

CWMP BOF Face-to-Face Minutes

August 6, 2012

Meeting was called to order at approximately 9:00am local August 6, 2012.

Attendees

Nancy Chen	Oki Data
Mathew Hansen	Toshiba (call-in)
Justin Hutchings	Microsoft
Ira McDonald	High North (call-in)
Joe Murdock	Sharp
Jerry Thrasher	Lexmark
Bill Wagner	TIC (KM consultant)
Rick Yardumian	Canon
Pete Zehler	Xerox

1. IP Policy and Minute Taker

- a. Policy accepted with Nancy taking the minutes.

2. Slides

<ftp://ftp.pwg.org/pub/pwg/BOFs/cwmp/cwmp-bof-august-2012.pdf>

The slide deck has been shortened by removing the slides in the “Supplement” section containing more detailed information about CWMP and previous Face-to-Face meeting presentations; participants are referred to the June 2012 Face-to-Face meeting slides for the removed “Supplement” section.

3. CWMP Overview

- CWMP means CPE (Customer Premises Equipment) WAN Management Protocol. It’s an Internet standard (TR-069) developed by BBF (Broadband Forum). It passes device/services’ object oriented data model in XML schema for remote management, via a SOAP based protocol optimized for friendly firewall traversal.
- CWMP data model for Imaging Devices can enable all brands to be remotely deployed, installed, managed by Auto-Configuration Server(ACS) remotely throughout their entire life cycle, like all other IT devices already are by telecom companies, managed service providers.
- CWMP BOF is providing guidance for developing the standard CWMP data model for imaging devices based on PWG Semantic Model.
- Once each PWG-based CWMP data model for Imaging Devices has been developed, it should be proposed as a BBF project for BBF standardization.

4. CWMP Architecture Overview

- The diagram shows the end-to-end CWMP architecture. On the right is the Internet gateway through which the CPE devices (storage servers, access points, smart phones, set-top boxes, laptops, PCs) are managed. The idea of the architecture is provide standard interfaces to backend configuration servers to policy servers, business support

servers, call center business applications (CRM,...,etc.). There are strong security with transaction confidentiality and data integrity always because CWMP connection is over TLS that data confidentiality and integrity must be used. Hence data is always encrypted over the connection in every operation.

5. Example CWMP Management Architecture for Printers/MFPs

- This architecture diagram came from Thinstream/Celstream shows more details with firewall, CWMP proxy that speaks CWMP for existing non-CWMP capable devices, and a local management console in customer's premise.

6. Example CWMP Solution Components

- This diagram shows a proxy based CWMP solution. The printers/MFPs on the left use existing interface (SNMP, Embedded Web Service, IPP) to communicate with the proxy. The printer/MFP on the right has embedded CWMP protocol stack communicating directly with DeviceMaestro Server implementing ACS.

7. Current Activities

- Developing a guidance whitepaper for development of CWMP data model based on PWG Semantic Model, and for implementation of Proxies for CWMP data model.
- Thinstream has developed a translation tool from PWG Semantic Model to the CWMP data model and improving the tool in parallel with the whitepaper development
- Thinstream has been incrementally prototyping the CWMP data model and CWMP embedded emulator for printer/MFP, and continuing improving the prototype as time allowed.

8. Future Activities

- To propose the basic CWMP model translated from PWG Semantic Model as a BBF project
 - Based on Thinstream Ranga's input – when the model has sufficient elements representing all essential components of a CWMP managed printer/MFD.
 - Only BBF principal members can propose a new standard development project.
 - Ranga and Ira have several conversations with BBF members in an effort to find a sponsor in BBF.
- To propose a liaison relationship with BBF to monitor the consistency of the full CWMP model with PWG Semantic Model.
 - Once a project is proposed in BBF, only BBF members can see the working drafts. There is an issue with diversion of the working draft from the PWG SM.

