

Customer Services Handbook

Global Switch Amsterdam

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GLOBAL
SWITCH

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FOR CLARIFICATION OF ANY TERMS USED IN THIS HANDBOOK, PLEASE REFER TO THE GLOSSARY IN APPENDIX 4, WHICH CAN ALSO BE FOUND ON THE GLOBAL SWITCH WEBSITE AND ON THE GLOBAL SWITCH CUSTOMER PORTAL.

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WELCOME

WE HAVE PRODUCED THIS CUSTOMER SERVICES HANDBOOK FOR THOSE VISITING AND WORKING AT GLOBAL SWITCH DATA CENTRES.

As well as setting out the rules and regulations you need to follow when on site, it also contains useful information on how to request and make the best use of various operational services we provide. You will find contact details for your specific data centre campus in **Section 19**, and a location map at **Appendix 1**.

PLEASE READ AND UNDERSTAND THIS HANDBOOK IF YOU ARE VISITING A GLOBAL SWITCH DATA CENTRE AS A:

- Customer's employee or consultant;
- Customer's contractor or sub-contractor; or
- An unescorted visitor who has completed a Global Switch data centre Site Induction (see **Section 4**).



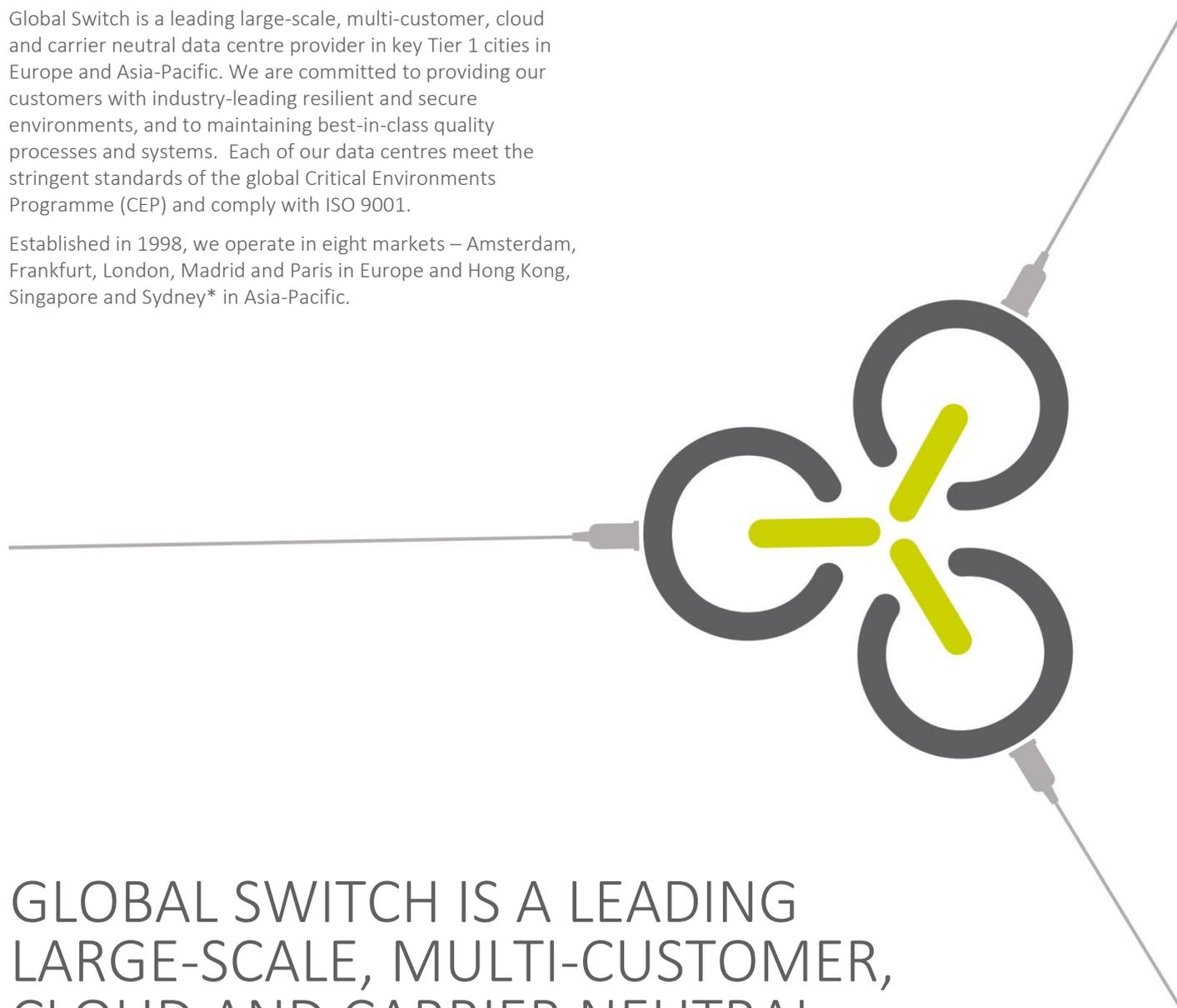
PLEASE NOTE:

It is essential that all visitors (including customers' employees, consultants and contractors), follow the rules and regulations in this Handbook, as failure to do so could lead to restriction of access and/or the suspension and/or termination of services provided by Global Switch. You can learn more about this and our warning process in Section 16 – Working in a Mission-Critical Environment. Please also be aware that to sustain our best-in-class operating procedures and to comply with changing laws and regulations, we will update this Handbook from time to time.

WHO WE ARE

Global Switch is a leading large-scale, multi-customer, cloud and carrier neutral data centre provider in key Tier 1 cities in Europe and Asia-Pacific. We are committed to providing our customers with industry-leading resilient and secure environments, and to maintaining best-in-class quality processes and systems. Each of our data centres meet the stringent standards of the global Critical Environments Programme (CEP) and comply with ISO 9001.

Established in 1998, we operate in eight markets – Amsterdam, Frankfurt, London, Madrid and Paris in Europe and Hong Kong, Singapore and Sydney* in Asia-Pacific.



GLOBAL SWITCH IS A LEADING
LARGE-SCALE, MULTI-CUSTOMER,
CLOUD AND CARRIER NEUTRAL
DATA CENTRE PROVIDER ACROSS
EUROPE AND ASIA-PACIFIC.

* CONSOLIDATED GROUP ENTITY



1.0 PUTTING SAFETY FIRST

GLOBAL SWITCH IS COMMITTED TO MAKING SURE ITS DATA CENTRES ARE A SAFE ENVIRONMENT FOR YOU, YOUR EMPLOYEES, OUR STAFF, OUR CONTRACTORS AND FOR ALL OTHER VISITORS. ALL OF OUR DATA CENTRES OPERATE POLICIES AND PROCEDURES IN ACCORDANCE WITH ISO 45001, INTERNATIONAL BEST PRACTICES, AND GUIDANCE ISSUED BY THE WORLD HEALTH ORGANISATION.

As part of that commitment, we may introduce additional control measures in accordance with Government and local authorities' advice, including, but not limited to, body temperature checks, health declaration forms, the wearing of Personal Protective Equipment (PPE) and social distancing practices, when circumstances, such as pandemics, require this. We require our customers' Health and Safety plans to comply with local laws, regulations and advice while also following our own Health and Safety policy. This ensures that:

- All customers' employees and visitors are fully aware of the site-specific emergency procedures.
- All Permanent Access and Visitor Access card holders are fully aware of the procedures, policies and guidelines set out in this Handbook.
- All Permanent Access and Visitor Access card holders have completed a Site Induction and are fully aware of any updates.

