IBM Software Group

Ask the Experts

WebSphere Plugin configuration includes Properties, Admin console, SSL, Load Balancing and failover

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WebSphere® Support Technical Exchange

ON DEMAND BUSINESS™

Agenda

- Introduce the panel of experts
- Introduce **WebSphere Plugin configuration includes Properties, Admin console, SSL, Load Balancing and failover** Topics
- Answer panel submitted questions
- Answer questions submitted by email
- Open telephone lines for questions
- Summarize highlights

Panel of Experts

Panelist	Role at IBM
Bob Richter brichter@us.ibm.com	Advisory Software Engineer WebSphere L2 Support Bob has worked in WebSphere Plugin L2 for last six years. Prior to Level 2 support , he worked in WebSphere development, VM operating System Support, VTAM development, Netview development , PCOMM development and IBM HTTP Server development.
Harold Fanning hfanning@us.ibm.com	Advisory Software Engineer WebSphere L2 Support Harold's 33 year career spans several products like DPPX operating system, 17 years in development for Communications Server products including OS2® and Windows®. Since being in customer support he has supported Personnel Communications, Host access transformation, the AST toolkit, IHS, WebSphere Plugin, WebSphere Edge Products including the Load Balancer, and WAS/CE.

Introduction

- We will be covering a number of questions that cover various WebSphere Plug-in Topics :

  - Properties
  - Configuration
  - Security

- Platforms covered will include all distributed platforms.

Question 1

How do you set up SSL between WebSphere Plugin and Application Server?

Answer to Question 1

- Locate the Application Server Certificate in Key.p12 file
- Extract the Associated Root Certificate in the Trust.p12 file
  - Note, there may be intermediate certificates that must also be in the plugin-key.kdb signer list
- Add the extracted Root certificate to the Plugin-key.kdb undr “Signer Certificates” tab

Answer to Question 1 (continued)

- See this Link for Details:
  - http://www.ibm.com/support/docview.wss?uid=swg21433593

- Plugin-key.kdb can be pushed down form the WAS DMGR Admin console.
  - Web servers Plug-in Properties "Manage keys and certificates" and "Copy to Web server key store directory"

Answer to Question 1(continued)

- Differences in Behavior start in V8
  - UseInsecure Plugin Property

Question 2

How to best determine ServerIOTimeout setting for Plugin Property?

Answer to Question 2

- Add the Following Options to the IBM HTTP Server LogFormat Directive:
  - LogFormat "%h %l %u %t %f %U %H %v %V TIME:%T \"%r\" %>s %b" common
  - CustomLog logs/access.log common
    - %...T The time taken to serve the request, in seconds.
    - %...D The time taken to serve the request, in microseconds.

Answer to Question 2 (continued)

- The monitor your longest running request and add 10-30 seconds.
- Application server plug-in properties. Read / Write timeout value in seconds

Question 3

How to manually exclude a node from the plugin-cfg.xml (ie. Node agent is up but I don't want web request to hit that node) ?

Answer to Question 3

- There is no method for excluding on a Node scope, You can exclude per JVM™ . Therefore exclude each JVM on that node

- Graceful way would be to set weight for the JVM to zero. On refresh interval no NEW requests will be routed to that JVM. However any affinity sessions will be allowed to complete.

Answer to Question 3 (continued)

- Remove the JVMs for that node from the primary server list
  - Application server plug-in properties “Server Role”
- Edit out server in the Plugin-cfg.xml file. Note that any new propagation of that file will re-introduce the server to the cluster.

Question 4

How can I rotate the WebSphere Plugin Log?

Answer to Question 4

- Plugin Log can manully be rotated for UNIX® Only
- Using these commands:
  - cd /opt/IBM/HTTPServer/Plugins/logs/webserver1
  - cp http_plugin.log http_plugin_log.date
  - cat /dev/null >http_plugin.log
- Write a small script to execute the commands and then place script in crontab to run at specific time

Question 5

What is better Plugin Round Robin loadBalancing or Random?

