NAME
>   ha_related_suse_tids - selection of SUSE Technical Information Documents, related to high availability

DESCRIPTION
>   This manual page lists SUSE Technical Information Documents (TIDs) related to high availability topics.
>
>   The mentioned documents, and others, are stored with the SUSE Knowledgebase at **https://www.suse.com/support/kb/** .
>
>   Useful keywords for searching are
>
>>   **<number_of_TID>**
>>   **openais**
>>   **corosync**
>>   **pacemaker**
>>   **hae**
>>   **sle-ha**
>>   **sbd**
>>   **stonith**
>>   **fencing**
>>   **ocf**
>>   **rear**
>>   **supportconfig**
>>   **mpio**
>>   **multipath**
>
>   Product to select is usually one of
>
>>   **<empty_string>**
>>   **SUSE Linux Enterprise High Availability Extension**
>>   **SUSE Linux Enterprise Server**
>>   **SUSE Linux Enterprise Server for SAP Applications**

EXAMPLES
>   *** General information:**
>   SLES 11 High Availability Extension (HAE) Master TID, FAQ and Common Issues (7007613)
>   Updating a SLES11 Cluster to the latest Service Pack (7007261)
>   Usage of hb_report for SLES HAE (7007262)
>   Supportconfig Self Service via SCC/FTP (7023007)
>   Best practice for applying Program Temporary Fixes (PTFs) (7016640)
>
>   *** Cluster basics, timing, fencing, communication:**
>   SLES 11 HAE - Send cluster update and changes through email (7007619)
>   pacemaker default behavior changed (7014282)
>   iTCO_wdt does not accept Watchdog Timeout bigger 63 seconds (7011426)
>   Generating a Kernel Core Dump running cluster HAE (High Availability Extension) (7015029)
>   SBD Stonith fails despite seemingly correct setup (OPENAIS STONITH) (7008921)
>   SBD Operation Guidelines for HAE Clusters (7011346)
>   SBD setup - debug and verify (OPENAIS) (7009485)
>   enabling STONITH requires STONITH device (OPENAIS) (7004817)
>   STONITH Clone Set configured on HAE 11 (7012124)
>   Invalid /etc/sysconfig/sbd SBD_DEVICE format (7010931)
>   SBD Stonith fails silently (OPENAIS HEARTBEAT CLUSTER) (7004306)
>   Use only one sbd_device instance attribute for SBD partitions (7010925)
>   Stonith unreliable (HEARTBEAT, COROSYNC) (7007731)
>   Disk latency may cause unwanted node fencing (7011350)
>   Stalling I/O triggers HAE Cluster (7010781)
>   Cluster SBD partition fails from mismatched metadata (7010933)
>   Create a SBD partition for HAE (High Availability) and XML example (7007616)