If you have any concerns or issues regarding Health and Safety, please contact our Customer Services team or, in an emergency, Global Switch Security (see **Section 19 - Contacts**).

Our Health and Safety policies:

1.1 FIRE AND EMERGENCY

All customers, their contractors and other visitors are required to minimise the risk of fire within the data centre.

1.2 FIRE DETECTION

We have advanced fire detection and suppression systems installed at all of our data centres - it is strictly forbidden to interfere with them in any way. If you need to isolate any of this equipment in order for you or your contractor to carry out

your work, please complete a Permit to Work request via the Customer Portal (see **Section 11**). All isolations are performed by Global Switch.

Activation of the fire detection and suppression systems whether accidentally or unnecessarily should be avoided at all times. The cost of attending to or rectifying false alarms may be charged to the customer or contractor that is found to be responsible.

1.3 FIRE EXITS AND EVACUATION MUSTER POINTS

As a visitor to the data centre, you should familiarise yourself with the location of emergency exit doors and stairways, fire alarm activation units, fire extinguishers, and the evacuation and muster points. Details of fire exits and evacuation muster points can be found at the entrance to each floor of our data centres. The muster point information for this site is at **Appendix 2** of this Handbook.

1.4 FIRE PROCEDURE



IF YOU DISCOVER A FIRE, YOU MUST:

- Activate the fire alarm by breaking the glass at the nearest fire alarm point.
- Leave the building using the nearest safe fire exit.
- Proceed to the Global Switch evacuation and muster point.
- Report to a Global Switch Fire Marshall or Fire Warden.



DO NOT

- Attempt to tackle the fire unless you are trained to do so.
- Attempt to recover personal effects.
- Delay your exit.
- Use the lifts.
- Re-enter the data centre unless instructed by the Global Switch Fire Marshall or Fire Warden.



1.0 PUTTING SAFETY FIRST

1.5 EVACUATION

If an emergency requires a building evacuation, Global Switch will supervise the process and all instructions issued by our team must be followed. On hearing the fire alarm, you should leave the data centre by the nearest available emergency exit and proceed immediately to the evacuation muster point to report to a Global Switch Fire Marshall or Fire Warden. Once it is safe to return to the building Global Switch will make an announcement. If the Fire Service or Fire Brigade is in attendance, they will take control of the investigation and access into the building.

1.6 MINIMISING THE RISK OF FIRE

A safe and quick means of evacuation from the data centre must be maintained at all times. For the security and the reliability of the fire system, fire and access doors must not be obstructed, left open or prevented from closing. All visitors are expected to safely dispose of combustible and waste materials and ensure that fire doors and fire escape routes are kept clear at all times.

As new technologies are introduced, it is important to ensure that the potential impact of these is adequately fire assessed, for example the use of lithium-ion batteries in technical suites, please see *Section 16.4.9 – Batteries, Working in a Mission Critical Environment*.

1.7 FIRE EXTINGUISHERS

In line with Global Switch's risk mitigation analysis and the data centre's fire certification, Portable Fire Fighting (PFF) equipment has been placed in strategic locations around the data centre. This PFF equipment should only be moved from its dedicated location in order to fight a fire. If a customer is conducting activities in the data centre which require PFF for

safety reasons, this should be identified in the risk assessment and provided by those carrying out the work. Customers or their contractors are not permitted to borrow Global Switch fire extinguishers in such cases.

1.8 FIRE BARRIERS

Where fire barriers need to be removed to carry out customer or other work, they must be replaced (by the person performing the work) on the completion of the work activity or at the end of each working day, whichever is earliest. Temporary fire barriers must be approved by Global Switch before the work is started and should be identified in any associated Permit to Work request.

1.9 MOBILITY IMPAIRMENT

A person will be deemed to have a mobility impairment if they are considered (by their employer or Global Switch personnel) to have a condition that directly affects their ability to evacuate themselves safely from the data centre in an emergency. Those with a mobility impairment, whether temporary or permanent, must notify Global Switch Security to ensure an appropriate risk assessment is completed and a personal evacuation plan is implemented for the duration of their stay on site.

1.10 FIRE ALARM AND EMERGENCY EVACUATION TESTS

We test the fire alarm systems periodically (normally weekly) at all data centres and we give all customers advance notice. We also hold regular evacuation tests to ensure that all systems and procedures are robust, up to date and working effectively.

IF YOU HAVE ANY CONCERNS OR ISSUES REGARDING HEALTH AND SAFETY, PLEASE CONTACT OUR CUSTOMER SERVICES TEAM.



1.0 PUTTING SAFETY FIRST

1.11 CUSTOMER AREA(S)

Within customers' own dedicated area(s), you and your contractors will need to comply with your own company guidance on the provision of First Aiders and first aid materials. Global Switch recommends that customers provide trained First Aiders to deal with incidents arising within their technical space, and maintain their own accident reporting procedures in relation to these areas as well as notifying Global Switch, see 1.14.

1.12 ACCIDENTS AND INJURIES, INCLUDING NEAR MISSES

Global Switch operates a comprehensive online management system for recording, analysing and managing Health and Safety. Global Switch regularly reviews logged accidents and injuries to identify trends and possible preventative action.



ALL ACCIDENTS AND INJURIES MUST BE REPORTED TO GLOBAL SWITCH SECURITY WITHIN 24 HOURS. 'NEAR MISSES' MUST ALSO BE REPORTED (BY EMAIL OR LETTER) TO GLOBAL SWITCH SECURITY WITHIN 24 HOURS.

1.13 SERIOUS INJURY

In the event of a serious injury, customers should immediately inform Global Switch Security who will contact the relevant emergency services and help to expedite access to the casualty. If you contact the emergency services yourself, you should still inform Global Switch Security immediately.

1.14 FIRST AID

As part of our 24x7x365 first aid provision, we have a number of First Aid kits on site and a Site Accident Book. A list of Global Switch First Aiders can be found at the data centre reception. At any Global Switch data centre, if an accident occurs, it must be recorded in our Site Accident Book. This record may be required for your own organisation's Health and Safety procedures.

GLOBAL SWITCH IS COMMITTED TO
**PRIORITISING THE HEALTH, SAFETY AND
WELFARE OF ALL OUR CUSTOMERS,
EMPLOYEES AND PARTNERS.**



2.0 CUSTOMER PORTAL

GLOBAL SWITCH'S CUSTOMER PORTAL HAS BEEN DESIGNED TO MAKE IT QUICK AND EASY FOR YOU TO USE AND MANAGE GLOBAL SWITCH'S ON-SITE SERVICES.

2.1 OUR SERVICES

The Global Switch Customer Portal is the most efficient and effective means to request Data Centre Services. It allows you to:

- Manage authorisation levels for personnel operating within the data centre.
- Request both unsupervised and supervised access to the data centre, please see **Section 5 - Access** for further information.
- View the Site Induction video and take a multiple choice test which is mandatory to allow unsupervised access to the data centre.
- View the Safe Systems of Work video and take a multiple choice test which is mandatory before undertaking work activities under a Permit to Work.
- Request and keep track of who has permanent or daily access to your area(s).
- Submit a Cross Connect installation request.
- Request and manage Deliveries and Storage.
- Request Equipment Removal.
- Request Remote Hands support.
- Request Parking.
- Request a Permit to Work.
- Request Technical Cleaning for your technical area.
- Request Waste Disposal.

- Review the status of both existing and previous requests.
- Submit tickets for general issues and support.

Once a request has been submitted through the Customer Portal, you will receive updates on progress.