Answer to Question 5

- Both provide an even Distribution of NEW and non-affinity request
- Plug-in design for distribution of request is limited to within Web Server process. There is no Global Plug-in Load Balancing, only within each process

- Round Robin: best in Single process Web Server
- Random: best with Multiple Web Server processes

Answer to Question 5 (continued)

- You can review plugin Load Balance of JVMs requests within a cluster using Stats Log Records.
- See later question/answer for details

Question 6

How to interpret Plugin Log Level STATS?

Answer to Question 6
Plug-in Log Stats Entry

- **PendingRequest**
  - Actual real time pending requests. If this number grows you may have some type of delay in app Server this number will go up and Down and in good environment may always be ZERO.
- **FailedRequest**
  - Cumulatve failed requests for Application Server in specific Web Server Process.

Answer to Question 6 (continued) Plug-in Log Stats Entry

- **AffnityRequest**
  - Session Affinity requests with JSESSIONID rather than NEW or NON-STICKY requests
- **TotalRequests**
  - Total Requests
- Stat Log Entry's after each request is handled
- We only need the **last** STATS log entry for **each Application Server** _for **each Web Server Process** for review

Answer to Question 6 (continued) - Plug-in Log Stats Entry

- **Process 000000b0 -** Server1 and Server2
  - [Tue Sep 10 10:52:26 2013] **000000b0** 00000304 - STATS: ws_server: serverSetFailoverStatus: Server **server1** : pendingRequests 0 failedRequests 0 **affinityRequests 632 totalRequests 637**
  - [Tue Sep 10 10:46:40 2013] **000000b0** 00000506 - STATS: ws_server: serverSetFailoverStatus: Server **server2** : pendingRequests 0 failedRequests 0 **affinityRequests 842 totalRequests 846**
- **Process 000000f8 -** Server1 and Server2
  - [Tue Sep 10 10:52:39 2013] **000000f8** 0000191a - STATS: ws_server: serverSetFailoverStatus: Server **server1** : pendingRequests 0 failedRequests 0 **affinityRequests 666 totalRequests 671**
  - [Tue Sep 10 10:46:18 2013] **000000f8** 00000708 - STATS: ws_server: serverSetFailoverStatus: Server **server2** : pendingRequests 0 failedRequests 0 **affinityRequests 872 totalRequests 877**

Answer to Question 6 (continued) - Plug-in Log Stats Entry

- Process **000000b0**
  - Server1
    - **totalRequests 637 – affinityRequests 632**
    - **New Requests = 5**
  - Server2
    - **totalRequests 846 - affinityRequests 842**
    - **New Requests = 4**
- Process **000000f8**
  - Server1
    - **totalRequests 671 – affinityRequests 666**
    - **NEW Requests = 5**
  - Server2
    - **totalRequests 877 - affinityRequests 872**
    - **New Requests = 5**

