NETBEEZ®

Monitoring the connected enterprise

Help Desk procedures

Troubleshooting an “Internet Outage” with and without NetBeez

INTRODUCTION

“[Before NetBeez] we had to connect via remote desktop to client machines to have a better view of the problem. This was an approach that does not scale well with 80 network locations. Things changed when we started using NetBeez. On the dashboard I can quickly access the network availability and application performance data collected in real-time by all the agents. This translates to faster problem resolution, decreased service downtime and reduced onsite tech dispatches.”

It is not uncommon for help desk troubleshooting procedures to include steps that require logging in to remote workstations and running a series of local tests (e.g. ping, traceroute). Some customers we spoke to, don’t even have access to remote workstations. The only choice for the help desk is to either call users at remote network locations to run these tests and email back the results or simply wait for other user-reported outages calls to come in. It is surprising that, to date, troubleshooting relies on the information communicated by the user, which is usually something along the lines of “The cashier register wasn’t working last night,” or “I can’t access Google.” These symptoms can have a large number of causes, and this is where the nightmare of troubleshooting begins.

NetBeez was built to solve the following critical problem that is affecting today’s help desk operations: Companies are still relying on heavily user-reported outages to detect problem with the network and its services. NetBeez's vision is to completely eliminate this process and let its agents detect problems before the users.

In this paper we want to present a typical scenario of an Internet outage occurring in a multi-site enterprise network. For each step of the procedure we will present the case where the help desk would proceed without NetBeez, where constant communication between the help desk and the end users is required, and the case where the help desk is using NetBeez. We hope to demonstrate how the same process is simplified and improved (estimated up to 80% less of time) with the help of NetBeez.

STEP 1. OUTAGE DETECTION AND ESCALATION

Without NetBeez: User reported outage

One user at a remote network location calls the help desk and reports that several workstations cannot connect to Internet websites but can still access internal services and applications, such as the corporate email system and databases.

With NetBeez: Automatic outage detection

The help desk and the network engineering group receive alerts as soon as a remote agent cannot connect to one or more network or application resources.

"NetBeez tests quickly pinpointed where to focus our attention. "

