

ocfs2 自动化测试套件

ocfs2自动化测试套件，目前部署在CI服务器上。并由一些脚本触发执行。

<http://10.67.160.200:8080/job/00-Milestone/job/SLE12-SP4/job/OCFS/job/0-deploy/configure>

该套件都以一个文件夹的形式呈现。



All			
S	W	Name ↓	Last Success
		0-deploy	1 mo 1 day - #25
		1-setup	1 mo 1 day - #17
		12SP4-OCFS	1 mo 1 day - #20
		2-run	1 mo 1 day - #18
		MonitorBuildChange-ocfs2-sle12sp4	1 mo 1 day - #78

套件构成

- 1) 12SP4-OCFS2
- 2) MonitorBuildChange-ocfs2-sle12sp4
- 3) 0-deploy
- 4) 1-setup
- 5) 2-run

- 1, 2 两项是nick帮忙加入用来定时触发执行的。不用深究
3. 0-deploy 用来安装部署虚拟机
4. 1-setup 用来安装HA以及ocfs2 相关的包
5. 2-run 用来执行测试套件

如何配置

以0-deploy为例，进入上述链接，点击0-deploy，进入如下界面

Jenkins » 00-Milestone » SLE12-SP4 » OCFS » 0-deploy »

Up

Status

Changes

Workspace

Build Now

Delete Project

Configure

Move

Project 0-deploy

Full project name: 00-Milestone/SLE12-SP4/OCFS/0-deploy

Workspace

Recent Changes

Build History

find

x

#25

2018-11-9 上午1:03

#24

2018-11-3 上午1:03

RSS for all

RSS for failures

Upstream Projects

00-Milestone » SLE12-SP4 » OCFS » 12SP4-OCFS

Permalinks

Last build (#25), 1 mo 1 day ago

Last stable build (#25), 1 mo 1 day ago

Last successful build (#25), 1 mo 1 day ago

Last completed build (#25), 1 mo 1 day ago

点击Configure 进入配置界面

如何运行

运行一个任务

以0-deploy为例

Jenkins > 00-Milestone > SLE12-SP4 > OCFS > 0-deploy >

Up

Status

Changes

Workspace

Build Now

Delete Project

Configure

Move

Project 0-deploy

Full project name: 00-Milestone/SLE12-SP4/OCFS/0-deploy

Workspace

Recent Changes

Build History

trend

#25

2018-11-9 上午1:03

#24

2018-11-3 上午1:03

RSS for all

RSS for failures

Upstream Projects

[00-Milestone](#) » [SLE12-SP4](#) » [OCFS](#) » [12SP4-OCFS](#)

Permalinks

- [Last build \(#25\), 1 mo 1 day ago](#)
- [Last stable build \(#25\), 1 mo 1 day ago](#)
- [Last successful build \(#25\), 1 mo 1 day ago](#)
- [Last completed build \(#25\), 1 mo 1 day ago](#)

点击 Build Now（或者Build with Parameters），Jenkins会按照Configure中的配置情况执行任务

运行整个测试套件

为了方便，我们把整个套件拆成了三个任务，分别是0-deploy，1-setup 和 2-run
请针对每个任务执行上述运行操作，完成整个测试流程

套件使用说明

0-deploy

目的

1. 构建虚拟机
2. 配置共享磁盘或者iscsi等

配置

1. 进入0-deploy的配置界面
2. 修改环境变量，与shell语法类似

Properties Content

```
LIB_DIR=/tmp/jenkins-work/ha-share/deploy/scripts
WORK_DIR=/mnt/vm/larry/jenkins-work
CONFIG_CLUSTER_DIR=/tmp/cluster-configuration
CLUSTER_FILE=${WORK_DIR}/cluster_conf
YAML_FILE=${WORK_DIR}/vm_list.yaml
BUILD_LOG_DIR=${WORKSPACE}/${BUILD_NUMBER}

RAW_FILE=/mnt/vm/larry/ocfs2-test-disk.do.not.remove
AS_IN_GUEST=vdb
ISCSI_SERVER=10.67.162.97
ISCSI_TARGET=iqn.2016-04.world.srv:storage.target00
```

