Service catalogue

Premium infrastructure and managed connectivity services
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Peregrine Metro

Peregrine Metro is a dark-fibre link that is billed according to distance. Save costs by building your network on our reliable infrastructure.

Data sheet

| Connectivity options | Core network and switching centres /
|                      | Core site to core site /
|                      | Core sites to a DFA aggregation node /
|                      | Branch site to branch site |
| Non-recurring charge | Connection fee |
|                      | Distance-based capex fee |
| Monthly recurring charge | Minimum monthly lease /
|                         | Line-of-sight distance × 1.4 routing factor × R/metre |
| Discount criteria      | Volume (total leased kilometres) |
|                       | Lease term |
| Lease/payment terms    | 1, 2, 3, 4, 5, 10, or 15 years |
|                       | Fixed monthly lease payment /
|                       | Down payment with reduced fixed monthly lease payment |
| Fibre pairs            | Single / Multiple |
| Optional redundancy    | Diverse link at 50% of monthly recurring charge |
| Service level          | 4-hour mean time to repair |
| Monitoring             | Main route |

Terms and conditions

Feasibility

- DFA may choose to build the duct infrastructure to connect your site to our existing infrastructure. In those cases, DFA will own the duct infrastructure and will be responsible for its maintenance.
You may choose to build your own duct infrastructure from existing DFA infrastructure to your sites. In those cases, you will own the duct infrastructure and will be responsible for its maintenance.

Total leased kilometres (billing distances) include open orders and fulfilled orders.

**DFA’s responsibilities**

- DFA will provide and float a maximum of 150 m of cable from the DFA handhole in the public domain into your access duct infrastructure up to your termination point in a building.
- If DFA chooses to build the access infrastructure, DFA will be responsible for its maintenance.
- DFA will monitor and maintain the main fibre routes over which your connectivity is provided. DFA will not monitor the access spur and the entry into a private property.

**Your responsibilities**

- Build from existing DFA infrastructure to your premises will be for your account. This includes material, installation, and maintenance costs.
- Permanent repairs on your access infrastructure are for your account. DFA can provide maintenance on infrastructure that you own at an additional agreed fee to be negotiated before any repairs.
- You will be responsible for providing an on-site termination facility within your premises at no cost to DFA. The on-site termination facility must be in a location that can be used to terminate the DFA passive infrastructure (e.g. space for a wall-mounted termination box and associated cable conduits).

**Discounts**

- Discounts apply only to new orders, even if they advance you to a new discount tier.
- Discounts at a higher tier will apply only if the total distance that you lease does not decrease below the tier threshold.
- If you renew after the initial term, the initial term and new contract term will be combined to give you a discount for the longer contract term.

**Redundancy**

- If you order the diverse link after the primary link, DFA will reset the primary link term to start on the same date as the diverse link.
- The diverse link will be subject to the standard product feasibility rules and responsibilities.
- You can order a diverse link between the same two sites.
- You must order the diverse link at the same time as the primary link. DFA will bill the diverse link at 50% of the monthly recurring charge of the primary link. A minimum monthly leasing cost applies.

**Terminations and cancellations**

- The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
DFA may waive the penalty for an early link termination if you order another link at the same or a higher contract value as that of the terminated link’s remaining contract term. The following will apply:

- The new link must be to a connected location.
- The terminated link will be billed until the new link is built and signed off.
- The new link will have its own full contract term and will be subject to the standard product rules.

You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Peregrine Long Haul

With Peregrine Long Haul you can extend your transmission, back-haul, and core network to towns and metros along the DFA long-haul routes.

### Data sheet

| Connectivity options | Predefined repeater sites along DFA long-haul route / Metro to submarine landing station or small towns:  
|                       | - Teraco Isando–Teraco Riverhorse Valley (via Middelburg)  
|                       | - Teraco Isando–Teraco Riverhorse Valley (via Secunda)  
|                       | - Montague Gardens–Yzerfontein  
|                       | - Montague Gardens–Melkbosstrand  
|                       | - Teraco Isando–Potchefstroom  
<table>
<thead>
<tr>
<th></th>
<th>Other small towns along the DFA long-haul route</th>
</tr>
</thead>
</table>
| Non-recurring charge  | Connection fee  
|                       | Distance-based capex fee |
| Monthly recurring charge | Minimum monthly lease / Actual distance × 1.1 routing factor × R/metre |
| Discount criteria     | Lease term |
| Lease/payment terms   | 5, 10, or 15 years  
|                       | Fixed monthly lease payment / Down payment with reduced fixed monthly lease payment |
| Fibre pairs           | Single / Multiple |
| Service level         | 4-hour mean time to repair |
| Monitoring            | Main route |
Terms and conditions

