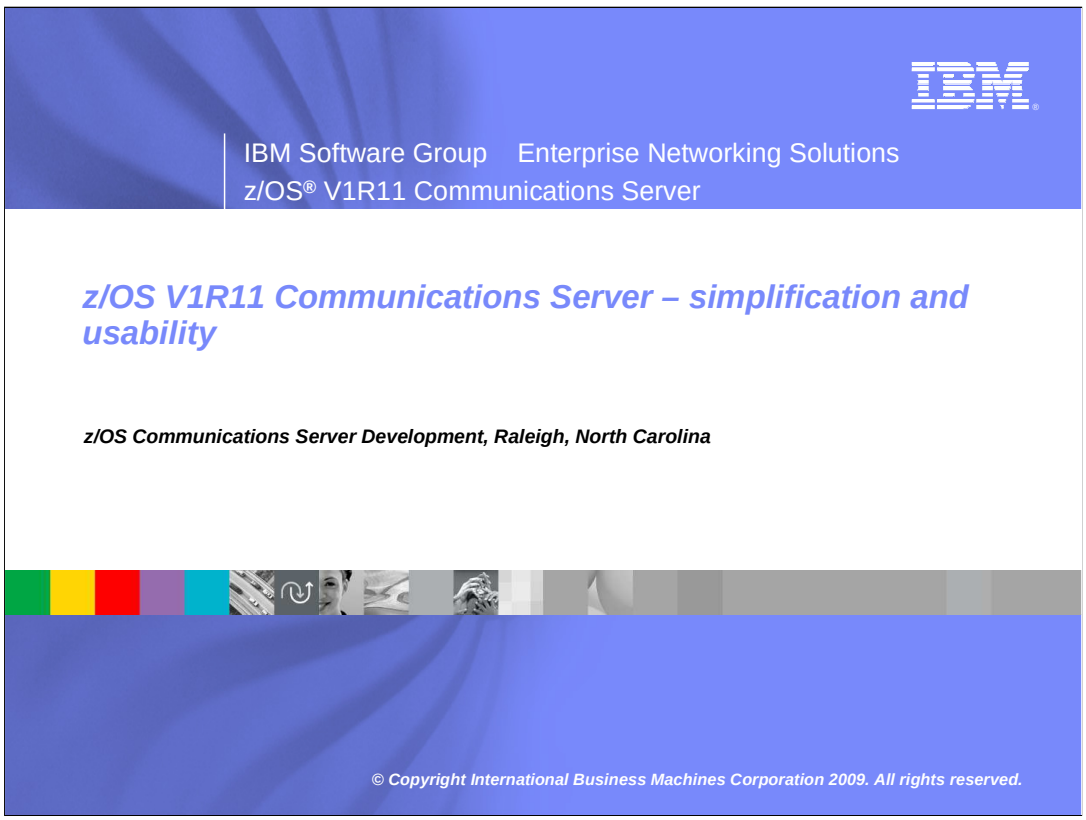
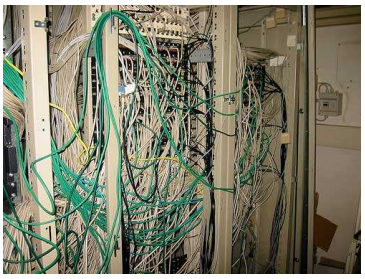


This presentation will give you an overview of the enhancements to the Communications Server in z/OS V1R11 for simplification and usability, what we call “consumability”. The simplification and usability theme covers enhancements that in some way or another make it easier to deploy or to use certain functions of the communications server.

Simplification and usability



- *Removal of NDB, DHCP Server, BINL, and BIND 4.9.3*
- Syslogd enhancements
- Syslogd browser and search facility
- Policy infrastructure management
- MVS console support for selected TCP/IP commands
- *Configuration Assistant - AT-TLS and IPSec improvements*
- Configuration Assistant - policy infrastructure simplification
- *Configuration Assistant - AT-TLS functional currency*

The main area of enhancements within this theme is the networking policy infrastructure and functions around it. That includes the IBM Configuration Assistant for z/OS Communications Server, the policy agent, and the syslog daemon.