3. 选择哪个host用来执行该项目

☒ Restrict where this project can be run

Label Expression

HA-2|

Label is serviced by 1 node

4. 配置要执行的命令

Execute shell

Command

```
# Create the dirs
mkdir -p ${WORK_DIR}

# Create YAML_FILE
cat > ${YAML_FILE} << !EOF!

resources:
  sle_source: http://mirror.suse.asia/dist/install/SLP/SLE-12-SP4-Server-LATEST/x86_64/DVD1/
  ha_source: http://mirror.suse.asia/dist/install/SLP/SLE-12-SP4-HA-LATEST/x86_64/DVD1/

nodes:
  - name: lchen-sle12-sp4-node1
  - name: lchen-sle12-sp4-node2
  #- name: lchen-sle15-rc2-node2
  #- name: lchen-sle15-rc2-node3

repos:
  - repo: https://download.opensuse.org/repositories/network:/ha-clustering:/Factory/openSUSE_Tumbleweed/
  - repo: http://mirror.suse.asia/dist/install/SLP/SLE-15-Packages-RC2/x86_64/dvd1/Module-Legacy/

#devices:
#  disk_dir: /mnt/vm/larry
#  nic: virbr1
#  second_nic: br0
#  disk_size: 61440

devices:
  disk_dir: /mnt/vm/larry
  nic: br0
  disk_size: 61440
  sharing_backing_file: no

!EOF!
#iscsi:
#  target_ip:
#  shared_target_luns:
#  - shared_target_lun: iqn.2018-01.suse.com:larry-jenkins-test-sbd
#  shared_target_ip:
#sharing_backing_file: yes
```

如图，WORK_DIR在第三步中已经定义
然后向YML_FILE中写入相关的配置信息，其中包括
resources:
源名称及对应的源，用来装系统

nodes:
虚拟机的名字

repos:
一些其他的repos 用户自定义的，如HA的源

devices:

disk_dir	虚拟机镜像所在路径
nic	虚拟机用哪个网桥
disk_size	虚拟机镜像的大小
sharing_backing_file	保持不动吧，这个是nick给的用来加速的，咱们不在乎那点速度，老老实实按龟速装吧

Execute shell

Command

```
echo =====  
echo ${CLUSTER_CONF}  
echo "+++++"  
echo ${CONFIG_CLUSTER_DIR}  
echo ${WORK_DIR}  
echo build log dir = ${BUILD_LOG_DIR}  
echo =====  
  
cd ${LIB_DIR}  
  
#Remove the vm machine that already exists  
../../cleanVM/cleanVM.py -f ${YAML_FILE}  
sleep 3  
  
./installVM.py ${YAML_FILE}  
./getClusterConf.py -f ${CLUSTER_FILE} -y ${YAML_FILE} -s 150 -S libvirt -R  
./cpFilesToGuest.sh ${CLUSTER_FILE} ${CONFIG_CLUSTER_DIR}  
  
./ocfs2/attach-disk.sh local ${CLUSTER_FILE} ${RAW_FILE} ${AS_IN_GUEST}  
#./ocfs2/attach-disk.sh iscsi ${CLUSTER_FILE} ${ISCSI_SERVER} ${ISCSI_TARGET}
```

cleanVM.py	用来清除已经重名的虚拟机
installVM.py	安装虚拟机
getClusterConf.py	安装完虚拟机后，会把安装好的虚拟机的相关信息写入 CLUSTER_FILE里 其中包含了每个虚拟机的ip 注：虚拟机内的hostname和虚拟机名是一样的

attach-disk.sh	用来创建共享磁盘 如图所示，有两条语句，下面一条被注释了 第一条表示创建一个本地的raw文件，用来作为虚拟机之间的共享块设备 第二条表明通过iscsi协议连接远程的LUN，使得虚拟机之间有共享块设备
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1-setup

目的

完成相关的安装包任务

配置环境变量

Properties Content

```
LIB_DIR=/tmp/jenkins-work/ha-share/deploy/scripts/  
WORK_DIR=/mnt/vm/larry/jenkins-work  
CLUSTER_FILE=${WORK_DIR}/cluster_conf  
OCFS2_DIR=${LIB_DIR}/ocfs2/  
SCRIPTS_RUN_IN_GUEST=${OCFS2_DIR}/guest/  
OCFS2_TEST_DIR=/var/lib/ocfs2test/  
  
BUILD_LOG_DIR=${WORKSPACE}/${BUILD_NUMBER}
```

执行命令

Execute shell

```
Command # for ocfs2  
cd ${OCFS2_DIR}  
  
# install vanilla kernel  
# ./installKernel.sh --cluster-config=${CLUSTER_CONF}  
  
sleep 3  
  
# copy scripts to /var/lib/ocfs2test/ in guests  
./scpFiles2Guest.sh --cluster-config=${CLUSTER_FILE} ${SCRIPTS_RUN_IN_GUEST} ${OCFS2_TEST_DIR}  
  
# ssh passwordless among cluster nodes for ocfs2test user  
./sshTestUsr.sh --cluster-config=${CLUSTER_FILE}  
  
# setup env for ocfs2 test  
./runProg.sh --cluster-config=${CLUSTER_FILE} /var/lib/ocfs2test/prepTestEnv.sh
```

