

Tell Me about Printers

This can be a very broad subject since there are so many different printers and applications for them, so I will keep this as brief as possible.

First of all, let us throw out a couple general categories.

- Network versus Serial
- Report versus Label

Network printers are going to connect directly with the network using a network cable which normally will connect from the back of the printer to a network port on the wall. The wall port will then connect to the LIS Server and that wall port will be uniquely identified in the system with a port number if it connects to a Terminal Server. If connecting to the server directly then it will connect the printer to the Server using the IP Address assigned to the printer and no port number is required and any wall port that connects to the server can be used.

Serial printers can connect directly to a workstation, which would be referred to as a slave printer. If connecting to the network the printer would need to be connected to another device which would convert the serial output of the printer to a TCP/IP data stream.

Report printers are just what it says, they are designed to print reports on paper as opposed to Label Printers which will print on paper that is on rolls and the labels can be peeled off and placed on specimen tubes or on report type paper which identify the two as being related.

The report printers can be of dot matrix type, which is like a typewriter in that each character is individually created by impacting an inked ribbon which is between the print head and the paper. The report printer can also be of a laser type, which will create the characters on a charged roller which then picks up the print material from a chamber and then deposits it on the paper which is then sent between heated rollers which fuse the ink powder to the paper. The third type of report printer is the ink jet type. In this type of printer, the ink is in a container as a liquid and the container has a matrix of holes that can individually be charged to spray the ink in a pattern which then forms the characters on the paper.

The ability of the various print methods to survive things such as moisture varies with the laser being the most durable and the ink jet and dot matrix being less durable although some ink jet inks are advertised as being quite resistant to water, although the ink will fade with time more than the laser or dot matrix printouts will.

Label Printers are specific for labels and not intended to print reports although some report type information can be printed on labels but has to be sent as part of a label, not a report. In fact, sending a report to a label printer can cause the label printer to stop working until that print job is removed from the printer.

The paper for Label Printers is generally in a roll configuration although for some small format printers it may be found in a 'fan fold' format. The method of creating the print is usually of one of two types. One type, the labels are made so that a heated print head can cause a change in the paper to create the black characters. The other type is similar except the labels are of plain paper and there is a separate roll of black film that is pressed to the paper and the print head heats the film to transfer the ink and create the characters on the label. This second type is not seen as frequently as the first.

Label printers, like report printers can be either serial, requiring a separate device in order to connect to the LIS or can be of network type and can be plugged straight into the network.