

ITRAINONLINE MMTK

Trainers' notes: Network Management and Monitoring

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Introduction	<p>The unit presents a goal-centric methodology to network management. It focuses first on defining clear goals for a service provider and later describes technical principles and possible tools to achieve the selected goals.</p> <p>The unit covers three concrete examples to illustrate the methodology.</p>
Timing/duration	Duration of unit is approx. 1.5h + 0.5h discussions
Content outline and main topics covered	<p>Three goals for a network manager</p> <ol style="list-style-type: none">1. Save costs by reducing the use of international bandwidth2. Provide better Quality of Service for VoIP3. Manage Service and Network Growth (T: 30 min) <p>Technical principles:</p> <ul style="list-style-type: none">SNMPTraffic AccountingTraffic ShapingBayesian FiltersViruses Fingerprints (T: 45 min) <p>Tools</p> <ul style="list-style-type: none">MRTGMonitoring Wireless parameters using MRTGSpam-AssassinClam Antivirus (Clam AV) T: 15 min) <p>Discussion of one goal (30 min)</p>
Target audience	Technical staff with practical knowledge in TCP/IP. Network managers. Decision makers in service providers.
Prerequisite skills/knowledge	Trainees should have theoretical and practical knowledge in network architecture and design.

Unit objectives/expected outcomes	<p>By the end of the unit participants should</p> <ul style="list-style-type: none"> • Understand the need of having clear goals before starting to monitor raw data. • Be able to identify the key elements that need to be considered when doing network monitoring. <p>The unit does not provide the training for each of the elements but tries to focus on the methodology aspects.</p>
Pre-workshop activities	<p>It is recommended that the trainers install Ntop http://www.ntop.org before coming to the workshop.</p>
Notes on using exercises	<p>No existing exercises. A possible discussion using the methodology outline in the unit.</p>
Resources included with unit	<ul style="list-style-type: none"> • Handout • Trainers' notes • Slides • List of additional resources • Materials evaluation form • Workshop evaluation form • Copyright statement
Additional trainer resources	<p>Tools websites and documentation.</p>
Equipment needed	<p>Two networked PCs running GNU/Linux and Windows. to visualize the tools through the session. An Orinoco Access Point to present one of the sections. LCD projector.</p>
Comments	<p>Trainers should have experience using some of the tools presented in the unit. Trainers should at least be familiar with SNMP and MRTG.</p>