



PREDICTIVE SAN MANAGEMENT

Using VirtualWisdom's User Defined Contexts (UDCs) for 'What -If' Analysis

Background

Today, most SAN management monitoring solutions are designed around troubleshooting, providing reactive assistance to harried IT administrators and operations professionals. Given the size and complexity of many environments, this simply isn't sufficient to avoid inevitable application slowdowns or outages.

For years, VirtualWisdom has enabled IT professionals to see low level physical layer issues, which are useful predictors of problems higher in the infrastructure stack. Beginning with VirtualWisdom release 2.0, Virtual Instruments augmented this predictive ability through the addition of 'User Defined Contexts', or UDCs. Amongst other uses for UDCs, they add the ability to easily analyze existing metrics to help predict problems before they occur.

User Defined Contexts

The UDC feature enables creation of 'custom context', specified by user-defined Group-By fields and values, customizing the data that VirtualWisdom stores by augmenting it with information specific to a specific SAN. This customization is done by adding information to the data collected by VirtualWisdom, and not by modifying the collected data. SAN owners can usefully apply a feature that enables them to group data in ways that are specifically relevant to their networks, and especially the ability to group together several ports on a switch and report them as one entity. UDCs allow custom grouping of data of any probe type and metric set. The UDCs, based on key fields and their attributes (such as Initiator, Initiator Name, Target, Target Name, or Channel), have the same behavior as existing key fields with which VirtualWisdom users are already familiar, allowing the seamless use in all aspects of VirtualWisdom, such as Reports, Alarms, and Recordings. UDCs also use metric fields, statistics gathered for a specific key, such as Frames/Sec, Avg Command to 1st Data, and MB/sec.

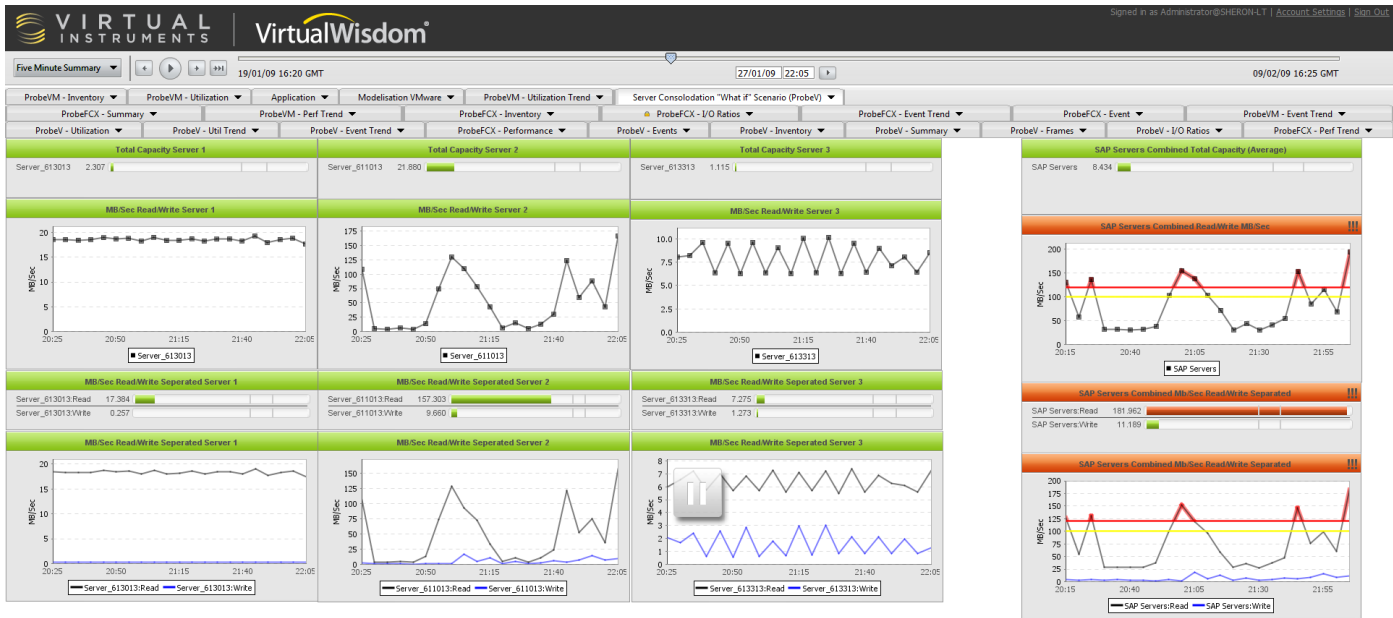
UDCs enable the following functionality:

- Create custom key fields such as Application or Server for any probe type and metric set.
- Group data by custom key fields alone or by combinations of custom key fields and existing key fields.

- Create report templates containing custom key fields.
- Answer “what if” questions by simulating different scenarios using the summarized historical data in the VirtualWisdom Server.
- Create server, virtual machine, and cluster fields automatically for ProbeFCX when used in conjunction with ProbeVM.
- Create fabric fields automatically for all probe types.
- Create filters and alarms using UDCs.

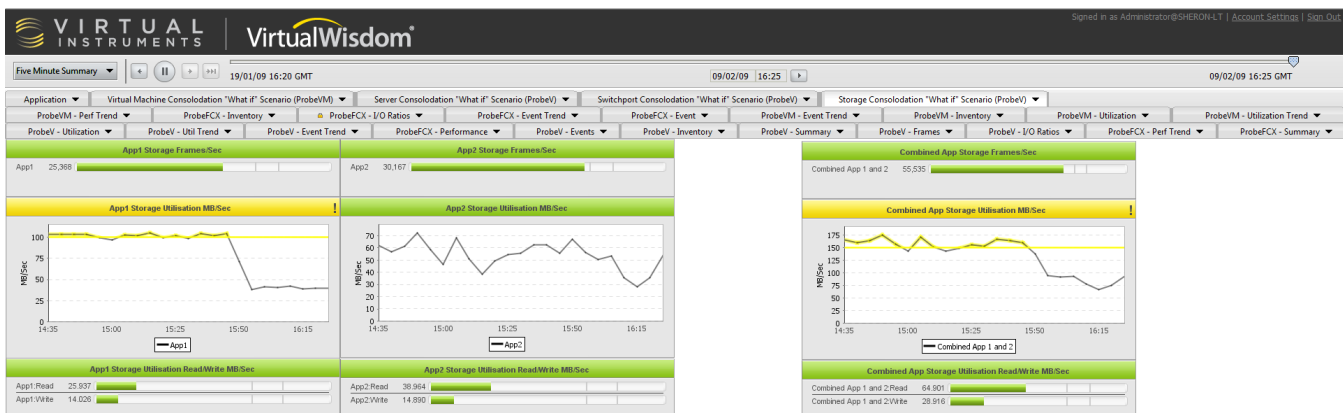
Sample Use Cases for “what-if” analysis

Host Consolidation:



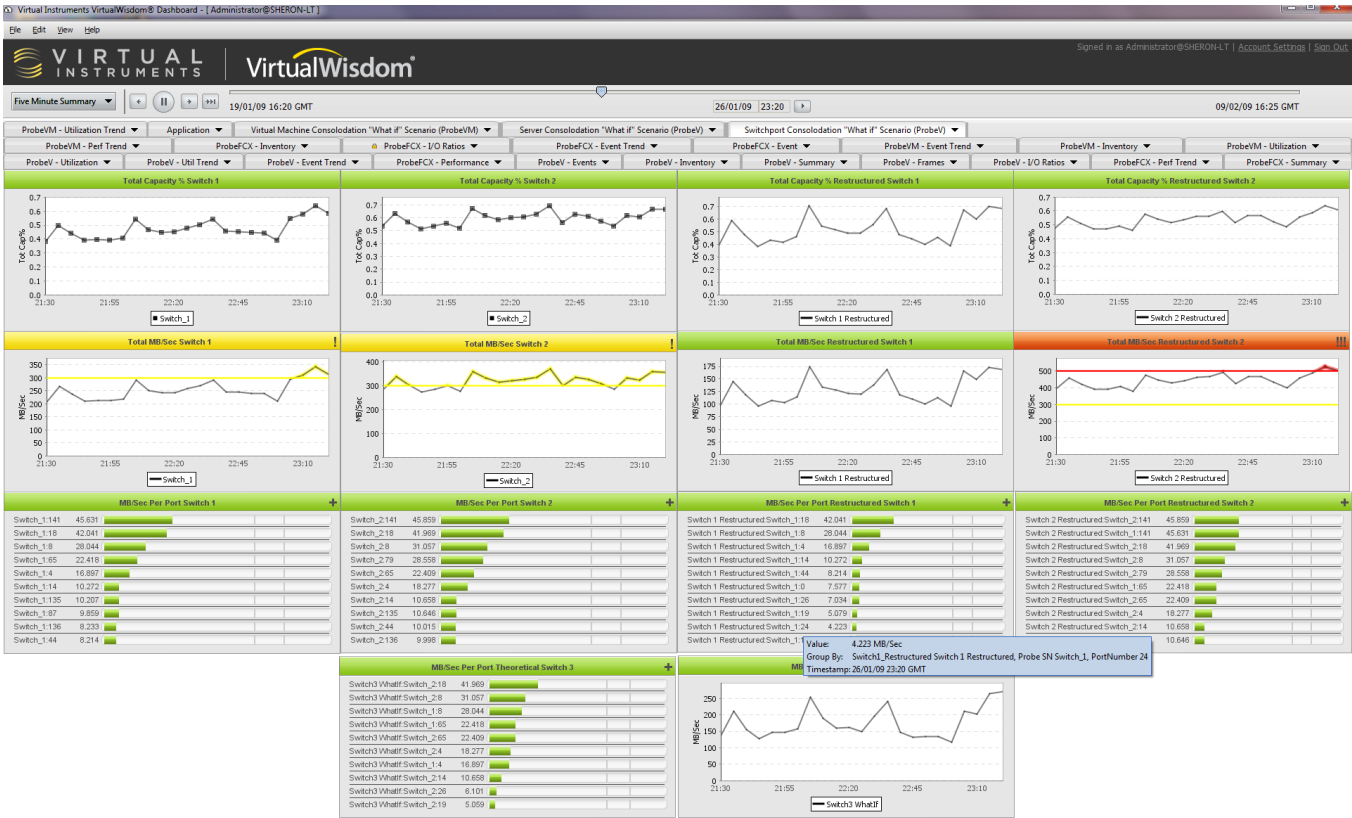
This dashboard shows the metrics for 3 separate SAP servers. The final column shows the same metrics based on the premise that the 3 servers are consolidated into one virtual server.

Storage Consolidation:



In this dashboard, 2 applications are using 2 different sets of 3 storage ports. The metrics for these are shown in the first 2 columns. The third column shows what the situation would be should the 2 applications merge their use of ports.

Switch Restructure:



In this dashboard, the top 4 columns show switch 1 and 2 as they are today. The next 2 columns show 30 ports from switch 1 being moved to switch 2. The bottom 2 widgets show a number of ports from both switch 1 and switch 2 being combined into a theoretical new switch 3. Switch3 shows the top talkers and the MB/sec.

Summary

VirtualWisdom UDCs enables the grouping of data in ways that are relevant to specific networks. UDCs allow custom grouping of data of any probe type and metric set, and are thus useful for doing 'what if' analyses quickly and easily, using actual production data.



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