2.2 THE BENEFITS

- A secure and user-friendly tool for handling day-to-day data centre service requests.
- Your nominated administrators can easily manage who is provided access to (and subsequent permissions within) the Customer Portal.
- 24x7x365 availability to make service requests associated with customer areas.
- Information can be shared with approved persons.
- Increased efficiency in the ordering of Global Switch services.
- All requests are tracked and auditable.

2.3 ACCESSING THE CUSTOMER PORTAL



THE LINK TO THE GLOBAL SWITCH CUSTOMER PORTAL IS:
GLOBSWITCH.SERVICE-NOW.COM/GS_PORTAL

2.4 USERS

Customer Portal Administrator(s)

All customers will need to appoint a Customer Portal Administrator(s) for their team. The Administrator(s) will have higher security permissions than standard users and will be

THE GLOBAL SWITCH CUSTOMER PORTAL IS THE MOST EFFICIENT AND EFFECTIVE MEANS TO REQUEST SERVICES.



2.0 CUSTOMER PORTAL

able to appoint new users, decide their level of access and adjust their permissions to ensure that working practices within the data centre remain the same even if business circumstances change.

We will provide the authorised Customer Portal Administrator(s) with a username and password, and then work with you to complete the set up process at a mutually convenient time. We can also provide face to face training if required.

Customer Portal Request Users

Your Administrator(s) will need to nominate and authorise Customer Portal Request Users to view and request services.

Customer Portal Read Only Users

Your Administrator(s) will need to nominate and authorise Customer Portal Read Only Users to view requested services.

It is your responsibility to keep the contact details of your Administrator(s) and Users up to date, as failure to do so could delay access to the data centre and any services requested. Use of the Customer Portal is subject to additional terms and conditions published on the Customer Portal from time to time including, without limitation, Global Switch's Terms of Use, Privacy and Cookies Policies.

2.5 DATA PROTECTION

To safeguard the integrity of the data used within the Customer Portal, Global Switch operates an Information Security System that complies with the ISO 27001 standard. This contains strict operational controls which all customers must follow.



TO PROTECT YOUR COMPANY INFORMATION AND PERSONAL DATA, WE HAVE PUT STRICT SECURITY PROTOCOLS IN PLACE WITHIN THE CUSTOMER PORTAL, WHICH INCLUDE THOSE SET OUT IN **SECTION 3 (SECURITY)** OF THIS CUSTOMER SERVICES HANDBOOK. YOU ACKNOWLEDGE AND AGREE THAT YOU WILL BE THE DATA CONTROLLER IN RESPECT OF ANY PERSONAL DATA WHICH YOU SUBMIT VIA THE CUSTOMER PORTAL AND/OR STORE ON OUR PREMISES.

2.6 CUSTOMER PORTAL ASSISTANCE

If you need assistance when accessing or using the Customer Portal, our Customer Services team can provide support. Please contact your local Global Switch Customer Services team, full contact details of which can be found in **Section 19** of this Handbook.

From time to time, the Customer Portal may display advisory messages when you login. These will contain information on current topics and situations.

If the Customer Portal is not available, we will notify Administrators and Users of alternative arrangements.



ONLY DIRECT CUSTOMERS OF GLOBAL SWITCH CAN REQUEST SERVICES. IF YOU ARE A CUSTOMER OF ONE OF GLOBAL SWITCH'S CUSTOMERS AND NEED TO REQUEST SERVICES YOU SHOULD CONTACT THE COMPANY YOU HAVE YOUR SERVICES AGREEMENT WITH.

IF YOU NEED ASSISTANCE WHEN ACCESSING OR USING THE CUSTOMER PORTAL, OUR CUSTOMER SERVICES TEAM CAN PROVIDE SUPPORT.



3.0 SECURITY

GLOBAL SWITCH PRIDES ITSELF ON PROVIDING ROBUST SECURITY AT ALL OF OUR DATA CENTRES THROUGH A COMBINATION OF BUILDING DESIGN, PHYSICAL AND ELECTRONIC MEASURES, AND STRONG OPERATIONAL PROCEDURES THAT COMPLY WITH ISO 27001.

We work closely with our customers to ensure security is maintained and subject to continuous improvement.

3.1 SECURITY MEASURES

Global Switch's Security Standard provides the measures necessary to protect both customers and Global Switch and has been developed to be scalable across our global portfolio so that it meets the specific needs of each data centre. This standard includes:

- A layered physical security methodology.
- 24x7x365 on-site manned guarding services.
- 24x7x365 Security Control Room.
- 24x7x365 access to the data centre via anti tailgate portal.
- Integrated Access Control and CCTV systems.
- Biometric controls.
- Intelligent HD CCTV systems.
- Perimeter Intrusion Detection systems.
- Secure delivery and loading bays.
- Cyber and information security detection on Global Switch infrastructure with planned responses.

3.2 SEARCHES

Our security staff may, if permitted by local regulations, conduct random bag and/or vehicle searches of anyone working in, entering or leaving a Global Switch data centre.

3.3 ACCESS CARDS (SEE ALSO SECTION 5)

Everyone at the data centre is required to wear a valid access card. The card must be worn around the neck so that it is visible and displayed using Global Switch supplied lanyards and card-holders. Access cards must only be used by the holder and cannot be loaned to any other person or exchanged. Any breach of Global Switch's security procedures will result in the holder and unauthorised user being subject to conditions detailed in *Section 16.1 – Customer Responsibilities, Working in a Mission-Critical Environment*. This may ultimately lead to the individual(s) having access denied to this Global Switch data centre.

3.4 CCTV POLICY

Global Switch data centres feature 24x7x365 CCTV surveillance systems. CCTV images are constantly monitored and recorded for the purposes of crime prevention, detection and safety of all customers, contractors and visitors. If requested, CCTV evidence may be used in civil or criminal legal proceedings. Global Switch ensures CCTV surveillance is deployed to monitor all communal and critical areas within the data centre including the perimeter, entrances and Meet Me Rooms. CCTV recordings are held typically for thirty-one days in accordance with local laws.

IF YOU REQUIRE **ADDITIONAL CCTV SURVEILLANCE** FOR AREAS OTHER THAN THOSE MENTIONED ABOVE, THIS CAN BE PROVIDED.



3.0 SECURITY

CCTV signage is displayed at entrance points informing all visitors of its deployment and intended use.

If you require CCTV recordings beyond 31 days please contact Customer Services. Likewise if you need additional CCTV surveillance for areas other than those mentioned above please contact Customer Services who can provide a quotation for an installation that meets your individual requirements.

3.5 PARKING

Parking at our data centres is strictly controlled and is limited to designated areas on our sites. No customer parking is provided within our data centre buildings other than for approved deliveries or work activities. Customer parking is only permitted if allowed under the terms of your contract with us. Any special parking requirements relating to an access request or a Permit to Work must be requested in advance and authorised by Global Switch. You can do this on the Customer Portal as part of your access or Permit to Work request.

Authorised vehicles must be parked in designated areas or as directed by Global Switch security. All parking signs must be obeyed. Where parking is provided, we reserve the right to revoke authorisation in the event of planned or unplanned operational requirements or for security reasons.

Any vehicle parked on Global Switch property is required to be insured by the owner/user in accordance with local legislation.



ALL PARKING AT OUR DATA CENTRES IS AT THE DISCRETION OF GLOBAL SWITCH AND AT THE RISK OF THE VEHICLE OWNER OR USER.

3.6 REMOVAL OF VEHICLES

Any vehicle parked beyond the authorised hours and not authorised by Global Switch may be removed, with any expenses incurred being charged to the relevant owner concerned.

