The Design and Implementation of Bare Metal Cluster Deployment Using BitTorrent

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Abstract

BitTorrent is popular for file sharing. However, when it is used in system deployment, a major issue has to be overcome, i.e., for bare metal deployment normally there is not enough temporary storage space to store the whole system image before deploying. This is because the disk is the place where you want to deploy the system, and normally the RAM size is not big enough to store the whole system image. Clonezilla is a free software project mainly developed at NCHC, Taiwan, and the bittorent mechanism has been added for massive deployment by incorporating Ezio, and ocs-bttrack. The mechanism has been verified to be able to scale up for larger system deployment, and can be used in deploying system for computer classrooms or HPC cluster.
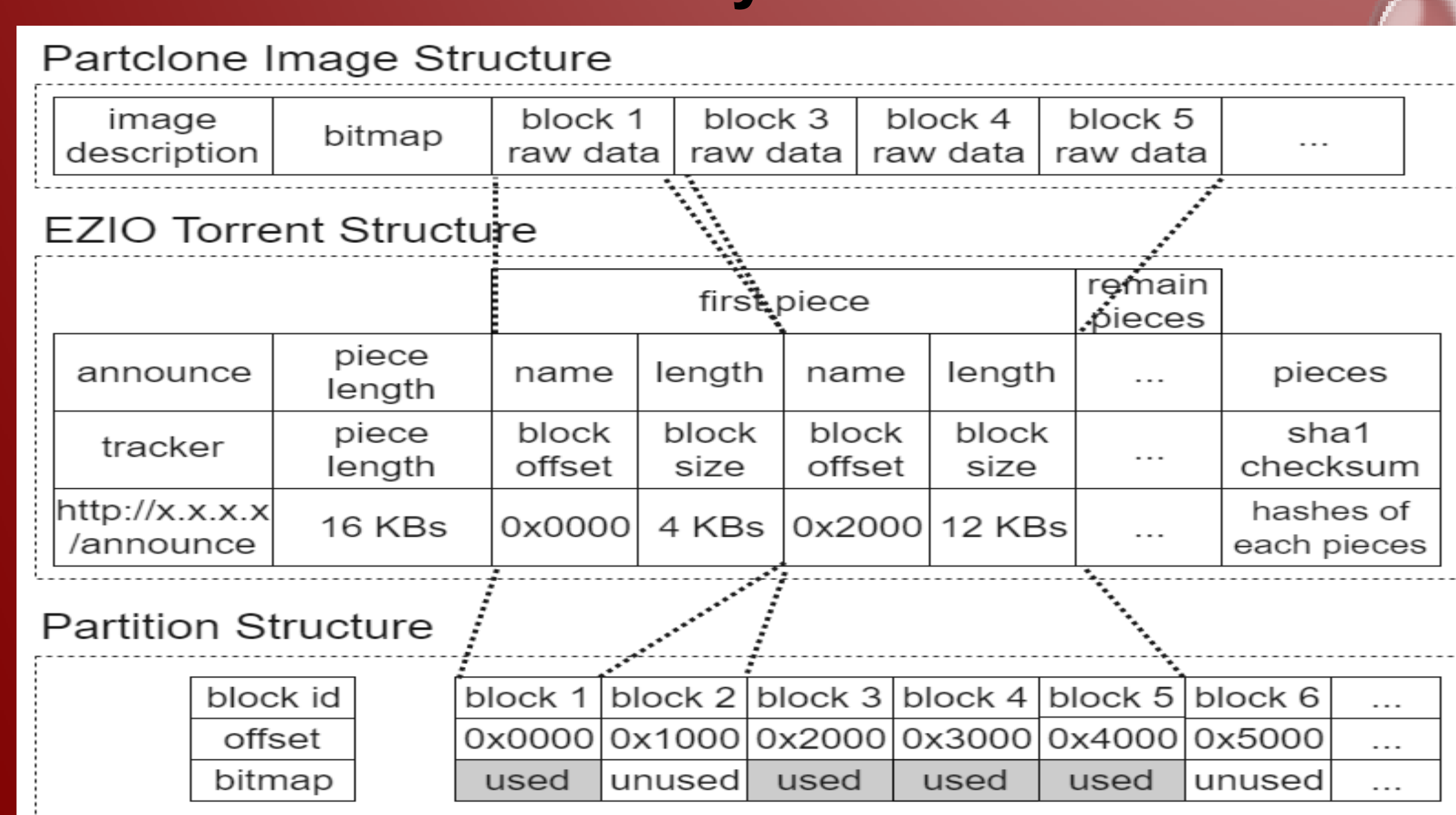