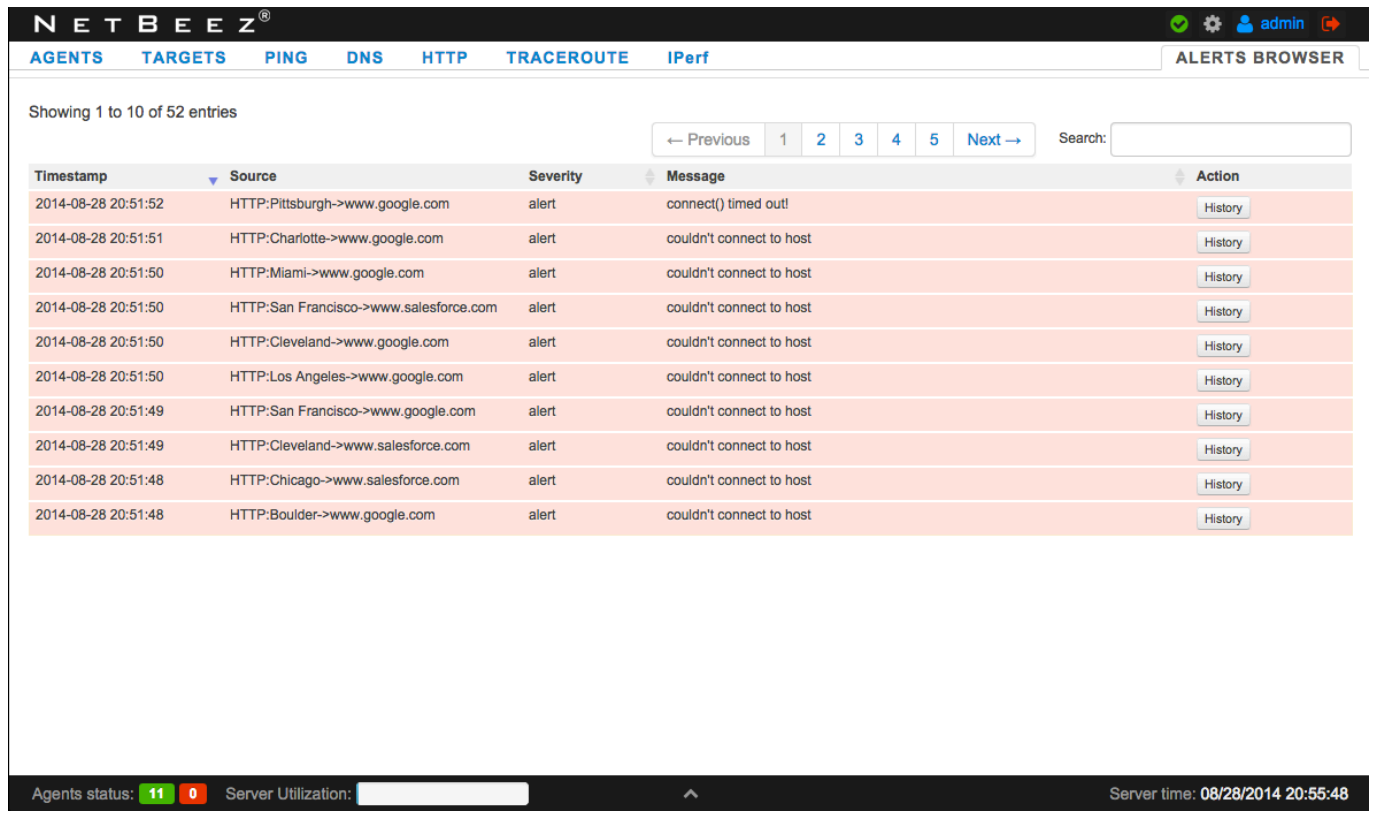

Figure 1. Screenshot of the NetBeez dashboard with agents detecting connectivity issues to several Internet websites.

STEP 2. INFORMATION COLLECTION ABOUT THE OUTAGE

Without NetBeez: Remote users provide information about the outage

The user at the remote site who called the help desk is expected to provide details about what services and applications are not reachable. This will include identifying websites that are currently inaccessible and determining if the web filtering is working.

With NetBeez: Automatic outage detection

The help desk can quickly verify if remote users can or cannot access internal or external websites from the NetBeez user interface.

"Would have had to troubleshoot multiple components ... This would have required network engineering and consulting time estimated at 10- 20 hours and estimated $5000."

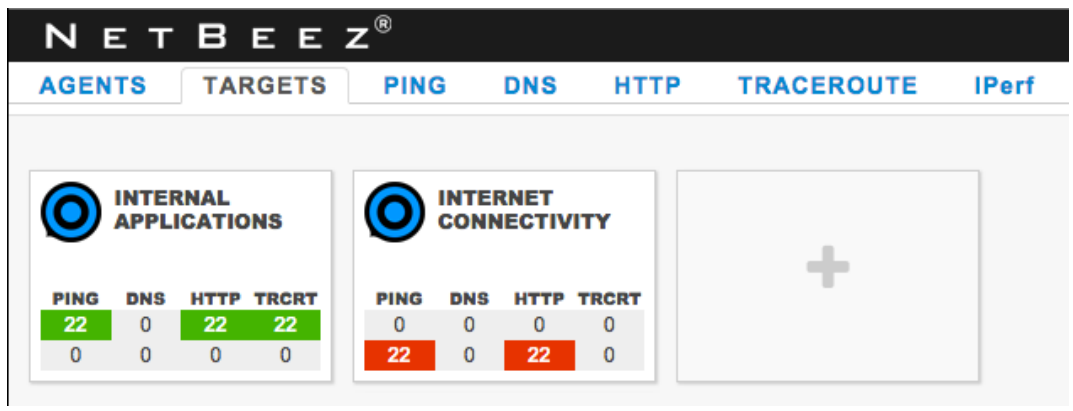

Figure 2. Screenshot of the Target View within the NetBeez dashboard that prove that multiple agents detected connectivity issues to websites.

STEP 3. TROUBLE TICKET CREATION

Without NetBeez: Help desk creates a trouble ticket

The help desk creates and files a trouble ticket in the system that includes all the information collected by the remote user in Step 2.

With NetBeez: Automatic outage detection

NetBeez can forward generated alerts to an SNMP trap collector or SMTP server so that the solution can be integrated with the company's escalation procedures.

