MONTHLY REPORT

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Subject: Monthly Activity Report - February 2016

- On February 5th, our network had reached maximum capacity with respect to the number of available network addresses. This was due to the fact that our network was configured as a flat network with a total of 254 addresses available to all network-attached devices: servers, workstations, printers, etc. The increasing use of laptops and mobile devices by staff and and instructors resulted in all available addresses being used. Once that occurs, no other computer or device can connect to the network. To temporarily remedy the situation, I deleted network addresses for all unrecognized devices.

- On February 12th while the Library was closed, I successfully reconfigured the network so that we are now no longer using addresses which were never intended to be used on a private network. Doing so also allowed me to increase the number of available addresses from 253 to over 1,000. With the new configuration, that number is easily scalable. The network is now arranged into four subnets, each one accommodating up to 253 addresses: 1) all systems servers, workstations, printers and specialized systems; 2) staff workstations and service desk systems; 3) public access computers; and 4) wireless access devices. The use of such subnets allows us to easily apply different network rules appropriate to each of these areas.

- One major problem following the network reconfiguration was that our main fileserver was not communicating with the other three Novell servers, nor could it be accessed by staff. As a temporary workaround to the unavailability of our fileserver, all staff logins were configured to access our backup fileserver which was still accessible. By February 19th, access to the main fileserver was restored; however, there remains a minor anomaly in how each workstation's network client must be configured in order to access the server. Although the issue is relatively minor and currently is not impacting staff, I have no recourse to Novell technical support to resolve it.

- Another major problem associated with the network change is that our VPN (Virtual Private Network) gateway could no longer communicate with SirsiDynix after changing its private address to the new network address. Changing the address back to the old one restored the secure connection with SirsiDynix. A problem ticket has been opened with WLS, and in turn, with SirsiDynix. Their technician also finds it inexplicable why the private address change should cause a problem. Once SirsiDynix configures a test connection on their end, I will configure one of our other existing gateways to also act as a VPN gateway and try establishing a connection using that. In the meantime, Systems Staff had to manually configure the network properties on all staff workstations and systems that needed to communicate directly with SirsiDynix. In effect, all such systems were configured to use both the old and the new network addresses so that they could communicate with the rest of our internal network as well as with the VPN gateway.

- A new server has been received. It will be configured with Windows Server 2012 and Microsoft Active Directory, after which it will allow us to migrate from our Novell network.