In addition, within this theme, it must also be mentioned that a set of functions have been withdrawn and are no longer shipped with the z/OS Communications Server. The withdrawal of those functions had been announced in statements of direction in the past.

The functions that have been withdrawn are:

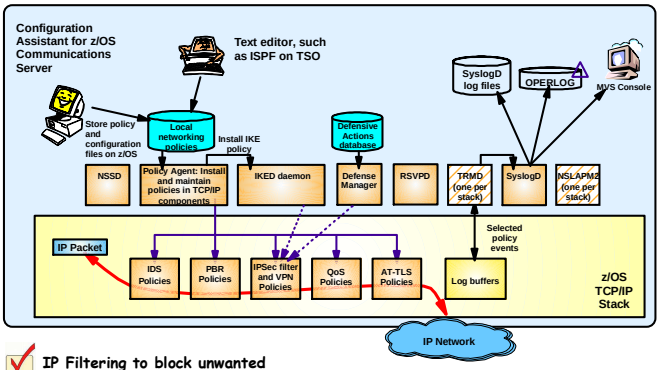
The DHCP server and the associated Boot Information Negotiation Layer (BINL). Customers are encouraged to use other platforms for state-full address configuration, such as Linux® on System z®.

In addition, the old Network Database function has been removed. Its function was no longer used – and had been replaced by SQL over DRDA® connections in DB2®.

Finally, the old DNS BIND 4.9.3 with the Sysplex support for name resolution in a Sysplex cluster has been removed. Load balancing and availability in a Sysplex should be addressed by use of the Sysplex Distributor instead.

z/OS Communications Server policy-based networking infrastructure overview

- **Perceived by many customers as a complex infrastructure**
  - Some initial cost to set up and enable the infrastructure
  - Difficult to manage and operate the infrastructure
  - But many valuable functions
- **z/OS V1R11 Communications Server simplifies the overall setup and operation of the networking policy infrastructure**
  - Making it simpler to gain the benefits of the networking policy-based functions on z/OS



IP Filtering to block unwanted traffic from entering or leaving your z/OS system

Connection-level security for TCP applications without application changes

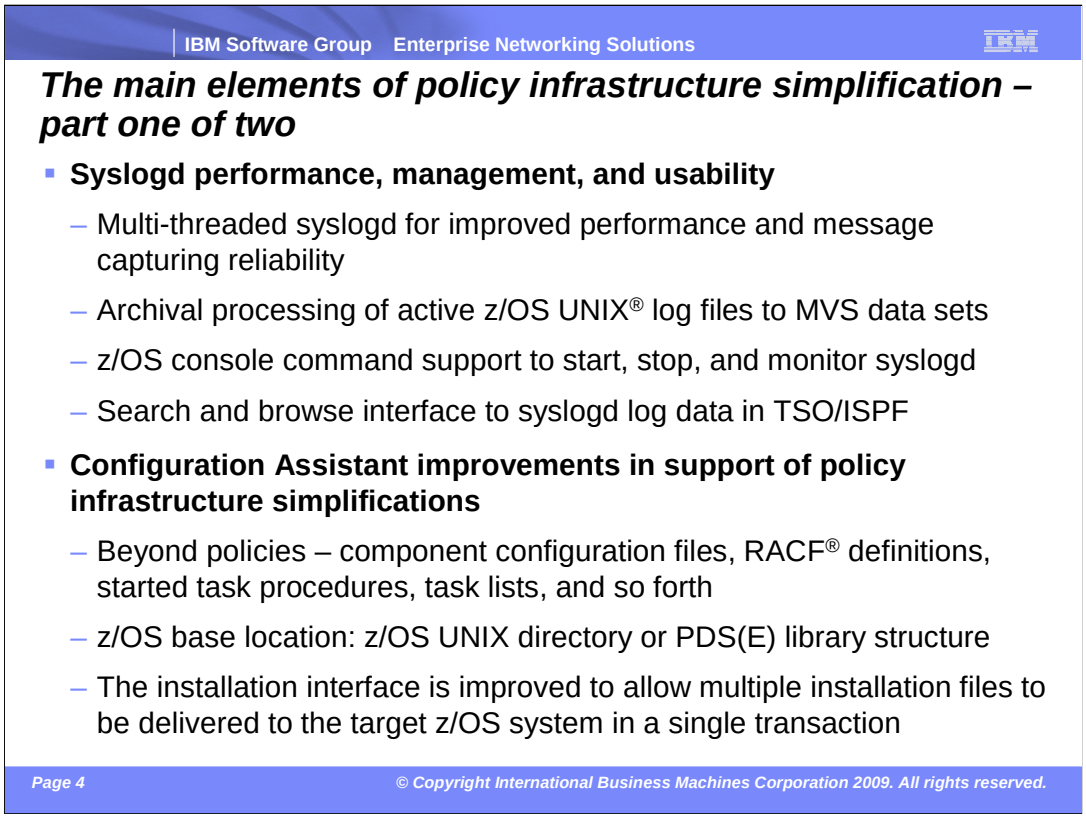
Making sure high-priority applications also get high-priority processing by the network

