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NEW QUESTION: 1
Which use case is most suitable for the deployment of a star topology?
A. Access networks, for collecting traffic towards the main central node
B. ASON networks, to protect traffic via GMPL5 protocols
C. Backbone networks, for supporting protection routes
D. SNCP-protected links
Answer: A (LEAVE A REPLY)
A star topology is a network design where all devices are connected to a central hub, which acts as a central point of control and management for the network. This type of topology is commonly used in access networks, where a central node is used to aggregate traffic from multiple users or devices, and then forward it to the core network. This design allows for efficient use of resources and easy management of the network.
Reference:
"Computer Networking: A Top-Down Approach" by James Kurose and Keith Ross (Chapter 3)
"Data Communications and Networking" by Behrouz A. Forouzan (Chapter 2)

NEW QUESTION: 2
Which of the following applications is related to Wavelength Tracker tool?
A. Collecting logs related to possible issue affecting a wavelength path
B. Tracking the protection path for a specific wavelength
C. Tracing the end-to-end wavelength optical power
D. Correcting errors related to wavelength inconsistencies
Answer: B (LEAVE A REPLY)
Tracking the protection path for a specific wavelength. The Wavelength Tracker tool is used to track the protection path of a specific wavelength, allowing the user to quickly identify any issues that may arise and take corrective action.

Wavelength Tracker tool is a feature used to monitor and track the protection path for a specific wavelength in an optical network. It can also be used to monitor and verify the working state of the protection path, and to detect and troubleshoot protection switch events. The Wavelength Tracker tool can be used to monitor the protection path for a specific wavelength, and it can also be used to trace the end-to-end path of a wavelength through the network. This tool is typically used by network operators to monitor and troubleshoot wavelength-level issues in the network, such as protection switch events or wavelength-level performance issues.

NEW QUESTION: 3
A user needs to check for interface details against the commands is the correct one?
A. show interface 11starla 1/17/L1 detail
B. config card 11star1a interface 1/17 detail
C. 11starla 1/17 port-detail
D. config interface detail 1/17/L1
Answer: A (LEAVE A REPLY)
show interface 11starla 1/17/L1 detail is the correct command to check for interface details. This command will display detailed information about the specified interface, including its status, configuration, and statistics.

NEW QUESTION: 4
Is it possible to mix PSS-24x and PSS-8x shelves In an SWDM configuration?
A. Yes, as both can be equipped within the same node
B. No, as they are not compatible and cannot be used within the same node
C. Yes, but the PSS-24X shelf must be configured as a master
D. Yes, but the PSS-8X shelf must be configured as a master
Answer: B (LEAVE A REPLY)
No, it is not possible to mix PSS-24x and PSS-8x shelves in an SWDM (Short Wavelength Division Multiplexing) configuration. The two shelves are not compatible, and cannot be used within the same node.

NEW QUESTION: 5
With reference to the power budget, what is the meaning of receiver dynamic range?
A. It is the minimum power to be received for a given BER.
B. It is the range between the receiver overload power and its sensitivity.
C. It is the range between the maximum transmit power and the minimum transmit power.
D. It is the maximum receiver power to prevent an overload.
Answer: B (LEAVE A REPLY)
Comprehensive and Detailed Explanation From Nokia Optical Networking Fundamentals:
In the design of a Nokia 1830 PSS optical link, the receiver dynamic range is a critical parameter for ensuring error-free transmission. It defines the "window" of optical power

within which a receiver (such as an SFP, XFP, or coherent line port) can accurately interpret the incoming signal. The lower bound of this range is the Sensitivity, which is the minimum optical power required to achieve a specific Bit Error Ratio (BER). If the power drops below this level, the signal is "lost in the noise." The upper bound is the Overload power (or saturation point), which is the maximum power the receiver can handle before the photo-detector becomes saturated, leading to signal distortion and errors. The dynamic range is the mathematical difference between these two points (expressed in dB). For a network to operate reliably, the calculated power at the end of a fiber span must fall comfortably within this dynamic range. If the signal is too weak, an amplifier is needed; if it is too strong (exceeding the overload point), an optical attenuator must be used to bring the power back into the dynamic range.

