

Constrained MANagement (COMAN)

Management of Networks with Constrained Devices: Use Cases and Requirements

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COnstrained MANagement

- The aim of the COMAN activity is to . . .
 - provide a problem statement on the issue of the management of constrained devices and the networks with constrained devices.
 - provide use cases for different scenarios where constrained networks and devices are deployed and discuss related issues of network management.
 - discuss the constrainedness of a network and how it influences the management of devices.
 - raise the questions on and understand the requirements and the required solution space for the management of constrained devices and the networks with constrained devices.
 - avoid recommending any particular solutions.
 - highlight gaps and propose potential new work.
- The draft will be divided into three pieces after the IETF 85 meeting as the problem statement, use cases and requirements documents.
- The COMAN activity might further result into a BoF in the March 2013 meeting.

Changes since Vancouver

Things we did since last time:

- Added additional text for the use cases concerning deployment type, network topology in use, network size, network capabilities, radio technology, etc. and examples for device classes.
- Added additional text for Mobile Applications (by Cao Zhen) and for Building Automation (by Peter van der Stok).
- Added the new use cases 'Advanced Metering Infrastructure' (by Gilman Tolle) and 'MANET Concept of Operations in Military' (by James Nguyen).
- Added the section 'Managing the Constrainedness of a Device or Network' discussing the needs of very constrained devices.
- Added the new section on the detailed requirements on constrained management matching to management tasks like fault, monitoring, configuration management, Security and Access Control, Energy Management, etc.
- Added an appendix on the related development in other bodies in related research projects.

Next Steps

- The terminology section needs to be further extended.
- Class of networks considering the different type of radio and communication technologies in use, needs a discussion and revision.
- The section on the management of the constrainedness needs a discussion.
- The current document provides management requirements categorized by management areas and matches the requirements to the device classes. It needs to be decided, whether a list of management features and matching the level of features to device classes and use cases is necessary.
- Section 4 on the management requirements, as the core section in the document, needs further discussion and consolidation. The term AMI PAN needs clarification.
- A section highlighting the gaps in network management standards needs to be written.
- The appendices on the work of other SDOs and the related research projects could be extended. Contributions are welcome.

How to contribute?

- We need more experts of constrained networks as reviewers. PLEASE review.
- The discussion is ongoing on the non-wg maillist 'coman':

<https://www.ietf.org/mailman/listinfo/coman>

- Please subscribe to the coman maillist and contribute.
- Contact: mehmet.ersue@nsn.com

Many thanks to the Contributors and reviewers on Coman maillist

- Following persons made significant contributions to this document:
 - Ulrich Herberg (Fujitsu Laboratories of America) contributed the [Section 3.9](#) on Community Network Applications.
 - Peter van der Stok contributed to [Section 3.5](#) on Building Automation.
 - Zhen Cao contributed to [Section 3.10](#) on Mobile Applications.
 - Gilman Tolle contributed the [Section 3.11](#) on Automated Metering Infrastructure.
 - James Nguyen and Ulrich Herberg contributed the [Section 3.12](#) on MANET Concept of Operations (CONOPS) in Military.