Virtual machines (VMs) are often generic though they are meant to serve a specific purpose. The redundancy of generic VMs may incur costs in security (due to bigger attack surface and a larger trusted computing base) and performance (due to extra VM image size as well as overheads in CPU and memory). We are working on techniques to build minimal, application-specific and secure virtual machines from declarative descriptions. An application running in a VM has dependencies on other applications, libraries, kernel features and (virtual) hardware. We model such a dependency as a graph. The VM is treated as an optimized system built specifically to satisfy this dependency out of a set of interdependent components such as packages and kernels from OS distributions. Such distributions and installations based on them are inherently complex networks that could benefit from a formal, rigorous treatment in order to perform security and performance optimization.