3.7 LOADING BAYS AND GOODS LIFTS

Loading bays and goods lifts are not to be used by customers or their contractors without specific authorisation from Global Switch. Packages over 5kg in weight and measuring over W45cm x H30cm x D35cm will need to be delivered to the loading bay, please see **Section 8 - Deliveries and Storage** for further information. For removals that require the loading bay and/or goods lift, please contact Customer Services to make arrangements.

3.8 ITEMS LEFT UNATTENDED



UNATTENDED ITEMS PRESENT A POTENTIAL SECURITY RISK. WE WILL THEREFORE REMOVE AND DISPOSE OF ANY ITEMS THAT ARE LEFT UNATTENDED. GLOBAL SWITCH WILL NOT ACCEPT LIABILITY FOR ANY LOSSES INCURRED IN SUCH CASES.

3.9 PHOTOGRAPHY AND VIDEO RECORDING

The taking of photographs, video or electronic images of any kind on Global Switch property is strictly prohibited without the express written authorisation of the Site Managing Director.

The copying of any Global Switch Access Card is strictly forbidden. Therefore, during any approved filming, the details of the Access Cards must be obscured and then displayed normally once filming has ended.



4.0 INDUCTIONS

AS PART OF GLOBAL SWITCH'S COMMITMENT TO SAFETY AND ENVIRONMENTAL PERFORMANCE, WE REQUIRE EVERYONE TO COMPLY WITH OUR WORKING PRACTICES AND THE RELEVANT HEALTH AND SAFETY PROCEDURES AS DEFINED IN **SECTION 16 - WORKING IN A MISSION-CRITICAL ENVIRONMENT.**

4.1 WHO MUST COMPLETE AN INDUCTION?

Inductions

We have two distinct Inductions as follows:

- **Site Induction:** All those requiring access (both permanent and visitor access) must successfully complete a Site Induction and test to demonstrate an individual's understanding on how to behave in a mission-critical environment.
- **Safe Systems of Work Induction:** Those undertaking physical work, such as cable management, equipment installation/recovery or mechanical and electrical work will also need to successfully complete a Safe Systems of Work Induction and test.

If you are working unsupervised within the data centre our Site Induction will need to be undertaken and successfully completed, and, depending on the type of work activity you are planning to undertake, you may also need to successfully complete a Safe Systems of Work Induction by:

- **Customer employees:** those working at the data centre either full-time or part-time who are employed by a customer contracted with Global Switch.
- **Customer contractors and sub-contractors:** those working at the data centre either full-time or part-time who have been engaged by a customer of Global Switch.

- **Customer's customers:** customers who host their own customers within their Global Switch dedicated area(s) are responsible for ensuring that all individuals (your employees and contractors as well as your customer's employees and contractors), whether full-time or part-time, comply with our Access and Induction process.

If you visit more than one Global Switch data centre, you will need to successfully complete an Induction for each data centre.

4.2 WHO DOES NOT REQUIRE A SITE INDUCTION?

Supervised visitors do not require a Site Induction. Instead, they will be issued with a Supervised Access Card and local site information, and will need to be supervised at all times by a person who has successfully completed a Site Induction.

You will not need to complete a Site Induction if you are:

- Attending a customer sales tour.
- Attending a meeting with a customer or with Global Switch.

4.3 HOW TO COMPLETE AN INDUCTION

There are four simple steps to completing an Induction:

1. Users must register for an account on the Customer Portal before being able to undertake an Induction or have an account created by their Customer Portal Administrator.
2. Go to the Induction area of the Customer Portal. To login: globalswitch.service-now.com/g_s_portal.

IF YOU ARE WORKING UNSUPERVISED WITHIN THE DATA CENTRE OUR SITE INDUCTION WILL NEED TO BE UNDERTAKEN AND SUCCESSFULLY COMPLETED.



4.0 INDUCTIONS

3. Watch the video for the Induction(s) which include both the site specific processes and the safety procedures, and read and review the relevant sections of this Handbook.

4. Proceed, as directed on screen, and complete the Induction test.

We recommend that you complete the Induction test prior to your site visit as this will speed up access on arrival. If this is not possible, you can use facilities at the data centre to take the test on arrival.

4.4 A COMPLETED INDUCTION, CONFIRMATION AND RECORD

On passing the Induction test you will immediately be issued with a confirmation reference number via email. The details of your Induction test will also be held in the Customer Portal where you will be able to view them for future reference.

If you do not pass the test, you will be required to retake the Induction.

4.5 HOW LONG IS AN INDUCTION VALID?

An Induction test result is valid for one year from the date of issue. You will need to re-take the test annually. Shortly before your Induction expires, you will receive an email reminder of the expiration date and a notification to re-take the relevant Induction test.

4.6 CONTINUED BEST PRACTICE

In order to continually improve the working practices at the data centre, we may periodically update the content of this Handbook. Depending on the nature or importance of the change, it may be necessary for all individuals registered as having completed the Site Induction to retake the test.

In order to confirm that Permanent Access Card and Visitor Access Card holders (see **Section 5 – Access**) hold a valid Site Induction, we reserve the right to make random spot checks of individuals visiting and working at the data centre.

THOSE UNDERTAKING PHYSICAL WORK,
SUCH AS CABLE MANAGEMENT, WILL ALSO
NEED TO SUCCESSFULLY COMPLETE A SAFE
SYSTEMS OF WORK INDUCTION AND TEST.



5.0 ACCESS

GLOBAL SWITCH OPERATES AND MAINTAINS A RIGOROUS SECURITY PROTOCOL WHICH COMPLIES WITH ISO 27001. ENTRY TO OUR DATA CENTRES IS STRICTLY CONTROLLED AND VISITORS NEED TO BE REGISTERED IN ADVANCE THROUGH THE CUSTOMER PORTAL. REGISTRATION ENABLES GLOBAL SWITCH TO MAINTAIN THE SECURITY OF THE DATA CENTRE, REDUCE OPERATIONAL RISKS AND ALSO IMPROVE THE EFFICIENCY OF ACCESS FOR OUR VISITORS.

Unauthorised access is an unacceptable risk and our access procedures must be followed at all times.

5.1 TYPES OF ACCESS

We offer our customers three levels of access, Permanent Access Card (PAC), Visitor Access Card (VAC) and Supervised Access Card (SAC), all of which should be requested through our Customer Portal.

- **Permanent access:** for those who work on site or are visiting the data centre on a regular basis (minimum three days in a seven-day week) and hold a valid Site Induction.
- **Visitor access:** for individuals who are working on a temporary basis in the data centre and hold a valid Site Induction.
- **Supervised access:** for visitors who have not completed a Site Induction and need to be supervised at all times.

All Access Cards must be worn around the holder's neck using a Global Switch supplied lanyard at all times.

5.2 ACCESS PROCEDURES

Permanent Access Card Register

Each customer's PAC Register, which is automatically created in the Customer Portal as access cards are requested, holds the details of the personnel that you wish to have permanent access to your dedicated area(s). To maintain the highest levels of security at the data centre, all customers are responsible for regularly reviewing their PAC Register and maintaining its accuracy. All changes must be managed via the Customer Portal.

Obtaining a Permanent Access Card

1. Your Customer Portal Administrator or PAC Request User will need to login to the Customer Portal, select a data centre and open and complete a new PAC request.