Application-specific selection of outbound interface and route (Policy-based routing PBR)

Providing secure end-to-end IPSec VPN tunnels on z/OS

Protection against "bad guys" trying to attack your z/OS system

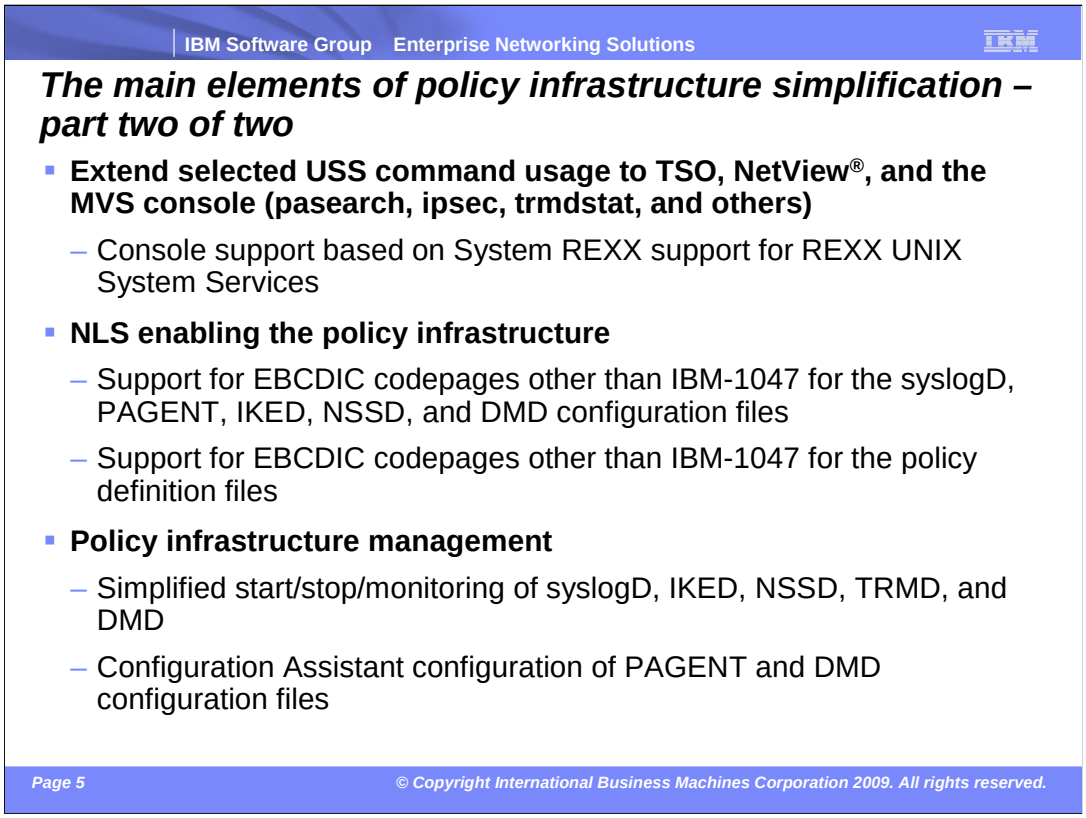
This slide is to refresh everyone's memory of what the z/OS Communications Server networking policy infrastructure is and supports. The infrastructure consists of many components that together deliver support for a range of policy-based networking functions on z/OS. IP filtering, IP Security, Application Transparent SSL/TLS, network quality of service, Intrusion detection, and policy-based routing. None of these functions are available unless the networking policy infrastructure has been customized and set up.