NEW QUESTION: 6
Which mechanisms can be put in place to increase network survivability?
A. Protection, where backup resources are pre-allocated and reserved; or restoration, where each trail can be recovered thanks to a 1+1 protection mechanism
B. Protection, where backup resources are allocated upon failure; or restoration, where each trail can be recovered thanks to a 1+1 protection mechanism
C. Protection, where backup resources are allocated upon failure; or restoration, where backup resources are pre-allocated and reserved
D. Protection, where backup resources are pre-allocated and reserved; or restoration, where backup resources are allocated upon failure.
Answer: D (LEAVE A REPLY)
There are two main mechanisms that can be put in place to increase network survivability: protection and restoration. Protection involves pre-allocating and reserving backup resources so that they are ready in case of a failure. Restoration involves allocating backup resources upon failure and using a 1+1 protection mechanism to recover each trail. This ensures that the network is able to re-route traffic in the event of a failure, increasing the overall survivability of the network.

NEW QUESTION: 7
What is the block that converts the colorless (or black and white) client signal to a specific optical channel in a WDM system?
A. Wavelength router (WR)
B. Optical transponder (OT)
C. Static filter device (SFD)
D. Dispersion compensation module (DCM)
Answer: B (LEAVE A REPLY)
Comprehensive and Detailed Explanation From Nokia Optical Networking Fundamentals:
The Optical Transponder (OT) is the essential interface component in a WDM system that bridges the gap between the client-side equipment and the WDM line-side. Client signals,

often referred to as "colorless" or "black and white" because they typically use standard 1310nm or 1550nm short-reach optics, cannot be directly multiplexed into a DWDM fiber because they would interfere with one another.
The Transponder performs an O-E-O (Optical-Electrical-Optical) conversion process: it receives the client's optical signal, converts it to an electrical format to perform 3R functions (Re-amplification, Re-shaping, and Re-timing) and often wraps it into an OTN (Optical Transport Network) frame, and then re-transmits it using a high-precision, ITU-T grid-compliant colored wavelength. In the Nokia 1830 PSS portfolio, these can be dedicated transponders for a single high-speed service or Muxponders, which aggregate multiple lower-speed client signals into a single high-speed "colored" line interface. Other components like the SFD are used for multiplexing those colors, and the DCM is used for managing fiber impairments, but only the Transponder performs the initial frequency conversion.

NEW QUESTION: 8
What is a Shared Risk Group (SRG)?
A. A set of fibers that share the same latency risk
B. A set of boards that share the same failure risk
C. A set of nodes that share a common risk of hardware failure
D. A set of network resources that share a common failure risk
Answer: (SHOW ANSWER)
According to the Nokia Optical Networking documentation, a Shared Risk Group (SRG) is defined as "a set of network resources that share a common failure risk. When a resource in an SRG fails, the other resources in the group are also affected." This can include fibers, boards, nodes, and other network resources. The SRG concept is used in network design and protection mechanisms to ensure survivability and minimal impact on service in case of a failure.

NEW QUESTION: 9
What is a trail?
A. An entity to encapsulate a low order signal into a high order container
B. A transparent transport of a client signal
C. A link between end points to increase the power budget of the optical link
D. A physical link between two optical amplifiers
Answer: B (LEAVE A REPLY)
A trail is a transparent transport of a client signal. A trail is a physical link between two points in an optical network, allowing for the transport of a client signal from one point to the other. It is a low-order signal, such as a 10G Ethernet or a Fibre Channel signal, encapsulated into a high-order container, such as a 40G or 100G signal. This allows for the transport of the client signal over longer distances, increasing the power budget of the optical link.

NEW QUESTION: 10
WDM allows transmission systems to:
A. Share a single signal among multiple fibers doing load balancing, and thus increasing the reliability of the optical transmission
B. Increase the bit rate of each client signal by spreading it over multiple wavelengths
C. Transport multiple signals transparently, onto several wavelengths, all together over one single fiber
D. Allocate different signals to different time slots
Answer: C (LEAVE A REPLY)

NEW QUESTION: 11
WDM allows transmission systems to:
A. Transport multiple signals transparently, onto several wavelengths, all together over one single fiber
B. Increase the bit rate of each client signal by spreading it over multiple wavelengths
C. Share a single signal among multiple fibers doing load balancing, and thus increasing the reliability of the optical transmission
D. Allocate different signals to different time slots
Answer: A (LEAVE A REPLY)
WDM (Wavelength Division Multiplexing) allows transmission systems to transport multiple signals transparently, onto several wavelengths, all together over one single fiber. This allows for increased capacity, as many different signals can be transmitted at the same time and along the same fiber. Other advantages include improved signal integrity and reduced signal attenuation.

