

CS 524 Homework #6

Due: April 21, 2020

This homework is rather straightforward, as was the previous one. It is essentially a reading assignment.
(100 points total)

Reading assignment: Chapter 7 and Appendix (except for the Identity Management part)

1. **(10 points)** Explain the motivation for developing COPS. What were the goals of COPS framework?
2. **(10 points)** What feature is intrinsically new to COPS (compared to the SNMP)
3. **(30 points)** Motivation for developing NETCONF.

Read RFC 3535, and answer the following questions (you can cite the relevant text of RFC 3535 verbatim). Each correct answer is worth 10 points.

- a. Why the SNMP transactional model and the protocol constraints make it more complex to implement MIBs, as compared to the implementation of commands of a command-line interface interpreter?
 - b. What is the problem with the SNMP lack of support for easy retrieval and playback of Configurations?
 - c. List the operators' requirements for network management:
4. **(10 points)** Does NETCONF use REST API in its Messages layer?
 5. **(10 points)** Name a de-facto modeling language for NETCONF. What document is it specified in? What is the name of this language's XML-based representation?
 6. **(10 points)** List the steps involved in *onboarding* of an application.
 7. **(10 points)** List the actors involved in the service life cycle and its stages. What constitutes an *offering*?
 8. **(10 points)** What is the name of the protocol used for communications among the *OpenStack* daemons?