SAIC Networked Printer Policy

Background
To ensure that SAIC campus printing facilities are maintained in a secure and standardized manner, networked printers are made available to the School community via IP printing only. Networked printers should not be shared by individual workstations, and printers’ AppleTalk and Bonjour (mDNS) should be disabled to make the printers non-discoverable to unauthorized users.

For the purposes of this policy, a networked printer is defined as any output device that is connected to and receives print jobs over the School’s ethernet network. Please note that this includes multi-function copiers that receive jobs over the network.

This policy was agreed upon and implemented for the following reasons:

1) Printers that are broadcast via AppleTalk are highly discouraged by IS Network Services, because the printers are visible everywhere on the WAN which is a shared and limited resource, and because AppleTalk requires substantial network overhead.
2) Printers that are non-discoverable save resources, as they are not easily exploited by end-users who were not intended to access them.
3) IP printers can be configured remotely on client workstations via ARD, which streamlines the setup and support process for technicians.
4) Discoverable printers are not easily managed on a large scale because they function through a variety of network protocols, and do not allow consistent prevention of unauthorized access.
5) Discoverable printers clutter up the Print Center on client workstations, making it confusing for users and technicians to identify desired target printers. For efficient workflow, users should have access only to printers that are relevant to their location.

Printer Management
CRIT provides Macintosh and Windows print driver installers for technicians and end-users. The installers are updated as new printers come online, and can be downloaded from Techmanagers servers via the UnipriNT/CURRENT folder.

In addition to installers, CRIT provides a command-line method for deploying printer setups on OS X computers in the form of a daily.local script. A thorough README accompanies the script, describing configuration and use (see below for some examples). Technicians managing desktop computer classrooms and labs will be responsible for configuring workstations in their areas to print using this command-line method, and the CRIT Print Administrator will provide assistance as needed.

CRIT will periodically perform a network printer audit to verify campus printer status. Printers that are configured to use AppleTalk, Bonjour (mDNS), IPP or IPX will be noted, and the technicians responsible for those printers will be contacted by email to reconfigure them. If you require fixed IP addresses to complete your configurations, or need other assistance, please send a request to the email problem log associated with your area.

Technicians managing printers on the Instructional network that do not comply with the School’s networked printer policy will be notified of incorrect settings via email. If after two notifications, the printers remain misconfigured, printing privileges will be revoked via physical removal of the printer.

Printer Purchase Requests
Purchase requests for printers intended for use on the instructional network will be reviewed by the CRIT Director of Digital Output Technologies, with assistance from the Print Administrator. If the requested printers are to be managed by UnipriNT and are found to be incompatible with that system, the purchase request will not be approved unless alternate print management arrangements are made. In some cases, a test model of the printer may be required to verify compatibility; if possible, the test unit should be provided by the vendor.
Additional Information

Printer Command-line Setup Examples
Using lpadmin in OS X, printers can be configured on clients per the following examples (please note that specific paths and driver names may vary):

```shell
## Mi413
/usr/sbin/lpadmin -p 'ATS_Faculty_HP1320' -v lpd://10.72.18.1 -P
/Library/Printers/PPDs/Contents/Resources/en.lproj/HP LaserJet\ 1320\ Series.gz -E -D 'ATS_Faculty_HP1320'
```

```
## Mi416
/usr/sbin/lpadmin -p 'Mi416_HP5000_PrintQ' -v lpd://10.72.18.2 -P
/Library/Printers/PPDs/Contents/Resources/en.lproj/HP LaserJet\ 5000\ Series.gz -E -D 'Mi416_HP5000_PrintQ'
```

```
## Mi425
/usr/sbin/lpadmin -p 'Mi425_HP4050_PrintQ' -v lpd://10.72.18.0 -P
/Library/Printers/PPDs/Contents/Resources/en.lproj/HP LaserJet\ 4050\ Series.gz -E -D 'Mi425_HP4050_PrintQ'
```

Similar commands should also work in Linux.

Printer Deployment Workflow
The workflow for deploying new instructional network printers will be as follows:

- Print Administrator notified of pending printer purchase via email from CRIT Technology Asset Coordinator sent to critprojects email alias
- Print driver CDs duplicated by Print Administrator and archived by Tech Asset Coordinator.
- UnipriNT compatibility status determined by Director of Digital Output Technologies
- Help Ticket for roll-out created, and fixed IP requested by Tech Asset Coordinator
- LAN name determined and applied to ePotato record by Print Administrator
- IP assigned to printer by Technician, assisted by Print Administrator if necessary
- Workstations configured to use new printer by Technician
- Settings applied by Print Administrator:
  - Turn off AppleTalk, IPP, Bonjour (mDNS), IPX
  - Turn on LPD/LPR
  - Set LAN name
  - Set printer asset number (if available)

In addition, the Print Administrator will be responsible for the following roll-out tasks:

Create print driver installer(s) and add entry to the master daily.local
Create UnipriNT queues on print spoolers
Assign UnipriNT server and paystation
Verify printer security settings
Update printer audit document with new printer data
Notify support staff that print drivers are available
Assist Technicians with printer roll-out and testing