SQL SERVER CLUSTERING

1. CREATE SERVICE ACCOUNTS FOR SQL SERVER CLUSTERED INSTANCE.
   SQLSRV, SQLAGT
2. CREATE SHARED DISKS FOR SQL SERVER DATA, LOG, TEMPDB AND BINARIES.
   BINARIES: C DIRVE

SYSTEM DATBASES	: S DRIVE	2GB
USER DBS DATA	: K DRIVE	5GB
USER DBS LOG	: L DRIVE	5GB
TEMPDB DATA,LOG	: T DRIVE	3GB
BACKUPS	: E DRIVE	7GB

   EVERTHING SHOUD BE CREATE IN AD, AS STARWIND IS THERE IN AD
   CREATE SERVICE ACCOUNTS FIRST IN AD
   DSA.MSC, ONCE WE HAVE CREATED AN ACCOUNT, CLICK ON THAT, ALL TASKS, COPY, CHANGE THE NAME AND PWD OF NEW ACCOUNT.
   OPEN STARTWIND
   CREATE 5 SHARED TARGETS.
   RIGHT CLICK ON TARGET NEW TARGET.
   TARGET ALIAS
   SDRIVE, CHECK TARGET NAME, HARD DISK, BASIC VIRTUAL, IMAGE FILE DEVICE, CREATE IMAGE VIRTUAL, BROWSE THE PATH AND GIVE THE NAME AS SDRIVE.IMG, GIVE THE SIZE, NO COMPRESS, NO ENCRYPT, NO ZERO, ASYNCHRONOUS, ALLOW MULTIPLE CONCURRENT.., NORMAL CACHING, NEXT, FINISH. ONE TARGET CREATED.
   DO THE SAME THING FOR ALL THE NODES. CREATE IMG FILES FOR K,L,T,E DRIVE AS THE ABOVE.
   IF NO SPACE IS THERE IN C DRIVE ADD ONE MORE DISK
   VIRTUAL BOX, GOTO AD SETTINGS, STOP AD ,GOTO STORAGE, DOWN + SYMBOL, GIVE THE REQUIRED SETTINGS. NOW WE CAN NEW DRIVE IN AD.NOW START AD.
   NOW GOTO DISKMGMT.MSC, U CAN SEE NEW DRIVE, MBR, OK, DISK 1, RIGHT CLICK , GIVE THE NAME AND PATH OF THE DRIVE.BETTER NAMED IT

AS SANDISK.
CREATE NEW DRIVES IN THAT NEW LOCATION.,C REATE ONE FOLDER IN THE NEW DRIVE , SAN. SELECT IT WHILE SHARED DRIVES ARE CREATED.
5 SHARED DISKS READY, SERVICE ACCOUNTS READY, DBA TEAM IS ADDED IN ADMINISTRATORS GROUP IN AD.
GOTO NODE1, ADD DBA TEAM INTO LOCAL ADMINISTRATORS GROUP.
OPEN ISCSI INITIATOR FROM ADMINISTRATIVE TOOLS, TARGET, GIVE THE IP OF AD, THERE U CAN SEE ALL THE CREATED DISKS.CONNECT ONE BY ONE DISK. SELECT A DRIVE, CLICK CONNECT AT THE BOTTOM.
NOW OPEN DISK MGMT.MSC, RIGHT CLICK ON THE NEW DISK (DISK2) BRING ONLINE AND THEN INITIALIZE.RIGHT CLICK ON THE LONG BAR, SELECT NEW VOLUME AND PUT THE NAME U WANT FOR THE DISK, GIVE THE NAME AND LETTER FOR THIS DRIVE.
ADD ALL THE CREATED DRIVES IN THE NODE 1 AS ABOVE.
DO THE SAME THING FOR NODE2, ADD ALL THE DRIVES IN THE NODE2 ALSO.
SHARED DISKS ARE READY, BUT THEY ARE NOT THE PART OF CLUSTER. WE NEED TO ADD THEM IN TO CLUSTER.
GOTO NODE1
OPEN FAIL OVER CLUSTER MANAGER,
GOTO STORAGE, DISKS, R.CLICK, ADD DISK, U CAN SEE ALL AVAILBLE DISKS BEFORE ADDING, GOTO DISK MGMT, JUST NOTE DOWN WHICH DISK IF FOR WICH DRIVE.LIKE – DISK2-SDRIVE, DISK3-..LIKE THAT
NOW IN THE AVILABLE DISKS IN THE FAIL OVER CLUSTER MANAGER S, UNCHECK ALL, ADD ONE BY ONE, ADD IT, THEN R.CLICK , PROPERTIES, AND CHANGE THE NAME OF FOR WHICH IT IS CREATED, MEANS BINARIES, SQLDATA, SQLLOG FOR BETTER UNDERSTANDING. OK.
EVERY THING SET AND READY.
LOGOFF FROM DOMAIN ADMINISTRATOR FROM NODE1, AND LOGIN AS DBA TEAM.(BEFORE THAT ADD DBA TEAM IN LOCAL ADMINISTRATORS GROUP). THEN ISTALL SQL SERVER
HOW WILL WE CHECK WHO IS THE OWNER OF THE CLUSTER
OPEN FILOVER CLUSTER MANAGER, THEN CLICK ON THE CLUSTER NAME,

THERE ON THE MAIN WINDOW U CAN SEE CURRENT HOST SERVER:NODE2. WHICH MACHINE U STARTED FIRST IT ACTS AS A OWNER OF THE CLUSTER. IF WE WANT TO MOVE SIMPLY RESTART THE OWNER NODE1, OR U CAN MOVE THE QUORUM FROM MOREACTIONS IN SETTINGS,MOVE QUORUM AND ALL SHARED DISKS IN ONE NODE.
NOW INSTALL SQL SERVER.
SETUP, RUN AS ADMIN
INSTALLATION CENTRE WILL OPEN.
--SQL SERVER DABASE AND ANALASYS SERVICES ARE CLUSTER AWARE SERVICES.
REMAINING SERVICES LIKE REPORTING.. ARE CLUSTER UNAWARE CLUSTER SERVICES.--
SELECT SQL SERVER FAIL OVER CLUSTER INSTALLATION, SECOND OPTION.
U CAN ISTALL LIKE NORMAL SQL SERVER INSTALLAITON.
--WE CAN NOT CONVERT STALND ALONE INSTANCE INTO THE CLUSTER INSTANCE
IF WE SEE ANY WARNINGS, OPEN CLUADMIN.MSC, RUN VALIDATE CLUSTER, FOR ANY WARNINGS OR ERROR, CHECK ALL THE DISKS.(AS A DBA BEFORE INSTALLING SQL SERVER, RUN VALIDATE CLUSTER FIRST.)
IN CLUSTER MAXMIMUM 25 CLUSTERED INSTANCES, 25 STANDALONE . WHY BECAUSE , C LETTER IS ALREADY ISSUED. ONE INSTANCE WILL BE OCCUPIED BY ONE DRIVE. SO IN THAT WAY FOR 26 LETTERS, C IS ISSUED, SO WE HAVE ONLY 25 LETTERS ARE THERE SO WE CAN INSTALL MAXIMUM 25 SQL SERVER CLUSTER INSTANCES.
--RUNNING A VALIDATION DURING BUSINESS HOURS IS A CRIME, WE SHOULD TAKE DOWN TIME AND APPROVAL FROM HIGHER AUTHORITES. (WHICLE VALIDATING IT WILL DO FAIL OVER DISKS, SO THE DISKS MAY BE DISCONNECT, SO THE INSTANCE WILL GOES DOWN.)

