Adding new disk using System Storage Manager in RHEL7.0

I am using Vmware Workstation in my lab, after adding the new disk to VM.

Open the Linux terminal and type fdisk –l and note the newly added disk name ,In my case it is dev/sdb

```
                    root@localhost:~/Desktop                      _ □ ×

File  Edit  View  Search  Terminal  Help
[root@localhost Desktop]# fdisk -l

Disk /dev/sda: 32.2 GB, 32212254720 bytes, 62914560 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
Disk label type: dos
Disk identifier: 0x000a7068

   Device Boot      Start         End      Blocks   Id  System
/dev/sda1   *        2048     1026047      512000   83  Linux
/dev/sda2        1026048    62914559    30944256   8e  Linux LVM

Disk /dev/sdb: 42.9 GB, 42949672960 bytes, 83886080 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes


Disk /dev/mapper/rhel-swap: 3221 MB, 3221225472 bytes, 6291456 sectors
Units = sectors of 1 * 512 = 512 bytes
Sector size (logical/physical): 512 bytes / 512 bytes
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

Install the system storage manager using yum

yum install system-storage-manager, after the package installation

Run ssm list on root privilege

```
[root@localhost RHEL-7.1 Server.x86_64]# ssm list
------------------------------------------------------------
Device         Free      Used     Total  Pool  Mount point
------------------------------------------------------------
/dev/sda                          30.00 GB        PARTITIONED
/dev/sda1                        500.00 MB        /boot
/dev/sda2  40.00 MB  29.47 GB    29.51 GB  rhel
/dev/sdb                          40.00 GB
------------------------------------------------------------
------------------------------------------------------
Pool  Type  Devices      Free      Used     Total
------------------------------------------------------
rhel  lvm   1         40.00 MB  29.47 GB  29.51 GB
------------------------------------------------------
-------------------------------------------------------------------
Volume  Pool  Volume size  FS    FS size       Free  Type    Mount point
-------------------------------------------------------------------
/dev/rhel/swap
        rhel     3.00 GB                             linear
/dev/rhel/root
        rhel    26.47 GB  xfs   26.46 GB   23.56 GB  linear  /
/dev/sda1
                500.00 MB  xfs  496.67 MB  397.79 MB  part    /boot
```

To add the diks to pool run the below command

ssm add –p testfs /dev/sdb

```
[root@localhost RHEL-7.1 Server.x86_64]# ssm add -p testfs /dev/sdb
  Physical volume "/dev/sdb" successfully created
  Volume group "testfs" successfully created
[root@localhost RHEL-7.1 Server.x86_64]#
```

Newly add pool will show on ssm list command

```
[root@localhost RHEL-7.1 Server.x86_64]# ssm list
----------------------------------------------------------------
Device          Free      Used      Total   Pool      Mount point
----------------------------------------------------------------
/dev/sda                            30.00 GB          PARTITIONED
/dev/sda1                 500.00 MB                   /boot
/dev/sda2   40.00 MB  29.47 GB  29.51 GB   rhel
/dev/sdb    40.00 GB   0.00 KB  40.00 GB   testfs
----------------------------------------------------------------
-----------------------------------------------------------
Pool    Type  Devices     Free      Used     Total
-----------------------------------------------------------
rhel    lvm    1       40.00 MB  29.47 GB  29.51 GB
testfs  lvm    1       40.00 GB   0.00 KB  40.00 GB
-----------------------------------------------------------
-------------------------------------------------------------------------------
Volume           Pool  Volume size  FS     FS size      Free  Type   Mount point
-------------------------------------------------------------------------------
/dev/rhel/swap   rhel     3.00 GB                             linear
/dev/rhel/root   rhel    26.47 GB   xfs   26.46 GB  23.56 GB  linear  /
/dev/sda1                500.00 MB   xfs  496.67 MB  397.79 MB  part   /boot
```

Create a new directory to mount the new volume

#mkdir /test01

then run the below command to create   volume and mount on /test01

ssm create -s 10G -n test01 --fstype xfs -p testfs /dev/sdb /test01

```
[root@localhost /]# ssm create -s 10G -n test01 --fstype xfs -p testfs /dev/sdb /test01
  Logical volume "test01" created.
meta-data=/dev/testfs/test01    isize=256    agcount=4, agsize=655360 blks
         =                      sectsz=512   attr=2, projid32bit=1
         =                      crc=0        finobt=0
data     =                      bsize=4096   blocks=2621440, imaxpct=25
         =                      sunit=0      swidth=0 blks
naming   =version 2             bsize=4096   ascii-ci=0 ftype=0
log      =internal log          bsize=4096   blocks=2560, version=2
         =                      sectsz=512   sunit=0 blks, lazy-count=1
realtime =none                  extsz=4096   blocks=0, rtextents=0
```

Finally run ==ssm list== to see the newly create volume

```
[root@localhost /]# ssm list
--------------------------------------------------------------
Device          Free      Used      Total  Pool     Mount point
--------------------------------------------------------------
/dev/sda                            30.00 GB          PARTITIONED
/dev/sda1                           500.00 MB         /boot
/dev/sda2  40.00 MB  29.47 GB   29.51 GB  rhel
/dev/sdb   30.00 GB  10.00 GB   40.00 GB  testfs
--------------------------------------------------------------
--------------------------------------------------------
Pool    Type Devices      Free       Used      Total
--------------------------------------------------------
rhel    lvm  1         40.00 MB  29.47 GB  29.51 GB
testfs  lvm  1         30.00 GB  10.00 GB  40.00 GB
--------------------------------------------------------
--------------------------------------------------------------------------------------
Volume               Pool     Volume size  FS      FS size       Free  Type     Mount point
--------------------------------------------------------------------------------------
/dev/rhel/swap       rhel        3.00 GB                               linear
/dev/rhel/root       rhel       26.47 GB  xfs   26.46 GB  23.56 GB  linear   /
/dev/testfs/test01   testfs     10.00 GB  xfs    9.99 GB   9.99 GB  linear   /test01
/dev/sda1                       500.00 MB  xfs  496.67 MB  397.79 MB  part     /boot
--------------------------------------------------------------------------------------
```

To mount the volume permanently, add the entry on /etc/fstab