2. The person(s) to be provided with access will receive an automated email informing them that a PAC has been approved as well as instructions on how to collect it.
3. There will be a link in the email directing them to obtain a Site Induction (see **Section 4 – Inductions**) which must be completed before the PAC can be collected.
4. On receipt of a Site Induction, the person requiring access will be able to collect their new PAC from Global Switch Security. To receive their PAC they will need to present valid photo identification such as:
 - Government issued photo identification.
 - Passport or National Identity Card.
 - Photo Driving Licence.
5. Once their identity and Site Induction status has been verified, a photograph of the proposed PAC holder will be taken and recorded by Global Switch in compliance with all relevant data protection legislation. They will receive an activated PAC which must be displayed at all times while in the data centre. The Site Induction will be valid for 12 months, after which a new Site Induction test will be required to renew their PAC.

5.3 VISITOR ACCESS CARDS

The process for obtaining a VAC is very similar to a PAC request, except your Customer Portal Administrator or PAC Request User will need to open a VAC Request. In certain Global Switch data centres, minor variations may exist to comply with local statutory regulations. Please note there is a 31-day limit for requesting advance visitor access.

If access to the data centre is needed on consecutive days, the visitor must report to the reception or Global Switch Security on a daily basis where a new VAC will be issued each time. Photo identification is required to be presented for each visit and a VAC that is not returned to Global Switch on the same day will incur a charge for the customer, please request the Services Catalogue from Customer Services for details.

Contractors carrying out work at a data centre on behalf of Global Switch customers are subject to all access rules and procedures set out in this Handbook. They may also require a Permit to Work (PTW), see **Section 11**.



5.0 ACCESS

5.4 SUPERVISED ACCESS CARDS

There are times when our customers need to arrange access for visitors either to attend meetings or as part of a sales tour of the data centre. These types of visitors do not need to complete a Site Induction, but they will need to be supervised at all times within the data centre by a person holding a PAC or VAC and having a valid Site Induction. In order to arrange a SAC, your authorised Customer Portal Administrator or PAC Request User will need to submit a Visitor Access Request via the Customer Portal and request 'supervised access' within the request.

5.5 ACCESS TO MEET ME ROOMS

We strictly control access to our Meet Me Rooms (MMRs) and need to be kept fully aware of all work taking place within them. Global Switch does not automatically allow customer PAC holders unescorted access to the MMRs. The nature of the work proposed in the MMR will determine whether a PTW is required.



TO OBTAIN ACCESS TO THE MMRS, YOUR CUSTOMER PORTAL ADMINISTRATOR OR REQUEST USER SHOULD LOGIN TO THE CUSTOMER PORTAL AND REQUEST A VAC WITH PERMISSION TO ACCESS THE MMR.

5.6 ARRIVAL ON SITE

To maintain security for all our customers, only registered visitors are allowed access to our data centres. Failure to follow the procedures set out in this Handbook will result in the visitor(s) being denied access to the data centre.

First-time PAC, VAC or SAC holders should:

1. Report to the reception/security office and sign the fire register.
2. Present valid Government issued photo identification such as a Passport, National Identity Card, or Photo Driving License.
3. Collect their PAC, VAC or SAC as defined above.
4. PAC and VAC holders will then be able to proceed to the authorised area(s).

5. SAC holders must be supervised throughout their visit to the data centre by a fully inducted and accredited individual.
6. People who do not have a valid Site Induction will not be allowed access until either they have completed a Site Induction or become a supervised visitor.

5.7 DEPARTURE

When leaving the data centre, all VACs must be returned to Global Switch and the visitor should sign out of the fire register. Failure to return your access card will incur a charge for the customer, please request the Services Catalogue from Customer Services for details.

5.8 PERMANENT ACCESS CARD ALLOCATION

Permanent Access Cards

As a Global Switch customer, you will be allocated a fixed number of complimentary PACs according to the size and nature of your dedicated areas or as otherwise specified in your Agreement with Global Switch. If you have any questions regarding the allocation of PACs, please contact Customer Services.

Additional cards or replacements

These are available on request. A charge will apply - please see the Services Catalogue which can be requested from Customer Services.

5.9 LOST OR STOLEN ACCESS CARDS

If an Access Card is lost or stolen, the holder must immediately notify Global Switch Security and in the case of a PAC, their Customer Portal Administrator must be notified as well.

5.10 TERMINATION OF A PAC

PACs not used for a consecutive period of thirty days will be disabled. A disabled card can be reactivated upon request but only if the request is received within thirty days from the date of disabling. After a further thirty days the card will be terminated and the customer will need to apply for a new card.



5.0 ACCESS

5.11 REACTIVATION OF A PAC

The reactivation of a disabled card must be requested through the Customer Portal. Customers may be subject to a charge if a reactivation of the card results in a PAC being above the allocation allowance. A terminated card cannot be reactivated.

5.12 ACCESSING ADMINISTRATION SERVICES

Re-programming PACs

The Customer Portal Administrator or Request User can apply for re-programming a PAC via the Customer Portal. Charges may apply in some circumstances, please request the Services Catalogue from Customer Services for details.

Cancelling PACs

The Customer Portal Administrator or Request User can apply for a PAC to be cancelled via the Customer Portal.

5.13 YOUNG PERSONS

No-one under the age of 16 is allowed to enter Global Switch data centres unless accompanied and supervised by a suitably qualified and inducted adult. They must never be left unsupervised while on-site. You must submit a Risk Assessment and Method Statement (RAMS) via the PTW process on the Customer Portal for each individual under 16, proposing to visit the data centre (e.g. work experience students/apprentices). The request must be submitted at least 48 hours before the visit. We reserve the right to decline the request for access.

THE CUSTOMER PORTAL ADMINISTRATOR
OR REQUEST USER CAN **APPLY FOR**
RE-PROGRAMMING A PAC VIA
THE CUSTOMER PORTAL.



6.0 CONNECTIVITY

GLOBAL SWITCH DATA CENTRES PROVIDE A HIGHLY RESILIENT, NETWORK DENSE, LOW LATENCY CONNECTIVITY ENVIRONMENT.

In order to protect and utilise this vital infrastructure efficiently, Global Switch carries out all cross connect installations, removals, maintenance and repairs within areas of our data centres that are not customer dedicated areas.

If you need to install cabling systems within your own private suite, cage, or rack please see **Section 11 - Permit to Work** and **Section 16 - Working in a Mission-Critical Environment**. Global Switch offers an in suite cabling service that you can request via the Customer Portal.

Customer Services can also assist with finding the right connectivity solution for your business along with service providers located at this data centre.

6.1 THE BENEFITS

There are a number of customer advantages to Global Switch managing the pathways and providing a robust cable management system, including:

- A reduction in the risk posed to existing cables during third party installations.
- All work is carried out to strict ISO standards.
- Customer connectivity can be scaled effectively.
- Consistent standards across Global Switch data centres for all cable installations.
- Strict cable infrastructure and physical network security.
- Standardised record-keeping with clear labelling of all new installations.
- Easy access to cross connect inventories.
- Comprehensive Service Level Agreements (SLAs).
- Choice of lead time for the installation of cross connects.

6.2 OUR SERVICES

We provide the following connectivity services:

- **Cross Connects:** are interconnections between defined A and B points from a suite or rack providing direct access to our extensive carrier and cloud service provider community.

- **Fit-outs:** are delivered within your individual suite, cage or rack. Areas of expertise include structured cabling, high density solutions, commissioning and testing, and design advice to formulate a best practice cable management strategy. For more information, please see **Section 9 - Fit-out**.

- **Connectivity:** infrastructure includes fibre and ducting between buildings, cable entry terminations and solutions with enhanced security. For details of our connectivity charges please request the Services Catalogue from Customer Services.