IN THE SQL SERVER INSTALLATION,
ON THE DEFAULT OR NAMED INSTANCE SCREEN
SQL SERVER NETWORK NAME , GIVE THE NAME OF SQL CLUS FAMILY NAME(KDSSGB24SQLCLUS), GIVE THE NAME U WISH, SUPPORTS UPTO 15

CHARACTERS.
ONLY ONE DEFAULT INSTANCE ON ALL THE CLUSTER ENVIRONENT, IF U SELECT DEFAULT INSTANCE IN NODE1, U R NOT SUPPOSED TO SELECT DEFAULT INSTANCE IN REMAINING NODES.
NEXT , NEXT
SQL SERVER CLUSTER RESOURCE GROUP NAME:
ALL SQL SERVER AWARE SERVICES(SQL SERVER MAIN SERVICE, AGENT SERVICE, FULL TEXT SERVICE) ARE CLUBBED INTO A SINGLE GROUP. WE SEE THIS GROUP SERVICE IN SERVICES.MSC
--BY DEFAULT CLUSTER GROUP WILL BE THERE IN ROLES OF CLUADMIN.MSC
CLUSTER NAME, CLUSTER IP ADDRESS AND QUORUM(IF QUORUM INSTALLED)BY DEFAULT IT WILL BE HIDDEN, WE CAN NOT SEE IT.--
-- ALL THE RESOUCES OF SQL SERVER WILL BE KEPT INTO ONE GROUP.
NEXT, CLUSTER DISK SELECTION.
SELECT ALL THE DISKS, , NEXT. TICK IPV4, GIVE THE IP OF U WANT (10.10.10.141) IP ADDRESS OF SQL CLUSTER, DO NOT SELECT DHCP(IT WILL AUTOMATICALLY GIVE OWN IP ADDRESS)
NEXT, SERVICE ACCOUNTS, GIVE THE CREATED SERVICE ACCOUNTS HERE.
ON A CLUSTER WE CAN NOT PUT SERVICES IN AUTOMATIC MODE, IT SHOULD BE IN MANUAL ONLY
NEXT, SERVER CONFIG, ADD DBA TEAM HERE, NEXT DATA DIRECTORY
GIVE THE DIRECTORIES FOR EACH FILES,
DATA ROOT DIRECTORY: S
SUSTEM DATABASE DIRECTORU: S
USER DATABASE DIRECTORY:K
USER DATABSE LOG DIRECTORY:L
TEMP DB DIRECTORY:T
TEMP DB LOG DIRECTORY:T
BACKUPDIRECTORY:E
NEXT, NEXT FI
LAST SCREEN U CAN SEE IS ACTION : INSTALL FAILOVER CLUSTER.

GotO NODE 2,
SEE ANY SQL SERVER INSTALLED IN NODE2. NO INSTANCE WILL BE INSTALLED. SO INSTALL SQL SERVER IN NODE2
SETUP , RUN AS ADMIN, SQL SERVER INSTALLATION CENTER, NO NEED TO SELECT NEW SQL SERVER CLUSTER INSTANCE, JUST SELEXT ADD NODE IN CLUSTER INSTANCE(3RD OPTION). NEXT, NEXT..
INSTANCE NAME: NAME THAT U HAVE ALREDY INSTALLED IN NODE1,
NAME OF THE NODE:NODE2, NO NEED TO GIVE ANY SERVICE ACCOUNTS, JUST GIVE THE SERVICE ACCOUTS PASSWORDS, NEXT , NEXT..
LAST SCREEN.. ACTION: ADD NODE.
BEFORE ADDING NODE: PING THE OHER MACHINE OR PING OWNER.

MSDTC
MICROSOFT DISTRIBUTION TRANSACTION COORDINATOR.
DISTRIBUTION OF TRANSACTIONS, TRANSFERRING TRANSACTIONS FROM ONE SERVER TO ANOTHER SERVER. THIS SERVICE TRACKS ALL PARTS OF THE TRANSACTION PROCESS, EVEN OVER MULTIPLE
MSDTC IS AN OPTIONAL SERVICE. IT IS STAND ALONE SERVICE, WE CAN PUT MSDTC IN CLUSTER.
TWO PHASE COMMIT IS A COMMON WORD IN MSDTC, THAT COMMIT WILL HAPPENS IN TWO PLACES. FOR SQL SERVER 2005 MSDTC IS COMPULSORY, FOR REMAINING VERSIONS ITS OPTIONAL.
GOTO NODE1
CLUADMIN.MSC, GOTO ROLES, WE CAN SEE A GROUP, GODOWN IF U CLICK ON RESOURCES, WE CAN SEE ALL THE RESOURCES.
HERE WE ARE GOING TO ADD MSDTC(TO MSDTC, WE NEED TO ADD ONE MORE DISK AS A TEMPORARY PURPOSE FOR MSDTC)
RCLICK ON ROLES, CONFIGURE ROLE,NEXT, OK, NAME OF DTC, KDSSGB24MSDTC, GIVE THE IP ADDRESS 10.10.10.142, DO NOT SHARE MSDTC FOR DIFFERENT VERSION OF INSTANCES, MICROSOFT RECOMM IS CONFIGURE MSDTC FOR EVERY ANOTHER VERSION OF INSTANCE.
GO TO AD, CREATE ONE MORE DISK FOR MSDTC.ONLY FOR TEMPRORARY MEMORY SO KEEP THE DEFALUT SPACE 256MB…CONNECT. GOTO NODE1,

