

GREEN: New power
measurement and power
efficiency management tools
from the IETF

Introduction

Past RIPE meetings have discussed sustainability issues at length

This presentation builds on this context

New concrete IETF work in the "GREEN" WG is starting for better understanding and optimizing power usage across networked systems

The presentation outlines this new technology and calls for feedback and participation from the RIPE community.

Motivation

Detailed usage data is important to know where and when power is consumed

To make use of optimization possibilities (such as shutting some devices down), control mechanisms are needed

The GREEN WG is a proposed working group at the IETF.

It plans modernize the power measurement and management frameworks and bring them to the YANG/NETCONF era

Work Items for the GREEN WG

- Use cases for energy efficiency network management
- Terms and definitions related to energy efficient metrics
- YANG models to enable measuring and reporting of energy usage
 - At component, device, and network levels
- Models to allow energy usage optimization in network devices
 - Shut down devices or components, or employ power save modes
- A framework for energy efficiency monitoring, capability discovery and control