



Business Case for Local Analyst

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Executive Summary

Smart analytics is a key component of a well-managed System and Application. While live monitors deal with what is happening now, smart analytics are tasked with: Detecting deeply rooted issues that will otherwise remain unknown, what to expect in future, and what you need to do now to avoid it.

What makes an analysis algorithm smart? In this case, it must know the underlying infrastructure of NonStop Servers, and be able to connect the millions of datapoints. Otherwise, the analytics will be of little to no benefit. Smart analytics can detect an exception, tell you why it is happening, which resources are responsible, which applications are affected, and what needs to be done.

Current monitoring tools fall into two categories:

1. Perform live monitoring and Analytics on NonStop – While we agree that live monitoring must be directly connected to NonStop Servers, it is no place to run analytics. NonStop is there to run your business. The last thing you want to do is to add to its load, in order to run analytics, which most likely adversely affects your business applications. This gets even worse when a performance issue is already detected on your Servers. In this case, analytics will only add to the problem.
2. Perform live monitoring and Analytics off NonStop. These products collect metrics from NonStop is pushed to a general analytic product either on local PCs or public cloud. That is where the disconnect happens:
 - a. You do not have a live and direct connection to your NonStop Servers to affect change or automatically recover from issues. These solutions do not know NonStop.
 - b. You can see metrics from NonStop and other Servers on a single screen, and it can detect anomalies, simply based on variations in reported metrics values when compared to its historical data. It can alert you to the anomaly but cannot tell you what is important: What exactly happened, which unit, who is affected, what needs to be done now, and how it can be avoided in the future. As stated before, these tools simply do not know the intricacies of NonStop Servers and applications. Local Analyst does.

The new generation of Computer Engineers and analysts will have little to no knowledge of NonStop architecture and its underlying workings. They have a good understanding of computing, and that is exactly what Local Analyst requires. All complex details are already built into the product; what comes on top is a simple overview, but with all links to details in a point-and-click matter. No commands need to be executed; no scripts need to be written. The young professional is told about the issues and directed to all the required answers.

It should be noted that HPE Performance specialists around the world use Remote Analyst (cloud-based version of Local Analyst, offering the same exact features) to performance analyses for Fortune-500 companies around the world receive information regarding their daily tasks; Finally, System Administrators can receive detailed analytics. Daily, weekly, and monthly frequencies are available. Reports can also be generated on demand at any time and there is no daily cap limit.

Local Analyst is the most comprehensive solution for the most experienced NonStop/Tandem professionals, as well as new computer graduates joining the team. Local Analyst automatically generates and emails analytics and trend reports. Management can receive overall trend and availability reports, while Operation staff can A special bonus for Web ViewPoint Enterprise users is the integration of the two products. From Web ViewPoint Enterprise and while examining a resource, the user can click on a cloud icon and immediately, post logon, be connected to Local Analyst to view all historical and analytical work for the resource. Local Analyst can hold information for years.

Local Analyst is the needed Smart Analytics solution for HPE NonStop users. It empowers both current and next generation of NonStop Administrators. Value is greatly magnified for Web ViewPoint Enterprise users.

Need for Smart Analytics

All off platform NonStop Analytic solutions only report on the top layer. Data is collected on NonStop and is forwarded to the platform, whether in private or public cloud. Users can build portfolios on how to organize their screens, how each metric should be grouped with others, and finally how they should be displayed.

Data comes in. Data gets displayed and stored. A flexible algorithm can look for and report exceptions. And this is where it stops. There is no basic: cause/effect/recovery information.

At this point the user knows something is wrong. Exactly what is unknown. What caused it, which products and/or customers are affected, and what needs to be done immediately is also unclear. In short, the System Administrator is more concerned, less informed, and most likely unable to resolve the issue in a timely matter.

As NonStop Servers became faster over the years, customers upgraded to new Servers with less CPUs, but perhaps more cores. In parallel and during the same period, the number of files, their configuration and overall storage requirements have grown substantially. Each CPU may now hold thousands of Processes, most customers hundreds of Terabytes of data, stored in tens of thousands of files and spread over hundreds of disk drives. In short, even the best of us cannot keep track of all that is happening on our Servers. Manual monitoring and attempts at analytics by the best of us will be futile.

Today it takes a computer to monitor and analyze another computer, all under directives of assigned company Staff members.

Analytics must be done off platform

Legacy products in the NonStop space do their analytics on NonStop itself. This was not by accident, but rather the technological limitations at the time: 80s! Windows/Linux platforms were slow platforms unable to perform the requirement analytics. Development software was limited to early versions of Visual Basic with simple UI features and unable to process large amounts of data. Needless to mention, Public cloud (AWS/Google Cloud, Azure) were decades away.

These companies did what they could. Also given the UI and SQL limitations on NonStop at the time, many required customers to write complex scripts to define the screens they wanted to display and relationship between them. Of course, customers needed to be trained (at significant costs) in how to write and manage these scripts. As any risk management strategy requires, more than one person needed to be trained in this. Such companies developed a following. These customer employees saw their main job as management of these products, and “solving” problems. This went on for decades, until the underlying architecture defects became apparent. These products were now part of the problem, and not the solution. Furthermore, new employees were not comfortable using them. There was limited value in spending precious time learning an arcane product, at a time where technology is rapidly expanding. To make matters worse, the companies producing these products decided to limit their investments to basic bug fixes. At the same time, they kept increasing their prices, as if they had a near monopoly in the market. Such is no longer the case.