Feasibility

- If you need the Peregrine Long Haul link to terminate at your own premises, the following will apply:
  - The Peregrine Long Haul link must terminate in the predefined DFA repeater site or PoP that is closest to your site.
  - You must order a Peregrine Metro link from the DFA repeater site or PoP to your site to complete the end-to-end link.

- No drops or equipment are allowed along the following routes:
  - Teraco Isando–Persequor Park
  - Stanger–Internet Solutions Umhlanga–Teraco Riverhorse Valley
  - Montague Gardens–Teraco Cape Town
  - Teraco Isando–Springs
  - Teraco Isando–Vanderbijlpark.

- Drops are subject to feasibility and customer-specific solution design.

DFA’s responsibilities

- DFA will monitor and maintain the main fibre route.
- DFA will provide access into DFA repeater or PoP sites.

Your responsibilities

- Build from existing DFA infrastructure to your premises will be for your account. This includes material, installation, and maintenance costs.
- A Peregrine Long Haul link between Teraco Isando and Teraco Riverhorse Valley consists of multiple repeater sites, and you will need to order hosting space at each of the repeater sites.
- Collocation, power, and cross connects at Tachyon nodes will be for your account.

Terminations and cancellations

- The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
- DFA will waive the penalty for an early link termination if you order another Peregrine Long Haul link at the same or a higher contract value as that of the terminated link’s remaining contract term. The following will apply:
  - The new link must be between two PoPs.
  - The terminated link will be billed until the new link is built and signed off.
  - The new link will have its own full contract term and will be subject to the standard product rules.

- You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Titan

Titan is a flat-rate-based fibre link that you can use to connect your PoPs or base-station-transceiver sites. Link orders are structured to connect the customer’s access sites in a logical ring topology. Access rings start at the customer’s aggregation sites and terminate at the same or at alternative aggregation sites.

Data sheet

<table>
<thead>
<tr>
<th>Connectivity options</th>
<th>Core PoP to PoP in ring terminating at the same or another core PoP / PoP on existing ring to new PoP in a star topology / PoP to new PoP in a star topology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-recurring charge</td>
<td>Yes</td>
</tr>
<tr>
<td>Monthly recurring charge</td>
<td>Flat rate</td>
</tr>
</tbody>
</table>
| Discount criteria      | Volume  
 Lease term                                                                                                         |
| Lease/payment terms    | 5, 10, or 15 years  
 Fixed monthly lease payment / Down payment with reduced fixed monthly lease payment                                                                 |
| Fibre pairs            | Two                                                                                                                                   |
| Optional redundancy    | Diverse link                                                                                                                                  |
| Service level          | 4-hour mean time to repair                                                                                                                   |
| Monitoring             | Main route                                                                                                                                  |

Terms and conditions

Feasibility

- DFA may choose to build the duct infrastructure to connect your site to our existing infrastructure. In those cases, DFA will own the duct infrastructure and will be responsible for its maintenance.
- Titan links must be ordered in a ring or star topology.
- In a metro area, the average distance of each of your Titan links in a ring must not exceed 5 km. The actual duct distance is used to calculate the average link distance.
If an exceptionally long link in a ring would increase your average Titan link distance above 5 km, you have the following options to lower the average:

- Order the long link as a Peregrine link.
- Establish new points of presence in the geographical area to shorten the link.

You may choose to build your own duct infrastructure from existing DFA infrastructure to your sites. In those cases, you will own the duct infrastructure and will be responsible for its maintenance.

You may use a Titan link as a spur to connect a site in a star topology to an existing ring.

Your core network must consist of 100 km of Peregrine links to qualify for Titan links, or you must commit to ordering 100 km of Peregrine links within 24 months from first ordering a Titan link.

DFA’s responsibilities

DFA will monitor and maintain the main fibre routes over which your connectivity is provided. DFA will not monitor the access duct and the entry into a private property where DFA has installed fibre via your duct infrastructure.

