Restoring the Root Linux File System

Symptom

I have an issue with CDP 3.0 when restoring the entire root file system of a Linux box or when restoring the root file system on a live system. I have to do so with NetworkManager, but during the restore process it may attempt to reload configuration files before they have been fully restored to the system. This includes network configuration which would interrupt the restore process and leave the system in a state that would require it to have its network brought up by hand.

Cause

Restoring the root file system on a live system can be problematic and should only be done by a trained system administrator that understands how their particular system works.

Usually it is not a good idea to restore the entire root filesystem (/). In Linux, the file system looks like the tree with only one root. Different devices and pseudo file systems are mounted under different directories under root. For example, if the second hard drive is mounted under /mnt directory and contains data, but during the backup the /mnt directory was empty, after restore it can be empty, meaning the loss of all the data.

Also restoring the root file system is known to cause problems with NetworkManager. NetworkManager is the service that allows you to configure network devices of different kinds (wired ethernet, WiFi, DSL modems, USB wireless modems, VPN connections) via the unified, user-friendly GUI interface. By default, NetworkManager provides the connection via the wired ethernet NIC. If the NetworkManager service is stopped or misconfigured, it can lead to loss of network connection. If it occurs during the restore process, the process cannot continue, leaving the system in a half-restored state. You should either stop the NetworkManager service and configure the network manually before starting the restore, or restore the file system partially by files, not the entire filesystem at once.

Resolution

The proper way to restore an entire system is to use the Bare-Metal Restore feature our software offers.

A work around for the NetworkManager issue above is to disable NetworkManager via

```
/etc/init.d/NetworkManager stop
```

before doing the file restore. This will ensure it does not attempt to prematurely reload configuration files during the restore operation.

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