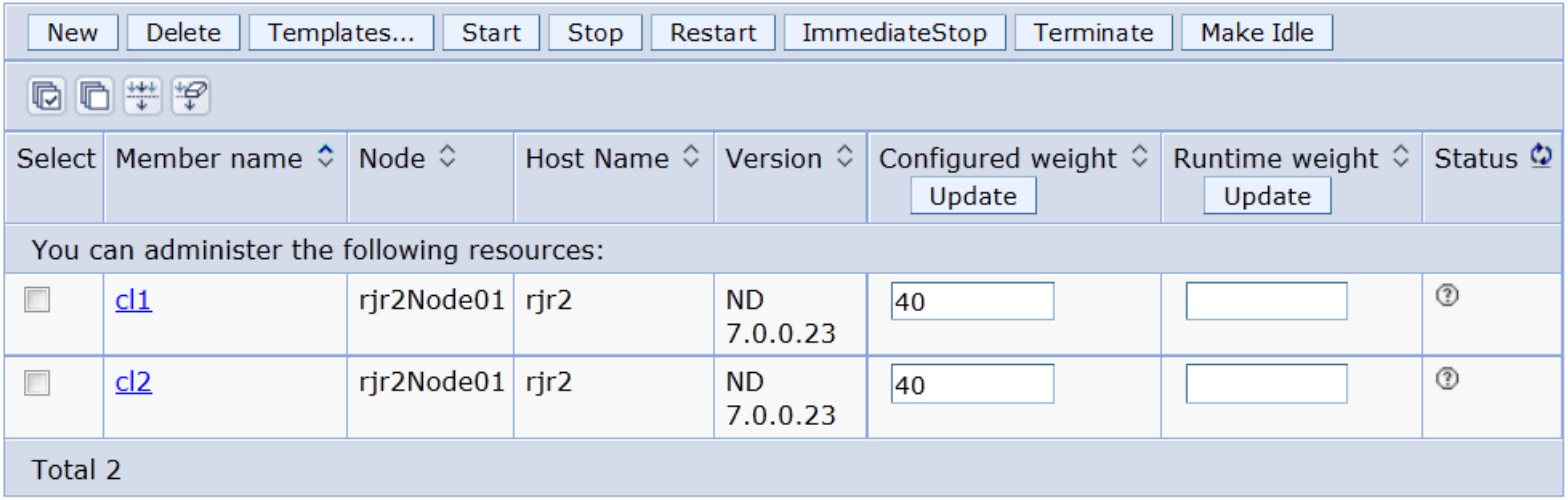
Question 7

Is it true that changes to runtime weight do not require plug-in generation and propagation? How long does it take before an update to the runtime weight is used?

The runtime weight for a JVM was set to 0 (to take it off-line). However, new connections were still allowed.

Answer to Question 7

- This is the panel your question refers to:



Answer to Question 7 (continued)

- The answer for WebSphere V7 is no Cluster Runtime weights do not apply to WebSphere V7 Plug-in running on Web Server.
- It's not dynamic for the WebSphere Plug-in, unless you're running:
  - Intelligent Manager/ODR Plug-in WebSphere V8.5.5.
  - WASXD ODR java proxy

Answer to Question 7 (continued)

- There are “Configured” LoadBalanceWeights which are the LoadBalanceWeights you input on that same Panel
  - To change the configure LoadBalanceWeights you Must Change at the Admin Console:
    - http://www.ibm.com/support/docview.wss?uid=swg21460889
- You must Generate and Propagate Plugin-cfg.xml to target Web Server

Answer to Question 7 (continued)

- If you made Hand-Edit changes to the Plugin-cfg.xml your changes may be overwritten if there is a subsequent Generate and Propagate

- **RefreshInterval**
  - The Plug-in will Check Timestamp of the Plugin-cfg.xml based on the Plug-in Property Refresh Interval (default 60 seconds).
  - If TimeStamp indicates a change , then ALL Plugin properties are reloaded.

Answer to Question 7 (continued)

- The runtime weight for a JVM was set to 0, to take it off-line. However, new connections were still allowed.
  - A LoadBalanceWeight of “0” will take the Application Server out of distribution loist for “NEW” and NON-affinity Requests
    - Existing Affinity Requests will continue to be passed to App Server with LoadBalanceWeight of “0”.
    - Over time all Existing Affinity requests session will expire.

Answer to Question 7 (continued)

- No New Requests will be routed to JVM with Configured LoadBalanceWeight =“0”
- This is a graceful way to take Application Servers offline

Question 8

When implementing High Availability with failover and sticky session, what are the plugin properties we need to set up to ensure session affinity?

Note: explain memory-to-memory replication.

Answer to Question 8

- Session affinity is configured in the WAS administrator console.
  - Application server => <servername> => Session management => Enable cookies
  - Set cookie name. Dflt = JSESSIONID
  - Clone-id Assigned when Plugin-cfg.xml is generated
- Mem to mem
  - Application server => <servername> => Session Management => Distributed environment settings

Open Lines for Questions

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Summary

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