BRING THE NEW DISK ONLINE, GIVE THE DRIVE NAME..OK.
DO THE SAME THING IN NODE 2. NOW ADD THIS INTO CLUSTER, U CAN DO THIS IN ANY NODE. CLUADMIN.MSC, DISKS, ADD DISK, GIVE THE IP ADDRESS OF AD… OK. CONFIGURED MSDTC IS WINDOWS ADMIN WORK.
GOTO NODE1
CLUADMIN.MSC
ADD MSDTC TO A ROLE, ROLES, CONFIG ROLE, NAME OF MSDTC, KDSSGB24MSDTC, IP ADDRESS, 10.10.10.142, SELECT DRIVE AS M, NEXT NEXT, FINISH.
WE CAN DO FAIL OVER OF SQL SERVER EASILY, GOTO ROLE, THERE U CAN SEE ALL THE ROLES, SELECT SQL SERVER(NAME OF INSTANCE), ,MOVE, SELECT NODE, OK, THEN THIS SERVICE WILL RUN FROM SELECTED NODE.
WE CAN INSTALL 25 INSTANCES IN CLUSTER FOR SAN, FOR NEW VERSION IF WE USE SMB SHARED (IT'S A NEW SHARED SOFTWARE), THEN WE CAN INSTALL UPTO 50 INSTANCES.
GOTO AD
CREATE A SINGLE SHARED DRIVE AND CREATE MOUNT POINTS ON THAT SINGLE DRIVE, MEANS ALL YOUR DATA, LOG, TEMP FILES WILL BE STORED IN ONE DRIVE ONLY. EARLIER WE USED TO CREATE DIFFERENT DRIVES FOR EACH FILE. NOW ALL FILES WILL BE STORED IN SINGLE DRIVE WITH MULTIPLE MOUNT POINTS. SO IN THIS WAY WE CAN INSTALL UPTO 25 INSTANCES IN FAIL OVER CLUSTER
CONNECT TO SQL SERVER INSTANCE, NODE1
OPEN SSMS ON NODE1,CONNECT TO SQL CLUS, WITH SERVER NAME AS, SQL SERVER FAMILY NAME
SELECT *FROM SYS.DM_OS_CLUSTER_NODES
WHICH TELLS ABOUT HOW MANY NODES ARE THERE IN MY CLUSTER AND WHICH IS THE OWNER OF THE CLUSTER.
GOTO AD
CREATE MOUNT DISKS FOR SQL SERVER 2K5
OPEN STARWIND
NEW TARGET, TARGET ALIASES:SDRIVE2K5, DON'T CHECK TARGET NAME, ALL SETTINGS ARE SAME. NAME IS SDRIVE2K5.IMG, SAME CREATE ONE

MORE DRIVE KDRIVE2K5, NEXT, NEXT KDRIVE2K5.IMG, CREATE ONE MORE DRIVE SAME AS ABOVE.
GOTO NODE1
ADMINSITRATIVE TOOLS, ISCSI INITIATOR, CONNECT ALL THE NEW DRIVES THAT ARE CREATED. DISK MGMT, BRING ONLINE, INISTIALZE, RIGHT CLICK ON LONG BAR, NEW SIMPLE VOLUME, NEXT FIRST TIME CREATE ONE DRIVE LETTER, ASSIGN , Y(2K5 NICK NAME YUKON), OK.
FROM SECOND ONWARDS WE NEED TO DO MOUNTING, R.CLICK ONLINE, INITIALIZE, R.CLICK ON LONG BAR, NEW SIMPLE VOLUME, NEXT NE,XT, SELECT SECOND OPTION, MOUNT…. BROWSE, SELECT ALREADY CREATED DRIVE, IN THIS CASE IT IS Y, CREATE A FOLDER IN Y, THIS ACT AS SUB DRIVE FOR MY SQL FILES.SELECT THAT FOLDER, OK, NEXT, FINISH. DO THE SAME THING FOR DATA FOLDER AND LOG FOLDER.
--WE CAN CREATE UNLIMITED MOUNTPOINTS.
DO THE SAME THING FOR NODE2.
OPEN ISCSI INITIATOR, CONNECT THE NEW DRIVES.
OPEN DISKMGMT, BRING ONLINE THE DRIVE, INITIALIZE, CHANGE THE LETTER TO ‘Y’, OK, FOR THE NEXT DRIVE BRING IT ONLINE, R.CLICK ON LONG BAR, CHANGE THE LETTER TO Y, HERE THE NEW DRIVE IS MOUNT POINT OF Y, SO CHANGE THE LETTER TO Y.
--MY DRIVE SIZE MAY BE SMALL SIZE, BUT WE CAN PUT MOUNT POINTS HAVING TERA BYTES OF SIZES IN THAT DRIVE.
GOTO MY COMPUTER AND CHECK ONCE.
OPEN Y DRIVE, U CAN SEE MOUNT POINTS.
CLUADMIN.MSC
STORAGE, DISKS, ADD DISKS, OK, U CAN SEE ALL THE MOUNT POINTS AS A INIDIVIDUAL DISKS. SELECT DISKS
GOTO CLUSTER DISK 1, R.CLICK, PROPERTIES,CHANGE THE NAME AS SQLDATA2K5. DO SAME THING FOR REMAING MOUNT POIN T POINTS.
IF MOUNT POINT ADDED AS A DRIVE REMOVE THE LETTER AND OK.
USE THE SAME SERVICE ACCOUNTS THAT WE HAVE ALREADY CREATED FOR SQL SERVER 2K12.

GOTO NODE1
INSTALL SQL SERVER 2K5
BROWSE SQL 2K5 MEDIA FOR D,
SQL 2K5, SETUP, SQL 2K5 WILL NOT INSTALL ON WIN SERVER 2K12R2.
SELECT RUN WITH OUT HELP, IF DRIVES AND QUORUM IS NOT THERE IN NODE1, RESTART NODE2 THEN ALL DRIVES WILL COME ONLINE IN NODE1.

ACTIVE-PASSIVE,ACTIVE –ACTIVE
THIS TERMINOLOGY IS CHANGED TO SINGLE INSTANCE(ACTIVE-PASSIVE) AND MULTIPLE INSTANCE (ACTIVE –ACTIVE)
N+1 HERE 1 PASSIVE IS THERE
N+2 TWO PASSIVES ARE THERE HERE N IS THE NODE1.THIS IS CALLED N+M, M MEANS NUMBER OF PASSIVES.

GEO CLUSTER
***INDIA DATA CENTER IS IN SEPARATE DOMAIN, ONE MORE DOMAIN IN US. WE CAN NOT CONFIGURE CLUSTERING BETWEEN TWO SEPARATE DOMAINS IN WINDOWS SERVER 2012. IN 2016 IT IS POSSIBLE.
***CLUSTERING IS POSSIBLE BETWEEN SUBNETS.
GEO CLUSTER IS A CLUSTER BETWEEN 2 DIFFERENT SUBNETS, OR GROUP OF SUBNETS. THESE SUBNETS MAY BE PRESENT AT SAME PLACE OR AT DIFFERENT GROGRAPHIES.