Syslog daemon is used not only for policy-based logging, but also for logging from other z/OS UNIX applications. However, with respect to networking policies, syslogd becomes a very central element of the full setup. Without syslogd, an installation does not have an audit trail of events that have been detected by the IP security or IDS components of z/OS Communications Server. Ensuring log messages are captured and retained for a certain period of time becomes crucial to the overall reliability of the networking policy environment.

Syslogd is enhanced in V1R11 to perform better (reducing the likelihood of losing messages during peak periods). Syslogd is also enhanced to archive active z/OS UNIX log files based on various criteria, and syslogd is finally enhanced to support a set of MVS console commands for operational purposes. To improve accessibility to the logged messages, a new ISPF-based syslogd browser function is part of z/OS V1R11 Communications Server.

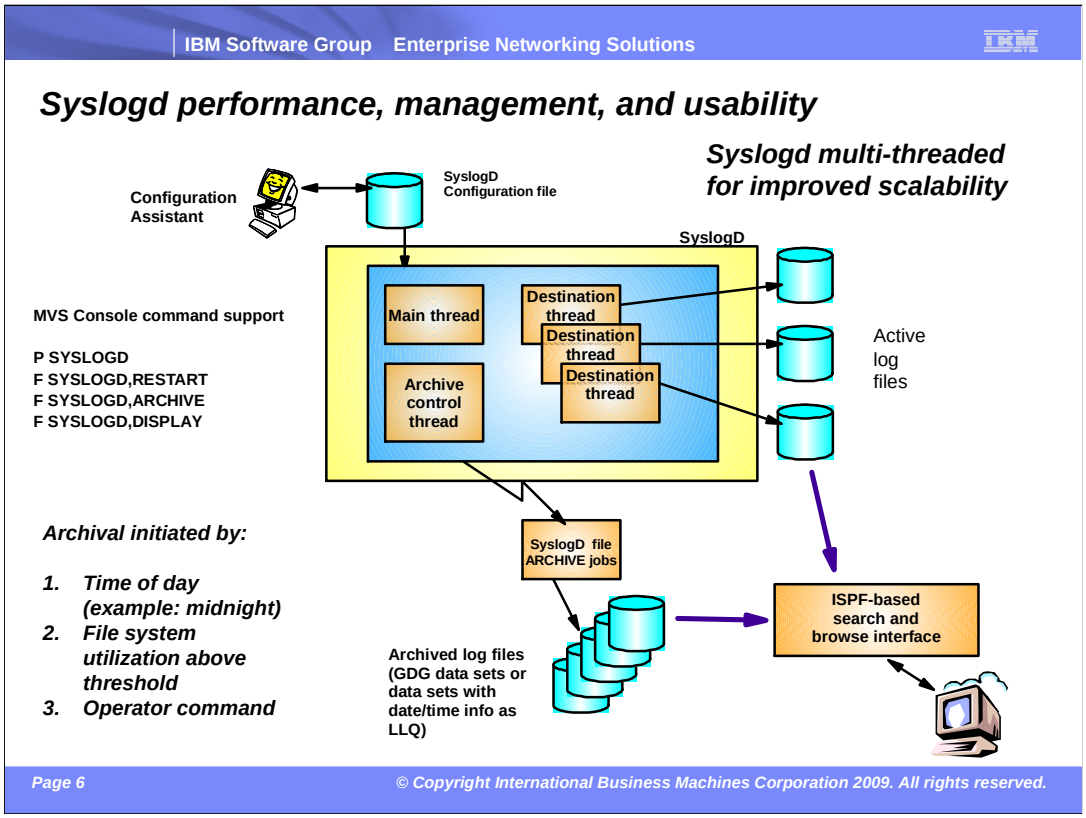
The Configuration Assistant is enhanced in many ways in support of the overall objective to simplify the z/OS networking policy infrastructure. Configuration Assistant will now create more configuration files (Policy Agent and Defense Manager daemon). It will create sample RACF command input when setting up new elements of the policy infrastructure, and it will create sample started task JCL procedures. Policy definitions, RACF commands, sample procedures, and so on can now be transferred to z/OS in single ‘transactions’. A base location per image can be set up in such a way that Configuration Assistant will transfer all objects into members of one or more base PDS(E) libraries.