https://clonezilla.org
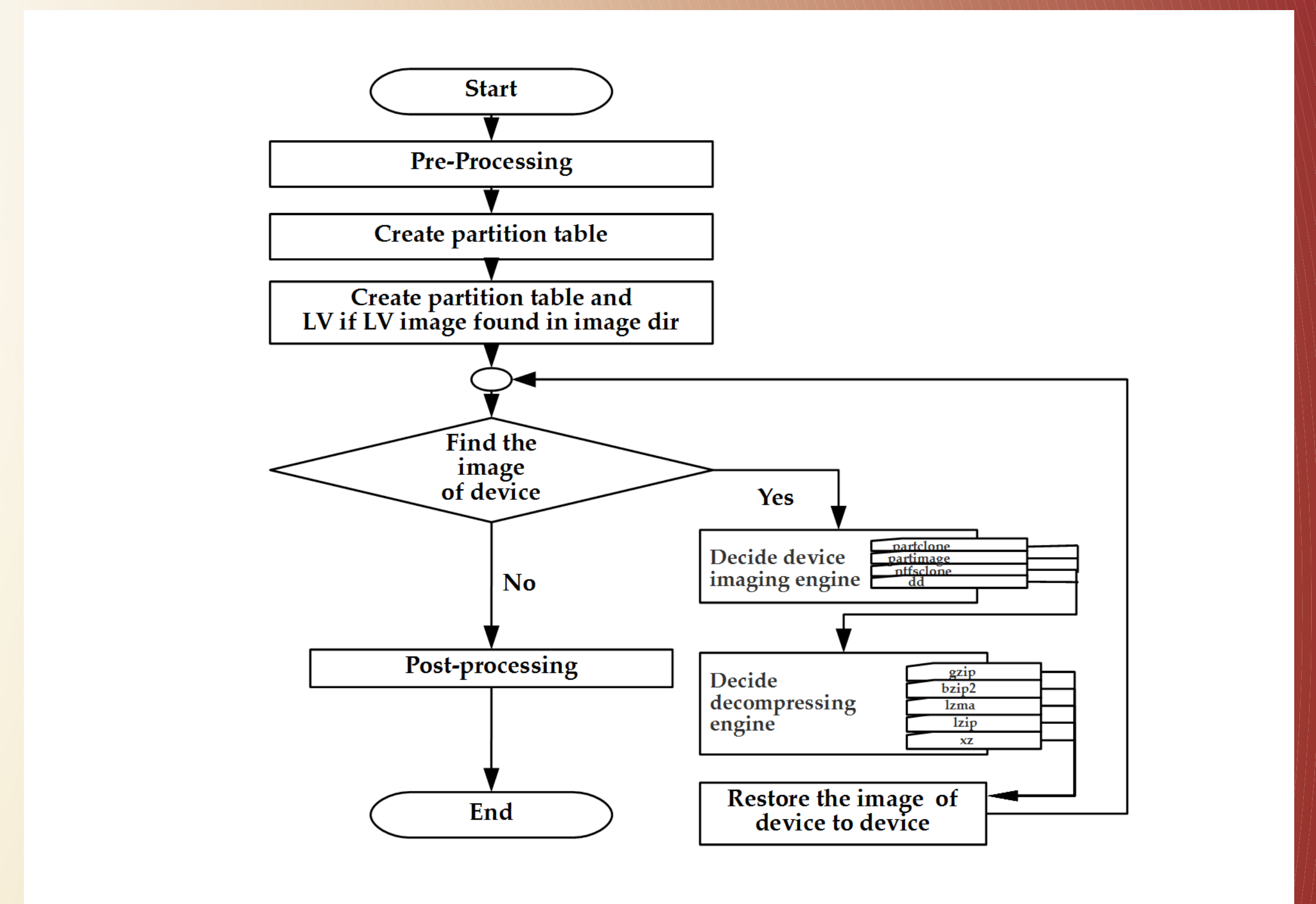
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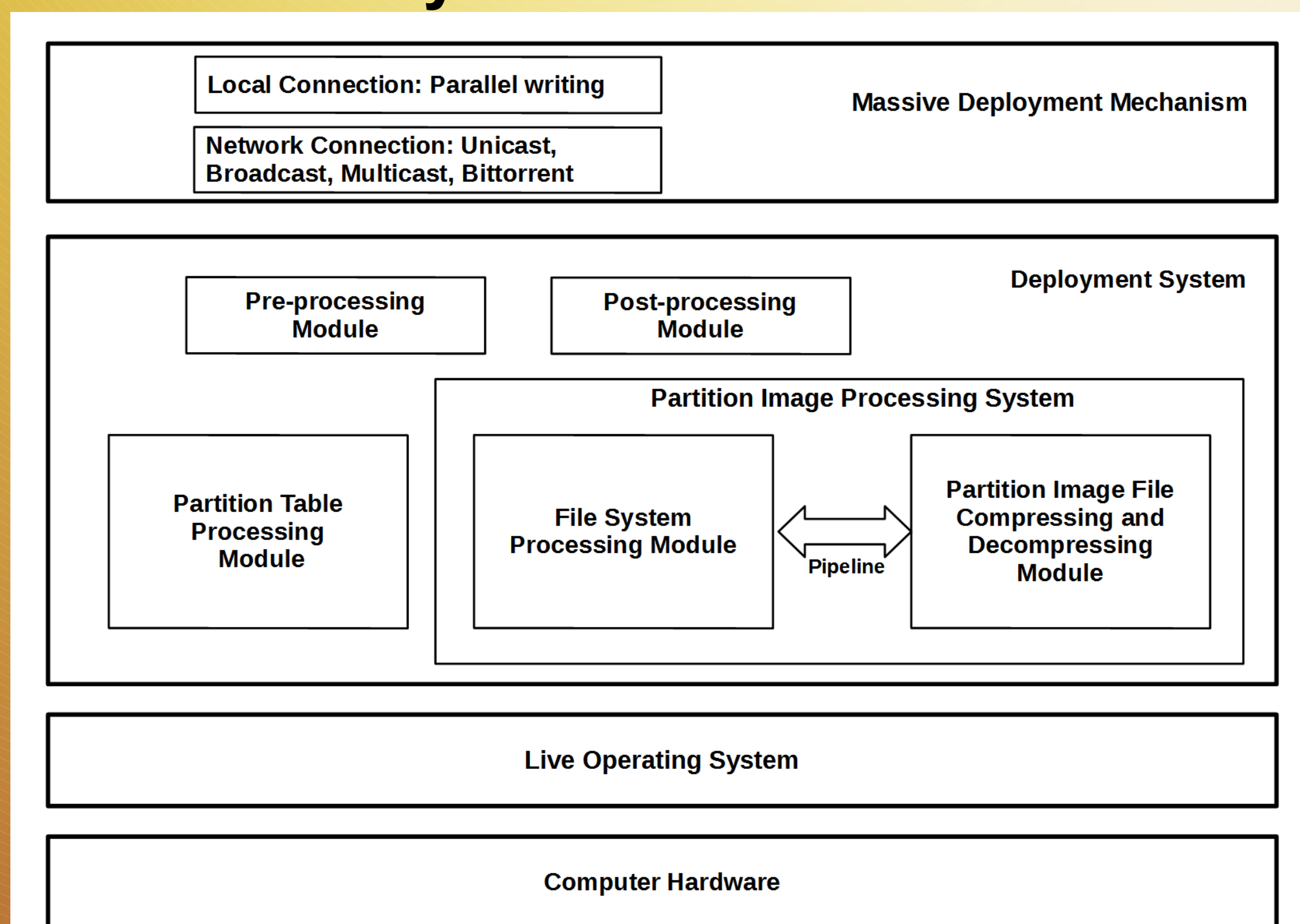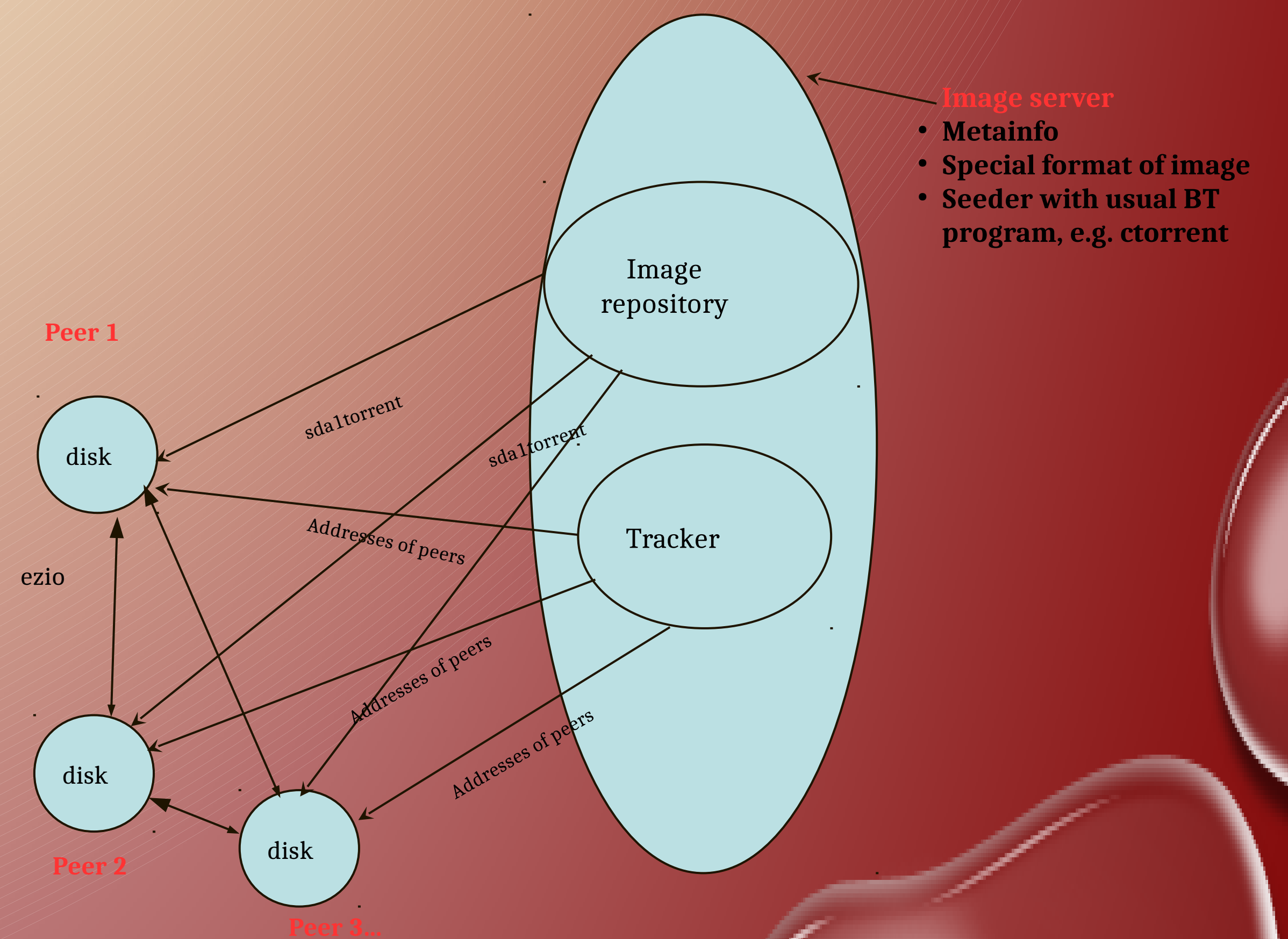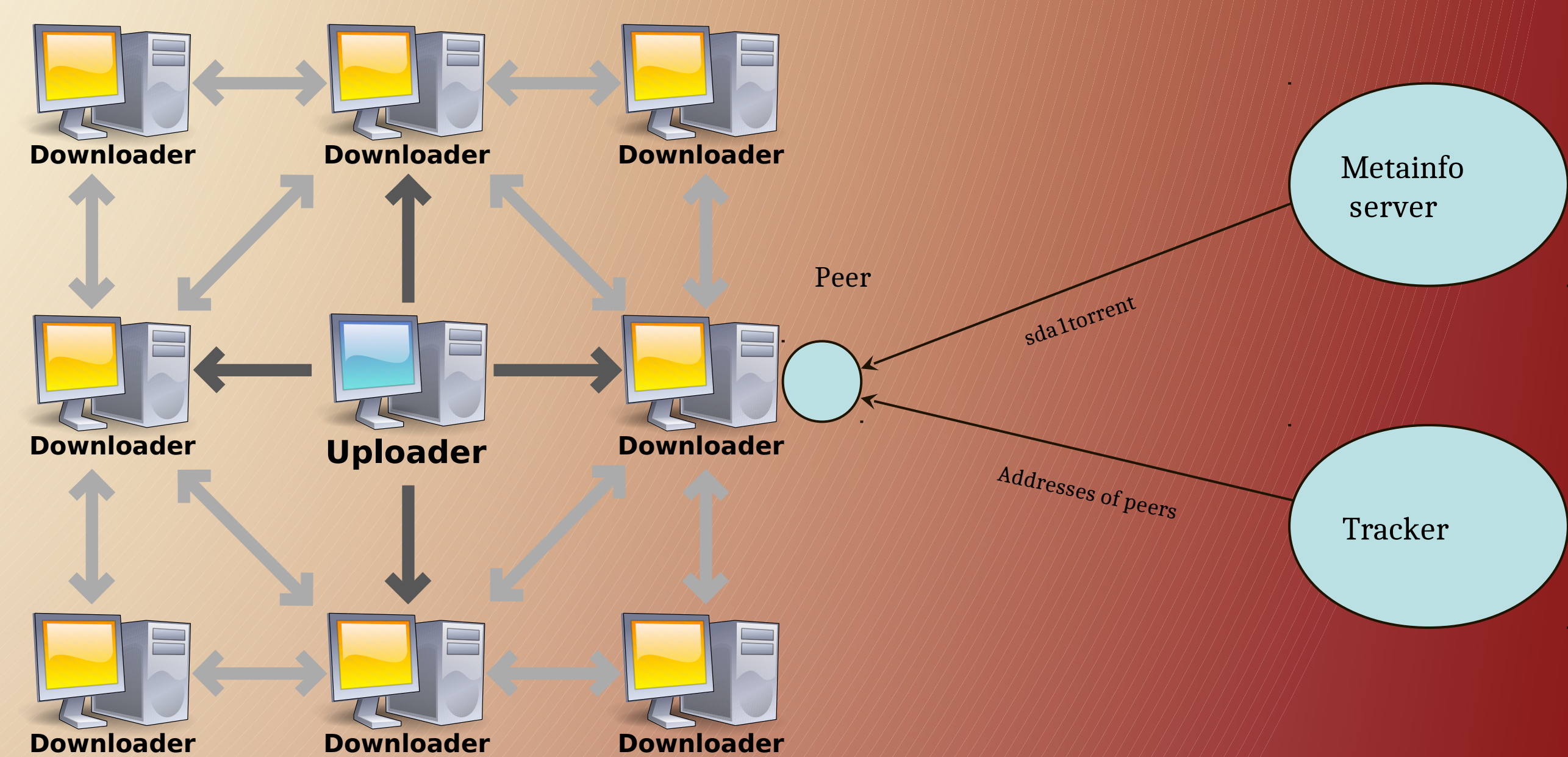

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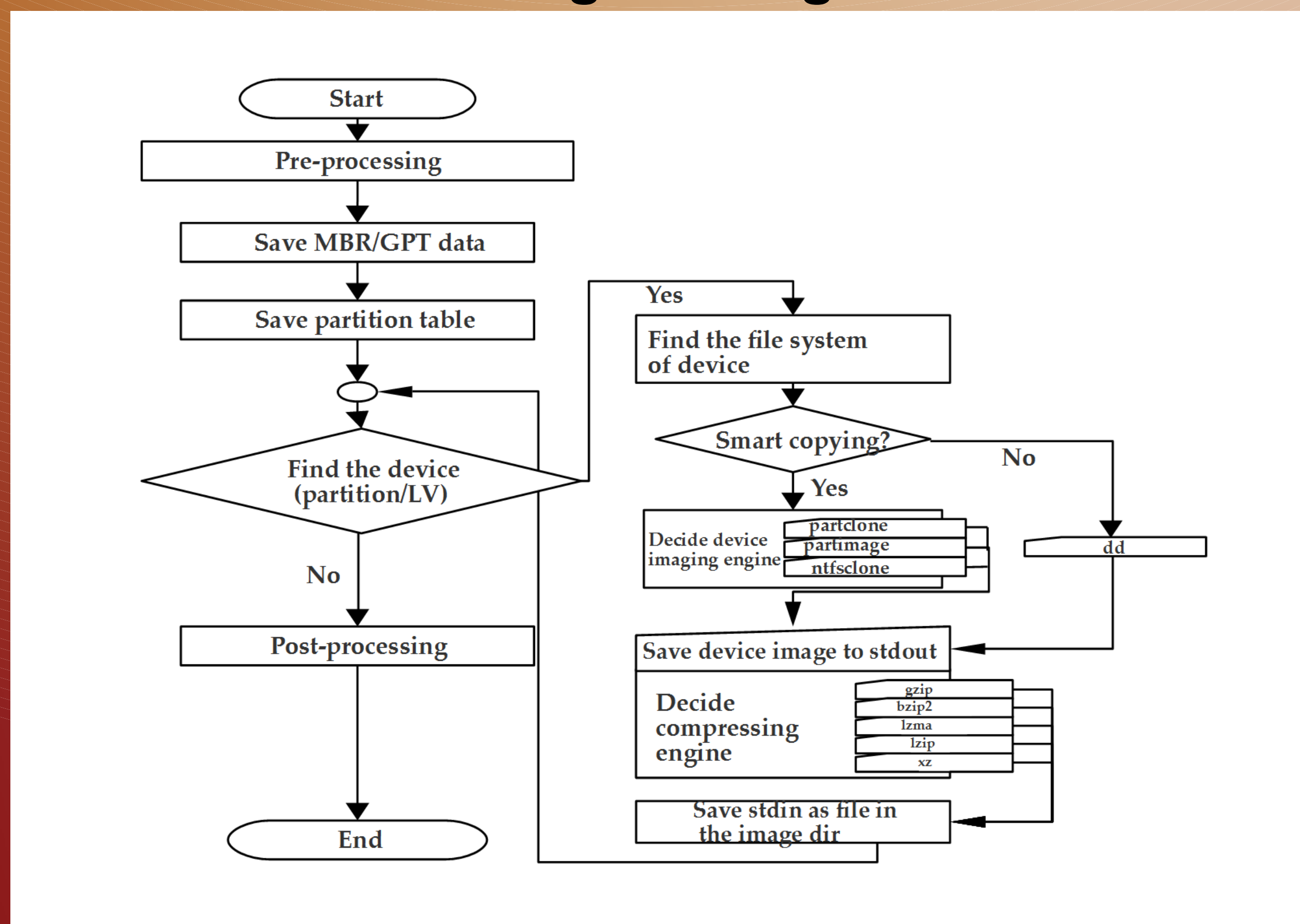
File system

Image deploying

BitTorrent in Clonezilla

System deployment time using bittorrent and multicast