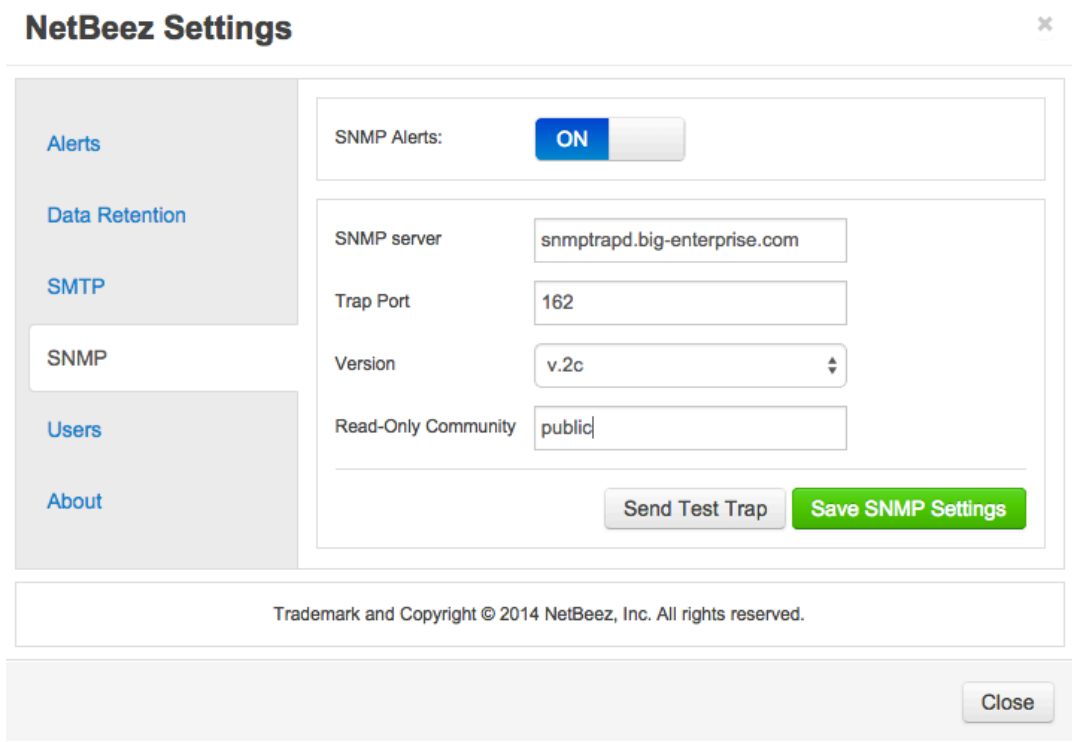

Figure 3. In the "NetBeez Settings" panel, the user can configure the SNMP trap collector that will receive all the alerts generated by the solution.

STEP 4. TROUBLESHOOTING THE OUTAGE

Without NetBeez: Help desk executes troubleshooting procedure

After opening the ticket the help desk digs further into the outage by following a similar procedure:

Step 4.1

- Verifying that there are no alerts on the host router for a bouncing WAN connection.
- Running extended ping tests on dedicated workstations deployed at remote locations for troubleshooting.

Step 4.2

- If the help desk does not see any alerts on the host router or there are no problems indicated in the ping test, then proceed to the next step.
- If the help desk finds alerts on the network hardware deployed at the remote site or if the results of the ping test show dropped packets or inconsistent response times, then the troubleshooting procedure will focus on the network portion of the remote location.

Step 4.3

The help desk will work with users at other remote sites and ask them to test whether they can reach internal versus external websites with a web browser. At this time, the help desk should receive calls from other sites reporting the same problem if it is a widespread issue. However, in case where a problem may be reported at odd hours, the only way they have to check if the problem is occurring at other sites is by connecting to other remote workstations and running ping tests as in Step 4.1.

"Without NetBeez, the help-desk group would have had to wait for multiple reports from users residing in different locations to verify if the problem was common to all the users or not."

With NetBeez: Help desk reviews the information reported by the agents

The help desk can simply check the ping and HTTP tests run by the NetBeez agents deployed at different network locations and verify the scale of the problem.

Figure 4. Screenshot of the PING grid view that proves that all the agents deployed in the network cannot access external network locations (e.g. www.google.com), while internal resources (172.30.0.6) are reachable.

In the HTTP tab of the dashboard, the help desk operator or network engineer can review the scale of the outage and pinpoint, from the real-time and historical graphs associated with each monitoring test, the exact timeline of events, whether the problem has been restored or not, if it is intermittent, etc.