How to recreate SBD partition in a SUSE HA cluster. (7018194)
SBD does not start but is configured (7022644)
HAE: How to create an SBD on local storage for VirtualBox guests (7009737)
HAE (High Availability) rilo V2 setup (7007614)
default action timeout and op default timeout (OPENAIS) (7009584)
OpenAIS/Corosync daemon fails to start (7010879)
Number of Rings with openais/corosync (7006345)
Cluster Services fail on boot because of Firewall (HEARTBEAT, OPENAIS) (7007820)
One HAE node fails to start at boot with openais showing help screen (7011300)
external/riloe fails on ILO3 (OPENAIS HEARTBEAT COROSYNC STONITH) (7008802)
Odd cluster membership changes in HAE cluster (7015215)
crm_ipc_prepare: Message exceeds the configured ipc limit (PACEMAKER COROSYNC) (7013215)
All HAE nodes fail to start clustering after reboot (7011302)
Cannot contact other cluster node (7006864)
Corosync crashed if node has more then one device in the same subnet. (7008804)
Number of Rings with openais/corosync (7006345)
clones don't show identification numbers after update (PACEMAKER COROSYNC) (7015095)
cluster update failed in cib checksum (COROSYNC, HEARTBEAT) (7012127)
crm_ipc_prepare: Message exceeds the configured ipc limit (PACEMAKER COROSYNC) (7013215)
ERROR: fencing_topology not supported by the RNG schema (COROSYNC) (7012682)
Implement a fencing topology on SLES 11 SP3 / 12 High Availabilty Extension (7016042)
cib write disabled (COROSYNC) (7012126)
Incorrect TOTEM Configuration for Cluster (7012121)
One HAE node fails to start at boot with openais showing help screen (7011300)
All HAE nodes fail to start clustering after reboot (7011302)
corosync-cfgtool -r hangs in loop while resetting faulty ring (7006774)
Troubleshooting HAE Cluster Membership (7015225)
Cannot contact other cluster node (7006864)
HAE no quorum policy for various numbers of nodes (7012110)
HAE requires IPv6 to be enabled (7012111)
dlm: cannot start dlm lowcomms -107 (7012160)
Increasing the number of lrmd children (7006863)
Failed cluster actions in crm_mon (7012145)
HA node unable to join AD domain after applying HA SP3 (7014642)
Replacing SBD device in a running Pacemaker cluster (7021158)
Mount and sbd failures leading to fencing failure (aio-max-nr too low) (7022255)
Simulating a Cluster Network Failure (7017617)
Cluster reboots frequently without cause in logs (PACEMAKER) (7018594)
How to determine the next Pacemaker Cluster Action (7022764)
ha-cluster-join fails on syncing configuration files (7020256)
corosync[35436]: [TOTEM] sendmsg(mcast) failed (non-critical)... (7022316)
The memory footprint of "corosync" process increases when it has communication problems with the other cluster Nodes (7022840)
sleha-join to a cluster using udpu will not join cluster until after restart of corosync on current nodes (7021065)
Preventing a Fence Race in Split Brain (COROSYNC,PACEMAKER) (7022467)
Cluster node will not join after one node was upgraded. (7022565)
Rear backup fails with "No space left on device" errors (7022152)

* Cluster resources:
Corosync/CTDB and LVS performance issues (7006849)
unable to export file-system on HAE, due to size of rmtab (7008514)
All Cloned Filesystems Remount When One Node is Rebooted (7011322)
Apache won't start in SLES11 SP1 HAE Cluster (7007396)