In support of making policy-related functions easier to use, a selected set of policy-based z/OS UNIX shell commands have been made available in environments other than the z/OS UNIX shell. This set of commands is now available in TSO, the MVS console, and NetView.

Since many of the policy-related files include POSIX-variant characters, the use of EBCDIC code page 1047 has so far been enforced. However, in z/OS V1R11, you can specify which single byte EBCDIC codepage the files are maintained in. The various policy components will honor that code page (and translate from that code page to IBM-1047 when the file is read). This allows customers with NLS-enabled ISPF browsers to better view their policy definitions in TSO. The Configuration Assistant is enhanced to prompt for the required EBCDIC code page. The files are transferred to z/OS and stored in the requested code page.

Finally, the various components of the policy infrastructure did not lend themselves very well to use of the TCP/IP AUTOLOG function. Most of them do not have a listening socket and most of them are not stack-specific, but can serve more stacks in a common INET environment. Policy agent is enhanced with a start/monitor/stop capability that allows installations to start Policy Agent. Policy Agent will then start and monitor the remaining necessary policy components.



This slide shows a high-level rview of the new and improved syslogd components.

Syslogd is now a multi-threaded implementation allowing for more parallel processing in peak periods. Syslogd continues to write log messages to z/OS UNIX files. A new archive function will archive the content of a z/OS UNIX log file to an MVS data set. The MVS data set can either be a sequential data set (low level qualifiers specify date and time) or a new generation of a generation data group (GDG). The archive operation can be initiated by an operator. At a specific point in time (for example, shortly after midnight), or when the utilization of one of the file systems to which the z/OS UNIX log files are written exceeds a configurable threshold.

Command support includes the ability to shut syslogd down using a P (stop) command. Syslogd will not change its address space name after it has started. If you start a procedure by the name of SYSLOGD – the resulting address space name remains SYSLOGD.

The ISPF browser starts by reading the syslogd configuration file, locates the active z/OS UNIX files, and all available MVS archives. It supports browsing individual files or data sets, in addition to performing extensive searches in one or a series of files or data sets.