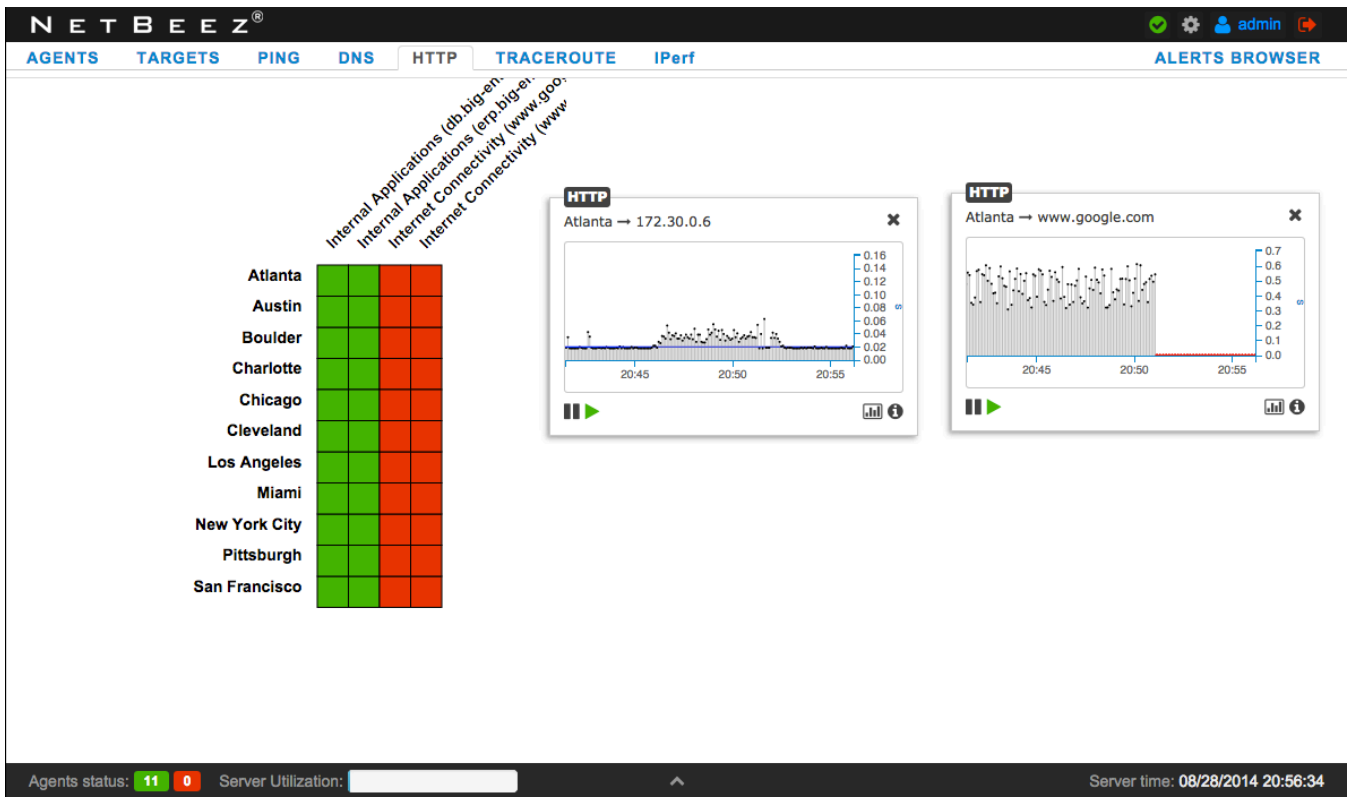

Figure 5. Screenshot of the HTTP grid view that proves that all the agents deployed in the network cannot access external websites (e.g. www.google.com), while internal resources (172.30.0.6) are reachable.

STEP 5. GENERATION OF A ROOT CAUSE ANALYSIS REPORT

Without NetBeez: Help desk connects to a remote workstation

The help desk will execute traceroute tests from the command prompt of several remote workstations to identify the path to the Internet.

With NetBeez: Historical traceroute data available for Root Cause Analysis

The NetBeez agents can be configured to run continuous traceroute tests to any destination. This data is permanently stored in the central server and can be retrieved and plotted anytime by the help desk so it can be analyzed and included in the Root Cause Analysis reports.

