

CV backup and restore using moshell

The document gives the procedure to backup and restore a CV using moshell, which can be used for cello based node, e.g. RNC, RBS and MGW. Although it is more visually to use EMAS^{[1][2]}, it is a alternate method to use moshell for CV backup and restore.

1. CV backup

Use command cvget

```
RNC13> cvget Fi_CXP9013831_R9TB_091020_1028
```

Download the following 1 CV's to /home/eweiwli/moshell_logfiles/logs_moshell/cv/RNC13/091020_184757?

```
=====
==
Fi_CXP9013831_R9TB_091020_1028      2009-10-20 10:28 CXP9013831_R9TB      CPP      Final CV autocreated at SU
=====
==
Are you Sure [y/n] ? y
```

Downloading CV 1 of 1: Fi_CXP9013831_R9TB_091020_1028

```
facc configurationversion=1 putToFtpServer Fi_CXP9013831_R9TB_091020_1028 /d/usr RNC13_Fi_CXP9013831_R9TB_091020_1028.zip 127.0.0.1 moshelluser $password
```

```
=====
=====
Proxy MO                               Action                Nr of Params
=====
=====
7054 ConfigurationVersion=1            putToFtpServer        6
>>> Return value = 104835539
=====
```

Total: 1 MOs attempted, 1 MOs actioned

Waiting 20 seconds before starting to poll...

ConfigurationVersion=1	ElapsedTime	currentMainActivity	currentDetailedActivity
ConfigurationVersion=1	0s	EXPORTING_BACKUP_CV	CREATING_BACKUP
ConfigurationVersion=1	10s	EXPORTING_BACKUP_CV	CREATING_BACKUP
ConfigurationVersion=1	20s	EXPORTING_BACKUP_CV	CREATING_BACKUP
ConfigurationVersion=1	30s	EXPORTING_BACKUP_CV	CREATING_BACKUP
ConfigurationVersion=1	40s	EXPORTING_BACKUP_CV	TRANSFERING_BACKUP_TO_REMOTE_SERVER
ConfigurationVersion=1	50s	EXPORTING_BACKUP_CV	TRANSFERING_BACKUP_TO_REMOTE_SERVER
ConfigurationVersion=1	60s (01m00s)	IDLE	IDLE

Waiting 20 seconds before checking result...

CV action result: EXECUTED

```
additionalInfo : CV_BACKUP_NAME
Get /d/usr/RNC13_Fi_CXP9013831_R9TB_091020_1028.zip
/home/eweiwli/moshell_logfiles/logs_moshell/cv/RNC13/091020_184757/RNC13_Fi_CXP9013831_R9TB_091020_1028.zip ... OK
Dele /d/usr/RNC13_Fi_CXP9013831_R9TB_091020_1028.zip ... OK
Successful storage of Fi_CXP9013831_R9TB_091020_1028 to
/home/eweiwli/moshell_logfiles/logs_moshell/cv/RNC13/091020_184757/RNC13_Fi_CXP9013831_R9TB_091020_1028.zip
```

2. Restore a CV
Put the CV to the node

```
RNC13> cvput /home/eweiwli/Fi_CXP9013831_R9TB_090831_1449.zip

Put /home/eweiwli/Fi_CXP9013831_R9TB_090831_1449.zip /d/usr/Fi_CXP9013831_R9TB_090831_1449.zip ... OK
facc configurationversion=1 getFromFtpServer /d/usr/Fi_CXP9013831_R9TB_090831_1449.zip 127.0.0.1 moshelluser $password
```

=====

Proxy	MO	Action	Nr of Params
=====	=====	=====	=====
=====	7054	ConfigurationVersion=1	getFromFtpServer
	>>>	Return value = 105907793	4