NEW QUESTION: 12
Which of the following are the main reasons for fiber attenuation?
A. Refraction and reflection
B. Scattering and absorption
C. Chromatic dispersion (CD) and polarization mode dispersion
D. Small channel spacing
Answer: B (LEAVE A REPLY)
Scattering and absorption are the main reasons for fiber attenuation. Scattering occurs when light bounces off the sides of the fiber, while absorption happens when light is absorbed by the glass or other materials that make up the fiber. Chromatic dispersion (CD) and polarization mode dispersion (PMD) are also factors that can cause attenuation, but they are not the main causes. Small channel spacing can also cause attenuation, but it is a secondary factor and is only significant in certain cases.

NEW QUESTION: 13

Which sentence about NFM-T is correct?
A. NFM-T fully supports LO, LI, L2 and GMPLS applications and it is mainly focused on 1830 PSS, as well as other older product families
B. NFM-T fully supports optical and IP nodes
C. NFM-T is used to design and manage optical network
D. NFM-T is used to provision optical services having IP nodes as extremities
Answer: D (LEAVE A REPLY)
NFM-T is a network management system designed to manage optical networks in a unified manner. It is used to design, manage, and provision optical services having IP nodes as extremities. It supports a variety of technologies, including optical and IP, and fully supports LO, LI, L2, and GMPLS applications. It is mainly focused on the Nokia 1830 PSS product family, as well as other older product families.

NEW QUESTION: 14
Which of the following is an example of optical protection mechanism?
A. Optical regeneration (e.g., back-to-back regeneration)
B. OSNCP (e.g., via Y-cable or OPS card)
C. GMPLS-enabled SBR
D. GR and SBR combined
Answer: B (LEAVE A REPLY)
It can be implemented through the use of a Y-cable or an optical protection switch (OPS) card, which allows for the switching of traffic to a secondary path in the event of a failure on the primary path. This type of protection is commonly used to protect against fiber cuts and other types of physical layer failures in the optical transport network.

NEW QUESTION: 15
What does it take to get connected to the NSP platform?
A. A browser and the NSP IP address; and from the landing page, the NSP application should be downloaded and launched.
B. A browser and the NSP IP address. Then, a browser plugin needs to be installed and the laptop rebooted before the NSP can be correctly reached.
C. A browser, the NSP IP address, and the credentials to access the web-based interface (WebUI).
D. The NSP package should be downloaded from the Nokia website and properly licensed for the specific workstation to be used.
Answer: C (LEAVE A REPLY)
To get connected to the Nokia Service Platform (NSP) platform, you need a browser and the NSP IP address. Then, you need the credentials to access the web-based interface (WebUI) for the NSP platform. Once you have these, you can access the NSP platform from a web browser.

NEW QUESTION: 16
How can a mesh network be upgraded so that more services can be transported?
A. Configuring new WSS cards is the most effective way to give flexibility and network bandwidth to an existing mesh network.
B. The Protection and Restoration Combined (PRC) mechanism can enable more bandwidth but only for the protected services.
C. Upgrading the network to coherent transmission is the only effective way to enable more bandwidth to the existing mesh network.
D. Upgrading link capacity and/or installing new links provides more bandwidth to the existing mesh network.
Answer: (SHOW ANSWER)
Comprehensive and Detailed Explanation From Nokia Optical Networking Fundamentals:
While technologies like WSS (Wavelength Selective Switches) and coherent transmission (100G/200G/400G+) significantly improve the efficiency and reach of a network, the most direct way to increase the total transportable volume of services in a mesh topology is to upgrade link capacity or install new physical links. In Nokia optical planning, upgrading link capacity typically involves moving from a lower-rate system (like 10G) to a higher-rate system (like 100G or 400G) or increasing the number of available wavelengths by expanding from a 40-channel to an 80-channel or 96-channel C-band system.
Adding new links (new fiber spans) creates more degrees in the mesh, providing more paths for traffic and increasing the overall aggregate bandwidth of the network. Option A refers to flexibility (ROADM functionality) rather than raw capacity. Option B (PRC) relates to survivability and availability, not capacity expansion. While Option C (coherent transmission) is a powerful method for increasing capacity per wavelength, it is not the "only" way, as adding more fiber (spatial multiplexing) or more channels (spectral density) are also primary methods for scaling a mesh network to handle more services.

NEW QUESTION: 17
What is the purpose of the validate step in the EPT design process?
A. During this step, the configuration available on the involved network elements is compared with the design provided by EPT.

B. This step is used to measure optical power performances over an existing network before making changes.
C. This step is optional and is useful to verify the network element layout before going through the commission step.
D. During this step, the run design action is triggered for network design consistency check and errors fixing.
Answer: D (LEAVE A REPLY)
The validate step in the EPT design process is used to trigger the run design action, which is responsible for verifying the consistency of the network design and fixing any errors that may exist. During the validation process, the system will compare the configuration available on the involved network elements and the design provided by EPT, and any discrepancies will be flagged for further investigation or correction.

