Real - Time Linux Course Content

|  |
| --- |
|  |

**Ticketing Tool**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1** | **Introduction To Service Now Ticketing Tool** | | | | | | | | |
| **2** | **Incident Management** | | | | | | | | |
|  | 2.1 L1 Team Responsibility | | | | | | | | |
| **3** | **Tickets Priority** | | | | | | | | |
| **4** | **SLA (Service Level Agreement)** | | | | | | | | |
| **5** | **Resolving Incident** | | | | | | | | |
| **6** | **Reassigning Incident** | | | | | | | | |
| **7** | **Configuration Management/Item or Inventory Details of Server** | | | | | | | | |
|  | 7.1 Home Page | | | | | | | | |
|  | 7.2 Application Details of the server | | | | | | | | |
|  | 7.3 Related Incidents/CTASK/Requests for this Server | | | | | | | | |
| **7** | **On-Scheduling** | | | | | | | | |
|  | 7.1 To know all the Changes | | | | | | | | |
|  | 7.2 To know about the Open Requests | | | | | | | | |
|  | 7.3 To know the Problem task in Your Team, | | | | | | | | |
| **8** | **Shift Handover Report** | | | | | | | | |
|  | 8.1 Current Shift Summary | | | | | | | | |
|  | 8.2 Shift Specific Details | | | | | | | | |
|  | 8.3 Any Ongoing Issues | | | | | | | | |
|  | 8.4 Slack Channels Joined | | | | | | | | |
| **9** | **Problem Management** | | | | | | | | |
| **10** | **Change Management** | | | | | | | | |
| **11** | **Service Catalog** | | | | | | | | |
|  | **Physical Server Environment** | | | | | | | | |
|  | **Introduction to ILO Console** | | | | | | | | |
|  | Login to ILO Console (physical server) | | | | | | | | |
|  | **Overview of Server** | | | | | | | | |
|  | System Information | | | | | | | | |
|  | ILO Events | | | | | | | | |
|  | Integrated Management Module | | | | | | | | |
|  | Active Health System Log | | | | | | | | |
|  | **Dianostics** | | | | | | | | |
|  | Power Managaement | | | | | | | | |
|  | Firmware Update | | | | | | | | |
|  | **Troubleshooting Issues** | | | | | | | | |
|  | Server hung then go to Power Option and do needful | | | | | | | | |
|  | Check the hardware status from Console | | | | | | | | |
|  | **Virtual Server Environement** | | | | | | | | |
|  | **Vmware Environment Discussion** | | | | | | | | |
|  | VMware Esxi | | | | | | | | |
|  | VMware Vcenter | | | | | | | | |
|  | VMware Vsphere Client | | | | | | | | |
|  | VMware Webclient | | | | | | | | |
|  | **How to login Vcenter Server using Web Browser** | | | | | | | | |
|  | **Cluster** | | | | | | | | |
|  | **Host Server (ESXi)** | | | | | | | | |
|  | Enter maintenance mode | | | | | | | | |
|  | reboot the host server | | | | | | | | |
|  | **VirtualMachine** | | | | | | | | |
|  | Power reset usage when server is hung | | | | | | | | |
|  | VMwareTools Update | | | | | | | | |
|  | Snapshots Backup | | | | | | | | |
|  | Snapshot Restore | | | | | | | | |
|  | Open Console to see the status of OS | | | | | | | | |
|  | Edit settings to change mem, CPU, HardDisk,NIC card etc | | | | | | | | |
|  | Migrate Virtual Machines to different host | | | | | | | | |
|  | Migrate Virtual Machines to different datastore | | | | | | | | |
|  | **Linux OS Patching ( OS Software Updates including Kernel updates)** | | | | | | | | |
|  | Put servers in maintenance mode after checking time in Approved Change | | | | | | | | |
|  | Take Snapshot if the server is Virtual Machine | | | | | | | | |
|  | Ran Script in server to take backup configuration files | | | | | | | | |
|  | Ran script to update packages Or yum update firefox\* samba\* gcc\* nss\* nfs\* kernel\* | | | | | | | | |
|  | Reboot the server (#reboot or #shutdown -Fr now) | | | | | | | | |
|  | Inform the application team to validate the application | | | | | | | | |
|  | ERROR: rpm db open failed | | | | | | | | |
|  | Error: yum command not working due to "rpmdb: PANIC: fatal region error detected; run recovery" | | | | | | | | |
|  | **Daily Issues** | | | | | | | | |
|  | **CPU performace Issues** | | | | | | | | |
|  | CPU Usage is High due to Application Programs ( tomcat, webspher, jboss, httpd, mqm, oracle,  mysql etc) | | | | | | | | |
|  | CPU Usage is High due to System Programs Or Root User programs | | | | | | | | |
|  | CPU Usage of 2 days back Or 1 month back ( Hisotry ) | | | | | | | | |
|  | Check out %idle, %us,%nice,%iowait | | | | | | | | |
|  | Check out the Load Average of CPU | | | | | | | | |
|  | **Memory Performance Issues** | | | | | | | | |
|  | Memory Usage is High due to Application Programs | | | | | | | | |
