ZENWORKS AND CONNECTION USAGE
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The following is a summary of the ZENworks client's usage of connections to NDS. It is based on the default settings of the client and that the workstation has been imported into NDS.

Step #:

1. PC boots up to a login prompt.
2. Workstation object creates 2 authenticated service connections (a.k.a. monitored connections) as follows:

    Connection 1: the workstation object connects to the Read/Write replica of the partition where the user exists. It will remain an unlicensed connection.

    Connection 2: the workstation object uses this connection to read and process policy packages that are associated to it directly or indirectly. Most of the time it will use an unlicensed connection.

    > Scenario's where it will turn into a licensed connection:
    > a. During initial authentication for about 30 seconds to read associated policy packages.
    > b. NAL refresh process runs (timed, manual, or startup)
    > c. NAL application "pre-installs" associated to a workstation object
    > d. Any need for file system access (ex. Printer or Inventory policies, Custom Action)
    > e. To access any NDS attribute stored in a streams file

3. User logs in.
4. User object creates 2 authenticated service connections as follows:

    Connection 3: the user object connects to the Read/Write replica of the partition where the user exists. It remains an unlicensed connection. It is used for auto-reconnect, advanced error-checking, and auditing functions, and to check for concurrent connection limitations as follows:

    > a. DS reads the *Login Maximum Simultaneous* attribute of the user object to see if it is populated.
    > b. If it is not, it will continue on to establish another connection. If it is, it then checks the user's current connection usage in two ways:
    >
    > > - DS checks the number of *Network Address* attributes of the user object.
    > > - DS checks the connection table to see how many authenticated connections exist.
    >
    > c. If the user has not used up all concurrent connections, login proceeds. If the user has, a message will appear stating they are logged into to many workstations.
    > ***Note:** Read the DS bug referenced at the end of this document.

    Connection 4: the user object is authenticated to the user's server for resources (mapped drives, captured printers, etc.) It is a licensed connection.

Summary: You will see a total of 4 connections for the user and workstation object. The user object will use 1 licensed and 1 unlicensed connection. The workstation object will use 1 unlicensed connection and 1 connection that switches between licensed and unlicensed.

Terms:
Licensed Connection: The user or workstation object is using a connection that uses a NetWare license.
Unlicensed Connection: The user or workstation object is using a connection that does NOT use a NetWare license.

Notes:
- You can view these connections at the server's Monitor Console screen underneath the Connection Information (v4.11) or Connections (v5.0) menu option.
- In the Monitor Console, an asterisk (*) marks a connection that is **not** using a license.

DS Bug:
There is a known bug where a user may still be unable to login on a second machine even though the user is logged in at one workstation only and the concurrent connection limit is set to 2.
Fix: DS v6.03 (v4.11) or SP2 (v5.0)
Workaround until you fix it: Use the formula (2n)-1 to set the concurrent connection of the user, where n is the number of concurrent connections you desire.
See Novell Knowledgebase TID # 2943257

References:
Novell Knowledgebase TID #'s: 2943964, 2937479, 2913388, 2916684, 2943257