



COLLEGE of AMERICAN
PATHOLOGISTS
Laboratory Quality Solutions

Direct Transmission of PT Results

User Guide, Part 1 of 3

Technical Requirements and Agent Installation



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INTRODUCTION

What is Direct Transmission?

Direct transmission is a proficiency testing (PT) results reporting solution that allows a laboratory to electronically transmit PT results directly to the College of American Pathologists (CAP). This delivery option provides laboratories with the ability to transmit quantitative PT results from their laboratory information system (LIS) to the PT Result Forms Data Entry interface in e-LAB Solutions Suite, providing faster and more accurate reporting.

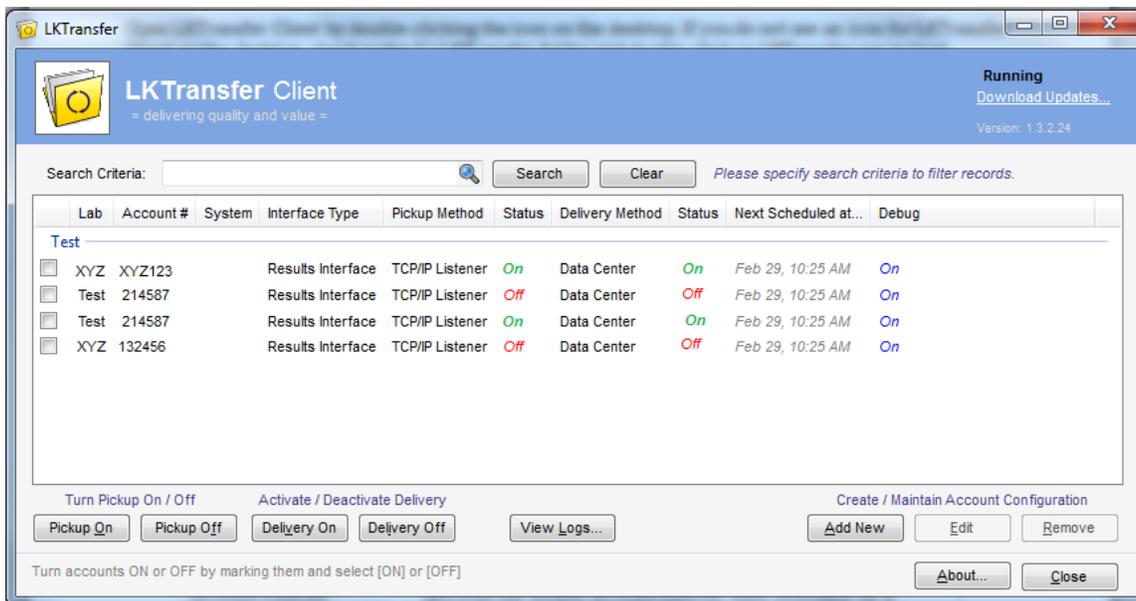
The CAP requires that a laboratory install the LKTransfer Client (“agent”) on its network to transmit PT results to the CAP.

What is the Agent?

The agent is a lightweight piece of software that the laboratory installs on a server on its network. The agent is used to transfer CAP PT data to a cloud-based middleware (“hub”), which then sends the data to the CAP.

How the Agent Works

The agent transfers the CAP PT data via a secure hypertext transfer protocol (HTTPS) web service to the CAP PT cloud-based hub for data transformation. The hub will transmit the CAP PT transformed data to the CAP’s e-LAB Solutions Suite Result Form Data Entry application portal via a secure HTTPS web service. PT data transmitted should not contain any patient data to avoid any Health Insurance Portability and Accountability Act (HIPPA) compliance violations.



