Instalacija i konfiguracija RedHat Cluster servisa (HA) na RedHat Enterprise Linux Server 6.3





1. Instalacija RHEL 6.3 na serverima (node01, node02)

- Podešavanje servera

2. Konfigurisanje clustering softwera

- Kreiranje clustera i dodavanje nodova
- Dodavanje Failover Domena
- Dodavanje resursa (IP, Apache)
- Dodavanje Servis Grupe

3. Demonstracija

- Startovanje resursa
- Stopiranje resursa
- Migriranje resursa sa jednog na drugi server (node)
- Monitoring clustering servisa

4. Pitanja, predlozi, ispravke?

1. Instalacija RHEL 6.3 na serverima (node01, node02)

Ugasite SELinux (node01, node02)

sed -i s/SELINUX=enforcing/SELINUX=disabled/g /etc/selinux/config

Podesite /etc/hosts fajl (node01, node02)

echo "192.168.0.111 node01.example.com" >> /etc/hosts
echo "192.168.0.112 node02.example.com" >> /etc/hosts

Ugasite nepotrebne servise (node01, node02)

chkconfig abrt-ccpp off chkconfig abrt-oops off chkconfig abrtd off chkconfig acpid off chkconfig atd off chkconfig auditd off chkconfig autofs off chkconfig cpuspeed off chkconfig certmonger off chkconfig crond off chkconfig cups off chkconfig haldaemon off chkconfig ip6tables off chkconfig iptables off chkconfig irgbalance off chkconfig kdump off chkconfig libvirt-guests off chkconfig mdmonitor off chkconfig messagebus off chkconfig netfs off chkconfig nfslock off chkconfig portreserve off chkconfig postfix off chkconfig rpcbind off chkconfig rpcgssd off chkconfig rpcidmapd off chkconfig sysstat off chkconfig udev-post off

Dodajte cluster servise u startup (node01)

chkconfig luci on chkconfig ricci on chkconfig cman on chkconfig rgmanager on

Dodajte cluster servise u startup (node02) chkconfig ricci on chkconfig cman on chkconfig rgmanager on

Podesite password za korisnika ricci (node01, node02) passwd ricci

Podesite Apache **/etc/httpd/conf/httpd.conf** (node01, node02) Listen 192.168.0.222:80

Napravite fajl /var/www/html/index.php (node01, node02) <?php echo "Apache is runing on " . exec('hostname') . ""; ?>

Ugasite nepotrebne Apache module (node01, node02) cd /etc/httpd/conf.d mkdir disabled mv webalizer.conf wsgi.conf perl.conf ssl.conf disabled/

Nakon toga restartujte servere (node01, node02) reboot

2. Konfigurisanje clustering softwera

Pristupite web interjfesu za konfiguraciju clustera na sledeći način https://192.168.0.111:8084

Unesite sledeće podatke Username: **root** Password: **password** zatim kliknite na **Login**.

High Availability				About
Homebase				
	Login			
	Exernance	root		
	Password	•••••		
	Login			
	_			

Da bi započeli konfiguraciju kliknite na Manage Clusters zatim na Create.

High Availability	1					About Admin Preferences Logaut
Homebase Clusters	_	_	_	_	_	
Homebase	Add Create Rem	ove				
Manage Clusters	Kane	Status	Possible Votes	Current Votes	Quorum	Nodes Joined

Kada se pojavi Create New Cluster unesite sledeće podatke

Cluster Name: TestCluster

Odaberite Use the Same Password for All Nodes (password ricci korisnika)

Node Name: node01.example.com, node02.example.com

Odaberite Use Locally Installed Packages zatim kliknite na Create Cluster.

Clusters Homebase Manage Clusters Create New Cluster Use the Same Password for All Nodes Node Name Password Ricci Histmane Ris	rum Hindet juined
Iomebase Ianage Clusters Create New Cluster Custer Name Custer Nam	um Nodes Jained
Manage Clusters Name TestCluster Nume Nume Cluster Name TestCluster Itele the Same Password for All Nodes Node Name Password Ricci Hossname Ricci Port Node Name Password Ricci Hossname Ricci Port node01 example.com +++++++ node02.example.com 11111 Add Another Node •++++++++ node02.example.com 11111 Download Packages Ites Localed Packages Ites Localed Packages	rum Hindes Jained
Cluster Name TeatCluster Use the Same Password for All Nodes Node Name Password Ricci Hossname Ricci Port node01.example.com 11111 Add Another Ricce Download Packages Itea Located Backages Itea Locat	
Use the Same Password for All Nodes Node Name Password Ricci Hossname Ricci Port rode01.example.com 11111 Add Another Node Download Packages Ite Local Local Local Local Substances	
Node Name Password Ricci Hostname Ricci Fort node01.example.com +++++++ node01.example.com 11111 node02.example.com 11111 Image: Common comm	
node01.example.com node01.example.com 11111 node02.example.com node02.example.com 11111 Add Another Riode Download Packages Itel.orable letrable Radiances	
node02.example.com node02.example.com 11111 Download Packages IteLocally letralief Packages	
Add Another Node Download Packages Itica Locally IstraTed Packages	
Download Packages Itel Locally learning Packages	
Drawlood Packages Brail control large Packages	
Ise Locally Isstalled Packages	
- on one one in the second sec	
Rebot Nodes Behre Joining Cluster	
Enable Shared Storage Support	
Create Chuster	

Kada se završi kreiranje osnovne konfiguracije prikazaće vam se informacije o članovima **TestCluster** clustera.

