How to Rebuild the Kerberos Database

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About This Document

The following procedure outlines how to destroy the kerberos database on the IBM RISC System/6000 Scalable POWERparallel System and then rebuild it.

This procedure applies to:

- Parallel System Support Programs Version 1.2
- Parallel System Support Programs Version 2.1
- AIX 3.2.5 and later
- AIX 4.1.3 and later

About This Procedure

The following list possible reasons for rebuilding the Kerberos database:

- if the database becomes corrupted
- if problems occur when configuring the database with /usr/lpp/ssp/bin/setup_authent
- when changing the hostnames of any of the nodes or the control workstation
- when switching name resolution from DNS to /etc/hosts or vice versa

Steps

At the control workstation(CW), login as root and execute the following commands:

1. /usr/lpp/ssp/kerberos/bin/kdestroy

The kdestroy command destroys the user's authentication tickets which are located in /tmp/tkt{uid}.

2. /usr/lpp/ssp/kerberos/etc/kdb_destroy

   The kdb_destroy command destroys the kerberos authentication database which is located in /var/kerberos/*

3. rm /etc/krb*

   This removes the following files:

   - krb-srvtab: contains the keys for services on the nodes
   - krb.conf: contains the SP authentication configuration
   - krb.realms: specifies the translations from host names to authentication realms

4. rm /.klogin

   This removes the .klogin file which contains a list of principals that are authorized to invoke processes as the root user with the SP authenticated remote commands[rsh,rcp].

5. rm /.k

   This removes the Kerberos Master key cache file.

6. rm /var/kerberos/database/*

   This command insures that the authentication database files are completely removed.

7. /usr/lpp/ssp/bin/setup_authent

   This command configures SP authentication services. Executing this command invokes an interactive dialog, in which various utility programs are invoked to accomplish this configuration. (Refer to Chapter 1, "Understanding RS/6000 SP Installation" section of the IBM RISC System/6000 Scalable POWERparallel Systems Installation Guide)

8. /usr/lpp/ssp/bin/setup_server

   This command will add the necessary remote command (RCMD) principals for the nodes to the Kerberos database based on what is defined in the SDR for those nodes.

9. The final step involves propagating the /etc/krb-srvtab files onto the nodes. This can be done automatically (requires a netboot of AIX 3.2.5 nodes or a reboot of AIX 4.1 nodes) or manually as described below.

   AUTOMATICALLY(requires a net boot of the nodes):

   a. execute "smitty node_data" command

   b. select BOOT/INSTALL/usr SERVER INFORMATION

   c. enter START FRAME, START SLOT, and NODE COUNT or NODE LIST

d. set RESPONSE FROM SERVER TO BOOTP REQUEST to "customize"

e. verify that RUN SETUP SERVER ON THE CW is set to "yes"

f. press enter to execute setup_server

FOR AIX 3.2.5 NODES

a. use the System Monitor GUI to shutdown the nodes

b. use the System Monitor GUI to netboot the nodes (steps g & h are detailed in Chapter 1, "Understanding RS/6000 SP Installation" section of the IBM RISC System/6000 Scalable POWERparallel Systems Installation Guide).

FOR AIX 4.1 NODES

a. Shutdown and reboot the nodes (DO NOT use netboot).

MANUALLY(reboot of the nodes is NOT required):

a. execute "smitty node_data" command

b. select BOOT/INSTALL/usr SERVER INFORMATION

c. enter START FRAME, START SLOT, and NODE COUNT or NODE LIST

d. set RESPONSE FROM SERVER TO BOOTP REQUEST to "customize"

e. verify that RUN SETUP SERVER ON THE CW is set to "yes"

f. press enter to execute setup_server

g. on the CW, cd into the /tftpboot directory and verify that there is a <node_name>-new-srvtab file for each node

h. ftp each node's respective /tftpboot/<node-name> -new-srvtab file from the CW to the node and rename the file to /etc/krb-srvtab

i. set the nodes back to disk via SMIT node_data on the Control Workstation

Note when using FTP, make sure to do the transfer in binary mode

Once the nodes are customized with the new /etc/krb-srvtab then you can test the functionality of kerberos by obtaining a ticket (kinit root.admin) and executing the "/usr/lpp/ssp/rcmd/bin/rsh <any_node> date" command.

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