AGENT INSTALLATION AND SETUP OVERVIEW

Setup Tasks

The CAP's web specialists provide support and training throughout the setup process. Work with your laboratory point of contact to coordinate support with the CAP's web specialists. At a high level, here are the tasks to complete the setup:

- 1 Allocate a server for the agent
- 2 Install the agent
- 3 Configure the agent
- 4 Create the pickup and archive folders on a shared network drive
- 5 Set up the pickup and archive folder security by creating a security group and adding the appropriate laboratory personnel to the group
- 6 Perform testing to ensure a file in the pickup folder can be picked up and delivered to the hub

Network Directory Setup and Security

A pickup and archive network directory must be setup for each seven-digit CAP number. Network security for each seven-digit CAP number must comply with security policy so laboratorians from one, seven-digit CAP number cannot view results of another seven-digit CAP number. Network directory configuration specifications are discussed below.

Only one instance of the agent is required to accommodate one or more laboratory locations. If you have multiple laboratory locations, you can configure them (ie, CAP numbers) on the one installed agent. The agent also allows you to customize the configuration regarding how, where, and when the files will be picked up/delivered.

LKTransferService

LKTransferService is a component of the agent that runs as a Microsoft Windows service application in the background. This allows the agent to continue running in the background. LKTransferService periodically checks if there are any new files available for secure transfers.

Server Minimum Requirements

Below are the minimum requirements for installing the agent:

- Operating System: Windows 7 SP1, Windows 8, Windows 10, or Windows Server 2008+
- Required: .NET Framework 4.0+
- Processor: 1 Ghz
- RAM: 1 GB
- Disk Space: 128 MB
- Agent requires ports 80 and 443 to be open for HTTP(S) traffic to lktransfer.com

The agent is a lightweight piece of software that uses minimum memory, processor, and hard-disk resources.

Security

LKTransfer is a HITRUST-certified application and is developed following Application Security Verification Standard (ASVS) using a strict role-based access control (RBAC) entitlements design pattern. The direct transmission CAP PT hub is hosted in a system and organization controls (SOC) 2 compliant datacenter operated by Rackspace Managed Hosting services. Rackspace publishes a Statement on Standards for Attestation Engagements (SSAE) 16 compliance report.

The agent communicates with LKTransfer dashboard via web services over HTTPS. All connectivity for transmitting data over web services uses an SSL tunnel with secure RSA 2048-bit certificate.

Communication Method

The agent supports the “Files in Folder” method to send and receive files, allowing a user to pick up and deliver files from or to a local folder. Network folders are also supported. The user must provide a valid folder name and file pattern.

SETTING UP THE FOLDERS

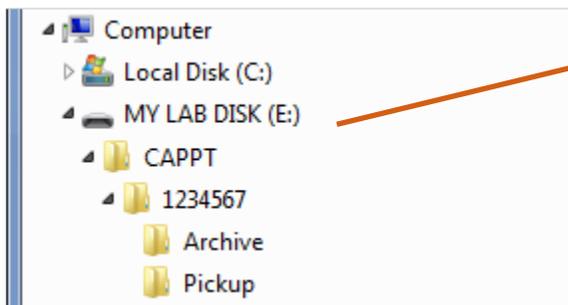
Creating the Shared Network Drive and Folder Paths

A specific set of folders is required to configure the agent. Create the appropriate folder paths on the same server designated for the agent:

1. On the chosen drive location, create a high-level directory named, “**CAPPT**”.
2. Within the CAPPT directory, create a subfolder named with the organization’s **CAP number**.*
3. Within the CAP number folder, create two subfolders named, “**Pickup**” and “**Archive**”.

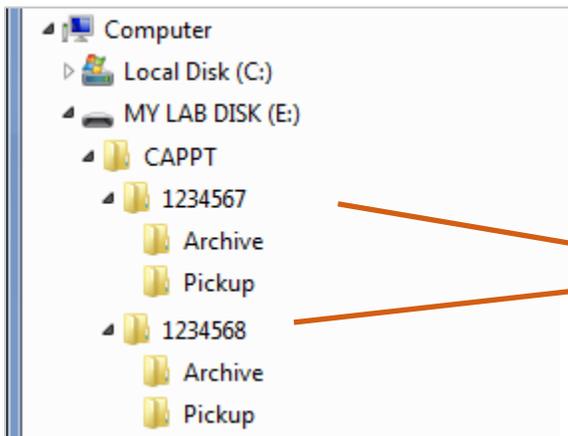
**Note:* If a laboratory organization has more than one, seven-digit CAP number (multi-facility laboratory), then each CAP number should have its own folder structure repeating the same format described above.

