AppDancer/FA
How To: Monitor an Email Server SLA

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OVERVIEW

The purpose of this document is to show how to use the AppDancer/FA Portable Flow Analyzer to monitor SLA agreements for Enterprise and Service Provider application servers. First we define what an SLA is, the types of servers that can be measured, how AppDancer/FA monitors an SLA, and then how to configure the SLA monitor in AppDancer/FA. Finally we include two examples of how you would monitor the SLA of a HTTP web server, and a POP e-mail server.

NOTE: The AppDancer/FA product is designed to complement your existing Network Management System. It is NOT designed to replace your existing Network Management System tools. Since it is a portable tool, it can be deployed on a Network Segment to monitor SLA agreements from that specific network segment too any network server or device.

Q: What is an SLA?

A: SLA stands for Service Level Agreement. Application Service providers and Enterprise IT staffs offer SLA`s as an incentive for customers to purchase or use their service. An SLA will often guarantee an end user a certain amount of uptime. Since no provider can absolutely guarantee 100% uptime, providers offer a minimum availability level which if not met will result in the customer getting service fee refunds. Of the major Application Service providers, most are offering an SLA guaranteeing between 99.5% - 99.9% per month of uptime. Some SLA`s not only guarantee application availability but also suggest average response times. It is often understood that while Application Service providers are likely to reimburse customers if they fail to meet agreed upon levels but no providers are likely to reimburse customers for lost time, revenue and customer goodwill when business cannot be conducted when there is a failure on the Application Service Provider or Enterprise server infrastructure.

Q: What types of Servers can I monitor with AppDancer/FA?

A: AppDancer/FA will monitor the following application servers.

ISP and Enterprise:	DNS, FTP, HTTP, POP, SMTP
	Microsoft SQL Server
	Microsoft Exchange Server
	H.323
	SIP

Q: How does AppDancer/FA monitor a Server?

A: AppDancer/FA allows the user to configure a REAL application transaction that requires a REAL response from the application server. This level of SLA verification is beyond the simple ICMP-Echo (PING), or Synthetic Transaction. If the AppDancer/FA Flow Analyzer is unable to receive a valid response for the application type (DNS, FTP, HTTP, POP, SMTP, SQL, Exchange, H.323 or SIP), then that attempt is considered a failure and is included in the computation of that SLA for that particular application.

EXAMPLE: MONITORING AN E-MAIL POP SERVER

In this example SLA scenario, we have a corporate IT staff that is in the process of converting the production e-mail server from Q-Popper (using POP Protocol) to Microsoft Exchange (using POP Protocol, not MAPI). Since the conversion to Microsoft Exchange, users have been complaining that the POP server has been disconnecting their sessions intermittently. The corporate IT staff immediately thinks that the problem is with the new Exchange Server.

They start looking at patches for the Microsoft Exchange Server, they monitored the segment for excessive traffic, and they look at the scalability of the server architecture to handle the number of requests. Everything checks out and looks good from the Network layer. NOW WHAT?

They downloaded a demo of AppDancer/FA from the www.appdancer.com web site, and immediately setup the SLA monitor for testing the POP server for 99.999% availability. This would give the corporate IT group an idea of how often the server was failing to take POP requests. The SLA monitor was setup as follows:

Summary	Alarm Log	Alarm Settings	SLA

Stop monitoring this POP server   **Refresh**

Current Status:
    Monitor: 🟢 Good: 0 🟡 Marginal: 0 🔴 Failed: 0
    Service Level Agreement: 🔴 Critical
    Last Active Operation Status: null

Connection:
    Server Hostname:
    User Name: testuser
    Password: **********

Actions:
    Do check number of emails.
    Do not retrieve latest emails.

Options:
    Timeout: 60 seconds
    Interval: 600 seconds

Monitor Status:
    🟢 Good if response time is less than or equal to 2 seconds.
    🟡 Marginal if response time is less than or equal to 5 seconds.
    🔴 Failed if other than above conditions.

Service Level Agreement:
    🟢 Excellent if more than 90.0 % of the monitor status are good.
    🟡 Fair if more than 80.0 % of the monitor status are marginal.
    🔴 Critical if other than above conditions.