=====

Total: 1 MOs attempted, 1 MOs actioned

```
Waiting 20 seconds before starting to poll...
ConfigurationVersion=1 ElapsedTime    currentMainActivity    currentDetailedActivity
ConfigurationVersion=1 0s      IMPORTING_BACKUP_CV      UNPACKING_RETREIVED_BACKUP
ConfigurationVersion=1 10s     IMPORTING_BACKUP_CV      UNPACKING_RETREIVED_BACKUP
ConfigurationVersion=1 20s     IDLE                      IDLE
Waiting 20 seconds before checking result...
CV action result: EXECUTED
additionalInfo : t[0] =
Dele /d/usr/Fi_CXP9013831_R9TB_090831_1449.zip ... OK
The CV Fi_CXP9013831_R9TB_090831_1449 was successfully transferred.
```

Verify whether the CV can be restored on the node

```
RNC13> acc configuration verifyRestore

Call Action verifyrestore on following MOs ?
=====
7054 SwManagement=1,ConfigurationVersion=1
=====
Are you Sure [y/n] ? y

=====
=====
```

Proxy MO	Action	Nr of Params
=====		
7054 ConfigurationVersion=1	verifyRestore	1

Parameter 1 of 1, cvName (string): Fi_CXP9013831_R9TB_090831_1449
>>> Return value = 120953557

=====

Total: 1 MOs attempted, 1 MOs actioned

Polc can be used to check the process of verification.

RNC13> polc

Waiting 20 seconds before starting to poll...

ConfigurationVersion=1	ElapsedTime	currentMainActivity	currentDetailedActivity
ConfigurationVersion=1	0s	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_CHECKSUM_FOR_LOAD_MODULES
ConfigurationVersion=1	11s	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_CHECKSUM_FOR_LOAD_MODULES
ConfigurationVersion=1	22s	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_CHECKSUM_FOR_LOAD_MODULES
ConfigurationVersion=1	33s	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_CHECKSUM_FOR_LOAD_MODULES
ConfigurationVersion=1	43s	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_CHECKSUM_FOR_LOAD_MODULES
ConfigurationVersion=1	54s	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_HARDWARE_COMPATIBILITY
ConfigurationVersion=1	66s (01m06s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_HARDWARE_COMPATIBILITY
ConfigurationVersion=1	77s (01m17s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_HARDWARE_SOFTWARE_COMPATIBILITY
ConfigurationVersion=1	88s (01m28s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	99s (01m39s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	111s (01m51s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	122s (02m02s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	133s (02m13s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	144s (02m24s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	155s (02m35s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	166s (02m46s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	176s (02m56s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	187s (03m07s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	198s (03m18s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	209s (03m29s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	219s (03m39s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	230s (03m50s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	241s (04m01s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	252s (04m12s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	263s (04m23s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	273s (04m33s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	284s (04m44s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	295s (04m55s)	VERIFYING_DOWNLOADED_BACKUP_CV_BEFORE_RESTORE	VERIFYING_APPLICATION_CONFIGURATION_DATA
ConfigurationVersion=1	306s (05m06s)	IDLE	IDLE

Waiting 60 seconds before checking result...

CV action result: EXECUTED_WITH_WARNINGS

additionalInfo : UNSPECIFIED Application Configuration data in CV is not present in Node.. XML Element: Subrack. Attribute: smn. Value: 9