The example below shows the folder structure for a laboratory with CAP number 1234567:



E is the chosen drive location.
CAPPT is high-level directory.
1234567 is the CAP number.

The example below shows a multi-facility laboratory with two CAP numbers, 1234567 and 1234568:



This laboratory has two facilities and two CAP numbers: **1234567** and **1234568**. Each CAP number requires a separate folder structure, with Archive and Pickup subfolders within each CAP number directory.



Setting up the Folder Security

Laboratories must ensure that personnel do not share results outside their Clinical Laboratory Improvement Amendments (CLIA) identification number.

To ensure the report will run and to restrict those who can access folders with PT results, create a security group for each CAP number folder. Anyone who will be running the PT extract report for that CAP number will need access. The laboratory manager or director should be able to provide the appropriate list for user access.

Access Type: Read/Write



DOWNLOADING, INSTALLING, AND CONFIGURING THE AGENT

How to Download and Install the Agent

Step	Instructions
1	Within your designated server, navigate to the following link to download the client application. You will need to run the installation as an Administrator: https://www.lktransfer.com/LKTransferDashboard/Setup/LKTransferSetup.exe
2	The LK Transfer Setup screen displays. Click Install . 

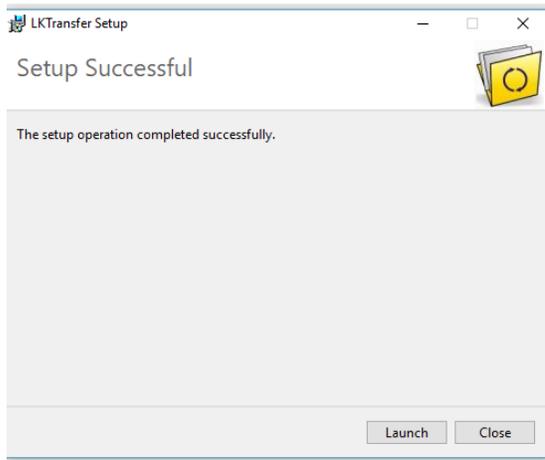


How to Configure the Agent

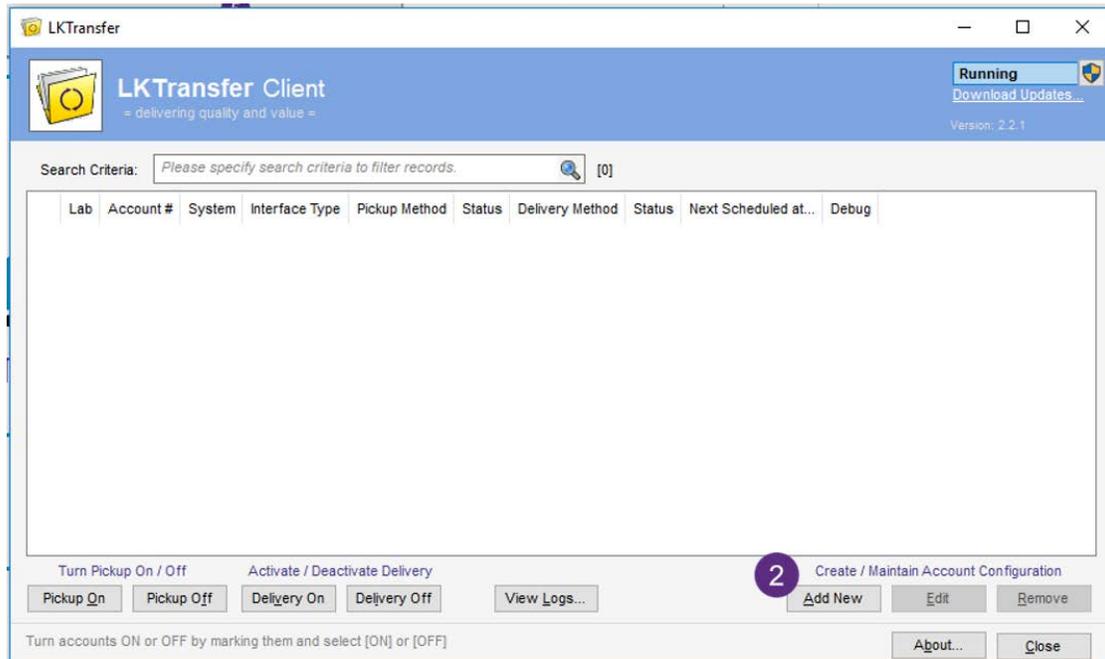
You are now ready to configure the agent. Follow the steps below. If you need assistance, contact the CAP Support Center.