****--IN SQL SERVER 2005 ALL DATABASES INCLUDING RESOURCE DATABASE WILL BE SHARED BETWEEN NODES. THAT'S WHY IF WE ARE APPLYING PATCHING (AS PATCHING INFORMATION WILL BE PRESENT IN RESOURCE DATABASE) ENTIRE CLUSTER NEEDS DOWN TIME. FROM SQL SERVER 2008 ON WARDS WE HAVE DEDICATED RESOURCE DATABASES FOR INDIVIDUAL NODES(EACH NODE HAS ITS OWN RESOURCE DATABASE), SO DOWN TIME IS NOT REQUIRED FOR PATCHING FROM SQL SERVER 2008 ONWARDS.
FROM SQL SERVER 2012 ONWARDS LOCAL TEMP DB IS AVILABLE FOR EACH NODE. IF THE TEMP DB IS IN LOCAL TRANSACTIONS WILL BE VERY QUICK.

SQL SERVER 2008R2 *****

INSTALLATION ON CLUSTURING ON MOUNT POINTS
GOTO NODE1
OPEN SQL SERVER 2008R2 , SET UP FILE, RUN AS ADMIN,
INSTALLATION CENTER, NEW SQL SERVER FAILOVER INSTALLATION.
SQL SERVER 2008R2 HAS A BUG WHEN INSTALLING IN FAIL OVER INSTANCE, SO FOR THIS WE HAVE TO SKIP THE RULES.
OPEN COMMNAD PROMPT RUN AS ADMIN
GOTO SETUP FILE LOCATION
D:\SQLSERVER2008R2:> SETUP /SKIPRULES=CLUSTER_VERIFYFORERROR /ACTION=INSTALLFAILOVERCLUSTER
HAVING PROBLEM WITH SQL SERVER 8R2 IN CLUSTERING

FAILOVER
WHAT IS THE EXACT PROCESS WHEN FAIL OVER HAPPEN
THERE IS DEPENDENCY ORDER ON SERVICES
GO TO ROLES
GO TO THE OTHER RESOURCES
R.CLICK ON THE SQL SERVER MAIN SERVICE, GOTO MORE ACTIONS, SELECT SHOW DEPENDENCY REPORT, THERE U CAN SEE THAT SERVICE IS DEPENDENT ON WHICH RESOURCES. THERE U CAN SEE AND DEPENDENCY, MEANS IF ONE RESOURCE DOWN THE WHOLE SERVIVE GOES DOWN.
--THERE ARE 2 DEPENDIES
AND DEPENDECY
OR DEPENDENCY
IF WE ARE MOVING NODE IN FAIL OVER, THERE U CAN SEE THE DEPENDECY, WHICH SERVICE GOES DOWN FIRST.
FIRST AGENT WILL GOES DOWN, THEN MAIN SERVICE ACCOUNT WILL GOES DOWN, THEN IP ADDRESS, THEN ALL THE DISKS WILL GO DOWN.
STOPPING ORDER
1 SQL SERVER AGENT SERVICE
2. SQL SERVER MAIN SERVICE

3. SQL SERVER IP
4. SQL SERVER NAME
5. ALL DISK(S)
STARTING ORDER
1. ALL DISKS
2. SQL SERVER IP
3. SQL SERVER NAME
4. SQL SERVER MAIN SERVICE ACCOUNT
5. SQL SERVER AGENT SERVICE ACCOUNT
U CAN SEE, WHILE DOING FAILOVER, WHILE MOVING NODE, WE CAN SEE WHICH SERVICE IS GOES DOWN FIRST, BUT IT IS VERY QUICK.

HOW MANY IPS THAT WE NEED FOR CLUSTERING
2N+3(ASSUMING SINGLE INSTANCE CLUSTER)
NODE1 PUBLIC
NODE1 PRIVATE
NODE2 PUBLIC
NODE2 PRIVATE
WINDOWS CLUSTER IP
SQL SERVER CLUSTER IP
MSDTC IP

INSTALLING SQL SERVER 2K8 ON CLUSTERING IS CREATING SOME PROBLEMS. ** SOME ERRORS ARE COMING . NEED TO CLEAR.
**UP TO WINDOWS 2003 HERAT BEAT IS COMPULSORY, FROM 2005 ONWARDS HEART BEAT(PRIVATE NETWORK) IS NOT COMPULSORY, WE CAN CONFIGURE CLUSTERING WITH OUT HEART BEAT ALSO.
**WE CAN CONFIGURE LOGSHIPPING ON CLUSTERING. SAME NORMAL LOG SHIPPING, NO DIFFERENCE
SCENARIOS
ADD DISK SCENARIO
GOTO NODE1, CLUSTER ALSO IN NODE1

IS ALIVE AND LOOK ALIVE

LOOK ALIVE AND IS ALIVE IS A BASIC HEATH CHECKS IN CLUSTERING.VERIFIES THAT SQL SERVER IS RUNNING ON THE CURRENT NODE. BY DEFAULUT IT CHECKS EVERY 5 SECONDS. IF LOOKALIVE CHECK FAILS WINDOWS CLUSTER PERFORMS IS ALIVE CHECK. IT WILL JUST CHECK THE SQL SERVICES IN SERVICES.MSC.

LOOK ALIVE MEANS BY LOOKING IT WILL CONFIRM WHETHER SERVICES ARE RUNNING OR NOT.

IS ALIVE CHECK (CALLED THOROUGH RESOURCE HEALTH CHECK)

RUNS EVERY 60 SECONDS AND VERIFIES INSTANCE IS UP AND RUNNING OR NOT USING THE COMMAND IN RESOURCE DLL CALLED SELECT @@SERVERNERNAME FOR EVERY 60 SECONDS. IF THIS QUERY FAILS, THE CHECK RUNS ADDITIONAL RETRY LOGIC TO AVOID STRESS-RELATED

HOWEVER IS ALIVE, LOOK ALIVE IS NOT SUFFICIENT FOR CHECK, THEN FORM 2K12 MICROSOFT INTRODUCES NEW SP FOR THE HEALTH CHECKS. SP_SERVER_DIAGNOSTICS

IS ALIVE LOOK ALIVE WHERE TO SEE

CLUADMIN.MSC,GOTO ROLES, SELECT THE INSTANCE , THERE AT THE BOTTOM U CAN SEE RESOURCES. GO TO SQL SERVER SERVICE IN THE RESOURCES. R.CLICK, PROERTIES, ADVANCED POLICES TAB.

THERE U CAN SEE, BASIC RESOURCE HAELTH CHECK(LOOK ALIVE), THROUGH RESOURCE HEALTH CHECK(IS ALIVE). FOR EVERY RESOURCE WE CAN SEE THESE TWO CHECKS.

WE CAN CHANGE THE INTERVAL TIME OF EACH CHECK FROM ADVANCED POLOCIES.