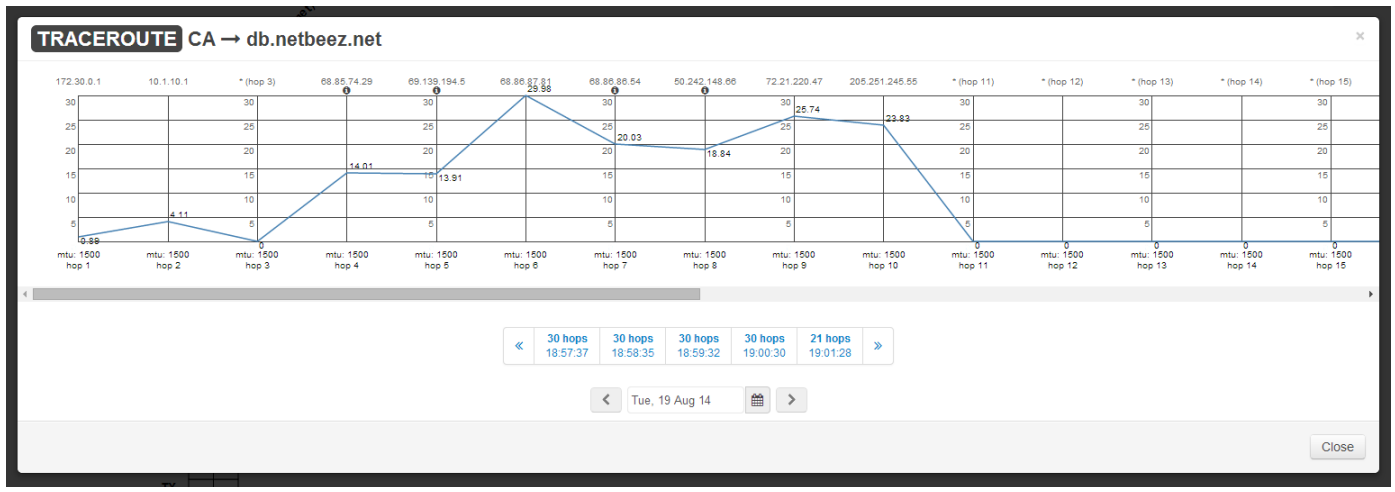

Figure 6. Output of the traceroute test executed by the "CA" agent towards the internal resource db.NetBeez.

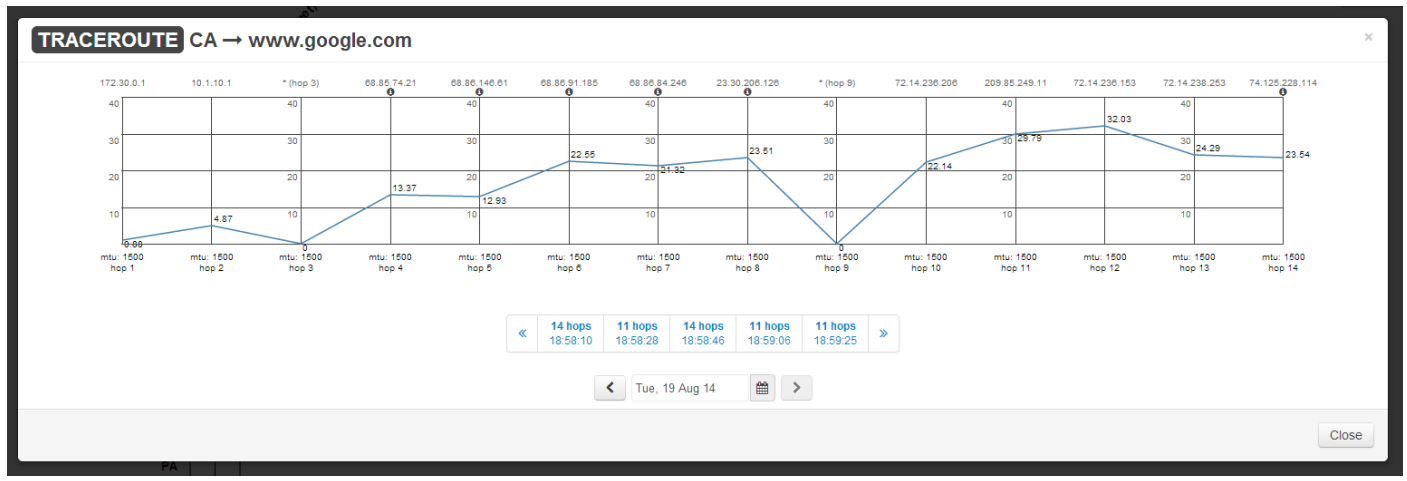

Figure 7. Output of the traceroute test executed by the "CA" agent towards www.google.com.

CONCLUSION

In this use case we wanted to illustrate how easy it is to use NetBeez and how this tool can assist the help desk during the troubleshooting process. This can go as far as using NetBeez to bypass the help desk for certain types of incidents saving help-desk man hours and downtime.

Welcome to the future of network monitoring, welcome to NetBeez.

You can request a demo at **demo@netbeez.net** and sign up for a free trial at **trial@netbeez.net**.