Step Instructions

- 1 Launch the agent or double-click the LKTransfer icon to open it.



- 2 The LKTransfer Client screen displays. Click **Add New**.





Step Instructions

- 3** The Account Configuration screen displays. Configure your account by entering the appropriate information. Start by entering your **CAP number** in the Account # field.

The screenshot shows the 'Account Configuration' window with the following fields and callouts:

- 3** Account #: CAP #
- 4** Password: DTLIS01
- 5** Interface Type: Proficiency Testing Interface
- 6** Transfer Type: Pickup
- 7** Register button
- 8** Type: Files in Folder
- 9** Folder Name: \\Lab_Network_Path
- 10** File Search pattern: *.csv
- 11** Save button

Other fields include Lab Name: Institution / Organization Name, System Name: LIS Type, Practice Name: LIS Location ID, Unregister button, Debug Log checkbox, and an Archive files to section with a text box for specifying a folder path.

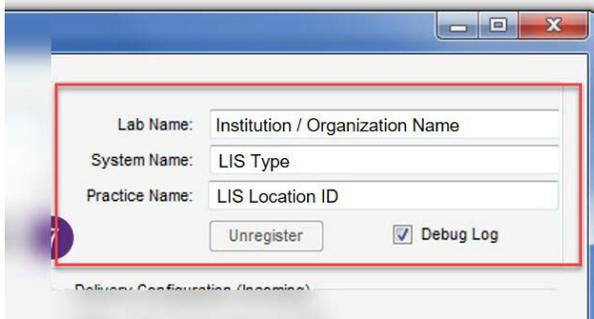
- 4** Enter **DTLIS01** in the Password field.
- 5** Select **Proficiency Testing Interface** from the Interface Type drop-down.
- 6** Select **Pickup** from the Transfer Type drop-down.



Step Instructions

7 Click **Register**.

Note: The Lab Name, System Name, and Practice Name fields will automatically be populated. If registration is successful, the Register button will be grayed out and the Unregister button will be available.



8 Select **Files in Folder** from the Type drop-down.

9 Enter your **laboratory's network path** in the Folder Name field.

Note: The network path is the location of where the agent can pick up the extract report along with the name of the file. See the Pre-installation and Permissions section for details.

10 Enter ***.csv** in the File Search pattern field.

This configuration directs the agent only to pick up files with this extension.

Note:

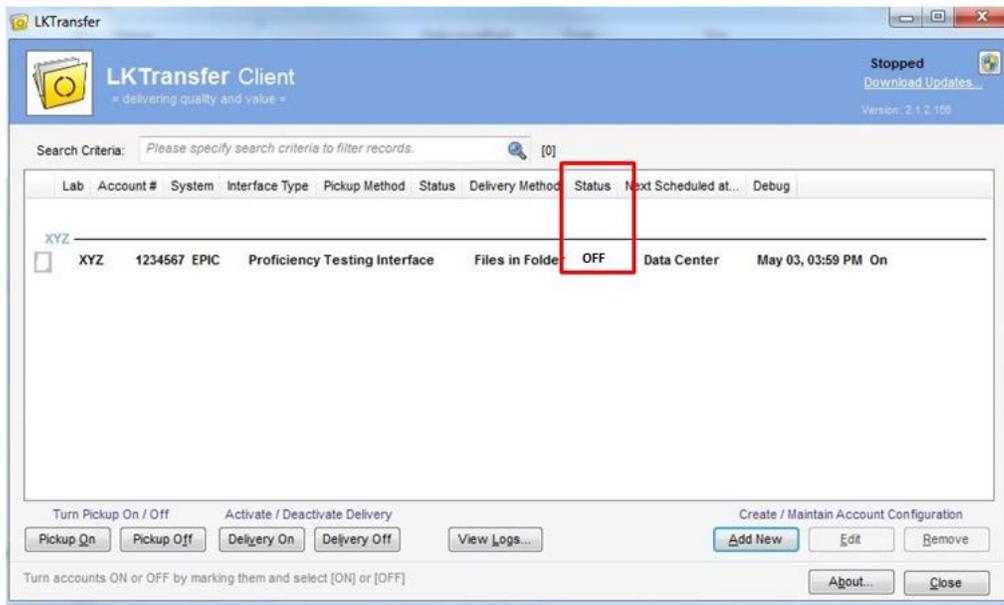
- The system does not require that you populate the three fields under Optional Configuration. **Archive files to** and **Archive method** fields allow the agent to automatically move the file from the pickup folder to a new location for archival purposes. A **Retention Threshold** entry allows you to set the amount of time the system should keep a file within an archive folder.
- Direct transmission will not use the **Advanced Options**.
- **Configure Schedule** allows you to change the pickup schedule (ie, days and time changes). The default is daily, every 15 minutes. Keeping the pickup schedule frequent ensures a file(s) reaches the hub quickly after the report has been generated.

11 Click **Save**.



Step Instructions

- 12** You have successfully created your configuration. The default status for the newly created configuration is “OFF.” You will have to turn on the new configuration, so it reads “On.” Going forward, you can see the status on the main agent screen.



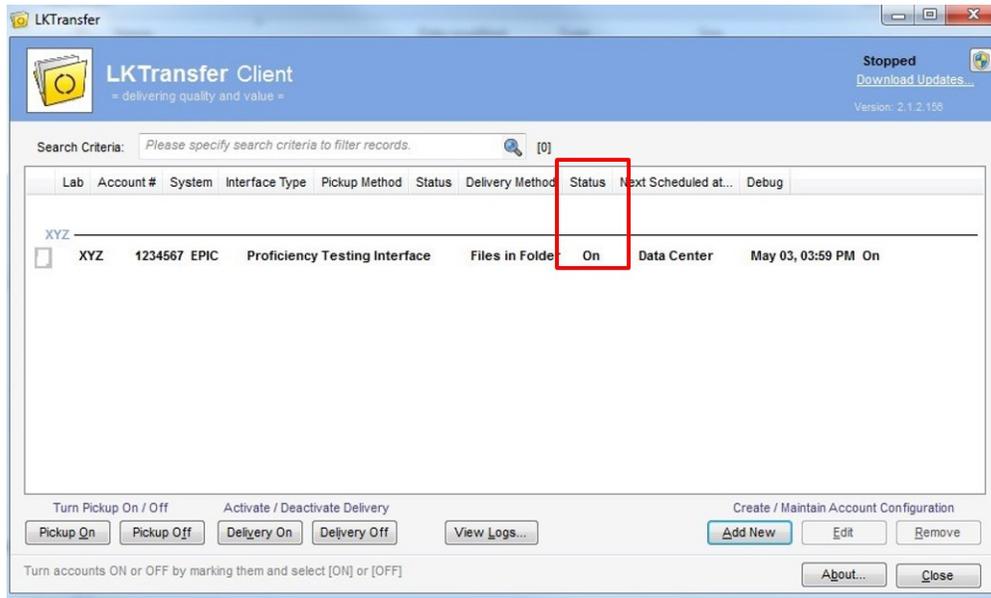
Click on the newly created configuration and then click **“Pickup On.”**