Syslogd ISPF browser – initial panel

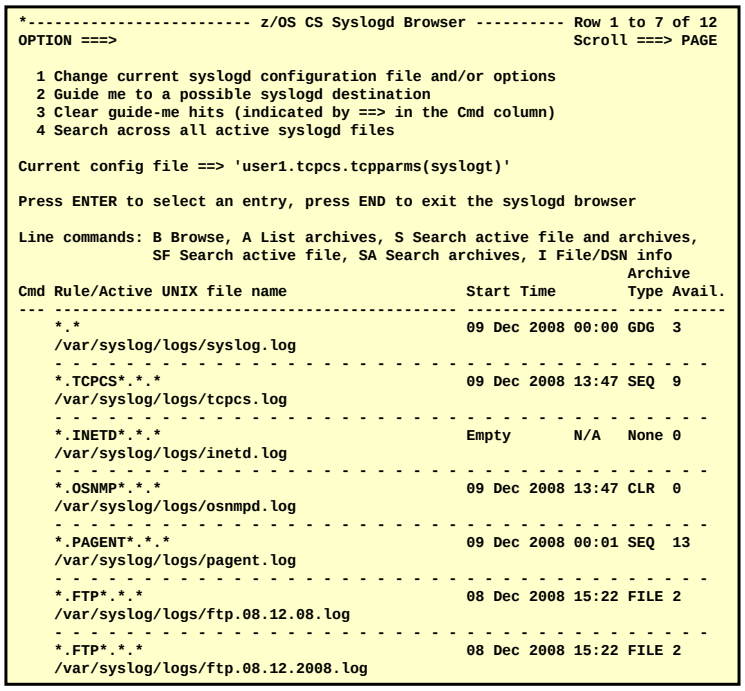
- In z/OS V1R11, a TSO/ISPF interface to browse and search messages captured by syslogD is also introduced
- The syslogD browser works with active UNIX files and archived MVS data sets
- The panel shown here is the initial panel when you start the syslogD browser. This panel is used to set general options and to select the syslogD configuration file representing the syslog daemon you want to work with

```
*------------------------ z/OS CS Syslogd Browser ----------- Row 1 to 7 of 7
Command ===>                                                  Scroll ===> PAGE

Enter syslogd browser options
  Recall migrated data sets ==> NO     (Yes/No) Recall data sets or not
  Maximum hits to display   ==> 9999   (1-99999) Search results to display
  Maximum file archives     ==> 10     (0-400) Days to look for file archives
  Display start date/time   ==> YES    (Yes/No) Retrieve start date/time
  Display active files only ==> NO     (Yes/No) Active files only, no archives
  DSN Prefix override value ==>

Enter file or data set name of syslogd configuration, or select one from below:

  File/DS Name ==> 'user1.tcpcs.tcpparms(syslogt)'

Press ENTER to continue, or press END PF key to exit without a selection

Line commands: S Select, R Remove from list, B Browse content, E Edit content

Cmd Recently used syslogd configuration file or data set name
--- ------------------------------------------------------------------------
    'user1.tcpcs.tcpparms(syslogt)'
    'user1.tcpcs.tcpparms(syslogn)'
    'user1.tcpcs.tcpparms(sysltom)'
    tcpcs.tcpparms(test)
    tcpcs.tcpparms(syslogt)
    /etc/syslog.test
    /etc/syslog.alfred.conf
****************************** Bottom of data ********************************
```


This slide shows the entry panel to the syslogd browser. You enter the name of the syslogd configuration file, which is parsed by the browser. The browser supports several optional settings, which also can be changed on this panel.

The browser remembers up to the last ten syslogd configuration files you used, and displays them in a list for easy re-use or edit/browse.

Syslogd ISPF browser



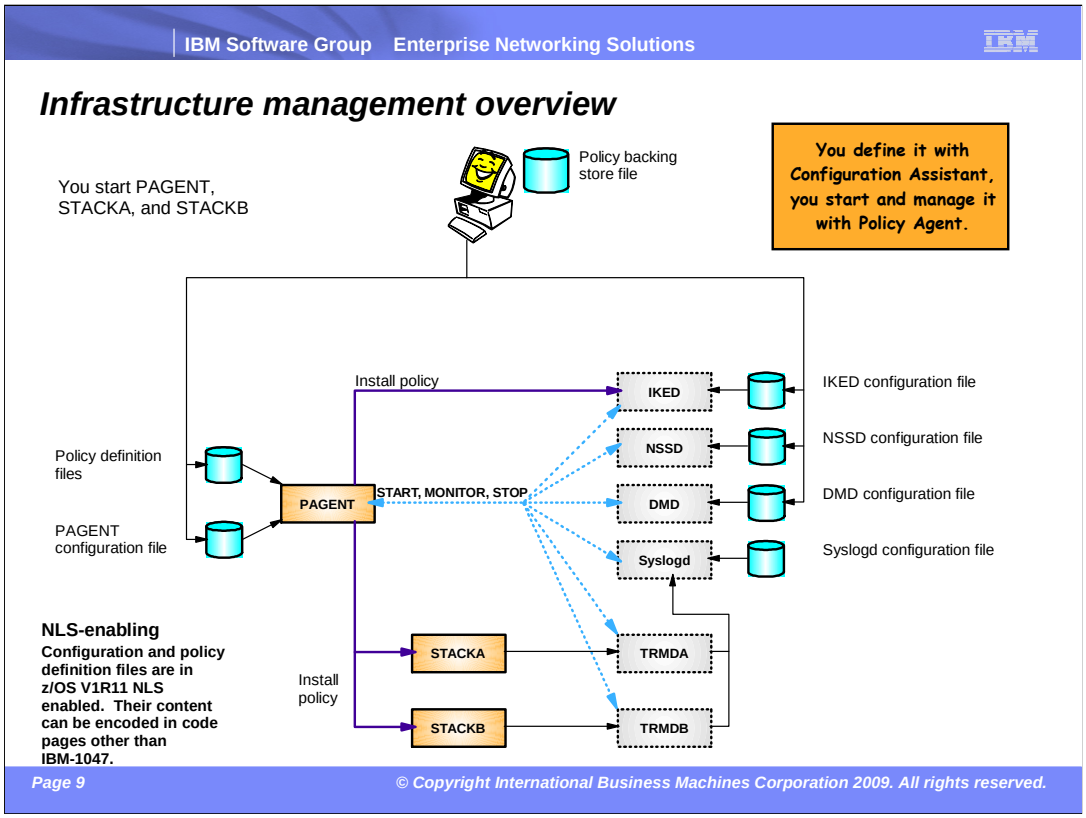
This panel shows the syslogd destination rules that direct messages to z/OS UNIX files. The files on this panel are referred to as the active log files