Check the result of verification

RNC13> get configurationVersion=1 actionresult

```
=====
=====
MO                               Attribute      Value
=====
=====
ConfigurationVersion=1          actionResult    Struct{6}
>>> 1.actionId = 154737150
>>> 2.time = Date: 2009-10-21, Time: 15:50:55.554
>>> 3.invokedAction = 5 (VERIFY_RESTORE)
>>> 4.mainResult = 1 (EXECUTED_WITH_WARNINGS)
>>> 5.configurationVersionName = Fi_CXP9013831_R9TB_090831_1449
>>> 6.pathToDetailedInformation = /c/systemfiles/cello/cma/cv/Fi_CXP9013831_R9TB_090831_1449/155054920.html
ConfigurationVersion=1          additionalActionResultData t[119] =
>>> Struct[0] has 2 members:
>>> 1.information = 26 (ACTION_RESTORE_IS_NOT_ALLOWED)
>>> 2.additionalInformation =
>>> Struct[1] has 2 members:
>>> 1.information = 27 (ACTION_FORCED_RESTORE_IS_ALLOWED)
>>> 2.additionalInformation =
>>> Struct[2] has 2 members:
>>> 1.information = 14 (NETWORK_CONFIGURATION_MISMATCH_FOR_IP_ATM)
>>> 2.additionalInformation = IP data in CV and Node is not matching.
    XML Element: IpAddress
    Attribute: ipAddress
    Value in CV: 10.11.34.9
    Value in Node: 159.107.215.20
>>> Struct[3] has 2 members:
>>> 1.information = 14 (NETWORK_CONFIGURATION_MISMATCH_FOR_IP_ATM)
>>> 2.additionalInformation = IP data in CV and Node is not matching.
    XML Element: IpAddress
    Attribute: subnetMask
    Value in CV: 255.255.255.192
    Value in Node: 255.255.255.0
>>> Struct[4] has 2 members:
>>> 1.information = 14 (NETWORK_CONFIGURATION_MISMATCH_FOR_IP_ATM)
>>> 2.additionalInformation = IP data in CV and Node is not matching.
    XML Element: DefaultGateway
    Attribute: nextHopIpAddress
    Value in CV: 10.11.34.1
    Value in Node: 159.107.215.1
>>> Struct[5] has 2 members:
>>> 1.information = 10 (HARDWARE_IS_INCOMPATIBLE)
>>> 2.additionalInformation = PlugInUnit (PIU) in Node does not exist in CV
    SMN: 1
    APN: 11
    Product number of PIU in Node: ROJ1192103/41
    Product revision of PIU in Node: *
```

Role of PIU in Node: BP
<cut for other hardwares>...

```
>>> Struct[112] has 2 members:
>>> 1.information = 15 (UNKNOWN_NODE_IDENTITY)
>>> 2.additionalInformation = Node ID data in CV and Node is not matching.
XML Element: NodeID
Attribute: fdn
Value in CV: SubNetwork=Telstra_R,SubNetwork=QLD_QTR1,MeContext=QLD_QTR1,ManagedElement=1
Value in Node: SubNetwork=ONRM_ROOT_MO_R,SubNetwork=RNC13,MeContext=RNC13,ManagedElement=1
>>> Struct[113] has 2 members:
>>> 1.information = 15 (UNKNOWN_NODE_IDENTITY)
>>> 2.additionalInformation = Node ID data in CV and Node is not matching.
XML Element: NodeID
Attribute: ipAddress
Value in CV: 10.11.34.9
Value in Node: 159.107.215.20
>>> Struct[114] has 2 members:
>>> 1.information = 15 (UNKNOWN_NODE_IDENTITY)
>>> 2.additionalInformation = Node ID data in CV is not present in Node.
XML Element: NodeID
Attribute: site
Value: QTR1
>>> Struct[115] has 2 members:
>>> 1.information = 16 (UNSPECIFIED)
>>> 2.additionalInformation = Application Configuration data in CV is not present in Node.
XML Element: Subrack
Attribute: smn
Value: 2
<cut for other subracks> ...
```

```
=====
=====
Total: 1 MOs
```

From the result information, forced restore is allowed for the CV.

Because the CV is got from another node, the IP address will be changed after restore. On site configuration is needed to change the IP back.

Restore the CV

RNC13> acc ConfigurationVersion forcedRestore

Call Action forcedrestore on following MOs ?

```
=====
7054 SwManagement=1,ConfigurationVersion=1
=====
```

Are you Sure [y/n] ? y

```
=====
=====
```

```
Proxy MO                               Action                               Nr of Params
=====
7054 ConfigurationVersion=1            forcedRestore                        2

Parameter 1 of 2, cvName (string): Fi_CXP9013831_R9TB_090831_1449

Parameter 2 of 2, autoconfigurationOn (enumRef-CVAutoConfigurationInformation):
Enter one of the following integers: 0:OFF, 1:ON, 2:AS_CONFIGURED: 1
>>> Return value = 110124651

=====
Total: 1 MOs attempted, 1 MOs actioned
```