Step Instructions

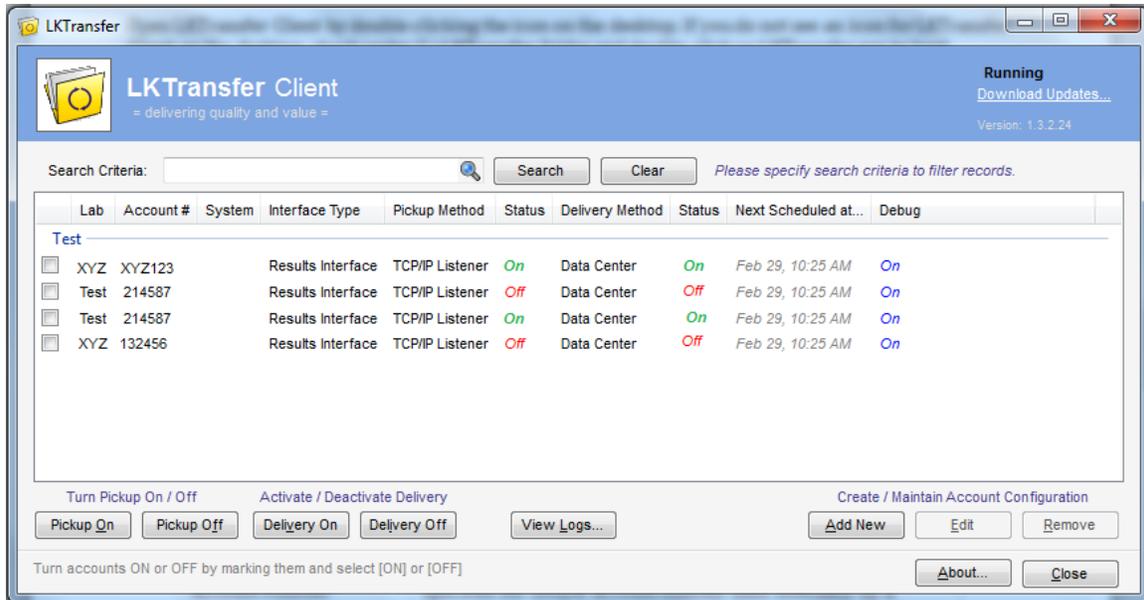
13 The configuration status is now "On." Click **Close**.



ADDITIONAL FEATURES

Activating and Deactivating Interfaces

While configuring interfaces, users have the option to activate/deactivate interfaces. The status column in the image below indicates the current status of an interface.



A common use of this functionality is to test the interface before going live. Depending on the situation, temporary configurations settings may be created and left deactivated. When performing testing, you may activate these temporary accounts.

To test the interface (ie, see if the agent picks up a file):