NEW QUESTION: 18
Is it possible to modify node parameters within the edit EPT menu?
A. Yes, the user can apply manual changes directly from this view
B. Yes, but the user can modify only the node name and location
C. No, this view is used to display a close-up view of the node
D. Yes, the user can apply manual changes but only for non-GMPLS nodes, as the control plane reserves node resources not editable by the user
Answer: (SHOW ANSWER)
Yes, the user can apply manual changes but only for non-GMPLS nodes, as the control plane reserves node resources not editable by the user. The edit EPT menu allows the user to view information about a node but is not used to modify node parameters. The user can only apply manual changes to non-GMPLS nodes, as the control plane reserves node resources which cannot be modified by the user.

NEW QUESTION: 19
Is it possible to open and manage EPT designs that are created with different releases than the release installed on the local workstation?
A. Only designs created with the current release can be opened and edited.
B. Only designs created with current and older releases can be opened and edited.
C. Designs created with an older release can be opened by a current release but cannot make changes.
D. No restrictions are imposed on the software release.
Answer: B (LEAVE A REPLY)
It is possible to open and manage EPT designs that are created with different releases than the release installed on the local workstation, however only designs created with current and older releases can be opened and edited. Designs created with an older release can be opened by a current release but changes cannot be made.

NEW QUESTION: 20
What is the metro area network?
A. The metro area network is that portion of network that passes through a city to provide connections to several customers.
B. The metro area network is located between access and core domains.
C. The metro area network is made of OCS/SWDM nodes only, as no pure photonic nodes are used here.
D. The metro area network is located in between two access area networks and made of photonic nodes only (no OCS/SWDM nodes are used there).
Answer: A (LEAVE A REPLY)
The Metro Area Network (MAN) is a telecommunications network that spans a metropolitan area and connects multiple local area networks (LANs) or business networks together. It typically covers an area that is larger than a LAN but smaller than a wide area network (WAN). The purpose of a MAN is to provide a high-bandwidth, low-latency communication infrastructure for businesses and other organizations in a metropolitan area.
Reference:
Cisco, "Metro Ethernet Services," https://www.cisco.com/c/en/us/solutions/service-provider/metro-ethernet-services/index.html Techopedia, "Metro Area Network (MAN)," https://www.techopedia.com/definition/26896/metro-area-network-man

NEW QUESTION: 21
What is the function of a pre-amplifier in an optical network?
A. Through the pre-amplifier, the optical signal is amplified at the receiver side after it travels along the fiber from another node.
B. Through the pre-amplifier, the optical signal is amplified at the transmitter side before it is sent to the line span.
C. Through the pre-amplifier, the optical signal is amplified both the receiver side and at the transmitter side.
D. Through the pre-amplifier, the optical signal is amplified within the node internally to recover internal losses due, for instance, to cascaded filters.
Answer: B (LEAVE A REPLY)
A pre-amplifier is an optical amplifier that is used to boost the power of the received optical signal before it is detected by the receiver in an optical communication system. This is done to overcome the loss of power that occurs as the signal travels through the optical fiber and to ensure that the receiver can detect the signal. The pre-amplification stage is typically located close to the receiver in order to minimize the distance that the signal has to travel between the amplifier and the receiver, which helps to reduce the noise and distortion in the signal.

NEW QUESTION: 22

What is the meaning of demand in EPT?
A. Demand refers to the amount of OTN interfaces within a single network element.
B. Demand refers to the required capacity of a single network element in terms of bandwidth.
C. Demand refers to the required number of trails to be automatically created to meet design requirements.
D. Demand refers to one or more client signal.
Answer: D (LEAVE A REPLY)
Comprehensive and Detailed Explanation From Nokia Optical Networking Fundamentals:
In the context of the Nokia 1830 Engineering and Planning Tool (EPT)-now known as WaveSuite Planner (WS-P)-a Demand is a fundamental planning object that represents the customer's traffic requirement between two or more nodes. Specifically, it refers to one or more client signals that need to be transported across the optical network. When a user defines a demand in EPT, they specify the source and destination nodes, the type of client service (e.g., 10GE, 100GE, or STM-64), the quantity of these services, and the required protection level (e.g., Unprotected, 1+1, or O-SNCP).
The tool uses these defined demands to calculate the most efficient optical path, select the appropriate hardware (transponders and muxponders), and determine the necessary wavelength assignments. While a demand eventually results in the creation of optical trails and utilizes network element capacity, the term itself strictly refers to the input traffic requirement or the client signal(s) that the network is being designed to carry. Without defining demands, the planning tool cannot generate a Bill of Materials (BOM) or perform power balancing simulations, as it wouldn't know the traffic load the physical infrastructure must support.