RUN THE FOLLOWING CHECK IN THE ACTIVE NODE

SP_SERVER_DIAGNOSTICS (THIS IS THE BETTER WAY OF VERIFYING). WE NEED NOT RUN THIS COMMAND. THIS WILL CONTINUE RUN 'SYSTEM_HEALTH" FROM EXTENDED EVENTS.(IN MANAGEMENT—

SESSIONS) IT CAN BE VISIBLE IN SQL 2K12 ONLY. WE CAN NOT SEE IT OLDER VERSIONS.

SCENARIOS

ADDING NEW DISK

GOTO AD, OPEN STARWIND, CREATE A TARGET. ADD TARGET, NAME :EXTERA2K12, SAME AS U KNOW. PATH \EXTRA2K12.IMG. FINISH.

GOTO OPEN ISCSI INITIALTER, REFRESH, NEW DISK WILL COME. CONNECT TO IT.

OPEN DISK MGMT, ADD THIS NEW DISK. RIGHT CLICK ONLINE, SAME INITIALIZE, CHANGE THE VOULUME LETTER AND NAME FROM NEW SIMPLE VOLUME. DO THE SAME THING IN NODE2

GOTO NODE1

CLUADMIN.MSC

STORAGE, ADD DISK, THEN RENAME IT.

GO TO ROLES, R.CLICK ON SQL SERVER, ADD STORAGE, SELECT WHICH DISK U WANT TO ADD. CLICK FINISH. WE JUST ADDED THE DISK IN TO CLUSTER. AGAIN WE NEED TO SET DEPENDENCY FOR THE NEW DISK. THEN GOTO RESOURCE, SELECT THE MAIN SERVICE, R.CLICK PROPERTIES, GOTO DEPENDENCIES.

AT THE END U CAN SEE, CLICK IT AND SELECT THE NEW DRIVE. K THEN THE NEW DISK WILL ADD .

TO FIND THE DISKS

SELECT *FROM SYS.DM_IO_CLUSTER_SHARED_DRIVES

CLUSTER COMMANDS

NEEDS TO RUN IN COMMAND PROMPT

GOTO NODE1 OR NODE2

OPEN CMD PROMPT AS RUN AS ADMIN

COMMANDS

CLUSTER /LIST

IT THROUGHS ERROR LIKE CLUSTER IS NOT RECOGNISED AS INTERNAL OR EXTER NAL COMMAND, WHY BECAUSE WE DID NOT INATALL FAIL OVER

CLUSTER MANAGEMENT TOOLS. SO WE HAVE TO INSTALL THOSE MANAGEMENT TOOLS. WE CAN INSTALL FROM POWERSHELL.

OPEN POWERSHELL

CD\

CD:> INSTALL –WINDOWSFEATURE –NAME FAILOVER –CLUSTERING –INCLUDEMANAGEMENT TOOLS

OR TRY THIS COMMAND

PS C:\> INSTALL–WINDOWSFEATURE RSAT–CLUSTERING –INCLUDEALLSUBFEATURE

DO THE SAME THING FOR ALL THE NODES. U CAN DIRECTLY INSTALL THIS FEATURE IN NODE2 FROM NODE 1 POWERSHELL.

AT THE END OF THE ABOVE COMMAND JUST GIVE THE COMPUTER NAME ON WHICH NODE U WANT TO INSTALL.

NOW CLUSTER COMMANDS WILL WORK.

COMMANDS

CLUSTER /LIST

CLUSTER NODE /STATUS

CLUSTER GROUP /STATUS

CLUSTER NETWORK /STATUS

CLUSTER NETINTERFACE /STATUS(TELLS ABOUT ALL NETWORKS FOR ALL THE NODES)

CLUSTER RESOURCE /STATUS (U CAN SEE ALL THE RESOURCES ARE ONLINE OR NOT)

CLUSTER GROUP CONTAINS 3 COMPONENTS (CLUSTER IP ADD, CLUSTER NAME, QUORUM)

FAILOVER THROUGH COMMAND

CLUSTER GROUP “GROUP NAME(SQL SERVER NAME) ” /MOVE:NODE2

(HERE NODE 2 IS NAME OF THE NODE ON WHICH U WANT TO MOVE)

CLUSTER GROUP “SQL SERVER (MSSQLSERVER)” /MOVE:KDSSGNODE1

IN THE ABOVE COMMAND SQL SERVER (MSSQLSERVER) IS THE GROUP NAME MEANS SQL SERVER NAME, ,MSSQL SERVER IS DEFAULT INSTANCE NAME, KDSSGNODE1 MEANS NAME OF THE NAME ON WHICH U WANT TO MOVE.

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GOTO SERVERMANAGER, ADD ROLES OR FEATIRES, ROLE BASE, POOL, NOT ROLES, GOTO FEATURES,

SERVICE PACK

FROM SQL SERVER 2K8 ALWAYS DO THE PATCH ON THE PASSIVE.

ADDING 3RD NODE IN CLUSTERING(DONE BY WINDOWS TEAM, BEFORE ADDING THE NODE RUN VALIDATION TESTS)

GO TO NODE 3

CHECK EVERY THING FINE OR NOT

IP ADDRESS, ASSIGN PRIVATE IP ADDRESS, (ADD ADAPTER), CHECK THE COMPUTER NAME WHETHER IT IS IN DOMAIN OR NOT. CHECK FIREWALL STOPPED OR NOT.

INSTALL FAIL OVER CLUSTER FEATURE FROM SERVER MANAGER.

GOTO NODE1, OR NODE2(NEED TO LOGIN AS DOMIAN ADMIN)

OPEN CLUADMIN.MSC

CLICK ON NODES, R.CLICK ADD NODE

NEXT, GIVE THE NAME OF THE NODE WHICH U WANT TO ADD. ,ADD DON'T RUN ANY VALIDATION , Y BECAUSE WHILE DOING VALIDATION ALL THE NODES AND NETWORKS WILL GOES DOWN FOR A WHILE, SO DON'T DO VALIDATION TESTS, IF IT REALLY WANTS TAKE APPROVAL. OR ADD NODE DURING OFF HOURS LIKE WEEKNEDS., THEN NEXT , FINISH.

GOTO NODE 3

OPEN ISCSICPL, GIVE THE IP ADDRESS, ADD ALL THE INACTIVE TARGETS. BETTER ADD IN THE ORDER ON WHICH U HAVE ADDED.OK.OPEN DISKMGMT. HERE NOTHING TO DO. LEAVE IT AS IT IS. IF THE DISK IS RESERVED DON'T DO ANYTHING ON IT. DON'T TRY TO BRING IT ONLINE.

NOW 'ADD NODE TO A SQL SERVER FAIL OVER CLUSTER' NODE IN NODE3(BEFORE THAT ADD DBA TEAM AS LOCAL ADMINISTRATOR) BY LOGGING IN MEMBER OF DBA TEAM.