Our carrier community at this site provide an extensive range of services including:

- IP transit, Premium Internet (IPMAN, DIA, BGP) and MPLS/VPLS VPN from the largest Tier 1 and regional providers.
- Metro and international dark fibre.
- Ethernet and wavelength capacity including OTN, SD-WAN, SDH and low latency solutions.
- Direct access to the world's largest cloud services providers.

6.3 TYPES OF CABLING

We offer a range of cables to suit your business needs, including:

- **Fibre** Single Mode, Multimode.
- **Copper** CAT6A and CAT5e.

For bespoke connectivity installations, please contact Customer Services.

Requesting new cross connects

Establishing a new connection at a Global Switch data centre is a straightforward process. You can raise an order via the Customer Portal. You will need to provide the following information:

- The A-end location of those areas (private suites, cages or racks) that you occupy at Global Switch.
- The B-end location which is the destination for the cross connect (this may be in another suite, cage, rack, or a carrier in the Meet Me Room (MMR). Where the B-end is owned by a third party you will be asked to supply an email or



6.0 CONNECTIVITY

document providing authorisation to connect to the B-end of the cross connect.

- The type of cross connect cable and connectors you would like to order.
- The quantity of similar cross connects. Please note that different types or end locations should be placed on separate orders.
- Your installation lead time preference.
- Whether any diverse routing options are required.

Once you have submitted your request via the Global Switch Customer Portal a quotation will be provided online for your approval. Once approved, the installation will proceed based on the timeframe in the request.

When the installation has been completed the status on the Customer Portal will change to 'Completed' and a completion confirmation email will be sent to the requestor. The connection test results will also be available to download.

6.4 DELIVERY TARGET LEAD TIMES

New cross connects

Our delivery target lead times for the installation of cross connects are published in the Services Catalogue for this site (please request from Customer Services). Typically for a standard 2 core installation they are as follows:

- **Standard:** within 5 working days.
- **Premium:** within 2-3 working days.
- **Express:** within 24 hours.

These timescales only apply from the acceptance of the order by Global Switch.

We install cross connects during normal business hours (08:30 hrs to 17:30 hrs) Monday to Friday. For cross connect installations outside of these hours or in cases where you require the service to be fast tracked, please contact Customer Services for assistance and associated charges.

Response and repair

We provide a standard response (4 hours) and repair (8 hours) Service Level Agreement (SLA) for standard fibre single pair or copper CAT6/CAT5e cables installed by Global Switch. This applies on a 24x7x365 basis.

6.5 CROSS CONNECT CHARGES

Global Switch charges a cross connect installation fee and an Annual Recurring Charge (ARC). Details of all cross connect charges are contained in the Services Catalogue which is available from Customer Services.

6.6 ON-GOING ADMINISTRATION

Inventory of cross connects

An inventory report for cross connects requested through the Customer Portal is available together with associated test results which can be accessed via the 'My Orders' section on the Portal.

Removal of cross connects

To remove one or all of your cross connects, please raise a request via the Customer Portal by selecting the 'Cross Connect Decommission Request' option. Charges relating to the removal of cross connects are detailed in the Services Catalogue which is available from Customer Services.

SHOULD YOU REQUIRE ANY ASSISTANCE
IN FINDING THE **RIGHT CONNECTIVITY**
SOLUTION, PLEASE CONTACT
GLOBAL SWITCH CUSTOMER SERVICES.



7.0 CUSTOMER REPORTS

GLOBAL SWITCH OFFERS A COMPREHENSIVE REPORT SERVICE TO ASSIST CUSTOMERS IN THE MANAGEMENT OF THEIR TECHNICAL SPACE.

Standard reports that cover security, temperature, humidity and overall power consumption are provided to customers who have 'service management' included within their contracts. These reports are also readily available as standalone reports. For more information on charges please request the Services Catalogue from Customer Services for details. Global Switch is also able to create bespoke reports to match your precise requirements including:

- **Access and Security:** Track individual card usage (date of issue, when and where it was used) and/or view access to specific locations (i.e. which cards were used to enter a specified area(s)).
- **Airflow:** Monitor cooling (whereby the airflow is measured by each floor grille using a Balometer) and review computational flow diagrams.
- **Air quality:** Appraise the dust particle count within technical areas to ensure you are within acceptable limits, complying to ISO 14644-8. Evaluate the presence of any microbiological organisms.
- **Preventative Maintenance:** Thermographic images of cabinets, as well as hot and cold aisle containment assist in the identification of any hot spots.
- **Power:** Reports can be provided showing either consumption of power to an area or racks within your space, or power consumption to a strip within your rack.
- **Other:** Bespoke reports not covered above will always be considered and provided wherever possible. Please contact Customer Services.

You can find out which reports are available at this site in the Services Catalogue (please request via Customer Services).

7.1 THE BENEFITS

There are significant benefits to obtaining reports about your environment, including:

- Increased visibility of the operation of your technical space.
- Increased capacity to manage and measure energy-saving activity.
- Enhanced security.
- Enhanced capacity to meet legislated reporting requirements.
- The opportunity to 'white label' your reports.
- Reliability and operability of the live space/IT load configurations.

7.2 REQUESTING REPORTS

If you would like a standard report please request it via the Customer Portal or to discuss your bespoke reporting requirements, please contact Customer Services.

GLOBAL SWITCH OFFERS A
WIDE RANGE OF UP-TO-DATE
INFORMATION AND CUSTOMER
AREA REPORTS.



8.0 DELIVERIES AND STORAGE

GLOBAL SWITCH HAS MANY YEARS' EXPERIENCE ASSISTING CUSTOMERS WITH THEIR DELIVERIES. AS PART OF OUR COMMITMENT TO MAINTAINING THE HIGHEST LEVEL OF SECURITY IN OUR DATA CENTRES, ALL DELIVERIES ARE REQUIRED TO BE REGISTERED BEFORE ARRIVAL.

We can provide assistance with a delivery if you do not have on-site personnel, are unsure of exact delivery times or are expecting large or multiple items during build or expansion phases. We also offer a secure storage service.

8.1 THE BENEFITS

The advantages of our stringent delivery procedures and storage services include:

- Peace of mind that all deliveries into Global Switch data centres have been authorised.
- Freedom for deliveries to be made at any time directly to the building.
- Reduced customer time spent waiting for the deliveries.
- Secure data centre environment for storage during build or expansion phases.
- Storage space for large deliveries (subject to availability).

8.2 OUR PROCEDURE FOR RECEIVING A DELIVERY

Prior to despatch

In order to receive a delivery at the data centre, please inform us in advance and follow the steps below:

1. Login to the Customer Portal and complete a 'Delivery request'. You will need to provide the following minimum information:
 - Delivery date.
 - Anticipated delivery time.
 - The number of items.
 - The estimated combined weight of all the items.
 - The estimated combined size of all the items.
 - The recipient's contact name, company, mobile and email details.
 - The sender's contact name, company and mobile details.
 - The name of the courier company.

- How you intend to remove the packaging waste from the data centre – i.e. by yourself or with our assistance.
 - In cases where deliveries require special handling, you will need to provide detailed information which will then be reviewed by Global Switch. In some cases, a Permit to Work may be required.
2. If you also require Global Switch assistance with your delivery or secure storage for your items, you will need to supply further information including the number of days you require storage.
 3. When we receive your request, we will send you:
 - An email and notification via the Customer Portal containing a reference number which authorises the delivery of items not requiring storage or Global Switch assistance, and/or
 - An email and notification via the Customer Portal notifying you of charges for deliveries requiring storage and/or Global Switch assistance. This quotation will need to be accepted by you before we can authorise the delivery.
 4. All deliveries will need to have the following clearly marked on each item:
 - For the attention of [insert Customer Name].
 - Your company name.
 - Full address of data centre.
 - Delivery agent or courier request number.
 5. If you are receiving multiple boxes per delivery, please ensure these are numbered Box 1 of 5, 2 of 5 and so on, with the delivery request number on each box.
 6. Customers should ensure any relevant tax (for example Goods Service Tax (GST)) has been paid before delivery.



PLEASE NOTE:

IF YOU HAVE NOT BOOKED THE STORAGE SERVICE, A DELIVERY MAY NOT BE ACCEPTED BY GLOBAL SWITCH IN THE EVENT THE DELIVERY RECIPIENT IS NOT AVAILABLE.



8.0 DELIVERIES AND STORAGE

Collecting your delivery

Small items such as letters and packages weighing less than 5kg can be picked up from reception. All other items should be collected from the loading bay/storage area – this is a secure area so you will need to arrange access for such collections. Please note that, unless previously arranged, Global Switch does not provide any unloading or handling services – please make sure the courier is aware of this, although a designated loading bay area is available.

If you are not available when the delivery is scheduled to arrive at the data centre and you wish the item to be signed for and/or moved into your suite, then you should tick the 'Receipt item/delivery into suite' option under 'Additional Services' within the delivery request form on the Customer Portal and complete the further information required.

Deliveries placed in storage

For items requiring storage, where the customer is not on site, please ensure that Remote Hands is requested via the Customer Portal, to receipt the delivery and move the items into the designated storage area. You will receive an email notification once your delivery has arrived and is being held by Global Switch. We cannot be held responsible for any damage to the delivery prior to its acceptance by Global Switch.

8.3 PREPAY AND SAVE

We offer a Deliveries and Storage Subscription service which provides a number of pre purchased delivery instances at a reduced cost which can be renewed each quarter. This service not only reduces your costs but also reduces administration with all requests being administered via the Customer Portal, which automatically tracks the number of instances remaining each time a delivery request is submitted.

8.4 CHARGES

For information on Deliveries and Storage charges, please refer to the Services Catalogue available from Customer Services.

8.5 EQUIPMENT REMOVAL

Any equipment over 5kg to be removed from the data centre needs to be requested by an authorised person through the Customer Portal by completing an Equipment Removal Request. It will not be possible to remove any equipment or material not authorised by this process. Global Switch security may conduct a visual check against the items leaving the premises, please see *Section 3.2 – Searches, Security*.

WE CAN PROVIDE ASSISTANCE WITH A DELIVERY IF YOU DO NOT HAVE ON-SITE PERSONNEL, ARE UNSURE OF EXACT DELIVERY TIMES OR ARE EXPECTING **LARGE OR MULTIPLE ITEMS** DURING BUILD OR EXPANSION PHASES.



9.0 FIT-OUT

GLOBAL SWITCH OFFERS FIT-OUT SERVICES TO ITS CUSTOMERS AND ALL WORK IS COMPLETED TO RECOGNISED INDUSTRY STANDARDS. TO MAINTAIN OUR HIGH STANDARDS OF INSTALLATION THROUGHOUT THE DATA CENTRE, THESE ACTIVITIES ARE MANAGED AND COORDINATED BY GLOBAL SWITCH PERSONNEL.

9.1 OUR SERVICES

Our services include:

Airflow management and floor service

We offer a wide range of solutions to optimise the delivery of cool air and the removal of heat generated by IT loads, including:

- Air grille/vent tile.
- Airflow management.
- Installation of temperature and/or humidity sensors in addition to the base system deployment.
- Thermal CFD studies.
- Rack blanking plates.
- Floor strengthening.
- Grommet or brush tile infill.
- Pedestal replacement and relocation.
- Replacement tile service.
- Tile cutting service.

Rack installations

- The procurement, delivery and installation of cabinets within a technical space.

Installation of aisle containment

- The procurement, delivery and installation of equipment to form contained aisles.

Connectivity

We offer a comprehensive design, supply and installation service for a wide variety of connectivity solutions, including:

- Containment systems such as trays, baskets and trunking.
- Cable management.

- Armoured cabling for high security.
- Structured cabling.
- High density solutions.
- Commissioning and testing.
- Design, planning and project management.

Electrical installations

The installation and provision of dedicated power and accessories, including:

- Single phase power.
- Three phase power.
- Protective Earth (Grounding) System.

Security

We can help you enhance the level of security within your space in a number of ways, including:

- Alternative cabinet furniture (e.g. locks and readers).
- Anti-pass back and tailgate solutions.
- Biometric measures.
- Enhanced security cabinets.
- Key cabinet management.
- Secure cage systems (free standing or slab to slab).
- Security - access control systems and CCTV surveillance.

Other

- Bespoke power monitoring solutions.
- Emergency signage.
- Temporary manned security.

9.2 ORDERING AND CHARGES

To discuss your requirements, review how effectively you are utilising your existing space or to order any of the above services, please contact Customer Services. For more information on charges, please refer to the Services Catalogue available from Customer Services.



10.0 ON-SITE FACILITIES

GLOBAL SWITCH PROVIDES A RANGE OF ON-SITE FACILITIES FOR ITS CUSTOMERS.

Our meeting and conference rooms enable you to conduct meetings with potential clients following a sales tour or to engage with colleagues who are office based to enable you to conduct a brainstorming session to resolve a technical problem. Whatever your circumstances are, meeting rooms can be pre-booked and are available to hire on an hourly or daily basis via the Customer Portal. The services include:

- Wi-fi.
- Telephone with speaker function.
- Whiteboard.
- Flipchart.
- Projector and screen.
- Light refreshments and beverages can be provided when arranged at the time of booking (subject to availability).

Please refer to the Services Catalogue available from Customer Services for the options and associated costs for this service.

GLOBAL SWITCH PROVIDES A RANGE OF ON-SITE FACILITIES FOR ITS CUSTOMERS SUCH AS MEETING ROOMS, CONFERENCE FACILITIES AND REFRESHMENTS.



11.0 PERMIT TO WORK

IF YOU WISH TO CARRY OUT INFRASTRUCTURE CHANGES WITHIN YOUR TECHNICAL SPACE (SEE DETAILED LIST 11.2 BELOW), THESE WILL BE SUBJECT TO CONTROLLED PROCESSES THROUGH A PERMIT TO WORK (PTW). THIS SYSTEM IS AN ESSENTIAL PART OF OPERATING A MISSION-CRITICAL SITE AND ENABLES US TO MINIMISE RISK WHEN WORK IS CARRIED OUT AT OUR DATA CENTRES BY ENSURING THAT SAFE METHODOLOGIES ARE IDENTIFIED AND ADHERED TO.

Before you start work, you will need to submit a Risk Assessment and Method Statement (RAMS) outlining the planned activity as well as the control and protective measures that are required.

In advance of the planned work, we will assess whether supervision is necessary. We will then carefully consider and communicate to you the type and duration of any required supervision.

11.1 THE BENEFITS

- The wellbeing, health and safety of all personnel visiting or working at the data centre.
- Reduction of operational risk for all customers and assurance that all work is being carried out in accordance with agreed procedures.
- PTWs are a key part in sustaining the operational integrity of the data centre, ensuring that Global Switch's 'Always On' service to you and other customers is not compromised.
- Before work commences, the PTW provides a thorough quality check on what is happening and when together with the supervision levels provided.
- The PTW procedure offers customers and Global Switch assurance that a clear audit trail of activities exists together with the personnel associated with the planned work.
- Easy ordering through the Customer Portal.