NEW QUESTION: 23
Where can the user set the long-haul WT decoder parameter, when designing a network with EPT?
A. In the network parameters
B. In the optimization parameters
C. In the NE parameters
D. In the audit menu
Answer: C (LEAVE A REPLY)
The long-haul WT decoder parameter can be set in the NE parameters when designing a network with EPT. This parameter is used to adjust the sensitivity of the decoder and can help to improve the accuracy of the measurements for long-haul WTs.
The Network Element (NE) parameters in EPT (Element Planning Tool) are used to configure various settings and options for the network elements in the network. The long-haul WT decoder parameter is one such setting that can be configured in the NE parameters section. The user can access the NE parameters by navigating to the NE Parameters menu within the EPT interface. The user can then select the appropriate

network element and modify the settings as needed. This information can be found in the Nokia guide for EPT.

NEW QUESTION: 24
What is the purpose of the NFM-T deploy menu?
A. It is used to deploy additional shelves to existing SWDM nodes.
B. It is used to import EPT files to deploy the network based on the EPT design.
C. It is used to deploy new operators (administrator, observers, and so on) to access the platform.
D. It is used to create new network instances, such as physical connections, infrastructures and services.
Answer: D (LEAVE A REPLY)
The NFM-T (Network Functions Manager - Transport), now part of the WaveSuite Network Operations Center (WS-NOC), is the centralized management system for Nokia's optical portfolio. The Deploy menu is the primary engine for operationalizing the network. Its fundamental purpose is to create and provision new network instances, which encompasses the lifecycle of the transport infrastructure.
Specifically, this menu allows operators to establish physical connections (fiber links between nodes), build out the infrastructure (defining the topology and node roles), and most importantly, provision services (such as ODUk or Optical Channel services). While the EPT (now WaveSuite Planner) designs the network, and those files can be used as a reference, the actual "birth" of a service in the live network-mapping it from the source transponder to the destination through the required ROADM degrees-is executed via the Deploy menu. It translates the high-level intent into specific cross-connect commands sent to the individual Network Elements (NEs), ensuring that the underlying hardware is correctly configured to carry client traffic.

NEW QUESTION: 25
In which of the following forms does the TTI byte provide information on network elements?
A. Source (SAPI) and Destination (DAPI) Access Point Identifiers
B. Source and destination IP addresses and overhead
C. Source and destination MAC addresses
D. Source and destination time-slot identifiers
Answer: A (LEAVE A REPLY)
Comprehensive and Detailed Explanation From Nokia Optical Networking Fundamentals:
In the Optical Transport Network (OTN) hierarchy, the TTI (Trail Trace Identifier) is a 64-byte overhead signal used to ensure that the source and destination of a path are correctly connected. It is part of the overhead in the OTU (Optical Transport Unit) and ODU (Optical Data Unit) layers. The TTI provides a mechanism for "path trace" to prevent

misconnections. It specifically carries the SAPI (Source Access Point Identifier) and the DAPI (Destination Access Point Identifier).
These identifiers are strings that uniquely identify the source and destination ports. By comparing the "Expected SAPI/DAPI" configured on a port with the "Received SAPI/DAPI" actually coming in over the fiber, the Nokia 1830 PSS can detect fiber patching errors or cross-connect mistakes. If there is a mismatch, the system can trigger a TIM (Trace Identifier Mismatch) alarm and potentially squelch the traffic to prevent data from being delivered to the wrong customer. This is a Layer 1 (OTN) function and is entirely independent of Layer 2 MAC addresses or Layer 3 IP addresses used by the management system for DCN (Data Communication Network) connectivity.

NEW QUESTION: 26
What is the OAMP LAN interface?
A. It is an RJ-45 interface (a common Ethernet port) used for cascading 1830 PSS nodes (e.g., external shelves)
B. It is an RJ-45 interface (a common Ethernet port) that has to be configured with an IP address for node reachability and management
C. It is an RJ-45 interface (common Ethernet port) used to connect one or more client ports (e.g., 1Gb/s or legacy 100Mbit/s client flows)
D. It is an RJ-45 interface (a common Ethernet port) used to export active alarms to an external device, typically equipped with several LEDs
Answer: (SHOW ANSWER)
It is an RJ-45 interface (a common Ethernet port) that has to be configured with an IP address for node reachability and management. This interface is used to connect the OAMP node to the LAN, allowing it to be managed and monitored remotely.