z/OS® V1R10 Communications Server
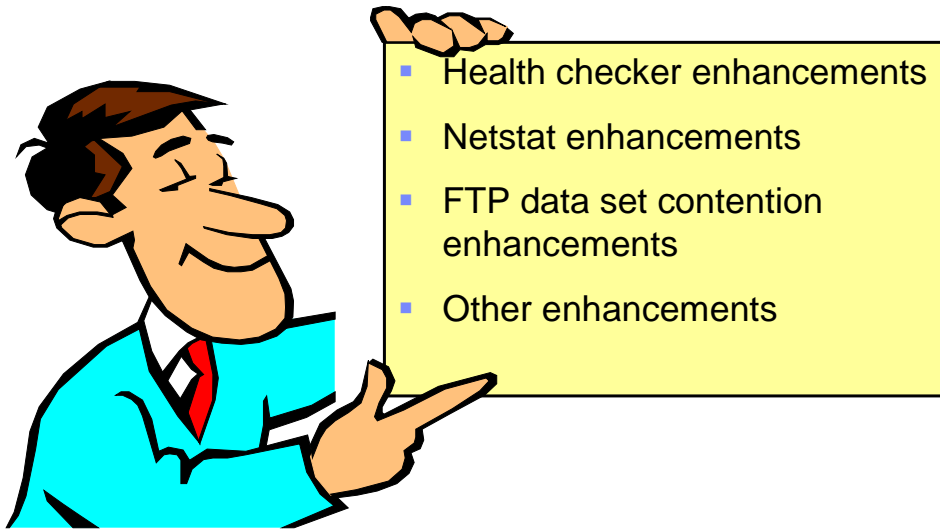
Overview: Serviceability

This presentation is an overview of serviceability enhancements to Communications Server for z/OS V1R10.

Agenda

- Health checker enhancements
- Netstat enhancements
- FTP data set contention enhancements
- Other enhancements

Overview : Serviceability
© 2008 IBM Corporation

This presentation includes Healthchecker, Netstat, and FTP data set contention enhancements for CS z/OS V1R10.

wnserv.ppt

Health checker enhancements

- CS z/OS V1R8 implemented initial support for and use of the z/OS health checker infrastructure

- CS z/OS V1R9 extended support for and use of the z/OS health checker infrastructure

- z/OS CS V1R10 adds more health checks, focusing on migration

Several health checks are added in V1R10.

One is a check that the BPXPRMxx INADDRANYPORT and INADDRANYCOUNT specifications match correct TCP/IP PORT/PORTRANGE definitions. These ports must be reserved to OMVS. If not, an abend EC6 occurs when Common INET tries to use one of them.

Another is a check for future migration issues involving servers that will no longer be included in the z/OS Communications Server distribution after V1R10. Four servers are included in the warning. They are the Boot Information Negotiation Layer (BINL), the Berkeley Internet Name Domain 4.9.3 (BIND 4.9.3) DNS, the Dynamic Host Configuration Protocol (DHCP) and the Network Database (NDB) servers.

It is important that users exploiting these functions plan for their removal **now**!

Netstat enhancements

- Provide a configurable maximum for records displayed by a D TCPIP,,NETSTAT MVS console command
  - Remember that the maximum value denotes number of records, not number of lines written to the console. These six lines count as two records:

```
SNTPD    0000001B UDP
  LOCAL SOCKET:   0.0.0.0..123
  FOREIGN SOCKET: *..*
SNTPD    0000001C UDP
  LOCAL SOCKET:   ::..123 (IPV6_ONLY)
  FOREIGN SOCKET: *..*
```

- With this new configuration support available, D TCPIP,,NETSTAT MVS console command support is added for the NETSTAT ALL report
  - This report can produce significant amounts of output if it is used without filters

Overview : Serviceability   © 2008 IBM Corporation

The default maximum number of Netstat records remains 100. This can now be changed with the newGLOBALCONFIG MAXRECS statement. Maximum can either be "*", indicating that there is no maximum), or any value between one and 65535.