Your responsibilities

- Build from existing DFA infrastructure to your premises will be for your account. This includes material, installation, and maintenance costs.
- Permanent repairs on your access infrastructure will be for your account. DFA can provide maintenance on infrastructure that you own at an additional agreed fee to be negotiated before any repairs.

Redundancy

A diverse link is subject to feasibility.

Terminations and cancellation

- The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
- DFA may waive the penalty for an early link termination if you order another Titan link at the same or a higher contract value as that of the terminated link’s remaining contract term. The following will apply:
  - The new link must be to a connected location.
  - The terminated link will be billed until the new link is built and signed off.
  - The new link will have its own full contract term and will be subject to the standard product rules.

- You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Tachyon

Tachyon is a hosting facility where you can collocate your equipment for easy access to the last-mile network. It acts as an aggregation point for your access network. The aggregated traffic can then be backhauled to the customer’s core network much more efficiently.

Data sheet

<table>
<thead>
<tr>
<th>Connectivity options</th>
<th>Host client network equipment / Aggregate traffic in geographical area / Aggregate traffic from backhaul to core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly recurring charge</td>
<td>Based on rack space, electricity, cross-connects, etc.</td>
</tr>
<tr>
<td>Lease/payment terms</td>
<td>5 years</td>
</tr>
<tr>
<td>Rack size options</td>
<td>¼ (7U usable space) / ½ (11U usable space) / ⅓ (18U usable space) / Full rack (39U usable space)</td>
</tr>
<tr>
<td>Cabinet</td>
<td>43U (600 x 600 split)</td>
</tr>
<tr>
<td>Fibre</td>
<td>Single-mode G.657.A1 connectorized (LC/PC) tail in equipment rack</td>
</tr>
<tr>
<td>Service level</td>
<td>4-hour backup batteries</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Remote silent monitoring</td>
</tr>
</tbody>
</table>

Terms and conditions

Feasibility

- Tachyon facilities and rack space are subject to availability.
- Only ¼ rack space will be available at certain Tachyon facilities.
- Only DFA fibre can be terminated at a Tachyon facility. This includes fibre from the Tachyon facility to your premises and backhaul fibre from the Tachyon facility to your core.
- The links can be patched through inside the facility to provide a link between two of your access sites in the same aggregation area. A cross-connection fee will apply.
- You can order multiple services that terminate in the Tachyon facility.
- You may establish your own cross connects between your equipment within your allocated space, e.g. within your allocated ⅓ or ¼
You may not establish your own cross connects to third parties or other racks in the Tachyon facility, whether between your own equipment or between your equipment and another DFA client’s equipment in the same collocation facility.

You may not sublease Tachyon facilities or rack space.

**DFA’s responsibilities**

- If you have multiple racks in the same Tachyon facility, DFA will provide fibre patching between your equipment.
- If the Tachyon node is in the basement of a building and you install your own reticulation to your end customer in the building, DFA will provide a cross connect from the Tachyon facility to the nearest common meet-me room. A per cross-connection fee will apply.

**Billing**

- Additional rates will apply for excess rack-space use and power consumption.
- DFA may apply an annual inflation-based increase to the monthly recurring charge.
- The electricity component of the Tachyon facility lease cost is subject NERSA-approved electricity-cost reviews.

**Terminations and cancellations**

- The lease term and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
- You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Helios

Helios is a last-mile fibre-access link that delivers dark-fibre links from DFA’s PoPs to your access sites or buildings in a star topology within a predefined DFA aggregation coverage area.

The link terminates on an optical distribution frame at the DFA PoPs where you can cross connect to your own equipment hosted in the DFA PoP.

Data sheet

<table>
<thead>
<tr>
<th>Connectivity options</th>
<th>DFA PoP to access site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-recurring charge</td>
<td>Connection fee</td>
</tr>
<tr>
<td>Monthly recurring charge</td>
<td>Fixed lease payment</td>
</tr>
<tr>
<td>Lease/payment terms</td>
<td>24 months</td>
</tr>
<tr>
<td>Fibre pairs</td>
<td>Single</td>
</tr>
<tr>
<td>Optional redundancy</td>
<td>Diverse link to same Tachyon node</td>
</tr>
<tr>
<td>Access build</td>
<td>Entry into meet-me room at access site</td>
</tr>
<tr>
<td></td>
<td>In-building reticulation from meet-me-room to end customer (cost limit)</td>
</tr>
<tr>
<td>Service level</td>
<td>8-hour mean time to repair</td>
</tr>
</tbody>
</table>

Terms and conditions

Feasibility

- Helios links are available only in the vicinity of DFA PoPs within predefined DFA aggregation areas.
- Helios links cannot cross aggregation-area boundaries.
- Helios links may not terminate in the following types of locations:
  - data centres
  - peering points
  - switching centres that connect to multiple third-party providers
  - high sites
  - passive aggregation infrastructure
  - carrier meet-me rooms.

- If you do not already host equipment in the DFA PoP, a monthly cross-connection fee will apply for every Helios link, if you purchase a Calypte service as backhaul.
- One termination point must always be at a DFA PoP.
The actual duct distance of a Helios link can extend up to 70 m from the DFA infrastructure to a handhole at the public boundary of the premises that you wish to connect. If you need an actual duct distance of more than 70 metres, the build will be for your account.

You cannot use a Helios link to connect your
- core nodes to each other
- core nodes to PoPs to aggregate multiple end customers onto one link.

You may use a Helios link to connect only a single end customer to a DFA PoP. You may not use it to aggregate links to multiple end customers in the same building or adjacent buildings.

DFA’s responsibilities

If the building has existing reticulation, DFA will install its own reticulation in accordance with the rules of the landlord.

Your responsibilities

- Any third-party costs that the landlord may charge will be for your account.
- If the access build and reticulation costs exceed R34,000, the excess will be for your account.
- You will need to install and maintain your own equipment in the DFA PoPs.
- You will need to negotiate landlord permission for fibre entry. DFA will assist where possible.

Redundancy

- If you are ordering a diverse Helios link, you must clearly specify that in your order and indicate the primary Helios link.
- If a second access entry is needed for the diverse link, DFA will cover the build cost subject to feasibility rules.
- Standard Helios feasibility rules apply to diverse links.

Terminations and cancellations

The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
- DFA will waive the penalty for an early link termination if you order another Helios link at the same or a higher contract value as that of the terminated link’s remaining contract term. The following will apply:
  - The terminated link will be billed until the new link is built and signed off.
  - The new link will have its own full contract term and will be subject to the standard product rules.
  - You will need to pay the remaining pro-rata costs for the build, installation, activation, and testing.
  - You will need to pay any third-party costs that DFA may incur as a result of the termination and substitution.
After the initial 24-month contract expires, you need to give 30 days’ notice before terminating a Helios link.
You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.

Volume order options

Helios Density

With Helios Density you can pay a lower monthly recurring charge on additional Helios links to the same site. The lower charge is based on the volume of additional links that you order.

Terms and conditions

In addition to the standard Helios product rules, the following will apply:

- DFA will apply the lower charge to additional Helios links to the same site and access infrastructure as your first Helios link.
- You cannot use a Helios link as a diverse link for another Helios link.
- DFA will get landlord approval.
- If you terminate the first link within its initial 24-month contract term, the monthly recurring charge of one of the remaining Helios Density links will change to the standard full cost of the first link.

Helios Volume

Helios Volume gives you the option to commit to a volume order with a ramp-up. The links that are part of the volume order will have a lower monthly recurring charge.
With Calypte Metro you can get the benefits of dark fibre in a more cost-effective solution. You can use it to construct your backhaul network between DFA PoPs or between DFA PoPs and your core sites.

Data sheet

<table>
<thead>
<tr>
<th>Connectivity options</th>
<th>DFA PoP to DFA PoP</th>
<th>DFA PoP to your chosen point of presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-recurring charge</td>
<td>Connection fee</td>
<td>Dependent on zone and selected throughput</td>
</tr>
<tr>
<td>Monthly recurring charge</td>
<td>Monthly lease</td>
<td>Dependent on zone and selected throughput</td>
</tr>
<tr>
<td>Discount criteria</td>
<td>Lease term</td>
<td></td>
</tr>
<tr>
<td>Lease/payment terms</td>
<td>5 years</td>
<td>Fixed monthly lease payment</td>
</tr>
<tr>
<td>Service configuration</td>
<td>Port-based</td>
<td>Link-fault passthrough</td>
</tr>
<tr>
<td>Redundancy</td>
<td>Core route protection</td>
<td></td>
</tr>
<tr>
<td>Interface options</td>
<td>1Gbit/s /</td>
<td>10Gbit/s for throughput above 800Mbit/s /</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Larger capacities available in selected cases</td>
</tr>
<tr>
<td>Throughput options</td>
<td>20Mbit/s–10Gbit/s</td>
<td></td>
</tr>
<tr>
<td>Service level</td>
<td>4-hour mean time to repair</td>
<td></td>
</tr>
<tr>
<td>Monitoring</td>
<td>Layer 2 service monitoring</td>
<td></td>
</tr>
</tbody>
</table>
Terms and conditions

Feasibility

- One termination point must always be at a DFA PoP.

Your responsibilities

- Build from existing DFA infrastructure to your premises will be for your account. This includes material, installation, and maintenance costs.

Throughput rate and bursting

- DFA will monitor your use of the Calypte service transparently, without affecting your throughput rate or intercepting any data.
- For a selected throughput rate between 20Mbit/s and 800Mbit/s, DFA will allow bursting up to the full 1Gbit/s port speed.
- For a selected throughput rate between 800Mbit/s and 10Gbit/s, DFA will allow bursting up to double the selected throughput, limited to the 10Gbit/s port speed.
- When your actual throughput rate on the Calypte Metro service exceeds your selected throughput rate for more than five consecutive minutes more than three times in 30 days, the following will apply:
  - DFA will notify you of the throughput-rate spikes.
  - The relevant higher throughput-rate bracket’s cost will apply for the billing period.
  - Your service will be upgraded automatically to the higher throughput-rate bracket and billed accordingly in future.

Configuration changes

- You may permanently upgrade your Calypte Metro service to a higher throughput-rate bracket without a penalty and without affecting the contract term.
- You may downgrade a Calypte Metro service on a 10Gbit/s interface only after 24 months.
- You may not downgrade a Calypte Metro service to a lower throughput rate than that of the initial order.
- Downgrades will take effect on the first day of the next month if DFA receives your request by the twentieth day of the current month.
- You may not downgrade a Calypte Metro service to a lower throughput rate than the peak throughput rate over the previous 30 days.
- A configuration fee for downgrades and other configuration changes will apply, which will depend on whether the downgrade must be implemented during office hours or after hours.

Terminations and cancellations

- The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
DFA will waive the penalty for an early link termination if you order another Calypte Metro service at the same or a higher contract value as that of the terminated link’s remaining contract term. The following will apply:

- The terminated link will be billed until the new link is built and signed off.
- The new link will have its own full contract term and will be subject to the standard product rules.
- The new link must be between two DFA PoPs.

You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Calypte Long Haul

For affordable backhaul and long-haul connectivity, Calypte Long Haul presents the ideal solution. Connect your points of presents to DFA PoPs with a throughput-monitored link that can adapt to your needs.

Data sheet

<table>
<thead>
<tr>
<th><strong>Connectivity options</strong></th>
<th>Predefined repeater sites along DFA long-haul route / Connectivity along predefined routes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Teraco Riverhorse Valley–Pietermaritzburg</td>
</tr>
<tr>
<td></td>
<td>• Teraco Isando–Potchefstroom</td>
</tr>
<tr>
<td></td>
<td>• Teraco Isando–Ermelo</td>
</tr>
<tr>
<td></td>
<td>• Teraco Isando–Secunda</td>
</tr>
<tr>
<td></td>
<td>• Teraco Isando–Klerksdorp</td>
</tr>
<tr>
<td></td>
<td>• Teraco Rondebosch–Yzerfontein</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Non-recurring charge</strong></th>
<th>Connection fee</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Monthly recurring charge</strong></th>
<th>Monthly lease / Dependent on zone and selected throughput</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Lease/payment terms</strong></th>
<th>5 years / Fixed monthly lease payment</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Service configuration</strong></th>
<th>Port-based / Link-fault passthrough</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Interface options</strong></th>
<th>1Gbit/s / 10Gbit/s for committed information rate above 800Mbit/s / Larger capacities available in selected cases</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Throughput options</strong></th>
<th>30Mbit/s–10Gbit/s</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Service level</strong></th>
<th>4-hour mean time to repair</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Monitoring</strong></th>
<th>Layer 2 service monitoring</th>
</tr>
</thead>
</table>
Terms and conditions

Feasibility

- A Calypte Long Haul service between Teraco Isando and Teraco Riverhorse Valley may have drops at DFA PoPs in small towns along the DFA route:
  - Bronkhorstspruit
  - Middelburg
  - Hendrina
  - Ermelo
  - Busby
  - eMkhondo (Piet Retief)
  - Paulpietersburg
  - Vryheid
  - Zulu Rock
  - Melmoth
  - Empangeni
  - Mtunzini
  - Stanger
  - Umhlanga.

- A Calypte Long Haul service between Teraco Isando and Ermelo may have drops at DFA PoPs in Secunda.

- A Calypte Long Haul service between Teraco Isando and Potchefstroom may have drops at DFA PoPs in:
  - Vanderbijlpark
  - Parys.

- If you need a Calypte Long Haul service from one metro area to another and you need to aggregate traffic at a repeater or PoP in one or more of the small towns along the long-haul fibre route, a monthly port fee shall apply.

- For a Calypte Long Haul route from Teraco Isando to Teraco Rondebosch, DFA will provide a breakout in Bloemfontein.

Throughput rate and bursting

- No bursting will be allowed.

Configuration changes

- You may permanently upgrade your Calypte Long Haul service to a higher throughput-rate bracket without a penalty and without affecting the contract term.
- You may downgrade a Calypte Long Haul service on a 10Gbit/s interface only after 24 months.
- You may not downgrade a Calypte Long Haul service to a lower throughput rate than that of the initial order.
- A configuration fee for downgrades and other configuration changes will apply, which will depend on whether the downgrade must be implemented during office hours or after hours.
Redundancy

- A diverse link is subject to feasibility.
- Protected services can be provided, where feasible, and will be provided on a case by case basis.

Terminations and cancellations

- The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
- You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Magellan

Magellan is a Layer 2 managed metro Ethernet suite that gives you easy access to Carrier Ethernet connectivity. The access services are MEF Carrier Ethernet 2.0 certified.

Data sheet

<table>
<thead>
<tr>
<th>Service types</th>
<th>Point-to-point access Ethernet Private Line (EPL) / Point-to-point access Ethernet Virtual Private Line (EVPL) / Point-to-point E-Line Ethernet Private Line (E-Line EPL)</th>
</tr>
</thead>
</table>
| Coverage      | DFA aggregation areas  
|               | Sites within predefined proximity to DFA network:  
|               | • Zone 1: metro areas  
|               | • Zone 2: small towns with DFA coverage, interconnected with third-party backhaul |
| Access technology | Dedicated Ethernet / GPON / Microwave (PTP and PTMP) |
| Non-recurring charge | Access setup  
|                   | ENNI port setup |
| Monthly recurring charge | Last-mile access  
|                         | Access bandwidth  
|                         | ENNI port |
| Lease/payment terms | 1, 2, 3, 4, or 5 years |
| Equipment       | Standard customer premises equipment |
| Interface options | 1Gbit/s interface:  
|                   | • Standard: RJ-45  
|                   | • Optional: Optical |
| Redundancy      | Core network protection  
|                 | Optional: LAG at ENNI |
| Bandwidth options | 5Mbit/s–10Gbit/s |
| Service configuration | End-point bandwidth per service |
| ENNI options    | 1Gbit/s / 10Gbit/s |
|
|-------------------------|-------------------------|
|                         | O-in-O support          |
|                         | Jumbo frame support     |
| **ENN port bandwidth options** | 50Mbit-10Gbit/s         |
| **Throughput-rate options**   | 1Gbit/s-10Gbit/s        |
| **Service level**                           | 4 service levels        |
|                         | Level 1:                |
|                         | 99.5% availability      |
|                         | Level 2–4:              |
|                         | 99.8%–99.95% availability|
| **Monitoring**                               | Layer 2 service monitoring|

**Terms and conditions**

**Feasibility**

- DFA does not recommend a bandwidth-contention ratio higher than 10:1.
- ENNI can be in a Zone 1 or Zone 2 Location and subject to DFA feasibility.
- ENNIs are available at DFA points of presence.
- Feasibility may vary depending on selected throughput rate or region.
- For multiple services, DFA will allow a maximum of three VLANs. Additional VLANs are available as customer-specific solutions.
- Limited public-property build included.
- You may split the ENNI bandwidth across multiple ENNIs to get a volume benefit across your entire network. You must specify the bandwidth split across ENNIs when you place your order.

**DFA’s responsibilities**

- DFA will provide and manage standard customer premises equipment. DFA will own the equipment.
- For multiple services, DFA will provide customer premises equipment at end-customer premises or multiport customer premises equipment in a shared facility.

**Your responsibilities**

- The customer premises equipment carries a warranty of 24 months from date of installation at the customer premises. If you or your end customer damages the customer premises equipment owing to negligence, or if the customer premises equipment is stolen or lost, the replacement cost will be for your account.
- You must ensure that access sites are ready and accessible for DFA to install the equipment.
- You will be responsible for cross connects at the ENNI.
- You will be responsible for ensuring that electricity, earthing, cabinet space, and cooling are ready at the access site by the installation date.
- You will be responsible for landlord approvals for any private-property build.
- You will be responsible for the insurance of the customer premises equipment once it has been installed at the end customer’s site.
Billing

- DFA will bill access and ENNI port fees in advance.
- DFA will bill all bandwidth services in arrears.

Configuration changes

- Access bandwidth upgrades are allowed.
- Access bandwidth downgrades not allowed.
- You may upgrade or downgrade the ENNI bandwidth at any time, but you may not downgrade to a bandwidth lower than that of the initial order.
- You may downgrade a Magellan service only after the end of the initial contract term.
- A configuration fee for downgrades and other configuration changes will apply, which will depend on whether the downgrade must be implemented during office hours or after hours.
- A migration fee for ENNI interface change from 1Gbit/s to 10Gbit/s will apply.

Terminations and cancellations

- The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
- DFA will waive the penalty for an early link termination if you order another Magellan link at the same or a higher contract value as that of the terminated link’s remaining contract term. The following will apply:
  - The terminated link will be billed until the new link is built and signed off.
  - The new link will have its own full contract term and will be subject to the standard product rules.
  - You will need to pay the remaining pro-rata costs for the build, installation, activation, and testing of the new service.
  - You will need to pay any third-party costs that DFA may incur as a result of the termination and substitution.
  - You will need to pay a connection fee for the new site.

- You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Magellan Metro DC-to-DC Connect

With the Magellan Metro DC-to-DC Connect service, you can get high-speed managed connectivity on predefined express routes between major data centres in metros.

Data sheet

<table>
<thead>
<tr>
<th>Connectivity options</th>
<th>Active managed connectivity to all major data centres in a metro</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-recurring charge</td>
<td>Connection fee</td>
</tr>
<tr>
<td>Monthly recurring charge</td>
<td>Monthly lease</td>
</tr>
<tr>
<td>Lease/payment terms</td>
<td>1,3, and 5 years Fixed monthly lease payment</td>
</tr>
<tr>
<td>Optional redundancy</td>
<td>At 50% of monthly recurring charge of primary link</td>
</tr>
<tr>
<td>Service configuration</td>
<td>Port-based Link-fault passthrough</td>
</tr>
<tr>
<td>Interface options</td>
<td>1Gbit/s / 10Gbit/s / Larger capacities available in selected cases</td>
</tr>
<tr>
<td>Throughput-rate options</td>
<td>1Gbit/s–10Gbit/s</td>
</tr>
<tr>
<td>Service level</td>
<td>99.5% availability without redundancy / 99.9% availability with redundancy</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Layer 2 service monitoring</td>
</tr>
</tbody>
</table>

Terms and conditions

Feasibility

- Magellan Metro DC-to-DC Connect provides connectivity to all major data facilities within a metro.
- All orders will be subject to approval from facility owners.
- All orders will be subject to technical and site feasibility.

DFA’s responsibilities

- DFA will hand off the link to you at the meet-me room or carrier meet-me room at the third-party facilities.
Your responsibilities

- Any third-party costs, including facilities, power, rack space, and cross connects, will be for your account.