High Availability						About Admin Preferences Logast
Homebase Clusters Te	stCluster					
Homebase Manage Clusters	Nodes Fence Devices Failow	r Domains Reso	ources Ser	vice Groups Configure		
TentClunter	🔾 Add 🎯 Reboot 🔗 Join Cluster	Cleave Cluster	C Delete			
	node01.exemple.com	Node ID	1	Cluster Member	00:00:16:34	node01.example.com
	node02.example.com	2	1	Cluster Member	00:00:17:16	node02.example.com
				Select an item to view details		

Nakon toga kliknite na Failover Domains zatim na Add.

High Availability			
Homebase Clusters Te	stCluster		
Homebase Manage Clusters	Nodes Fence Devices Failover Domai	ns Resources Service Groups Configure	
TestCluster	Add ODelete		
TERCIPATI	Kame	Prioritized	Restricted
		No item to display	
			· · · · · · · · · · · · · · · · · · ·

Kada se pojavi Add Failover Domain to Cluster unesite sledeće

Name: FailoverDomain

Odaberite Prioritized, Restricted i No Failback

Selektujete oba servera (**node01**, **node02**) i postavite njihove prioritete (**1**, **2**) Zatim kliknite na **Create**.

	ty				About Admin Preferences Lagrat
Homebase Clusters	TestCluster				
Homebase Manage Clusters	Nodes Fence Dev	ices Failover Domains Res	sources Service Groups	Configure	
	Add C Delete	Add Failover Domain	to Cluster		
• TestSlaster	Name	Name FailoverDomain			Restricted
		Prioritized	Order the nodes to which s	envices failover.	
		Restricted	Service can run only on nod	es specified.	
		No Failback	Do not send service back to when it becomes available	a 1st priority node again.	
			Member	Priority	
		node01.example.com	×.	1	
		node02.example.com	V	2	
		Create			4

Nakon toga je potrebno dodati resurse **(servise)** koje će cluster koristiti. Kliknite na **Resources** zatim na **Add**.

High Availability	/			About Admin Preferences Logout
Homebase Clusters 7	festCluster			
Homebase Manage Clusters	Nodes Fence Devices Fa	ilover Domains Resources Service G	roups Configure	
	Add 🖸 Delete			
TestCluster	Name/1P	Түре	in Use	
		N	ia item to display	

Kada se pojavi **Add Resource to Cluster** izaberite sledeće Iz liste izaberite **IP Address** i unesite IP Address: **192.168.0.222** i selektujete **Monitor Link** Zatim kliknite na **Submit**.

High Availabilit	y			About Admin Preferences Logost
Homebase Clusters	TestCluster			
Homebase Manage Clusters	Nodes Fence Device	es Failover Domains Resources Service Grou	ips Configure	
TentClanter	Add Delete	Туре		in Use
		Add Resource to Cluster		
		IP Address Netmask Bits (optional) Monitor Link Disable Updates to Static Routes Number of Seconds to Steep After Removing an IP Address	192.168.0.222	
		Subres		4

Ponovo kliknite na **Add**.

Kada se pojavi Add Resource to Cluster izaberite sledeće

Iz liste izaberite **Apache**. Unesite Name: **Apache** i Shutdown Wait (seconds): **10** Zatim kliknite na **Submit**.

High Availabili	ity			About Admin	Preferences Logou
Homebase Clusters	TestCluster				
Homebase Manage Clusters	Nodes Fence Devic	es Failover Domains Resou	urces Service Groups Configure		
TestOuter	Add ODelete				
TRICLESH	Name/IP	Туре		in Use	
	192.168.0.222			No	
		Add Resource to Cluste	r		
	192.168.0.222				8
	IP Address	Apache			
	IP Address	Name	Apache	192.168.0.222	
	Netmask Bits (optional)	Server Root	/etc/httpd		
	Monitor Link	Config File	conf.httpd.conf	12	
	Number of Seconds to Static	httpd Options		10	
		Shutbown Wart (seconds)	10		
	Apply	Submit Cancel			

Nakon toga kliknite na Service Groups zatim na Add.

High Availability					About Admin Preferences Logaut
Homebase Clusters T	estCluster	_	_		
Homebase Manage Clusters	Nodes Fence Devices	Failover Domains Resources 56	ervice Groups Configure		
TestCluster	I Name	Status	Autostart	Failover Domain	
			No item to display		

Kada se pojavi Add Service Group to Cluster unesite sledeće

Service Name: WebServer

Izaberite Automatically Start This Service

Izaberite iz liste Failover Domain FailoverDomain

Zatim kliknite na Add Resource i izaberite 192.168.0.222

Nakon toga kliknite na Add Child Resource i izaberite Apache.

Zatim kliknite na **Submit**.

High Availability					٨	osat Admin Prafarences Logout
Homebase Clusters To	estCluster	Add Service Group to Cluster	-	_	-	
Manage Clusters TextCluster	Node Add	Service Name Automatically Start This Service Run Exclusive Failover Domain Recurrery Policy		WebServer		
		Restart Options Maximum Number of Restart Failures Before Relocating Length of Time in Seconds After Which to Forget a Restart				
		Add Resource Cancel			4	

Kada se završi kreiranje **Service Groups** dobićete sledeći ekran sa informacijama o status servisa.

High Availability				About Admin Preferences Logaut
Homebase Clusters Te	estCluster			
Homebase Manage Clusters	Nodes Fence Devices	Failover Domains Resources Service Groups Configure		
TestCluster	🕒 Add 🚺 Start 🔹 Restart	O Disatrie O Delete		
	WebServer	Status Running on node01.exemple.com	Autostart	Failover Domain
		Select an item to view details		

3. Demonstracija

Stopiranje resursa (node01 ili node02) clusvcadm -s WebServer

Startovanje resursa (node01 ili node02) clusvcadm -R WebServer

Migriranje resursa sa jednog na drugi server (node01 ili node02) clusvcadm -r WebServer -m node02.example.com

Monitoring clustering servisa cman_tool nodes clustat -i 1