Aanbesteding SURFnet8 Photonic Layer
Aanbestedende Dienst: SURFnet B.V.
Referentie:

Omschrijving:
SURFnet is searching for a Partner that can provide a solution for the SURFnet8 photonic layer. The aim of the Tender Procedure is to award a Contract to a Partner that can provide the requested hardware, software and support.

For the next generations of the SURFnet network, SURFnet requires a new photonic layer. This Tender aims to renew the bandwidth providing photonic layer, which is used for SURFnet's domestic services and potentially the Cross Border Fiber (CBF) systems.

The scope of the Contract for delivering the SURFnet8 photonic layer consists of;
1. Hardware, i.e. the physical equipment including installation related materials;
2. Software and licenses (including software interfaces (APIs)) for planning, performance monitoring, troubleshooting, fault detection, provisioning, security and accounting, automation, and programmability;
3. Layer 0 and layer 1 control plane functionality;
4. Training and periodic training sessions for current staff and staff to be hired in the future, and external personnel;
5. A migration scenario from our existing Ciena CPL and DWDM layer to a new solution. This may include field service support and the provision of temporary hardware;
6. High level design activities for migration, introduction of new features or equipment, and complex changes;
7. M&S (Maintenance and Support). SURFnet will stock its own spares;
8. Installation and de-installation procedures for equipment and software;
9. Delivery and setup of a test bed.

Toelichting:
Dear Madam/Sir,

Please find herewith the answers to the additional questions received so far, concerning the SURFnet8 Photonic Layer tender. Insofar this information notice contains modification and/or additions to the Request for Proposals Document and/or previous information notices (Nota van Inlichtingen), the text in this notice prevails. Please take note of this document in preparing your response.

Kind regards,

Jac Kloots
SURFnet

Nr:

Categorie Bestek/beschrijvend document
Betreft MR13 (page 34)

1 **Vraag**

For Type C Nodes it is stated that this node "allows colored adding and dropping of at least 8 but not more than 16 DWDM waves per line fiber interface" are MR(13). Can you clarify the requirement for maximum 16 wavelengths. Is it acceptable if the solution would support more than 16 DWDM waves per line fiber?

Antwoord **Vrijgegeven:** 07-07-2016

Yes, the possibility to drop more than 16 wavelengths is acceptable as long the number of waves in excess of 16 can also be passed through. / Type C Nodes are relatively simple OADM nodes and must not block too much of spectrum. For this reason, the maximum number of add/drop waves has been limited to 16, thus allowing the majority of waves and spectrum to be used for pass-through waves.

Nr:

Categorie Bestek/beschrijvend document

Betreft MR2 (page 30)

2 **Vraag**

Surfnet is asking for a DCM free core network (Node Types A, B and C). In addition support of 10G Alien waves are a MR. This seems a bit contra dictionary, as most 10Gs will require (fiber-based) dispersion compensation. Therefore it is not supported as an integrated solution in our offer. A possible workaround would be for Surfnet to add external dispersion compensation to the Alien waves. Is this acceptable for Surfnet?

Antwoord **Vrijgegeven:** 07-07-2016

Yes / Support for conventional 10G Intensity Modulated Direct Detection waves is generally limited to distances of 80km. In the case of Type II waves, Dispersion Compensation Modules, OEO, or electronic dispersion compensation is implemented by SURFnet. In the case of Type III waves it is the responsibility of the transceiver to compensate for transmission impairments, including dispersion. Type III waves are expected to have a minimum capacity of 100G and rely on coherent detection and electronic transmission impairment compensation.

Nr:

Categorie Bestek/beschrijvend document

Betreft MR26 (page 38)

3 **Vraag**

Support for TFT services using bi-directional waves in a single fiber is listed as a MR. This is currently not supported as an integrated solution in our offer. A possible solution would be to add an additional bi-directional filter on the line to add these type services per span. Is this acceptable for Surfnet?

Antwoord **Vrijgegeven:** 07-07-2016

Yes / SURFnet requests an architecture, which indicates the location where a bidirectional add/drop function can be implemented.