Also, if the number of lines displayed as the result of a D TCPIP,,NETSTAT console command exceeds 65535 before the MAXREC value is reached, an error message is issued. In previous releases an abend D23 is issued for this condition.

wnserv.ppt

FTP Enhancements (data set contention)

```
ftp> cd 'user1.alfred.pdse'
250 The working directory "USER1.ALFRED.PDSE" is a partitioned data set
ftp> get cs4
200 Port request OK.
550 USER1.ALFRED.PDSE(CS4) used exclusively by someone else.
ftp>
```

- If the FTP client end-user is a human being, the end-user can choose to wait a little and then retry the failed FTP operation

- If the FTP client end-user is an automated process, such a condition normally results in a failed automated FTP process

- z/OS CS V1R10 adds FTP functions that, instead of reporting an error in this case, will wait and retry the operation automatically

Less disruption of automated file transfer workloads

z/OS FTP client and server obviously need to obey the usual MVS data set sharing rules for members of PDS and PDSE data sets based on ISPF enqueue/dequeue conventions. When FTP cannot access an MVS data set because another job already is holding it, FTP fails the request.

With this new function, you can configure maximum wait time in minutes. Also, new messages inform the FTP client who is using the dataset and how many retries are remaining before failure. This gives the user a chance to resolve the conflict before the wait time expires, allowing the FTP attempt to succeed without having to manually retry.

Various reliability, availability, and serviceability items

- OMPROUTE include file support

- The TCP/IP stack will add an initialization message with hostname information

- Add TCP/IP's ECSA and private storage usage and high-water marks as new fields to the stack interval and stop SMF records.

- Ability to packet trace discarded packets

- Numerous IPCS enhancements

z/OS CS V1R9 added support for use of system symbolics in the OMPROUTE configuration file.   z/OS CS V1R10 now adds support for use of INCLUDE statements in the OMPROUTE configuration file. This makes it easier to share common OMPROUTE definitions within a Sysplex.

The TCP/IP initialization message will now tell you which local hostname is this stack using. This is the name that will be returned on a gethostname() call. It will also tell you from which location (file/data set) the stack picked up the hostname. This helps with problem determination.

There have been many IPCS enhancements, including: ability to issuing VTAM display commands against a VTAM dump. Also TCPIPCS commands are enhanced to accept port and IP address filters

Feedback

Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send e-mail feedback:

mailto:iea@us.ibm.com?subject=Feedback_about_wnserv.ppt

This module is also available in PDF format at: ../wnserv.pdf

You can help improve the quality of IBM Education Assistant content by providing feedback.

Trademarks, copyrights, and disclaimers

The following terms are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both:

z/OS

A current list of other IBM trademarks is available on the Web at http://www.ibm.com/legal/copytrade.shtml

Product data has been reviewed for accuracy as of the date of initial publication. Product data is subject to change without notice. This document could include technical inaccuracies or typographical errors. IBM may make improvements or changes in the products or programs described herein at any time without notice. Any statements regarding IBM's future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only. References in this document to IBM products, programs, or services does not imply that IBM intends to make such products, programs or services available in all countries in which IBM operates or does business. Any reference to an IBM Program Product in this document is not intended to state or imply that only that program product may be used. Any functionally equivalent program, that does not infringe IBM's intellectual property rights, may be used instead.

Information is provided "AS IS" without warranty of any kind. THE INFORMATION PROVIDED IN THIS DOCUMENT IS DISTRIBUTED "AS IS" WITHOUT ANY WARRANTY, EITHER EXPRESS OR IMPLIED. IBM EXPRESSLY DISCLAIMS ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT. IBM shall have no responsibility to update this information. IBM products are warranted, if at all, according to the terms and conditions of the agreements (for example, IBM Customer Agreement, Statement of Limited Warranty, International Program License Agreement, etc.) under which they are provided. Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products in connection with this publication and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products.

IBM makes no representations or warranties, express or implied, regarding non-IBM products and services.

The provision of the information contained herein is not intended to, and does not, grant any right or license under any IBM patents or copyrights. Inquiries regarding patent or copyright licenses should be made, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

Performance is based on measurements and projections using standard IBM benchmarks in a controlled environment. All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. The actual throughput or performance that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput or performance improvements equivalent to the ratios stated here.

© Copyright International Business Machines Corporation 2008. All rights reserved.

Note to U.S. Government Users - Documentation related to restricted rights-Use, duplication or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract and IBM Corp.