Cluster resources failing on stop take too long to recover (7012355)
HAE Resources are not managed and won't failover (7012114)
umount of NFS exported Filesystem fails in cluster during stop (PACEMAKER COROSYNC) (7014619)
Changing Resource Attributes without Resource Restart (PACEMAKER COROSYNC) (7012872)
oracle resource agent fails silently to start Database (COROSYNC) (7012627)
Cluster mount succeeds but resource shows as failed (OPENAIS, OCFS2, CLUSTER) (7004243)
OCFS2 mount fails during boot (OPENAIS) (7015438)
pingd constraint is not adhered to sporadically (OPENAIS HEARTBEAT) (7008656)
Disabling of LVM Monitor in Cluster (OPENAIS HEARTBEAT) (7008620)
drbd online verify stalls (DRBD OPENAIS) (7009306)
umount of NFS exported Filesystem fails in cluster during stop (PACEMAKER COROSYNC) (7014619)
OCFS2 volume with more than 16TB fails to mount due to missing block64 option (7009624)
Cannot Perform a Filesystem Check on OCFS2 (7005238)
OCFS2 Partition Fails to Mount with No Free Slots Error (7005236)
mount.ocfs2: Cluster stack is invalid while trying to join the group (7018352)
mount.ocfs2: Protocol error while mounting /dev/sdX on / (7017651)
howto automatically rebuild a broken md with HAE (7008537)
Migrating an FTP resource results in connection reset (7012188)
Configuring additional block disks for XEN Virtual Machines on an HAE cluster. (7012165)
LVM cluster resources should be cluster aware (7012115)
OCFS2 File System Hanging or Mounting Read Only (7008776)
tunefs.ocfs2 does not handle symbolic link (7005445)
Deprecated '-O' option used in MySQL-OCF-Script (7006533)
How to create a KVM resource into HAE using ssh transport (7008168)
Dead IP Address resource fails to restart or migrate (7012073)
LVM RA reports "Improper setup detected" with exclusive (PACEMAKER COROSYNC) (7014216)
How To Configure DRBD on HA (3299772)
Linux Heartbeat bladehpi resource agent fails (7001102)
Getting stale NFS file handle errors after cluster fail over (3714483)
Joining a CTDB cluster into a domain (7006496)
The OCF_ROOT is set to the wrong path when using the XEN live template (7002527)
pingd constraint is not adhered to sporadically (OPENAIS HEARTBEAT) (7008656)
howto automatically rebuild a broken md with HAE (7008537)
OCFS2 cluster node support statement and requirements (3828044)
Fencing, crashes and hangs on system with Mulitpath and OCFS2 (7000097)
SLES 11 HAE - LSB resource will not start (7007617)
Cluster resources are not migrating when paths are lost to the SAN when using multipathing (7003637)
Cluster resource tracing (7022678)
Integration of sap-suse-cluster-connector does not work as expected (7023149)
Error when coming out of standby: hdbdaemon HDB Daemon not running (7021376)
Basic health check for two-node SAP HANA performance based model (7022984)
How to re-enable replication in a two-node SAP performance based model (7023127)
Error when coming out of standby: hdbdaemon HDB Daemon not running (7021376)
PostgreSQL resource fails to start with "My data may be inconsistent" (7023166)
Showing SOK Status in Cluster Monitoring Tools Workaround (7023526)

* Related operating system settings and components:
How to load the correct watchdog kernel module (7016880)
Can't open watchdog device: /dev/watchdog: Device or resource busy (7008216)
Estimate Multipath Timeouts (7016305)
Troubleshooting SLES Multipathing (MPIO) problems (3231766)
HOWTO: Add, Resize and Remove LUN without restarting SLES or OES Linux (7009660)
How to Expand a filesystem on a Multipath-Enabled LUN (3129645)
Dynamically adding storage for use with multipath I/O (3000817)

Can't open /dev/mapper/mpath* exclusively. Mounted filesystem? (7012050)
mkinitrd doesn't include the correct bindings_file (7003710)
Multipath Blacklisting Local Disks (3970086)
Device-mapper does not use all available paths to a SAN (7005564)
Static load balancing in Device-Mapper Multipathing (DM-MPIO) (3858277)
Unnecessary spaces in "multipath -l" command output (7014442)
After server reboot multipath shows no paths. (7016832)
Recommendations for the usage of user_friendly_names in multipath configurations (7001133)
Using a large number of LUNs and/or paths with MPIO (7008051)
Fiber attached Multipathed volume mounts as read only (7001766)
Crash Kernel Boot Runs Out of Memory and Fails With Large Logical Unit Number (LUN) Configurations (7016542)
Unkillable processes in state D when all paths to a volume are down (7001880)
Enabling multipathing in autoyast Installations (7009981)
HOWTO: Boot from a SAN with Multipath (MPIO) (7008995)
Using LVM on Multipath (DM MPIO) Devices (7007498)
Basic LVM Health Check (7002759)
Found duplicate Physical Volumes (PV) (7002287)
Duplicate LVM Volume Group Warning (7003547)
Configure kernel core dump capture (3374462)
Troubleshooting Application Crash or Core Dump (7004526)
Generating a Kernel Core Dump Analysis File (7010484)
System crash or unexpected reboot - Which info is needed by Novell Technical Services for a root cause analysis? (7010249)
HP iLO not able to trigger a kernel crashdump (7013475)
Low write performance on SLES 11 servers with large RAM (7010287)
Important difference in timing of I/O writes in SLE 12 (7015931)
Partial record errors when writing over NFS to zOS (7012647)
Overcommit Memory in SLES (7002775)
NTP fails to access time server on system boot. (3435100)
NTP issue with VMWare (7008544)
Time drifting when running a Linux guest under VMware ESX server (3858673)
NTP server does not resolve host names (7016873)
NTP start command produces a warning about Cryptographic keys dir (7016814)
Fixes and workaround to avoid issues caused by Leap Second 2015 (7016150)
Leap second issues - June 30, 2012 (7010351)
Patch recommendations to avoid issues caused by Leap Second 2015 (7016150)
Leap Second - test cases (7016355)
Hardware Clock having wrong time on cluster node (7011375)
Software repositories in SUSE Linux Enterprise 11 Service Pack 2 (7010225)
Packages from one version of SLES to another are missing (7003311)
Possible reasons for suse_register to return improper code (7014777)
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Using mdadm to send e-mail alerts for RAID failures (7001034)
ReaR does not support servers with SAN-attached storage/SAN boot (7008030)
ReaR rescue environment fails to load on Blade Hardware (7008029)
Supportconfig causes the server to panic when processing PROC (7009270)
Supportconfig hangs on SLE 11 SP3 after updating kernel (7012980)
How to make sure the latest supportutils are installed. (7010476)
Config Report For Linux (7001936)
Frequent ACPI errors starting with SMBus or IPMI write requires Buffer of length 42. (7010449)
Troubleshooting Tools for Linux (3513679)
Supportutils fails to update do "Failed dependencies: rpmlib(PayloadIsLzma)" (7014039)
XFS metadata corruption and invalid checksum on SAP Hana servers (7022921)