Local Analyst was developed and placed in the market in its public cloud-based implementation, some 20 years ago! It was one of the early analytic products on AWS! Today, Remote Analyst receives and processes over 3,500 Measure and other metrics files each and every day. This data is automatically received, loaded and analyzed from many customers around the planet. At near zero down time over 20 years, it also creates and distributes hundreds of analytic reports every day.

Local Analyst is a private cloud implementation of Remote Analyst. It was released several years ago and is quite easy to install. Here: [HPE Local Analyst Videos](#) you can find narrated videos which demonstrate the software and hardware requirements and steps needed to install the product.

We continue to enhance the product (Remote/Local Analyst) and listen to our customers’ enhancement requirements. That is how we plan our next release, and what the new features should be.

Analytics product must know the Server it is analyzing

A bit of background: Remote Analyst was developed over several years with weekly consultations with HPE Performance specialists around the world. Our joint efforts were to translate their knowledgebase into computer algorithms, and substantially improve them, given that we had access to new technologies. We started with GPA (written in Enform), SPAM (a combination of Cobol code on NonStop and some excel worksheets). Initially, they were duplicated into new technologies and were placed in the cloud. Once all analysts gave it a unanimous thumbs up, we started on the next phase: Taking it to a much higher level; and that’s how we started. Sadly, none of those HPE specialists are with the company anymore. We are super fortunate to have had their support in creating a product that carries their knowledge and skillset into the future and for the next generation.

So now when the data comes in, Remote/Local Analyst does not just look at its value. It takes to a much deeper level. For instance, when it notices a CPU busy above what was expected it will automatically drill down to far lower levels to find the cause and whether it is a cause for concern. Following is just one possible path (depending on the level of data received from the customer):

- Process running on each IPU, to identify the culprit(s)
- Check whether they use the same object code.
- Analyze the files each Process opened and their I/O rate.
- Analyze each file in more detail to see which other Processes had it opened.
- Compare this data to past and look for exceptions at this level.
- Where possible, check for program code behavior and SQL statement activity.
- If this is identified as a valid point of concern (Dynamic and specific to each Server), alert the users, along with detailed findings.

No other product on the market today can do that.

While Remote/Local Analyst can do all this in seconds, it may take a human days and weeks to do the same. Remote/Local Analyst more than pays for itself, in just reporting a single incident.

This has been proven in several cases, where customers were not even aware of the problem until it was brought to their attention.

Alternative Solutions

Several legacy products are widely used in the market. We expect readers of this document either use them or are familiar with how they work. We went into details on how they operate in the previous section. In our opinion, and based on the arguments presented earlier, legacy products were a good choice for the time they were developed. They are, however, a very poor choice in today's environment, as they add to the problem they were built to address and are simply incapable of doing the type of Analytics Local Analyst does.

On the other spectrum, we also argued that off platform analytics that are not NonStop aware cannot be a solution to handle deep and informative NonStop Analytics. Alternative solutions from Splunk, down to basic PC based general metric analyzers, do not address NonStop requirements, and at best can offer a general overview of Enterprise. In short: They show trends but cannot do helpful NonStop Analytics.

Local Analyst – Mechanics

Local Analyst has two main parts:

- Code on NonStop that:
 - o Collects data from various subsystems such as:
 - Measure (Object/Entities/Counters + User Defined Counters)
 - Storage
 - SCF / CLIM
 - Pathway
 - Network
 - Application (dynamic)
 - o Process this data to make it readable off NonStop.
 - o FTP this data to Local Analyst in a secured format (SFTP).
- Code On PC based architecture off NonStop that:
 - o Verify and load the incoming data
 - o Builds all internal datapoints
 - o Processes Application (definition based) and trend activities
 - o Looks for exceptions and reports as needed
 - o Generates on demand and scheduled reports
 - o Allows access to users in a secured browser-based interface for “detective” and analytic reviews
 - o Manages all archives and data availability functions

Business Summary

Local Analyst is a Smart off platform Analytic solution that knows NonStop. In a browser-based interface it may be accessed securely without any client installation.

Local Analyst is offered through HPE, which offers full first level support for the product 24*7, while Idelji corporation in California offers second and third level support. You are in good hands.

Local Analyst learns details about your system over time and will most likely bring to your attention issues that you did not know exist. It tells you what the issue is, how to solve it now, and how to avoid recurrence. It also tells you about configuration mishaps and how to correct them. The list goes on and on.

In short, Local Analyst is the solution needed to manage and analyze NonStop Servers in today’s environment, and one which will offer value to both experts and novices alike.

For Web ViewPoint Enterprise users, Local Analyst is a natural complement, as Web ViewPoint Enterprise in one click offers direct link to all that Local Analyst knows.

Finally, with all its abilities, Local Analyst offers a better cost basis, when compared to the main legacy products in the market. Given that all work is automated, human productivity is greatly enhanced.