Stop

Under this configuration, AppDancer/FA will continue to login to the POP server and test for availability. AppDancer/FA keeps a running total of number of requests, success and failures of each request. Each of these requests effect the SLA scores for the POP server.

After deploying the AppDancer/FA product on their network segment, they noticed that the SLA monitor told them that they had 100% availability. This told them that every request that AppDancer/FA sent to the POP server was completed successfully. How could this be?

They then used AppDancer/FA to capture traffic from a client to a POP server the old way, and then captured traffic from a client to Microsoft Exchange Server the new way (see Capturing Packets in the AppDancer/FA Users Manual). Upon reviewing the traffic flows and data capture, the problem was actually in an upgrade that was done to the Microsoft Outlook client that did not show up until Microsoft Exchange was deployed. Microsoft Outlook was not retaining the username and password on the third request to the POP server. Had the corporate IT staff used the AppDancer/FA SLA monitor to prove the server was not dropping transactions, and then used the Data Capture and Flow Analysis portions of the AppDancer/FA product, the days of guessing at where the problem was could have been eliminated.

CONFIGURING APPDANCER/FA FOR SLA MONITORING

In order to monitor a server using AppDancer/FA, you must first add the server to be monitored to the AppDancer/FA Home Page. In the example below, we will add a Web Server from the Application Monitor to the Home Page.

NOTE: The AppDancer/FA Home Page is a user-constructed custom view of the devices, servers and applications that you want to monitor. For more information the AppDancer/FA Home Page, please consult the AppDancer/FA Users Guide.

In this example, we have AppDancer/FA up and running. We have selected "Application Monitoring->Nodes" and we can see that we have automatically discovered a Web Server at IP address 66.218.71.80. This discovery is based on the data traffic that AppDancer/FA can currently visualize from this segment on the network.

To add the item to your Home Page, perform the following steps:

1. Open the "HTTP – Web" Folder.
2. Select the HTTP server that you want to add to the Home Page from the list of servers. In this case, there is only one server.
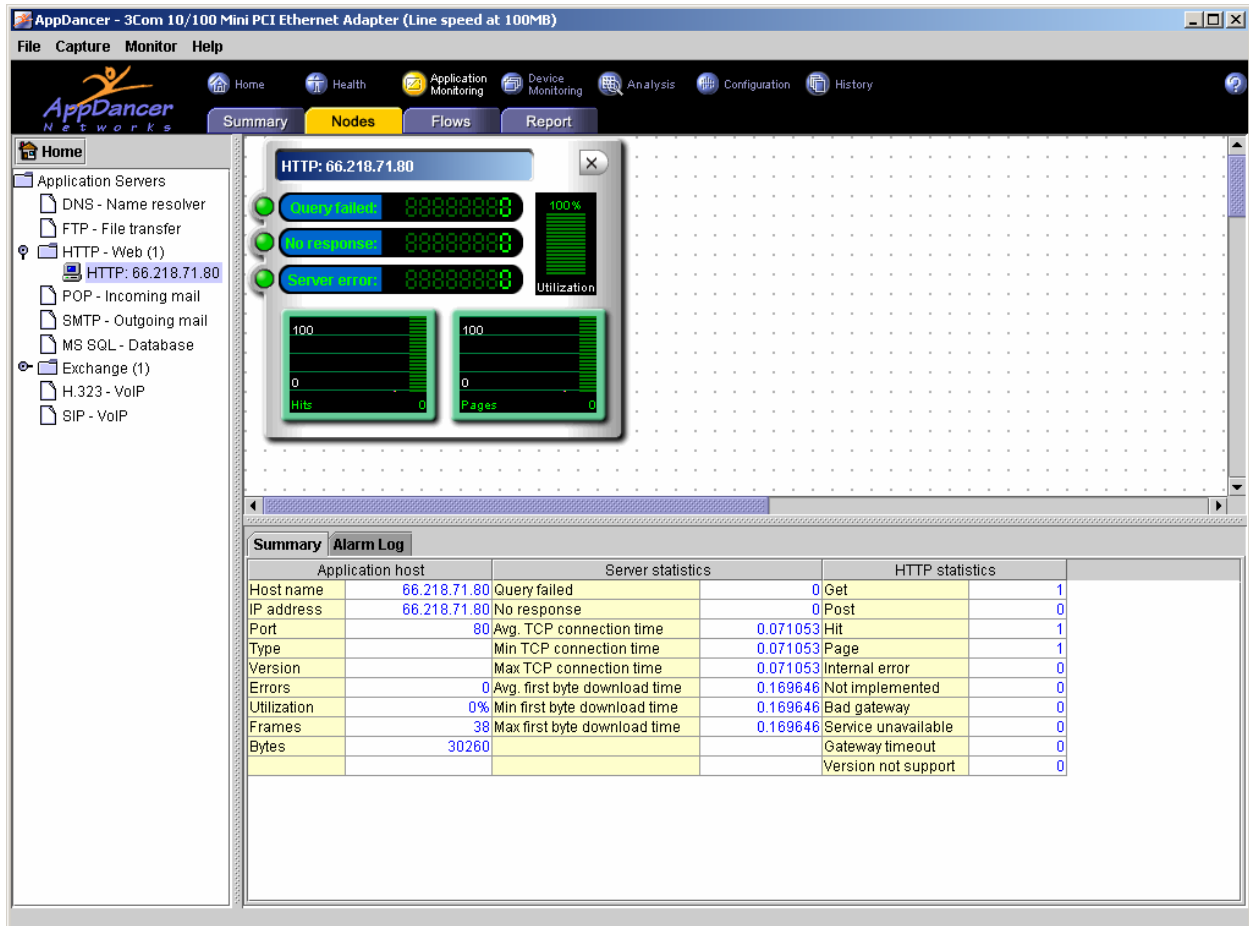
3. Select the "Home" button on the upper-left hand side of the screen (under the AppDancer/FA logo).
4. You should receive a response similar to the following:
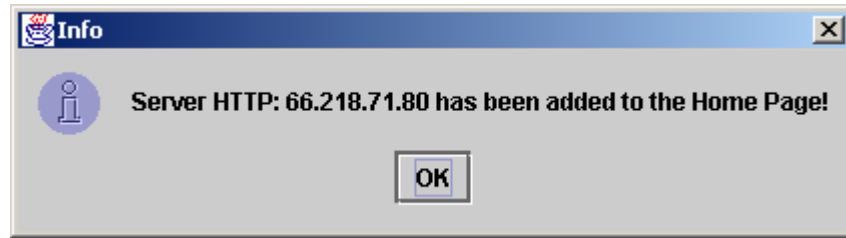
Once a server has been added to the Home Page, select the "Home->My View" from the menu bar at the top of the screen.

1. Open the "Severs" Folder. The server was added in the previous steps should located in this folder.
2. Select the server from a list of servers. In this case, there should be only one unless you have added other servers.
3. Your view should be similar to the following:

4. Notice in the lower-right panel of the screen, there is now an SLA tab. Select this tab.
5. Your screen should now look similar to the following:
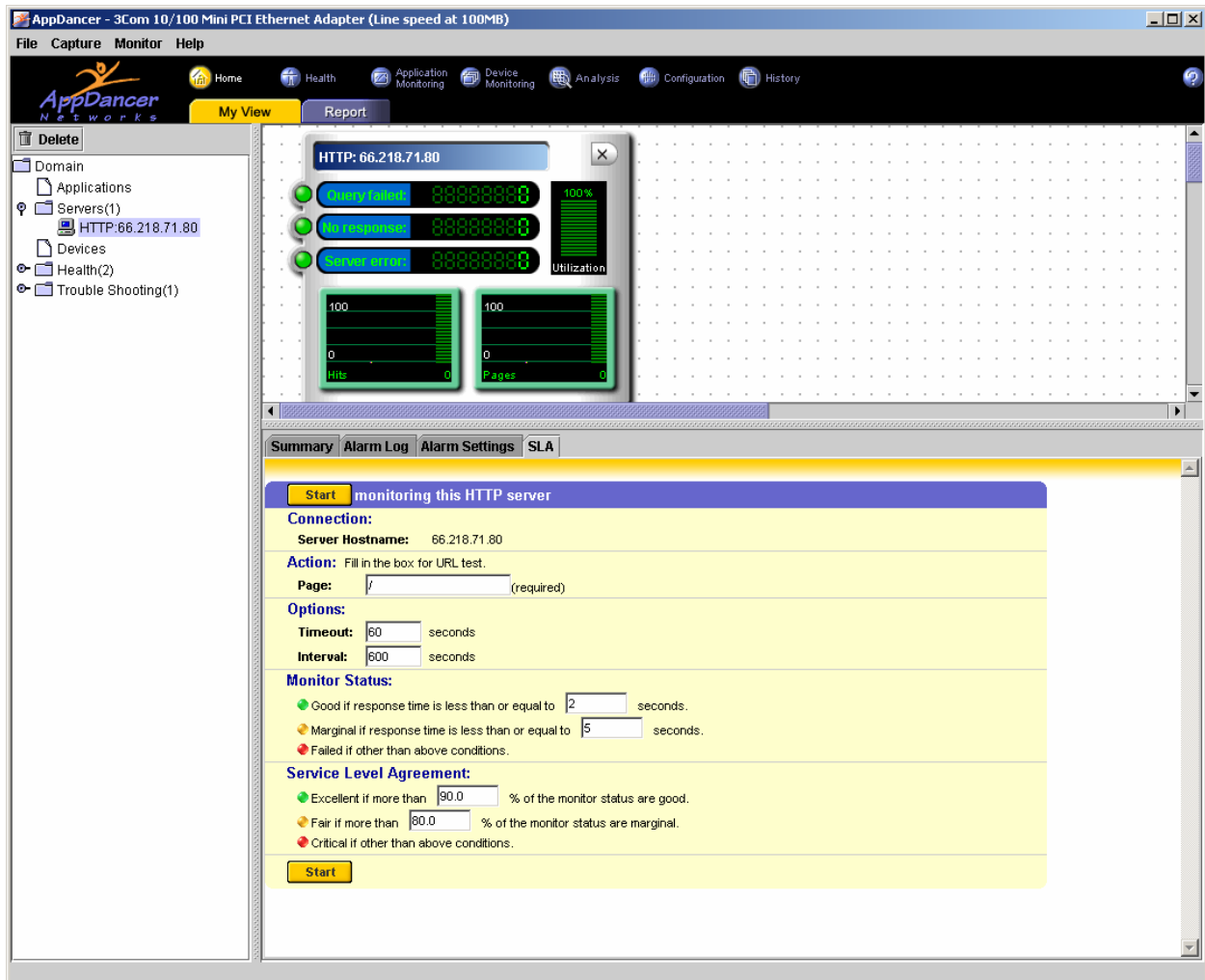
In the SLA Window, you should now see the basic SLA monitoring items that are associated with an HTTP application.

NOTE: Look at the "action" section of the SLA monitor. This "action" will be different for each application server that you are running through the SLA monitor.

For example, if you were monitoring a POP server, you would specify a "Username" and a "Password" in the "action" section of the SLA monitor.

The SLA monitor consists of the following fields:

Connection: This is the server name and/or IP address.

Action: The field is where you enter in your application server specific data. Each application protocol has its own "action".

Options: This is where you specify the timeout and polling interval for the application.

Monitor Status: This is where you decide what response time is considered good, marginal, or failed.

Service Level Agreement (SLA): This is where you decide your percentages that affect the overall of performance or lack of performance of the application and network infrastructures.

Start Button: Start the SLA Monitor – Send alerts if SLA is violated.

Stop Button: Stop the SLA Monitor.

Refresh: Refresh the status of the SLA monitor.

If you want to change the defaults for the SLA monitor, you can adjust these settings in the Configuration section of the AppDancer/FA product.

1. Select "Configuration->Global Settings->Service Level Agreement".
2. The screen should be similar to the following: