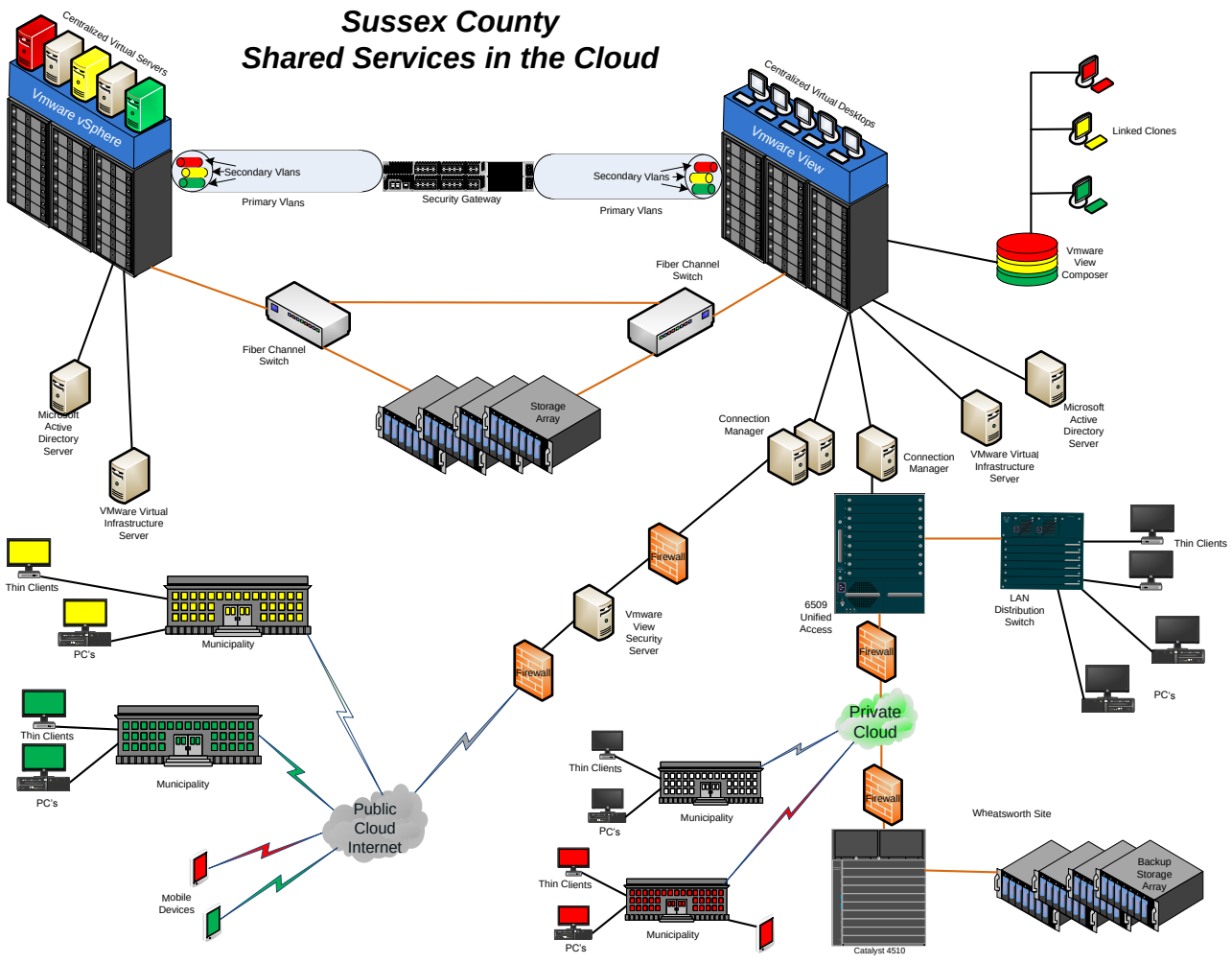

Server Virtualization:

Virtualization is the masking of server resources, including the number and identity of individual physical servers, processors, and operating systems, from a physical server, sometimes called the host. The server administrator uses a software application to divide one physical server into multiple emulated servers and isolating the resources into separated virtual environments. The virtual environments are sometimes called Virtual Machines (VM), but they are also known as guests. The guest system has no knowledge of the host's operating system because it is not aware that it's not running on real hardware.

Desktop Virtualization:

Desktop virtualization separates a personal computers desktop environment from a physical machine using the same concept as the server virtualization model of computing.

In host-based virtual environments each user connects to an individual virtual machine that is hosted in a data center. The user may connect to the same Virtual Machine every time, allowing personalization, this is known as a persistent desktop, or be given a random VM from a pool created from a master

template that is cloned for each user. When the user logs off the VM is then deleted and can be recreated when the user logs back in again.

Desktop virtualization requires that users view and interact with their desktops computers over a network by using a remote display protocol. Because processing takes place in a data center, desktop devices can be thin clients, zero clients, smartphones, and tablets.

Many enterprise-level implementations of this technology store the resulting virtualized desktop on a remote central server, instead of on the local storage of a remote client's device. Thus, when users work from their virtual desktop machine, all of the programs, applications, processes, and data used are kept on the server and run centrally. This allows users to run an operating system and execute applications from a smartphone or thin client which does not have the hardware resources necessary to run applications.

This business model can also be implemented with the server virtualization component, allowing organizations to take advantage of the flexibility of creating an entire organizations network consisting of servers and desktops on a single virtual platform without additional physical resources, and then distributing this virtual platform through the public internet or private network.

The County's development in Server and Desktop Virtualization has created a private Cloud Computing model that can distribute technology services to the supporting community. Server and Desktop virtualization is done by creating a network of available computing resources into a pool and then splitting up the available resources into independent networks that can be distributed to local governments. Each private network consisting of virtual servers and desktops can be assigned or reassigned to a particular government's requirement. Every subscriber can have shared access to all the resources on their virtual network from their internet connection or private connection. Each network is independently secured. This Virtual Server & Desktop infrastructure has replace the county's entire network with the Private Cloud business model.

This business model has as its prime objective the sharing of resources, improving technology services, and reducing Total Cost of Ownership. Subsequently, additional local governing agencies will be invited to join these shared services, participate in the business model and share in resources and costs.

There are applications and services that Sussex County does not provide but local governing municipalities do, such as construction permits. This service is offered through the municipalities and their building codes. A municipality that has a strong business process for their service now can offer its services outward to other municipalities. Each additional Municipality that participates in Joint Services will be charged accordingly base on the services chosen. This tiered allocation model is equitable and manageable through shared service level agreements. Ultimately having a vertical network infrastructure that supports a wider diameter of services, will develop a seamless data network between the county, the municipalities and the citizens of Sussex County.

The business model that Sussex County has created can be recognized as a template that should be replicated not only for other counties in the state of New Jersey but also used at a national level that other states can utilize.