ınfinera®

Coriant Transcend™ Chorus for Packet - Provisioning Packages

Reduce Operational Cost through Efficient Provisioning

Coriant Transcend™ Chorus is a powerful element, network, and service management system for Coriant and third-party network elements. Currently supported devices include Coriant® 8600 and 8800 Smart Routers, Coriant® 7090 CE Packet Transport Platform, Coriant® 6300 Series, and Coriant® 8100 Managed Access System. The solution offers a programmable and easily extendable network management platform specializing in advanced end-to-end service management, monitoring, and troubleshooting as well as other network-level automation tools. The Transcend Chorus solution has a powerful normalized network model and southbound integration layer providing smooth and fast integration of new devices.

OPTIMIZE PROVISIONING WITH POWERFUL TOOLS THAT INCREASE EFFICIENCY

Provisioning packages provide tools for easy and efficient creation and management of network services, including optical and TDM-based circuits, IP VPNs, VPLS VPNs, pseudowires for ATM, TDM, Ethernet, Frame Relay and HDLC traffic, as well as VLAN VPNs for Ethernet-based services.

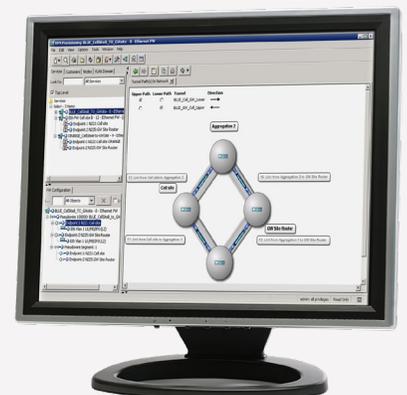## STREAMLINE PROVISIONING WITH EASY-TO-USE GUI AND TEMPLATES

The easy-to-use Graphical User Interface (GUI) and provisioning templates make provisioning fast, simple and efficient. The online database keeps the network documented so that all users have a constantly up-to-date view of the network status. The provisioned services can be assigned to different service classifications for optimized network operation.

REDUCE OPERATIONAL COSTS AND TIME-TO-REVENUE

Simplified provisioning reduces operating expenses and helps operators achieve faster time-to-revenue.

BENEFITS OF CORIANT TRANSCEND™ CHORUS FOR PACKET PROVISIONING PACKAGES

- **Optimize productivity with powerful tools** that increase efficiency and prevent costly mistakes

- **Streamline provisioning** with easy-to-use GUI and templates

- **Reduce operational costs** and speed up time-to-revenue

- **Choose from a range of separately licensed packages**

Reduce Operational Cost Through Efficient Network Provisioning
Transcend Chorus supports powerful provisioning tools enabling network service providers to maximize efficiency and lower cost of operation. No matter the network type or service delivery technology involved – optical wavelength, Packet Ethernet, or MPLS pseudowires – Transcend Chorus has the right tools for rapid provisioning of new services. Network operators can enjoy increased productivity as less time is spent turning up new services, while faster service delivery translates to faster time-to-revenue.

CHOOSE FROM A RANGE OF LICENSED PACKAGES

- **Optical Provisioning Package** enables provisioning of optical circuits on the 6300 Series and 7100 Packet Optical Transport Platform network elements. The Router Tool supports the creation and management of optical circuits.

- **TDM Provisioning Package** enables provisioning of TDM circuits and SAToP pseudowires. The Router Tool supports PDH/SDH circuits on the 6300 Series, 7100 Packet Optical Transport Platform and the 8100 system network elements. The VPN Provisioning Tool supports provisioning of TDM SAToP pseudowires on the 8600 and 8800 Smart Router network elements.

- **Ethernet Provisioning Package** enables provisioning of Ethernet pseudowires and VPLS VPNs on Coriant 8600 and 8800 Smart Router network elements through the VPN Provisioning Tool. The VPN Provisioning Tool also supports VLAN VPN provisioning of static VLAN services on the 7100 Packet Optical Transport Platform and 7090 Packet Transport Platform network elements. The Ethernet Provisioning Package also enables creation of VLAN VPNs on 6300 Series and 8100 system network elements using the VLAN Manager Tool.

- **ATM Provisioning Package** enables creation of ATM pseudowires on the 8600 and 8800 Smart Router network elements though the VPN Provisioning Tool.

- **Frame Relay/HDLC Provisioning Package** enables creation of Frame Relay pseudowires on 8600 and 8800 Smart Router network elements through the VPN Provisioning Tool.

- **IP VPN Provisioning Package** enables creation of L3 BGP/MPLS IP VPNs on the 8600 and 8800 Smart Router network elements through the VPN Provisioning Tool.

- **VLAN Manager Tool** enables provisioning of VLAN connections on the 6300 Series and 8100 system network elements. The VLAN Manager calculates optimal routes for VLAN VPNs over VLAN trunks created in the Network Editor Tool. These VLAN trunks represent TDM capacity reserved for the creation of VLAN services. The VLAN Manager Tool works in conjunction with the VLAN Domain Configuration Tool, which automates configuration of the VLAN domain and QoS parameters used for provisioning Ethernet/VLAN services.

- **VPN Provisioning Tool** supports fast and efficient provisioning of pseudowire services on 8600 and 8800 Smart Router network elements. Service types supported include Ethernet pseudowire mesh, ATM pseudowire mesh, TDM SAToP pseudowire mesh, FR pseudowire mesh, HDLC pseudowire mesh and default routing access. A pseudowire mesh service has a point-to-point topology with two endpoints connected by pseudowire. It is possible to create several point-to-point pseudowires under the same service, thus creating a pseudowire mesh.

