-click navigation—fast and powerful access to network, service and application perspectives

Reflecting a unique multi-dimensional approach to service assurance, 5View Service Data Manager offers application visibility, analysis and response-time management to enable network and application performance management from a common environment. Service Data Manager complements InfoVista's award-winning Vistalnsight® for Networks, allowing users to exploit InfoVista's strengths in monitoring IP network infrastructure and VPN performance.

Vista360, which leverages the network and application performance data from these two solutions, empowers service providers to create views and visualize the relationship between application usage and infrastructure performance. This enables them to validate customer service integrity and rapidly and efficiently diagnose the causes of application usage and performance issues related to quality degradation.

Additional valuable time can be wasted when trying to source detailed information about the environment in which the services are running—all part of the troubleshooting process. Using Web 2.0 concepts and ease-of-use, Vista360 can host Web-based information to further streamline operational responsiveness.

InfoVista's Vista360 ensures that information remains available and actionable by multiple audiences, through a collection of integrated dashboards that provide "one-click" access to all environments.

The Power of Live Analytics

A key feature of the InfoVista Vista360 dashboard is the analytic view—as seen in Figure 11—which enables quick troubleshooting of performance problems. The user can browse data easily to identify trends and correlate statistics to discover possible root causes of performance issues.



Figure 11. Analytics—troubleshooting, baselining and trending of networks and applications

The benefits of adopting Web 2.0 technology and innovative techniques for reporting are captured in Vista360's export capability. Analytical reports can be sent as PDFs to third parties, but these reports are delivered as usable information instead of the traditional flat data. Recipients can select data ranges, time frames and collection periods, and even apply trend analysis to the exported data—a real innovative use of new PDF technology.

Data Analysis Report



Figure 12. PDF analytics export third-party analysis of historical performance data and trending

Figure 10. One-click navigation—integration with third-party data to supplement integral data

Cost-Effective Knowledge Transfer

The cost associated with operator training can very often be overlooked, and training a large amount of users—who have frequent or infrequent access to an application—can be a significant expense. InfoVista's Vista360 offers great advantages to cost-sensitive organizations by leveraging simple operational procedures and easily navigated, easy-to-learn dashboards that all can benefit from—whether day-to-day or occasional users.

Features	Capabilities and Benefits
Innovative self-empowering dashboards	✓ Personalized dashboards using abstracted and relevant data
	✓ Each user can create his/her view of the world without the need for IT support
	✓ Dramatically reduce cost of ownership and improve user experience
Powerful and intelligent automation	✓ Combine and monitor resources from multiple VistaMart databases into one or many dashboards
	✓ Maintain synchronization with dynamic network and service topologies
	✓ Customer-focused, automated and query-based search and update
Intuitive and role-aligned views	✓ Role-relevant dashboards for a focused view
	✓ Drag-and-drop, state-of-the-art Web 2.0 user-interfaces (UIs)
"One-click" single-pane navigation	✓ State-of-the-art approach to managed service reporting
	✓ Simple and integrated network and application performance management
	✓ Single-pane access to service-supporting, third-party Web-based content
Powerful performance-based analytics	✓ Keep a real-time eye on critical resources to quickly access critical data and troubleshoot problems
	✓ Reduce performance issues and proactively prevent impact on customer experience (revenue protection)
	✓ Analyze service behavior and trends with ease
	✓ Share embedded-data reports with multiple lines of business
Cost-efficient operator empowerment	✓ Simple and intuitive UIs
	✓ Cost-efficient enablement of a broad range of users

Table 1. Features and Benefits of InfoVista's Vista360 Operational and Customer Dashboard

Summary

The dashboards of InfoVista's Vista360 enable a proactive approach to performance management for operations teams. They complement existing fault management applications but allow service providers and IT management to take a positive step toward quality-aware customer experience management. The ad-hoc capabilities aid the reduction of cost of ownership for InfoVista solutions, increase the visibility and usefulness of InfoVista products to a broader range of users, and augment the perceived value of performance management.