ATTACH SQL 2K12 ISO FILE FROM STORAGE, OPEN SQL SERVER, SETUP.EXE, INSTALLATION CENTER WILL OPEN, NOW SELECT ,ADD NODE TO A SQL

SERVER FAILOVER CLUSTER'. NOW SAME PROCESS.
GOTO NODE 1
OPEN SQL SERVER, QUERY WINDOW
SELECT *FROM DM_OS_CLUSTER_NODES

WHILE INSTALLING SQL SERVER 2008R2, WE WILL GET ONE ERROR
SOLUTION IS
INSTALLING SQL SERVER 2008R2 ON WINDOWS 2012 CLUSTER GOOGLE IT WITH THIS SENTENCE.
MSCLUS.DLL LIBRARY IS DISABLED BY DEFAULT TO CLEART THIS …
SO FOR THAT WE NEED TO RUN POWRSHELL COMMAND
ADD-WINDOWSFEATURE RSAT-CLUSTERING-AUTOMATIONSERVER
SO TO RUN THE ABOVE COMMAND IN POWERSHELL , CANCEL THE GUI INSTALLATION.
AFTER THIS WE NEED TO AGAIN RERUN THE INSTALLATION.
THEN WE CAN SEE ONE MORE ERROR
WINDOWS SERVER 2003 FILE STREAM HOTFIX CHECK FAILED
THIS IS THE ISSUE WITH SERVICE PACK, AS WINDOWS 2012 SERVER IS MODERN AND SQL 2008R2 IS THE OLD ONE. SO WEED TO DO SLIPSTREAM INSTALLATION.
SO CANCEL ALL THE INSTALLTION. DO THE SLIP STREAM INSTALLATION.
WHILE DOING SLIP STREAM INSTALLAITON WE NEED TO DUMP THE RECENT SERVICE PACK , SO FOR CD ISO IMAGE WE CAN NOT DUMP ANYTHING, SO COPY THE MEDIA INTO THE C DRIVE AND COPY THE SERVICE PACKS IN TO THE MEDIA IN PCU FOLDER.
EXTRACT THE SERVICE PACK FROM COMMAND PROMP
TO EXTRACT SERVICE PACK FROM COMMAND PROMPT, OPEN COMMAND PROMP, GOTO THAT PATH WHERE SERVICE PACK IS THERE TYPE THE SERVICEPACKNAME.EXE -x. It will extract at that location.
OPEN PCU THERE U CAN SEE SEE SETUP.EXE, SETUP.RLL COPY THOSE TWO AND PASTE IT OUTSIDE SETUP.EXE LOCATION., REPLACE IT.(IF SETUP.RLL IS NOT THERE NOT AN ISSUE, REPLACE ONLY SERTUP.EXE)
THEN AGAIN GOTO PCU SOURCE, X64 FOLDER, COPY ALL THE FILES

(EXCLUDE FOLDERS), EXCEPT THE BELOW DLL FILE
MICROSOFT.SQL.CHAINER.PACKAGEDATA.DLL
PASTE IT IN OUTSIDE X64 FOLDER..
NOW AGAIN OPEN PCU FOLDER, OPEN DEFAULTSETUP.INI FILE
AT THE END U HAVE TO ADD
PCUSOURCE=".\PCU" (FROM 2012 ONWARDS IT IS UPDATESOURCE)
THIS PROCESS IS SAME FOR SQL SERVER 2008 ALSO.
IF WE WANT TO INSTALL SQL SERVER 2008, 8R2 WITH SLIP STREAM ON WINDOWS 2012 WE NEED TO FOLLOW THE ABOVE STEPS.

OPEN CLUSADMIN.MSC
SELECT CLUSTER NAME, PROPERTIES, RESOURCE TYPES, THERE U CAN SEE AT THE BOTTOM U CAN SEE USER RESOURCES, DOUBLE CLICK ON ANY RESOURCE, THERE U CAN SEE RESOURCE DLL FILES. IN THIS WAY WE CAN CHECK THE DLL FILES. BY SEARCHING THE DLL FILES IN C DRIVE WE CAN FIND PATH OF THE DLL FILES.
GOTO ROLES, RIGHT CLICK ANY ANY ROLE, GOTO PROPERTIES.
PREFERRED OWNERS. WE CAN CHANGE THE PREFERRED OWNERS.
JUST FOR TESTING PURPOSE , CHECK FIRST TWO NODES.
NOW RESTRAT THE OWNER NODE.
THEN THE SQL SERVER ROLE WILL MOVE TO THE NEXT PREFERRED OWNER.
IF ANY ONE NODE IS IN UNCHECK IN THE PREFERRED OWNERS LIST, IT WILL NEVER GOTO THAT UNCHECKED NODE WHEN AUTOMATICE FAILOVER OCCURS, BUT IF WE MANUALLY MOVES THE OWNER TO THE UNCHECKED NODE. IT WILL MOVE TO THAT NODE.
IN THIS SCREEN WE HAVE TO TUNE THE PREFERRED OWNERS , CHECK THE OWNER
GOTO FAILOVER TAB IN THE PROPERTIES OF ROLE
PRVENT FAIL BACK(IF MY OWNER NODE FAILS IT WILL GOTO THE PREFERED OWNER, IF MY NODE 1 CAME TO ONLINE IF WE CHECK THE PRVENT FAIL BACK THEN THE INSTANCE WILL NOT GO TO NODE1)
ALLOW FAILBACK MEANS THE INSTANCE IN THE ABOVE SCENARIO WILL GOTO NODE 1 WHEN MY NODE 1 IS CAME TO ONLINE.

THIS IS NOT A GOOD OPTION. IN REAL TIME PREVENT FAIL BACK OPTION WILL BE USED MOSTLY.
IN ALLOW FAILBACK WE CAN SEE 2 OPTIONS
IMMEDIATELY—APPLICATION WILL IMMEDIATELY MOVE TO THE FAILED NODE IF MY FAILED NODE CAME TO ONLINE
IF WE SELECT 'FAIL BACK BETWEEN' WE CAN GIVE THE NON BUSINESS HOURS HERE. IT WILL DO FAIL OVER IN THAT GIVEN HOURS, AND THAT TIME IS 24 HOURS FORMAT
IN THE ABOVE PART OF FAILOVER TAB U CAN SEE
MAXIMUM FAILURES IN THE SPECIFIED PERIOD:
PERIOD:
IF MAY MAXIMUM FIALURES IN THE SPECIFIED PERIOD IS 2, AND THE PERIOD IS 6 HRS, WITH IN 6HRS IF FAIL OVER OCCURS 2 TIMES THE INSTANCE WILL STOP. IF I SELECT ALLOW FAIL BACK , THEN IT IS BETTER TO INCREASE THE MAX FAILURES.

**WHILE INSTALLING SQL SERVER 2008 OR 8R2 ON WINDOWS SERVER 2008 , AFTER SOME SCREEN U CAN SEE
USER SERVICE SIDS
USER DOMAIN GROUP
SERVICE ACCOUNTS WILL NOT HAVE PERMISSIONS TO ACCESS THE DATABASE, ONLY SERVICE ACCOUNTS GROUP WILL HAVE PERMISSIONS. SO WE CAN SEE TWO GROUPS IN SQL SERVER 2008 OR 8R2
ONE FOR DATABASE ENGINE DOMAIN GROUP
ONE FOR SQL SERVER AGENT DOMAIN GROUP. ALL THE SERVICE ACCOUNTS SHOULD BE PART OF THESE DOMAIN GROUPS. THIS IS OPTIONAL IN 2008 , 8R2. YOU CAN USE USESERVICE SIDS(RECOMMENDED) BUT FOR 2005 IT IS COMPUSORY. EVEN IF WE WANT TO CHANGE THE SERVICE ACCOUNT, FIRST U HAVE TO CHANGE IN THE CONFIG MANAGER PROPERTIES, LOG ON AS… BEFORE THAT OPEN LUSRMGR.MSC, CREATE 3 GROUPS (SQLSRVGRP, SQLAGTGRT, SQLFTSGRP) IN THIS GROUP ADD THE SERVICE ACCOUNT IN EACH GROUP. IF WE WANT TO CHANGE IT REMOVE THE OLD SERVICE ACCOUNT FROM GROUP, ADD THE NEW SERVICE

ACCOUNT IN IT THEN CHANGE IT IN CONFIG MANGER . EVEN IF IT IS A STAND ALONE INSTANCE OR CLUSTER INSTANCE WE NEED TO CREATE THE GROUPS IN LOCAL ONLY. THIS PROBLEM CAN BE SEEN IN ONLY SQLSERVER 2005, 8, 8R2 ON WINDOWS SERVER 8 ONLY.

WHILE INSTALLING IF U SEE ANY ERROR LIKE “REQUIRE KERBROS” THEN IT MAY BE ISSUE WITH COMPATIBILITY. SO INSTALL SQL SERVER WITH SERVICE PACK 1.
**ADVANCED SLIP STREAM ALSO CALLED MERGE DROP.

**enable persistent mode
for 2008 or082 in the cluster roles goto properities there u can see this option. This means it will remember the old node from which node it come. IF the current node fails it will directly goes to the last node which it remembers.

Installing sql server 2k5
in virtual servername screen we have to give cluster.
Before Installing sql 2k5 we need to create a sql server group means a role(services or application). From 2008 onwards it will automatically create a group in clusadmin.msc but for 2k5 we need to manually create that role so for that we need to create the role(services and application) for sql server 2005 in clusadmin.msc
open cluadmin.msc, goto services and applications, r.click, create an empty service. Name is sql server (2k5). Ok , finish. Right click on that service add storage.
then start the installation.
In ths service accounts group we need to type the domain service accounts. If we browse there some times it will create errors. So better type it.

HOW TO KNOW THE INSTANCE IS CLUSTERED INSTANCE OR NOT

R.CLICK ON INSTANCE NAME CLICK ON PROPERITES, THERE U CAN SEE

"IS CLUSTERED=TRUE" THEN WE CAN SAY IT IS THE CLUSTERD INSTANCE.

HOW TO FIND WHICH NODE IS ACTIVE AND PASSIVE

SELECT *FROM SYS.DM_OS_CLUSTER_NODES

--FCI – FAILOVER CLUSTER INSTANCE

WSFC—WINDOWS SERVER FAILOVER CLUSTER

HOW TO FIND CLUSTER PROPERTIES

SELECT *FROM SYS.DM_OS_CLUSTER_PROPERTIES

IN THIS TABLE WE CAN SEE TWO IMPORTANT PARAMETERS

***FAILURE CONDITION LEVEL

DIFFERENT FAIL OVER LEVELS

LEVEL 0—NO AUTOMATIC FAILOVER(WE HAVE TO DO MANUAL FAILOVER)(NOT USE FUL OPTION)

LEVEL 1—FIALOVER OR RESTART ON SERVER DOWN. (ONLY IT WILL CHECK SQL SERVER SERVICES. IF SERVICES DOWN IT AUTOMATICALLY FIAL OVER)(SHUT DOWN IS AN EXCEPTION. IF SQL SERVER SERVIES WITH ANY OTHER REASONS THEN ONLY FAILOVER HAPPENS)

--WE CANT SHUT DOWN THE INSTANCE FROM SSMS QUERY WINDOW WHEN THE INSTANCE IS IN CLUSTER. IF WE TYPE THE COMMAND IT WILL SHOW THE OUTPUT BUT INSTANCE WILL NOT STOP. IF WE ARE TRYING TO STOP THE INSTANCE THROUGH GUI IT WILL IMMEDIATLEY FIALOVER TO ANOTHER NODE. SO STOPPING INSTANCE THROUGH GUI NOT A RECOMMENDED OPTION. IF WE WANT TO STOP THE INSTANCE USE CONFIGURATION MANAGER. IT IS THE BEST OPTION. OR FROM CLUADMIN ALSO WE CAN STOP THE INSTANCE

LEVEL 2

IF SQL SERVER IS NOT RESPONDING THAT MEANS THE INSTANCE IS STRUCK , THEN IT WILL AUTOMATICALLY DO FAILOVER. THAT MEANS IN THIS LEVEL THE RESOURCE DLL RUNS SP_SERVER_DIAGNOTSTICS. IT WILL CONTINOUSLY RUN. IF WE DON'T GET REPLY FOR 60000 MILLI SECONDS THAT MEANS 60 SECONDS (1 MIN) IT WILL AUTOMATICALLY DO FAILOVER. THE PARAMETER NAME IS CALLED "HEALTH CHECK TIME" IN THE ABOVE TABLE. LEVEL 2 CONTAINS LEVEL 1 ALSO.