scpFiles2Guest.sh用来把host上的测试脚本拷贝到虚拟机里面，前面说过虚拟机的相关信息全部放在CLUSTER_FILE里面

后面两个是用来执行相关的安装任务的，包括安装ocfs2-test ocfs2-tools 和HA 相关的软件包

2-run

目的

这个任务是用来执行具体的测试套件的

配置测试用例参数

其中的配置非常详细，以SINGLE_CASES为例

String Parameter

Name	SINGLE_CASES
Default Value	create_and_open,directaio,fillverifyholes,renamewriterace,aiostress,filesizeimits,mr
Description	<pre>#create_and_open,directaio,fillverifyholes,renamewriterace,aiostress,filesizeimits,mr ne,xattr,reflink,mkfs,tunefs,backup_super [create_and_open] - file create and open test [directaio] - aio/dio test [fillverifyholes] - file hole write and verify test [renamewriterace] - file rename and extend write race test [aiostress] - aio stress test [filesizeimits] - file size limitation test [mmaptruncate] - mmap truncate race test [buildkernel] - kernel building test [splice] - ocfs2 splice feature test [sendfile] - sendfile() test [mmap] - mmap test [reserve_space] - unwritten extent test [inline] - inline data test [xattr] - xattr test [reflink] - reflink test [mkfs] - ocfs2 tools mkfs test [tunefs] - ocfs2 tools tunefs test [backup_super] - ocfs2 tools backup super block test</pre>

Default Value表明要跑的测试集合，以“,”分隔

配置环境变量

Properties File Path

`${WORK_DIR}/cluster_conf`

Properties Content

```
LIB_DIR=/tmp/jenkins-work/ha-share/deploy/scripts/  
CLUSTER_CONF=${WORK_DIR}/cluster_conf  
  
OCFS2_DIR=${LIB_DIR}/ocfs2/  
OCFS2_TEST_DIR=/var/lib/ocfs2test/  
TEST_CONFIG=${OCFS2_TEST_DIR}/test_config  
TEST_CONFIG_IN_HOST=${WORK_DIR}/test_config  
  
OCFS2_INSTALL_DIR=/usr/local/ocfs2-test/  
  
WORK_DIR=/tmp/jenkins-work/${JOB_NAME}/${BUILD_NUMBER}  
BUILD_LOG_DIR=${WORKSPACE}/${BUILD_NUMBER}
```

执行测试任务

Execute shell

```
Command # dump variables to TEST_CONFIG file  
mkdir -p ${WORK_DIR}  
echo ${TEST_CONFIG_IN_HOST}  
# get the host ip address  
HOST_IP=$(ip address | grep -A 2 "state UP" | grep -m 1 "10.67.[160|161]" | awk -F'/' '{print $3}')
```

```
cat > ${TEST_CONFIG_IN_HOST} << !EOF!  
BLOCK_SIZE=${BLOCK_SIZE}  
CLUSTER_SIZE=${CLUSTER_SIZE}  
TESTMODE=${TESTMODE}  
SINGLE_CASES=${SINGLE_CASES}  
MULTIPLE_CASES=${MULTIPLE_CASES}  
CLUSTER_STACK=${CLUSTER_STACK}  
CLUSTER_NAME=${CLUSTER_NAME}  
SHARED_DISK=${SHARED_DISK}  
MOUNT_POINT=${MOUNT_POINT}  
KERNEL_SOURCE=${KERNEL_SOURCE}  
HOST_IP=${HOST_IP}  
!EOF!  
  
# scp TEST_CONFIG to guest  
cd ${OCFS2_DIR}  
./scpFils2Guest.sh --cluster-config=${CLUSTER_CONF} ${TEST_CONFIG_IN_HOST} ${OCFS2_TEST_DIR}  
  
# scp kernel source to guest  
./scpFils2Guest.sh --cluster-config=${CLUSTER_CONF} ${KERNEL_SOURCE} ${OCFS2_INSTALL_DIR}/tmp/
```

Execute shell

```
Command # run ocfs2-test  
cd ${OCFS2_DIR}  
./runProg.sh --cluster-config=${CLUSTER_CONF} --test-config=${TEST_CONFIG} --this-node=${IP_NODE1} ${OCFS2_TEST_DIR}/runTest.sh  
  
# take care of test logs  
./downloadTestLogs.sh ${IP_NODE1} ${BUILD_LOG_DIR}  
./genTestReport.py ${BUILD_LOG_DIR}
```

See the list of available environment variables

Execute shell

```
Command # sort out the test result  
cd ${LIB_DIR}  
./runCases.py -f ${CLUSTER_CONF} -d ${BUILD_LOG_DIR}/test_reports -r "parseOCFS2Report.py"
```