

MPLS operation experiences and challenges

Satoru Matsushima
<satoru@ft.solteria.net>

What we achieved for

- Robust and Stable backbone
 - Some technique/gimmicks for stable routing
 - Traffic Engineering/Fast Reroute
- Business opportunity
 - Multi-service converged networking

MPLS operation experiences

- Provisioning
 - Lots of vrf/interface
 - Too many te-lsp and bypass-lsp

MPLS operation experiences

- Fault detection
 - Signaling protocol status
 - LSP ping
 - Routing convergence monitoring

MPLS operation experiences

- Network Observation
 - MPLS related MIB
 - LSR-MIB
 - LDP-MIB
 - TE-MIB
 - FRR-MIB

What MPLS is going to

- Full automation
 - Auto-mesh
 - Auto-optimization
- High coverage
 - Multi-area/domain
 - Multi-layer
- High density
 - All of multi-service customers on MPLS network

What our challenges are

- Mapping network resources/event to services/customers
 - What does this LSP serve?
 - Which services/customers affected on this fail?
- Observing misbehavior
 - When an unexpected event occur, how do we detect and fix it?
- Management plane robustness
 - When we lost mgmt connectivity, network is in the dark