9. Discussion

- In a teleconference prior to this meeting, Ranga (Thinstream/Celstream) proposed that rather than developing a full CWMP print device/service model), follow the typical BBF approach to develop a SOHO model first (covering low-end consumer device) then a Enterprise model for device hosted in Enterprise environment. The current translated full model still need to be optimized, fine tuned, and fairly large - based on 25 IETF and PWG IPP specs influencing 6 MIB specs and PWG SM that require a lot of time for BBF members to review and adopt as a standard. SOHO vendors such Marvel for printer/MFP chip sets hypothetically could quickly drive a non-PWG SOHO data model for printers/MFPs in BBF.
- Suggest that PWG SOHO model be the list of the required properties in IPP/2.0 which are the required properties in IPP/1.1 with the exception of two, and not to include subsequent extensions.

- IPP Everywhere is based on IPP/2.0 with some extensions. Should we also include IPP Everywhere extensions to IPP/2.0 in the CWMP SOHO data model?
 - Good idea to Include IPP Everywhere properties (device UUID, geolocation), impression/scanner counters.
 - Roll-up counters (service level) only, nothing at subunit level.
 - How much subunit properties should be included in CWMP model?
 - The full list includes hundred's MIBs that include all optional properties - a fairly large number of objects and sub-objects (85K lines of XML) for non-printer/MFP experts in BBF to review them, and hence the issue with diversion from PWG SM. The time to get the data model adopted in BBF can become another year or two longer due to the sheer scope of IPP plus more than 20 specs.
 - How to get PWG's CWMP model to quickly be adopted by BBF?
 - Though only provide a SOHO model to BBF may mislead BBF members that other valuable properties are not needed, but they are important for the enterprise market.
 - Consider several separate questions:
 - How to get sufficient properties to get BBF started with adopting the standard.
 - Should we have a reduced model?
 - Consensus is YES.
 - What do the supporters in the BBF really want for the model? Unclear that IPP Everywhere is the one.
 - Recommend we should start with all the required properties in IPP/2.0 and IPP Everywhere – these are very small set: properties in printer MIB, PortMon MIB, service capabilities, subunit counter MIB, core service counter, IPP counter properties that were taken into DMTF model, and can reduce further those properties not widely supported by vendors.
 - What's preferred business model in the BBF SOHO market: customer owned vs. leased service model? What are the purpose of CWMP – remote management only (full or small set of management)? Hence what are preferred in the reduced model and what are the extension properties in IPP Everywhere are required? Managing large number of \$65 inkjet vs, \$300-400 MFPs are different in the set of properties required for management.
 - Perhaps IPP/2.0 + handful of IPP Everywhere required properties is a good start given the momentum from the standard and Cloud printing, though we need to have some interoperability credibility before proposing to BBF as a standard.
 - Probably besides PWG SM has now, need to add -
 - "quotas" and standard network configuration properties that all existing CWMP data models in BBF have such as major network protocols: LDAP, SNMP, TLS/SSL, ..., etc.
 - Is policy enforcement done in device or management application? Normally done in management side – e.g.

by disabling the print service or stop sending jobs to it when some counter has exceeded the limit. Devices may never even see a job afterwards.

- Currently Ranga and Ira are still working on finding proper contacts in BBF to propose a reduced PWG SM based CWMP model for SOHO/consumer market. No PWG member is a BBF member so far.
- We still need some BBF members such as Marvell, Broadcomm, Cisco, or Samsung who are interested in CWMP management for printer/MFPs to join us to develop the reduced data model before proposing to BBF.
- Could Celstream become a BBF member?

10. Next Steps

- Continue to investigate who are BBF members interested in printer/MFP CWMP data model standard for remote management in consumer market, and invite them to participate in our CWMP data model development based on PWG SM model.
- Continue update of the white paper.
- Continue to optimize and enhance the machine translation of PWG SM to CWMP data model as time allows.
- Continue incremental prototyping with demo of CWMP data model in a CWMP proxy for Printers w/ IPP support as time allows.
- Next Teleconference: August 27, Friday, 10am EDT (tentative).