The syslogd browser is a traditional ISPF application.

You start the syslogd browser by executing REXX program EZABROWS from the *tcpip*.SEZAEXEC library. You might need to customize the EZABROWS REXX program name to match your local TCP/IP data set high-level qualifier.

After you start the browser and enter the name of the syslogd configuration file, the browser will display an overview panel. The overview panel will show all z/OS UNIX file log destinations along with information about the availability of any associated archive data sets or files.

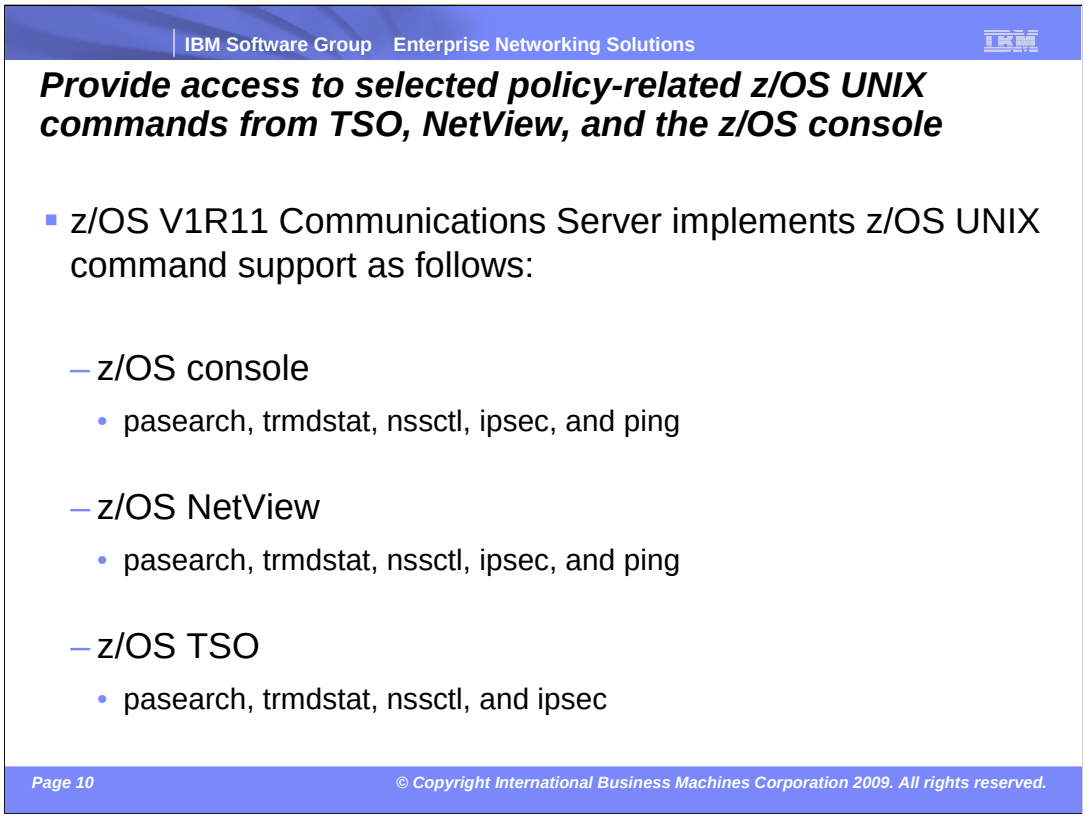
When browsing a log file, the browser has been customized to wrap long log messages into whatever screen size your 3270 terminal currently is set to use.



