Print Director Network Impact

This article explains how much network traffic Print Director adds, what travels between its parts, and what keeps working if a link breaks. For hardware, operating systems and the ports to open, see *Print Director Technical Requirements*.

Print data

Most network traffic from printing is the print data itself, and Print Director adds as little to it as possible: it adds no extra hops and does not make the data noticeably bigger.

- **With a print server:** the PDAgent on the print server holds each job in the server's queue, and sends it straight from the server to the printer the user releases it at. Users' computers need the PDAgent only for popups (account billing, Rule messages) or signing in.
- **Without a print server** (users print directly to the printers): the PDAgent is installed on each computer. The job waits on the user's computer, and the PDServer is told it is waiting, so the user can see it when they log in at a printer. When they release it, the job goes straight from their computer to the printer.

For help choosing between these, see *Choosing a deployment model: workstation PDAgent, print-server-only or Universal Print*.

The database

Print Director uses Microsoft SQL Server. It stores only details of what was printed, copied, scanned, faxed and phoned, such as document names, page counts and costs: never the documents themselves or images.

The PDServer and PDAgents keep the settings they need (users, printers, Rules) in a local cache (a small SQLite database), and refresh it from the database on a schedule, so they rarely need to ask the database anything. The PDAgent does not record transactions; the PDServer does.

Printers with the Print Director app

The Print Director app on a printer talks to the PDServer over HTTPS, and only when someone uses the printer: when they log in, release jobs, copy or scan. Nothing is polled in between, and what is sent is transaction information, not images.

PDServer and PDAgent

The PDServer and PDAgents are the only parts that talk to each other, over HTTPS. The PDAgent tells the PDServer when a job arrives, and the PDServer tells the PDAgent when the user releases it. These messages are small, so the effect on bandwidth is negligible. When the PDServer and PDAgent are on the same server, this does not touch the network at all.

User syncs

An LDAP Sync or Microsoft Entra ID Sync reads about 1 KB per user each time it runs. How much that adds up to depends on how many users it imports and how often it runs. Hourly is common; if bandwidth matters, run it daily or weekly instead.

Installing the PDAgent on many computers

The PDAgent installer is an msi file of about 10 MB. It can be installed by hand, or pushed out with Group Policy or Microsoft Intune, with the database connection settings built in so nothing has to be set up on each computer (see *Group Policy deployment of PDAgent*).

If a link breaks

- **The PDServer or a PDAgent loses the database:** it carries on working from its local cache. The PDServer stores new transactions locally and sends them to the database by itself once the link is back. Users do not notice.
- **A branch office loses the link to the central database:** if that office has its own PDServer, users there can still log in and release jobs at their local printers.
- **Resource Manager or PD Reports loses the database:** they cannot be used until the link is back.
- **A printer loses the PDServer:** users cannot log in at that printer, or release jobs to it, until the link is back.
- **A PDServer loses a PDAgent on another server:** users cannot release jobs held on that PDAgent's server until the link is back. This only matters where one PDServer serves PDAgents on several print servers.

User names without a domain

The PDAgent matches jobs to users by their Windows account name. On a domain these names are unique. Without a domain they may not be, so either give every user their own account name, or make users sign in to the PDAgent client (see *How to configure PDAgents for user login*).

Related articles

- *Print Director Technical Requirements*
- *Choosing a deployment model: workstation PDAgent, print-server-only or Universal Print*
- *Group Policy deployment of PDAgent*

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