GAS&COM AG DWDM Link

Service description

GAS&COM AG
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Scope and area of applicability of this service description

This service description defines the product **GAS&COM AG DWDM Link** in terms of the technology, functionality, provision and operation of the service as well as the associated contractual services and the obligations of the customer and GAS&COM AG. This document is an integral part of the "DWDM Service" contract of GAS&COM AG.
The specific service scope is regulated in the corresponding service contract of the respective customer.

"DWDM Link" service

This service description defines the technical details for planning and implementing the customer service with the DWDM Link of GAS&COM AG.

Overview

The DWDM Link is a high-availability, point-to-point connection with guaranteed, synchronous and high bandwidth. The GAS&COM AG DWDM network was specially designed for high bandwidths and geographical redundancy. This makes it possible to interconnect customer locations or data centre connections georedundantly and with the highest possible bandwidths.
The Service Access Point (SAP) is the defined transfer point at the customer location, i.e. to a house connection box or data centre directly from the DWDM node of GAS&COM AG. The customer devices are connected directly via fibre-optic cable to the DWDM backbone of GAS&COM AG. In exceptional cases, a leased line from a third-party provider may be used instead of the fibre-optic cable.

The GAS&COM DWDM Link is offered as a Single, Dual or Protected Link.

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DWDM Single Link

The GAS&COM AG DWDM Single Link is a point-to-point wavelength connection without diversity or protection, which is used for high-capacity data transmissions or for connecting a customer site to a central data centre.
The solution is designed in such a way that the most direct route is provided when implementing the service. On request, a specific routing can be selected if redundancy is required for another service.

DWDM Dual Link

Dual Link is basically a service consisting of two Single Link wavelength services with the same capacity, which are routed differently between the same end points. This allows the customer to use twice the capacity on different / diverse paths between the two endpoints or to implement their own method of protection or load balancing between the two services.

DWDM Protected Link

This service is provided via two completely different routes between the same end points; one is "live" and the other is reserved exclusively for the purpose of protection. In the unlikely event of an error on the "active" path, the service is automatically redirected to the "protected" path to ensure the continuity of the connection. The "switchover" takes place in less than 50 ms and will therefore hardly be noticed by customer. This increases the availability of the service for the customer, even in the event of planned maintenance.

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Technical features

The GAS&COM AG DWDM Link consists of a full-duplex wavelength channel within the bidirectional DWDM system, which is provided via a pair of fibres. The required equipment includes high-performance DWDM nodes in the GAS&COM AG POPs for signal generation as well as amplification equipment along the route to amplify and regenerate the optical signal.

Standard bandwidths and interfaces

Bandwidths	Optical channel	Electrical interface	Optical interface
1 Gbps	ODU0	1000BaseT	SMF 1000BASE-LR / ER if required / BiDi-SFP
10 Gbps	ODU2	--	SMF 10GBase LR / ER if required / BiDi-SFP
40 Gbps	ODU3	--	SMF 40GBase LR
100 Gbps	ODU4	--	SMF 100GBase LR4

The bandwidth profiles are applied to the Ethernet frames (layer 1)
100 % transparent layer 1 connections to all data transmission types

For the service transfer to a data centre or house connection box, the transfer interface is always in optical single mode.

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Provision of the service

Services provided by GAS&COM AG

Provision of the GAS&COM AG DWDM Link is coordinated by GAS&COM AG. Services provided in relation to provision of the product include the design of the solution, project coordination, implementation, measurement using RFC25544 and an RFS (Ready for Service) document, which contains the technical details.

Responsibilities of the customer

The customer is responsible for providing the equipment in the building (in-house installation), which must be ready and tested on time.
The in-house installation must be implemented with 9 µm SM fibre for the GAS&COM AG DWDM Link.

Patch cable and SPF specification

- Fibre type ITU-T G.652.D
- Plug type E-2000/APC to LC/PC
- Mode type - single mode
- SFP 1 Gbps 1310 nm SM LR / ER
- QSFP28 40 Gbps LR
- SFP 1 Gbps BiDi 1330/1550 nm SM LR / ER
- SFP+ 10 Gbps 1310 nm SM LR / ER
- SFP+ 10 Gbps 1550 nm SM ER
- SFP+ 10 Gbps BiDi 1270/1330 nm SM LR
- QSFP28/CFP2 100GBASE-(4x25G)/-LR4-10km

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Operation of the service

GAS&COM AG is responsible for operating the service.
To ensure the reliable operation of the service, GAS&COM AG may update the hardware and software on the DWDM backbone. The customer will be informed accordingly in such a case

Services during operation

GAS&COM AG guarantees that the services purchased will be provided in accordance with the agreed SLA and the general terms and conditions of business.

Operational monitoring and fault rectification

The Network Operation Center is available around the clock, 365 days a year. Faults reported by the customer are recorded by Dispatching and forwarded to the Operations team.
Faults reported outside of the support hours are forwarded directly to the stand-by service team.

Service Level Agreement (SLA)

According to the SLA document

Network Operation Center

Calls within Switzerland:
0848 427 266 (24 hours / 365 days)

Calls from outside Switzerland:
+41 44 733 62 18 (24 hours / 365 days)

E-mail: support@gas-com.ch