It is possible to only manually start Policy Agent and your TCP/IP stacks. Policy Agent will then be able to start and monitor all other policy-related components.

The sequence of events is to start Policy Agent first, and then the stack or stacks.

Definitions in the Policy Agent configuration file instruct Policy Agent what to start/monitor/stop.



z/OS V1R11 makes the z/OS UNIX commands listed on this slide available in three new command environments: z/OS console, NetView, and TSO. Only the z/OS UNIX commands listed on the slide are made available in these environments.

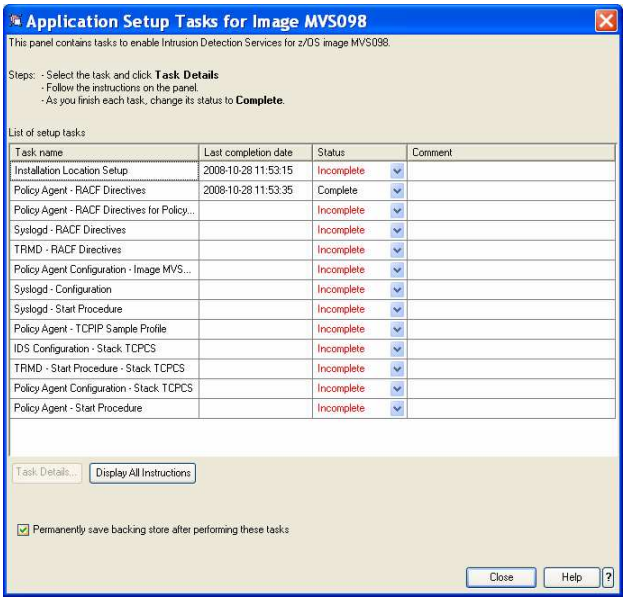
Ping is not a policy-related command, but customers have asked for ping from the z/OS console for many years. The infrastructure that was built for the policy-related commands was very easily expanded to also support ping. Since TSO has a native TSO ping command already, the z/OS UNIX ping was not made available in TSO.

The z/OS console command support is based upon System REXX, which in z/OS V1R11 is enhanced to support z/OS UNIX System Services functions in REXX programs started under System REXX.

Configuration assistant

Configuration Assistant for z/OS Communications Server goes beyond policy definition in z/OS V1R11.

It now includes support for configuring nearly all policy component configuration files: Pagent, IKED, NSSD, and DMD configuration files



The Configuration Assistant will guide you through all the tasks that need to be performed when setting up a specific policy discipline. For each task, you are guided through the activities, and when completed, the task is marked complete, so you can have an overview of the status at any time.

The Configuration Assistant provides sample started task procedures, RACF definitions, and so forth. It keeps track of which z/OS definitions need to be changed based on policy changes and will transfer all related definitions in a single file transfer ‘transaction’.

Configuration Assistant for z/OS Communications Server

- Download from the web:
  - Versions for z/OS V1R7, V1R8, V1R9, and V1R10 are available for download:
  - http://www.ibm.com/support/docview.wss?rs=852&context=SSSN3L&dc=D400&uid=swg24013160&loc=en_US&cs=UTF-8&lang=en&rss=ct852other

One long URL !!!!

Tired of that long URL above – try this one instead: http://tinyurl.com/cgoqsa

The IBM Configuration Assistant for z/OS V1R11 Communications Server is available at the same location as shown above.

The Configuration Assistant remains a Web download in z/OS V1R11.

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