If restore successfully, the node will restart with the restored CV.

```
RNC13> cvcu

=====
091020-22:01      CV Name                               Upgrade Package      Release
=====
Startable:        Fi_CXP9013831_R9TB_090831_1449        CXP9013831_R9TB      P7.1
Loaded:           Fi_CXP9013831_R9TB_090831_1449        CXP9013831_R9TB      P7.1
Executing:        Fi_CXP9013831_R9TB_090831_1449        CXP9013831_R9TB      P7.1
Last created:     RR_CXP9013831_R9TB_091020_1330         CXP9013831_R9TB      P7.1
-----
Current UpgradePkg: UpgradePackage=CXP9013831_R9TB      CXP9013831_R9TB      P7.1
AutoCreatedCV:     Enabled
Rollback status:    Rollback is on
Rollback init timer: 2880
Rollback init counter: 2
Rollback counter:   0
Rollback list:      s[17] = RR_CXP9013831_R9TB_091020_1330 RR_CXP9013831_R9TB_091020_1235 Fi_CXP9013831_R9TB_091020_1028
Rb_CXP9013831_R9TB_091020_0949 PGU_CXC1724152_P99ZZ90_090910_094153 Rb_CXP9012995_R6DB%5_091019_1309 CXP9012842_R3BC_10_before_57384
CXP9012123_R9AS%Z_addprog CXP9012123_R9AS%Z_090928_for_61316 Rb_CXP9012123_R10H%19_090925_1205 Fi_CXP9012123_R9AS%Z_090130_1050
Fi_CXP9012842_R3BC%10_090811_2007 Rb_CXP9013831_R9SB_090814_1401 CXP9012842_R3BB Rb_CXP9012842_R3BC%21_090728_1344
Rb_CXP9012842_R3BC_090202_1432 Fi_CXP9012842_R3BB_081208_1400
```

RR_ CV is the rollback CV before restore.

Confirm the restore

```
RNC13> acc configuration confirmRestore

Call Action confirmrestore on following MOs ?
=====
```

10602 SwManagement=1,ConfigurationVersion=1
=====

Are you Sure [y/n] ? y

=====

Proxy MO	Action	Nr of Params
=====		
10602 ConfigurationVersion=1	confirmRestore	0
>>> Return value = 140056542		

=====

Total: 1 MOs attempted, 1 MOs actioned

A RF_ CV will be created and set startable.

RNC13> cvcu

=====

091020-22:13	CV Name	Upgrade Package	Release
=====			
Startable:	RF_CXP9013831_R9TB_091020_1401	CXP9013831_R9TB	P7.1
Loaded:	Fi_CXP9013831_R9TB_090831_1449	CXP9013831_R9TB	P7.1
Executing:	RF_CXP9013831_R9TB_091020_1401	CXP9013831_R9TB	P7.1
Last created:	RF_CXP9013831_R9TB_091020_1401	CXP9013831_R9TB	P7.1

Current UpgradePkg: UpgradePackage=CXP9013831_R9TB CXP9013831_R9TB P7.1

AutoCreatedCV: Enabled

Rollback status: Rollback is on

Rollback init timer: 2880

Rollback init counter: 2

Rollback counter: 2

Rollback list: s[17] = RR_CXP9013831_R9TB_091020_1330 RR_CXP9013831_R9TB_091020_1235 Fi_CXP9013831_R9TB_091020_1028
Rb_CXP9013831_R9TB_091020_0949 PGU_CXC1724152_P99ZZ90_090910_094153 Rb_CXP9012995_R6DB%5_091019_1309 CXP9012842_R3BC_10_before_57384
CXP9012123_R9AS%Z_addprog CXP9012123_R9AS%Z_090928_for_61316 Rb_CXP9012123_R10H%19_090925_1205 Fi_CXP9012123_R9AS%Z_090130_1050
Fi_CXP9012842_R3BC%10_090811_2007 Rb_CXP9013831_R9SB_090814_1401 CXP9012842_R3BB Rb_CXP9012842_R3BC%21_090728_1344
Rb_CXP9012842_R3BC_090202_1432 Fi_CXP9012842_R3BB_081208_1400

=====

3. References

[1]117/1543-CRX 901 49/1, Saving a Configuration Version Backup
[2] 118/1543-CRX 901 49/1, Restoring a Configuration Version Backup

