3.2 Print Use Cases

Each of the use cases in this section begin by initiating a connection to a Cloud Print Provider, selecting a Device, querying the Device status, capabilities, and status information, and displaying of any status information important to the User. Each use case generally ends with the User collecting the printout from the Device.

Common Preconditions: For all of the following use cases, the Device must be Visible to the Client in order to be selected, either directly or through an intermediate Service. A User selects a Printer using properties such as Service, capability, or description properties of the Printer Also, the document to be printed must be available to be sent to the Device and in a format suitable for the Device

3.2.1 Print a Document

User has a mobile device connected to the Wi-Fi network in her business. User has a document to print prior to a meeting and has it available from her mobile device. User initiates a print from the mobile device and chooses a Printer that has been associated with the mobile device previously. User submits the print job. Once the Printer determines that the settings are valid, the job is printed. User picks up her job at the Printer.

3.2.2 Print a Document by Reference

User has a mobile device connected to the Wi-Fi network in her business. User is viewing a document on a server and would like to print it. User initiates a print from the mobile device and chooses a Printer that has been associated with the mobile device previously. User submits the print job. Once the Printer determines that the settings are valid, the job is printed. User picks up her job at the Printer.

3.2.3 Print a Photo

User is viewing a photo and would like to print the photo on the largest borderless photographic media available on her Printer. User selects a printer with the necessary capabilities; user selects job ticket options such as print quality and media size and submits the photo for printing.

3.2.4 Print a Form

The treasurer of a small training company that is holding a meeting and seminar at a resort needs to print out 20 checks for training personnel. He uses an accounting program to enter the hours worked, bonuses, reimbursable expenses, and so forth and prints the checks on a printer provided by the resort using check blanks he brought to the meeting.

3.2.5 Special Formatting Printing

At a seminar located at a country resort, a factotum and general gofer has been asked to provide 80 sets of ten keywords/phrases, clearly printed on 2-inch by 1-inch paper slips for use in a get acquainted exercise. Costs are to be minimized. Gofer has a laptop with a word processer program. Resort has a Wi-

Fi network available to users and a networked MFD at the business center. Attendant at business center will charge for any printed sheets removed from premises

3.2.6 Prescription Printing

Doctor has a mobile device and wants to send a prescription to a particular drug store for a patient in off hours. The Doctor selects a target printer based on the Cloud Provider's information regarding the geographic location of the printer. The user configures the print job, and once the Cloud Provider determines that the settings are valid, the job is sent to the targeted device and printed. The third party receives the print job at the targeted printer.

3.2.7 Print and Select at Device

One or more Devices are integrated with a Service to provide "follow me" printing. The User may release a job at a given Device by providing a PIN and/or other unique identification/authorization information such as a username and password or ID card. After initiating a print and selecting a Service, the User specifies the processing intent and PIN for the Job and confirms the print action. The Client sends a print job request to the service with the Job Ticket and local document. The Service validates the Job Ticket and document data and then holds the document until released by the User at the Device.

3.2.8 Print to a Service

John is flying to New York for a presentation and doesn't want to carry the presentations. John arrives in New York and goes online from his mobile phone. He selects a local print provider after reviewing the provider web pages and submits his document for printing. He specifies that he needs 10 color copies, printed duplex and stapled on the left side. He also specifies the covers to be 80lb. stock, and the internal pages to be 24lb. stock. John arrives at the provider and picks up his presentations, paying with his corporate credit card.

3.2.9 Print with a Proof Copy

After initiating a print and selecting a Device, the User specifies the processing intent, requests a proof print, and confirms the print action. The Client sends a print job request to the Device with the Job Ticket and local document. The Device validates the Job Ticket and document data and then prints a proof copy of the document. The User collects the proof printout from the Device and verifies correct output. The User then initiates a full print of the document from the Client or Device to produce the final printout.

3.3.1 Exceptions

3.3.1.1 Select Printer Canceled

The User cancels selection of a Printer. This may also cancel the print request.

3.3.3.2 Printer No Longer Visible after Selection

After selecting a Visible Printer, the Client, Printer, or network suffers a failure preventing the Client from communicating with the Printer. Typically this will display an error message on the Client and cancel the print request.

3.3.3.3 Not Authorized

After confirming the print request, the Cloud Print Provider responds that the User is not authorized to print the document. The reason for the authorization failure may involve general access to the Printer or disallowed Job Ticket values, for example a User may not be allowed to print in color.

3.3.3.4 Not Authenticated

After confirming the print request or selecting the Printer, the User is asked to authenticate with the Cloud Print Provider in order to gain specific access.

3.3.3.5 Not Accepting Jobs

After confirming the print request, the Client discovers that the Cloud Print Provider is no longer accessing jobs, displays an error message, and cancels the print request.

3.3.3.6 Job Ticket or Document Format Not Supported

After confirming the print request, the Cloud Print Provider rejects the request because the job ticket or document format is not supported for the specific Device. The Client displays an error message and cancels the print request.

3.3.3.7 Job or Document Processing Failures

While processing a job, the Cloud Print Provider reports job or document processing issues to the Client, which displays an error message as needed and asks the User or Operator to confirm the disposition of the Job. Processing failures include out-of-memory, missing resource, and other conditions that prevent a particular Job or document from printing.

3.3.3.8 Printer Fault

While processing a Job, the Cloud Print Provider reports printer faults to the Client, which displays an error message as needed and asks the User or Operator to confirm the disposition of the Job. Printer faults include "out of paper" and other conditions that stop the processing of Jobs.

3.3.3.9 Printer Warning

While processing a Job, the Cloud Print Provider reports printer warnings to the Client, which displays a warning message as needed. Printer warnings include "low toner" and other advisory conditions that do not stop the processing of Jobs and do not require immediate attention.