Configuration changes

- You may permanently upgrade your Magellan Metro DC-to-DC Connect service to a higher throughput-rate bracket without a penalty and without affecting the contract term.
- You may not downgrade a Magellan Metro DC-to-DC Connect service to a lower bandwidth than that of the initial order.
- A configuration fee for downgrades and other configuration changes will apply, which will depend on whether the downgrade must be implemented during office hours or after hours.

Redundancy

- A diverse link is subject to feasibility.
- A diverse link will be configured as an active-standby connection.
- A connection fee for the diverse link will apply.

Terminations and cancellations

- The terms and conditions for termination will be stipulated in the commercial agreement.
- An early termination penalty equal to the contract value of the remainder of the term will apply.
- DFA will waive the penalty for an early link termination if you order another Magellan Metro DC to DC Connect link at the same or a higher contract value as that of the terminated link’s remaining contract term. The following will apply:
  - The terminated link will be billed until the new link is built and signed off.
  - The new link will have its own full contract term and will be subject to the standard product rules.
  - You will need to pay the remaining pro-rata costs for the build, installation, activation, and testing of the new service.
  - You will need to pay any third-party costs that DFA may incur as a result of the termination and substitution.
  - You will need to pay a connection fee for the new site.

- You will be liable for abortive costs if DFA incurs costs as a result of, among other things, your sites not being ready or you cancelling an order.
Business Broadband

The Business Broadband service uses various last-mile technologies to provide cost-effective, best-effort end-to-end connectivity between you and your end-customers.

Data sheet

<table>
<thead>
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<th>Service types</th>
<th>Broadband</th>
</tr>
</thead>
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<tr>
<td>Coverage</td>
<td>DFA connected buildings</td>
</tr>
<tr>
<td>Access technology</td>
<td>Dedicated Ethernet /</td>
</tr>
<tr>
<td></td>
<td>GPON /</td>
</tr>
<tr>
<td></td>
<td>Microwave (PTP and PTMP) /</td>
</tr>
<tr>
<td></td>
<td>4G or 5G</td>
</tr>
<tr>
<td>Non-recurring charge</td>
<td>Access setup</td>
</tr>
<tr>
<td></td>
<td>GNNI port setup</td>
</tr>
<tr>
<td>Monthly recurring charge</td>
<td>Last-mile access</td>
</tr>
<tr>
<td></td>
<td>Access bandwidth</td>
</tr>
<tr>
<td></td>
<td>GNNI port</td>
</tr>
<tr>
<td></td>
<td>Optional voice VLAN</td>
</tr>
<tr>
<td>Lease/payment terms</td>
<td>2 years</td>
</tr>
<tr>
<td>Equipment</td>
<td>Standard customer premises equipment</td>
</tr>
<tr>
<td>Interface options</td>
<td>1Gbit/s RJ-45</td>
</tr>
<tr>
<td>Bandwidth options</td>
<td>10Mbit/s /</td>
</tr>
<tr>
<td></td>
<td>20Mbit/s</td>
</tr>
<tr>
<td>Service configuration</td>
<td>End-point bandwidth per service</td>
</tr>
<tr>
<td></td>
<td>1 VLAN per service</td>
</tr>
<tr>
<td>GNNI</td>
<td>1Gbit/s with support for 100 VLANs</td>
</tr>
<tr>
<td></td>
<td>Q-in-Q support</td>
</tr>
<tr>
<td>Service level</td>
<td>Best effort</td>
</tr>
<tr>
<td></td>
<td>48-hour mean time to prepare</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Layer 2 service monitoring</td>
</tr>
</tbody>
</table>
Terms and conditions

Feasibility

- DFA does not recommend a bandwidth-contention ratio higher than 15:1.
- Individual business cases may be conducted for large-scale requirements.
- You need a dedicated GNNI for Business Broadband services.
- You may split the GNNI bandwidth across multiple GNNIs to get a volume benefit across your entire network. You must specify the bandwidth split across GNNIs when you place your order.

Throughput rate and bursting

- No bursting above the configured bandwidth on each client service and the aggregation interface will be allowed.

DFA's responsibilities

- DFA will provide and manage standard customer premises equipment. DFA will own the equipment.

Your responsibilities

- Any cross-connection fees will be for your account.
- Any third-party costs that the landlord may charge will be for your account.

Terminations and cancellations

- The terms and conditions for termination will be stipulated in the commercial agreement.