IP VPN Provisioning
Multiple endpoints are supported for BGP/MPLS IP VPN. The different topology types supported include:

- Full mesh: Send traffic from any endpoint to any other endpoint through the VPN.

- Central services hub-and-spoke: Route traffic between a single hub end-point to any of the spoke endpoints. Traffic cannot be routed between spoke endpoints.

- Full-featured hub-and-spoke (firewall hub-and spoke).

- In addition to routing traffic between hub and spoke endpoints, this topology type also allows routing traffic between spoke endpoints through a customer router at the hub endpoint.

VPLS VPN Provisioning

The VPN Provisioning Tool is used for provisioning VPLS VPN services on 8800 and 8600 Smart Routers. The VPLS service specified in RFC 4762 is supported, which enables creation of private Ethernet switching networks built of virtual switch instances (VSI) interconnected with MPLS pseudowires.

Tunnel Engineering

The VPN Provisioning Tool includes the Tunnel Engineering Tool, which creates traffic-engineered tunnels on the 8600 and 8800 Smart Router network elements. The Tunnel Engineering Tool supports RSVP-TE label switched paths, MPLS-TP tunnels, IP tunnels and static LSPs for MPLS network transport. The tool supports provisioning of dynamic and explicit paths, administrative groups and backup tunnels. Protection modes for traffic engineered tunnels include LSP1+1, RSVP-TE1:1, RSVP-TE Fast Reroute and MPLS-TP Linear Protection (RFC 6378).

Static VLAN Provisioning

The VPN Provisioning Tool also enables provisioning of Ethernet static VLAN services over Coriant packet transport equipment. The tool supports Provider Bridged networks with end-to-end provisioning support on 7100 Packet Optical Transport Platform and 7090 Packet Transport Platform network elements. The tool supports manual and auto routing of S-VLAN-based services between selected endpoints, which can be configured for a variety of port types including PNP, CNP-P, CEP, and CNP-S.

Router Tool

The Router Tool enables users to create and manage connections between wavelength interfaces on the 6300 Series, the 7100 Packet Optical Transport Platform and the 8100 system network elements. A wide variety of circuit types are supported, whether Optical, SDH or PDH. Circuits route virtual trunks (e.g., VC-2/12, ATM and Frame Relay) through the high order network. The circuit types supported are point-to-point, point-to-multipoint, compressed point-to-point, broadcast and swap. The Router Tool facilitates efficient planning and utilization of network resources. It is possible to graphically view and configure time slots for each circuit and to view time slots reserved for future use. The circuits can be manually or automatically routed through the Coriant network.

Manual routing is accomplished by simply selecting the links in the network view. With automatic routing, the nodes and trunks are selected automatically using a shortest path algorithm. The algorithm finds the optimal route while considering user configurable routing profiles for evaluation of weighted criteria such as length, cost, delay and available capacity. Each circuit can be given a name and a unique identifier for service inventory management and it is possible to retrieve and view circuit information by criteria such as customer name, circuit type, circuit state and circuit capacity. The Router Tool also supports creation of planned circuits without physical hardware in place. This enables the user to configure network connections in advance using planned interfaces and trunks. The circuit can then be connected and become operational when the physical hardware is installed and available.

The Router Tool supports high availability of network connections though configuration of backup routes, which may be configured in addition to the primary route. This backup route can be pre-routed by the Router Tool, or dynamically routed when needed by the Recovery Management System (an optional application described in the Recovery Package datasheet).

Provisioning Wizards

Transcend Chorus offers many easy-to-use wizards for provisioning end-to-end pseudowires. These powerful tools include configurable templates to optimize and prevent costly configuration mistakes. The pseudowire wizards also include a valuable function to automate re-parenting cell sites to a new RNC. These powerful tools provide streamlined workflows that enable network operators to achieve faster service delivery time, reducing operational costs and supporting faster time to revenue.

The Pseudowire Wizard enables the user to select a group of source and destination interfaces from the network and then create the required pseudowires between the selected interfaces. The ability to provision multiple pseudowires from a single dialog results in highly efficient operation and facilitates rapid turn-up of pseudowire services. The Cell Site Wizard combines the steps needed when adding pseudowire connections from a NodeB to an RNC. The wizard provides automated tools to create and configure the required ATM interface hierarchy and provision the pseudowires needed. The wizard supports configuration templates, which can be tailored for different types of NodeBs as required by the network.

The endpoint creation for existing IP VPN services is straightforward using the IP VPN Endpoint Wizard. The wizard can be launched from the 8600 and 8800 Smart Router Node Manager or Node Editor tools and all necessary provisioning procedures can be easily done step-by-step.

The Reparenting Wizard supports automated reconfiguration of endpoints between pseudowire interfaces. The user can easily select a group of interfaces used by the pseudowires, as well as select the new interfaces where the endpoints need to be moved.

A single click on the start button completes the operation. Transcend Chorus then automatically disconnects and deletes the original pseudowire connections and reconnects the pseudowires to the new destination interfaces.

The 7100 Packet Optical Transport Platform Service Endpoint Mapping Wizard automates the creation of an end-to-end packet-over-SDH/SONET (PoS) circuit using the 7100 OTS SSM-D/X cards. The wizard enables the user to set the parameters and optionally create all the required entities, including the Ethernet ports, link aggregation groups and Ethernet virtual connections. Using the wizard helps ensure that all critical steps in the procedure have been completed.

infinera®