SP_SERVER_DIAGNOSTICS CONTAINS 5 CHECKS. EVERY TIME THESE 5 CHECKS WILL RUN.
1.SYSTEM, RESOURCE, QUERY PROCESS IO_SUBSYSTE, 5.EVENTS
LEVEL 3
IF SP_SERVER_DIAGNOSTICS STORED PROCEDURE RETURNS 'SYSTEM ERROR' THEN IT WILL DO FAILOVER. EVEN IF THE DIAGNOSTICS SP IS NOT RUNNING ALSO IT WILL DO FAILOVER. LEVEL 3 CONSTAINS LEVEL 1 AND 2
LEVEL 4
IF THE RESOURCE ERROR CAME IT WILL DO FAILOVER(CONTAINS LEVEL1, 2, 3. PUTTING THIS VALUE IS NOT RECOMM.)
LEVEL 5
EVEN IF THE QUERY IS NOT RUNNING(QUERY PROCESSING ERROR) IT WILL DO FAIL OVER. (CONTAINS 1, 2, 3, 4 THAT MEANS IT WILL FIRST CHECK FOR LEVEL 1 CONDITION THEN 2, 3, 4 LEVEL CONDITIONS THEN IT WILLCHECK FOR LEVEL 5)(IT IS ALSO NOT RECOMM OPTION)
LEVEL 3 IS THE DEFAULUT LEVEL

CHANGING THE VLAUES OF CLSTER SERVER PROPERTIES

ALTER SERVER CONFIGURATION
SET FAILOVER CLUSTER PROPERTY
FAILURECONDITIONLEVEL= 5 (PUT WHICH LEVEL U WANT)

PATCHING SQL SERVER (SERVICE PACK)
ONLY FOR 2005 WE NEED TO PATCH ON ACTIVE NODE MEANS DOWN TIME REQUIRE.
FROM 2K8, R2, 12, 14, 16 WE HAVE TO PATCH FIRST ON PASSIVE NODE.
THEN DO PATCHINGS FOR REMAINING PASSIVE NODES, THEN FAILOVER AND PATCH REMAINING NODE. AFTER PATCHING RESTART THE INSTANCE ONCE.
APPLYING PATCH—NEXT, NEXT, UPDATE

IF WE HAVE THREE NODES THEN QUORUM VOTE IS NOT REQUIRED
SO OPEN CLUSADMIN.MSC

MORE ACTIONS—CONFIGURE QUORUM SETTINGS—SECOND OPTIN—THEN THIRD OPTION (NO QUORUM WITNESS)
THEN QUORUM WILL NEVER PARTICIPATE IN VOTING

PREFERRED OWNERS WE CAN SEE AT ROLE LEVEL
POSSIBLE OWNERS WE CAN SEE AT SERVICE LEVEL
R.CLICK ON SQL SERVER ROLE, THEN AT THE BELOW R.CLICK ON MAIN SERVICE GOTO ADVANCED POLOCIES THERE U CAN SEE POSSIBLE OWNERS. IF WE UN CHECK ANY NODE, IN THE LIFE WE CAN NOT DO FAIL OVER ON THAT UNCHECKED NODE . THAT MEANS IT ACTS AS A BLOCKED LIST. WE NEED TO DO THIS STEP FOR ALL THE RESOURCES (MEANS IP, CLUS NAME, DISKS) OF THE PARTICULAR ROLE. THEN IT WILL NOT DO FAIL OVER FOR THAT UNCHECKED NODE. SO THIS IS A DANGEROUS SETTING, BETTER LEAVE THE DEFAULT.

DESTROYING CLUSTER

BEFORE REMOVING CLUSTER
FIRST REMOVE NODES OF SQL SERVER CLUSTER ON PASSIVE NODES..
THEN UN INSTALL SQL SERVER FROM ACTIVE NODE.
IF WE UNSTALL THE SQL SERVER FROM PASSIVE NODE IT WILL NOT ALLOW TO UN INSTALL IT WILL THROUGH ERROR THAT IT IS IN CLUSTERNG.
SO TO REMOVE NODE
PUT MEDIA DISK, OPEN SETUP.EXE , OPEN INSTALLATION CENTER ,GOTO MAINTENANCE, THERE U CAN FIND “REMOVE NODE”
AFTER REMOVING SQL SERVER CLUSTRING HANDED OVER TO WINDOWS TEAM THEN WINDOWS TEAM WILL EVEVICT THE WINDOWS CLUSTERING FROM PASSIVE NODES. THEN THEY WILL DISTROY THE WINDOWS CLUSTER FROM ACTIVE NODE.

DISTRYING CLUSTER (WINDOWS TEAM WORK)
OPEN CLUADMIN.MSC, SELECT NODES, SELECT THE PASSIVE NODE (NODE1 OR 2 WHICH IS PASSIVE NODE) R.CLICK, MORE ACTIONS, STOP CLUSTER SERVICE FIRST AND AGAIN R.CLICK EVICT. DO THE SAME THING FOR REMAING PASSIVE NODES.

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THEN GOTO ACTIVE NODE IN CLUADMIN. ON THE CLUSTER NAME R.CLICK, MORE ACTIONS , DESTROY CLUSTER.

SCENARIO
changing virtual Ip address of sql server cluster Instance
go to Roles
Select The Instance
at the bottom we can see resources, click on the virtual ip address (if not visible expand sql cluster name)
Right click on Ip Address , properties U can see the Static IP Address. Then change the Ip Address.
If we want to stop the sql server clustered Instance Better stop it from the cluadmin role.
--change freeze—some companies maintains change freeze for 2times in year. for a month they will not change anything on the server. Except issues, client will not accept to touch the instances. Changes like patching, creating databases like this any change they will allow.

CLUSTER EVENT IS NOT EQUAL TO CLUSTER LOG
CLUSTER EVENT IS ACTS AS A EVENT VIEWER FOR ALL CLUSTER NODES.

OPEN CLUSTER EVENTS, RIGHT SIDE WE CAN SEE QUERY, CLICK ON THAT WE CAN SEE ALL NODES SOME PARAMETERS. FILTER SEARCH. THEN WE CAN SELECT PARTICULAR NODE TO SEE THE ERRORS OF THAT NODE.

READING CLUSTER LOG
WE CAN GENERATE CLUSTER LOG FOR ALL NODES BY USING FOLLOWING COMMAND IN COMMAND PROMPT

CLUSTER LOG /GEN
The cluster log file will be there at c: windwos\cluster\reports there we can see cluster log.

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If sql server clustered Instances is stopped or not starting then first we have to generate query from cluster events. Open it check for the error. It will give info but not accurate it also tells on which node the instance failed to start . Then goto event viewer of that particular node we can see the error. It will help to resolve that issue. Or we need to try some other troubleshooting steps then at last gen cluster log. There we can find the error but it is hard to understand the exact reason for failing the Instance.

--Local quorum will be there in all the nodes, and that nodes will be sync with the local quorums. We cant find the local quorum.

Service sid
IT IS A MECHANISM THAT ASSIGNS PRIVILEGES TO THE SERVICE ITSELF, RATHER THAN TO THE ACCOUNT UNDER WHICH THE SERVICE RUNS.

--DISK ARBITRATION MEANS TAKING OWNERSHIP ON DISK. IN CLUSTERING VALIDATION CHECKS WE CAN SEE THIS CHECK.

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