SAP Instances failed stop on shutdown (PACEMAKER, SYSTEMD, SAP) (7022671)
SAP on SLES shows Error: NIECONN_REFUSED in the logs (7023236)
Indepth HANA Cluster Debug Data Collection (PACEMAKER, SAP) (7022702)
How to prevent certain values in limits.conf from being changed by saptune (7023104)
SLES for SAP Upgrade returns: "Error: Product SLES for SAP Applications will be automatically removed" (7018571)
Memory, I/O and DefaultTasksMax related considerations for SLES for SAP servers with huge memory (7021211)
Kernel-bigmem for SAP HANA environments on ppc64 (7018408)
SAP on SLES shows Error: NIECONN_REFUSED in the logs (7023236)
Long Client hang to Cluster after failover of ERS Instance (7023324)
"cgroup: fork rejected by pids controller in..." found in system log (7022001)
application core created on kernel 3.0.101-108.35 not readable (7022975)
Reading /proc//maps and /proc//numa_maps takes long (7019001)
CVE-2016-2183: openssl: Birthday attacks on 64-bit block ciphers aka triple-des (SWEET32) (7017985)
How to prevent certain values in limits.conf from being changed by saptune (7023104)
System crash or unexpected reboot (7010249)
How to obtain application core dumps (3054866)
HOWTO: Configure lkcd to capture a kernel core dump (3044267)
How to obtain systemd service core dumps (7017137)
How To Redirect Unwanted Messages From /var/log/messages (7004659)
Best practice for providing kernel core dumps to support incidents (7010056)
How to recover from BTRFS errors (7018181)
SLES 12 /etc/sysconfig/nfs is not honoring NFSV4LEASETIME (7016918)
Rear backup fails with "No space left on device" errors (7022152)

BUGS

Feedback is welcome, please use the project page at
https://build.opensuse.org/package/show?package=ClusterTools2&project=home%3Afmh erschel

SEE ALSO

ClusterTools2(7) , **cs_show_cluster_patterns**(8), **cs_show_error_patterns**(8),
https://www.suse.com/products/highavailability/ ,
https://www.suse.com/releasenotes/x86_64/SLE-HA/12-SP3/ ,
https://www.suse.com/documentation/sle-ha-12/ ,
https://www.suse.com/documentation/sles-12/stor_admin/data/stor_admin.html

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