|  | Memory Usage is High due to System Programs or Root user programs | | | | | | | | |
|  | Clearing the Memory cache space if apps team approved | | | | | | | | |
|  | Write a script to clean the cache and setup in crontab | | | | | | | | |
|  | **Swap Performance Issues** | | | | | | | | |
|  | Swap Usage is High due to Application Programs or System Programs | | | | | | | | |
|  | Clearing the Swap Space if application team approves | | | | | | | | |
|  | Difference between Swap and Swappiness | | | | | | | | |
|  | Changing the swappiness values as per Database requirement ( Kernel Parameter Changes) | | | | | | | | |
|  | Error: "Read swap header Failed : Invalid Argument " error while enabling swap partition | | | | | | | | |
|  | Adding a new swap space in server/Extend a swap space in server | | | | | | | | |
|  | **File System Usage is Full** | | | | | | | | |
|  | Compressing files as per size | | | | | | | | |
|  | Moving or Deleting Files as per size or timings | | | | | | | | |
|  | Extend the File System Size ( if approved change) | | | | | | | | |
|  | **File System Inodes are full OR File System is Read-Only** | | | | | | | | |
|  | **File System shows Full but unable to see any big files ( diff of output in df and du) - Open Files Issue** | | | | | | | | |
|  | **Server is DOWN or Server is not pingable Or Server is unreachable** | | | | | | | | |
|  | Out-of-Memory error on sonsole | | | | | | | | |
|  | BUG: Soft Lockup - CPU#1 stuck for 62s! [vmmemctl :920] | | | | | | | | |
|  | Kernel panic - not syncing: Out of memory and no killable processes | | | | | | | | |
|  | Server swap fully utilized - available swap is 0 | | | | | | | | |
|  | The superblock could not be read or corrupted - Run the fsck on the mentionded partitions | | | | | | | | |
|  | Go to single User mode Or Rescue mode to troubleshoot further | | | | | | | | |
|  | Reset root password in RHEL6 and RHEL7 | | | | | | | | |
|  | **Physical Hardware Errors** | | | | | | | | |
|  | Bad memory Errors Or Bad DIMMs Error or Uncorrectable Memory Error | | | | | | | | |
|  | Bad Processor Or Uncorrectable Machine Check Exception (UMC Exception) | | | | | | | | |
|  | ***Failed Hard Disk OR Amber LED on HardDisk*** | | | | | | | | |
|  | Power Supply Failed | | | | | | | | |
|  | Fan Failed | | | | | | | | |
|  | **How to Open a ticket with HP Hardware Vendor** | | | | | | | | |
|  | <https://support.hpe.com/hpesc/public/home> | | | | | | | | |
|  | Generated AHS logs OR IML logs from ILO for sending to HP | | | | | | | | |
|  | **Kernel Panic Issues** | | | | | | | | |
|  | Reset server from console side (mostly resolve the issue) | | | | | | | | |
|  | Boot with alternate Kernel | | | | | | | | |
|  | Sometimes re-install the Kernel after login with old kernel | | | |  |  |  |  |  |
|  | Restore from Snapshot ( if it is Virtual machine) | | |  |  |  |  |  |  |
|  | Restore from backup team (if it is Virtual machine) | | | |  |  |  |  |  |
|  | If server rebooted itself then check logs to know the time and also check general logs before that time | | | | | | | | |
|  | **How to open a ticket with RedHat Software Vendor** | | | | | | | | |
|  | https://access.redhat.com/support/contact/customerService/ | | | | |  |  |  |  |
|  | Generated sosreport for sending to RedHat for Investigation | | | | |  |  |  |  |
|  | **User Related Issues (Importance of /var/log/secure File)** | | | | | | | | |
|  | Access is Denied Or User is unable to login | | |  |  |  |  |  |  |
|  | User is Locked ( locally locked due to shadow file) | | | |  |  |  |  |  |
|  | User Password is expired |  |  |  |  |  |  |  |  |
|  | User locked due to failed login attempts in PAM | | |  |  |  |  |  |  |
|  | Winbind Issues OR sssd Issues ( due to this also user is unable to login) | | | | | |  |  |  |
|  | Checking which services are used for password authentication ( See inside /etc/nsswitch.conf) | | | | | | | |  |
|  | Checking which AD groups are allowed on particular server | | | |  |  |  |  |  |
|  | Checking which users are defined in the particular AD groups | | | | |  |  |  |  |
|  | Unable to sudo ( due to user is not defined in sudoers file) | | | |  |  |  |  |  |
|  | Unable to sudo (due to resource unavailable) - Change the limits of the application user in  /etc/security/limits.conf | | | | | | | | |
|  | winbind and sssd configuration for remote users | | | | | | | | |
|  | PAM Module configuration - Prevent user From Using Or Reuse Same Old Passwords | | | | | | | | |