1. Get a test file
2. Make it .csv
3. Place it in the pickup folder

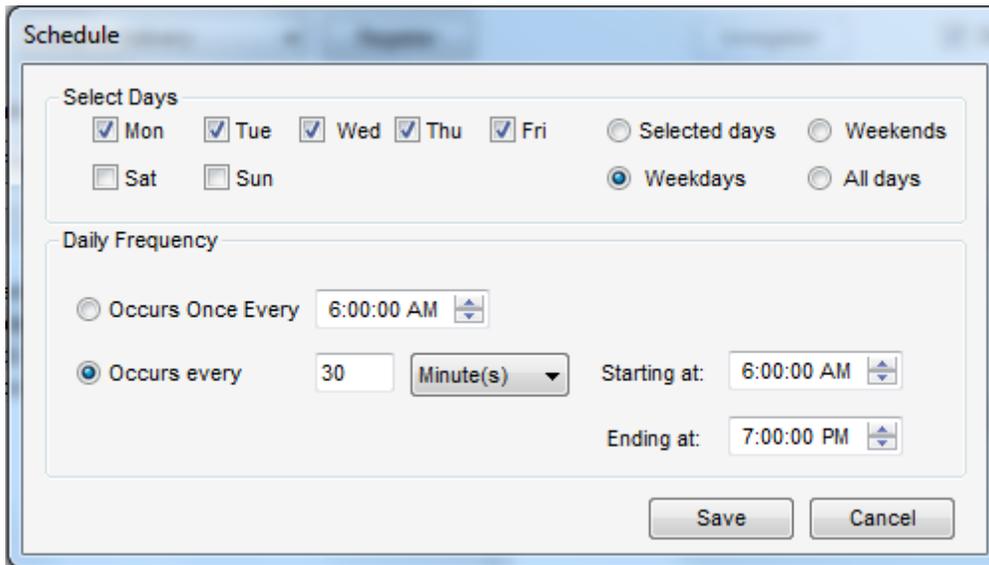
How to Activate/Deactivate Accounts

A user can check the accounts he or she wishes to select by clicking on the checkbox on the left side of the screen in the Accounts List. Once the user has selected all the desired accounts, four options are available depending on the user's requirements:

1. Activate pickup for selected accounts
2. Deactivate pickup for selected accounts
3. Activate delivery for selected accounts
4. Deactivate delivery for selected accounts

Agent – Schedule Feature

The Schedule feature controls data transfer details based on an individual laboratory's needs.



The screenshot shows a 'Schedule' dialog box with the following settings:

- Select Days:** Mon, Tue, Wed, Thu, Fri are checked. Sat and Sun are unchecked. Radio buttons for 'Selected days', 'Weekends', 'Weekdays', and 'All days' are present. 'Weekdays' is selected.
- Daily Frequency:** 'Occurs every' is selected with a value of 30 and a unit of 'Minute(s)'. 'Starting at' is 6:00:00 AM and 'Ending at' is 7:00:00 PM.
- Buttons:** 'Save' and 'Cancel' buttons are at the bottom right.

Days, times, and the frequency of data transfer are defined in the schedule. The settings in the scheduler are saved but can be modified as the requirements change.

Depending on a laboratory's requirements, a user may configure either a recurring frequency or a one-time frequency to check for new results. The above figure shows an interface that is scheduled to check for new results every hour between 6am and 7pm on weekdays. If the laboratory does not wish to send files on Wednesdays, a user may simply uncheck "Wed", which will tell the system not to check for new results on Wednesdays.

LKTransferService Status and Updates

The figure below shows the status of the LKTransferService application.

“Running” means the service is running. When it says “Stopped,” it means that the service is not running. If it does not say anything, the service is not installed.

Search Criteria: [3]

Lab	Account #	System	Interface Type	Pickup Method	Status	Delivery Method	Status	Next Schedu
Training Laboratory								
<input type="checkbox"/> LAB 01	118		Proficiency Testing Interface	Custom	ON	Data Center	ON	Feb 05, 12:1
Training Laboratory 2								
<input type="checkbox"/> LAB 02	24682468	Soft	Proficiency Testing Interface	Custom	Off	Data Center		Feb 05, 12:1
Training Laboratory 3								
<input type="checkbox"/> LAB 03	56789012	Soft	Proficiency Testing Interface	Custom	Off	Data Center		Feb 05, 12:1

Turn Pickup On / Off Activate / Deactivate Delivery Create / Maintain Account Configuration

Pickup On Pickup Off Delivery On Delivery Off View Logs... Add New Edit Remove

Turn accounts ON or OFF by marking them and select [ON] or [OFF]

About... Close

When a user clicks “Download Updates...” the application will check if there are any new updates available on the server. New updates will be downloaded on the workstation and installed. The user will have the choice to cancel the updates at any time during the download.



Stopping and Starting the LKTransferService

The status on the top-right side that indicates whether LKTransferService is “Running” is also a drop-down menu that allows the user to stop and start the service. When stopped, none of the accounts configured will transfer any data.

To control individual accounts, a user must “activate” and “deactivate” specific accounts instead of starting or stopping the LKTransferService.