11.2 ACTIVITIES REQUIRING A PTW

A PTW is required for a wide variety of works activities, including:

Cabling

- Communication cabling work that is either high level or within the floor plenum or uses any Global Switch tray or duct.
- Fibre splicing.

Electrical

- Electrical work that requires isolation or a circuit(s) to be energised.
- Access to electrical panels and systems.



IT WILL BE NECESSARY TO PROVIDE TEST CERTIFICATES FOR ELECTRICAL INSTALLATION WORK BEFORE CONNECTING IT TO THE LIVE POWER.



NOTE: PLEASE SEE **SECTION 16 - WORKING IN A MISSION-CRITICAL ENVIRONMENT** AS THIS COVERS RESPONSIBILITIES AND DUTY OF CARE OF ALL PEOPLE WORKING AT THE DATA CENTRE.

Environment

- Dust-creating work, including drilling or cutting.
- Hot Works.
- Removing floor tiles (please see **Section 16.4.8 (n) - Working in a Mission-Critical Environment**).
- Tasks generating significant noise or vibration.

Hazards

- Use of toxic/flammable materials.
- Any activities in the floor plenum.
- Access to the roof.
- Work which has potential to impact on another customer or the operation of the data centre.
- Working at heights.
- Working in confined spaces.
- Movement of large or heavy components (Materials Handling regulations).



11.0 PERMIT TO WORK

- Electro-plated metallic surfaces (or any other material that produces conductive whiskers).
- Combustible materials, including paper, cardboard and foam.

Installation

- Rack/cabinet installations within Colocation, MMRs or shared suites.
- Working in an MMR outside your own rack.
- Rack/cabinet installations even those within a customer's exclusive suite.
- Installation of cable management trays or containment or fibre ducting.
- Security cage installations.

If you are in any doubt about whether work you wish to undertake requires a PTW, please contact Customer Services.

11.3 REQUESTING A PERMIT TO WORK

In order to ensure compliance with ISO 45001 and our own Health and Safety measures as set out in **Section 16 – Working in a Mission-Critical Environment**, we have a five-step process to obtaining a PTW:

1. Your PTW request should be submitted via the Customer Portal at least **48 hours** before the work is proposed to start. The request will need to include:
 - Proposed start date and time.
 - Proposed completion date and time.
 - Overall description of the work.
 - Type of work being performed.
 - A detailed RAMS associated with your PTW request.
 - Details of the area(s) where work will be undertaken.
 - A complete list of all people carrying out the work, including:
 - Full name.
 - Company name.
 - Mobile number.
 - Email address.

- Roles for the project – e.g. primary PTW holder (i.e. Supervisor/Project Lead) or secondary PTW holder (Deputy).

Please remember all those carrying out work will need to hold a valid Site Induction and a Safe Systems of Work Induction, please see **Section 4 - Inductions**.

2. We will review your PTW request together with any other requested works that may impact on your surrounding area.
3. You will receive an email advising you either that your PTW request has been successful (in which case all people named on the PTW will be copied in) or if any revision is required. Where applicable, you will receive a quotation for the Supervision Services and Isolation Services that may be required to support the proposed works.
4. Where applicable, you will need to review the quotation provided and accept the terms and conditions in order for the works to proceed.
5. In the event that your PTW is declined, you will be sent an email stating the reasons. Customer Services will also be informed and can offer guidance if required.

11.4 SUPERVISION

Where PTW activities present operational risk, we will provide an appropriately qualified person to assist with supervision and guidance and to ensure that the work conforms with the PTW. These Supervision Services are in addition to the services required to assess, respond and manage a PTW request.

Supervision Services may not necessarily be required throughout the PTW works; they may only be needed, for example, at the planning, initiation, testing, commissioning and/or go-live stages. Whatever the scope, we work closely with customers to make sure the proposed activities are understood by all parties. To help protect all those working in the data centre, please note you should expect the Global Switch team to make visits during your work activities, to ensure the PTW and RAMS are being adhered to.



11.0 PERMIT TO WORK

11.5 ACTIVE PERMITS TO WORK

Once approved, your PTW should be collected from Reception/Security prior to commencing activities. Once you have received your PTW, please note:

- Only work outlined in the PTW can be carried out and all requirements set out in the PTW must be strictly met.
- If the work is not carried out in accordance with the RAMS or changes are required, we reserve the right to cancel the PTW with immediate effect.
- If Global Switch personnel believe any work (completed or being completed) breaches local legislation or rules in this Handbook, appropriate corrective action will be required. Please see *Section 16 – Working in a Mission-Critical Environment*.
- A copy of all relevant and open PTWs that have been issued and deployed must be clearly displayed where the work is taking place, or be immediately available on request.
- Work must be completed in the time periods approved in the PTW. The PTW should be returned to Global Switch as soon as the work is completed. For incomplete or overrunning work, the PTW needs to be returned as specified on the Permit, for re-issue the following day.
- The PTW holder is responsible at all times for the Access Cards issued under the PTW and their return to Global Switch Security.

Although Global Switch approves the PTW or requires supervision of the works to be conducted it does not accept responsibility for the project management of these works or actions carried out by customers and their contractors. Responsibility for the smooth flow of the works and adherence to the rules and regulations within this Handbook and any statutory/legislative requirements remain with the customer.

In cases where an approved PTW cannot be produced, we reserve the right to suspend any work until a validated PTW can be produced. Please see *Section 16 - Working in a Mission-Critical Environment*.

11.6 ISOLATION SERVICES

We recognise that many PTW activities may require isolation of critical systems and services. In such cases, the work will need to comply with the Safe Systems of Work (please see *Section 16 – Working in a Mission-Critical Environment*) and need to be planned accordingly. It is essential that the Isolation Services are consistent with the PTW activities to be carried out, and that they are performed and managed by Global Switch.

Your evaluation of any requirement for Isolation Services will be verified by Global Switch on receipt of your PTW request and we will inform you of any associated costs in our response.

11.7 ELECTRICAL EQUIPMENT AND DISTRIBUTION

Access to electrical switchboards

Customers are not permitted to work on Global Switch's electrical switchboards. Even if access is required to customer-managed electrical switchboards (i.e. those not managed or maintained by Global Switch), a PTW application nevertheless still needs to be submitted via the Customer Portal.

For any colocation and/or MMR area, you should only use dedicated electrical circuits for your rack or cabinet footprint as instructed by Global Switch.

ONLY WORK OUTLINED IN
THE PTW CAN BE CARRIED OUT
AND ALL REQUIREMENTS SET OUT
IN THE PTW MUST BE STRICTLY MET.



11.0 PERMIT TO WORK

In all cases only Global Switch or our qualified technicians can connect customer equipment to power outlets connected to power distribution boards.

Distribution

The identification, isolation and energising of electrical circuits must be planned and completed by Global Switch. Under no circumstances should customers alter any power provided by Global Switch.

To ensure that the power neither exceeds the technical limits of the electrical circuits nor the capacity limits in your Agreement, it is essential to comply with the power requirements of the manufacturer's specifications.

Customers are not permitted to connect equipment from one rack to a power source (electrical circuit or in rack power bar) from an adjoining rack or cabinet footprint. Nor is it permitted to daisy chain multiple power bars. If you require additional electrical circuits, please contact Customer Services.

Single corded equipment

We provide diverse A and B power to sustain concurrently maintainable services. It is the customer's responsibility to ensure that if you chose to install single corded equipment the necessary precautions are taken.



NOTE: GLOBAL SWITCH RECOMMENDS ALL CUSTOMERS USE ONLY DUAL CORDED EQUIPMENT.

11.8 CHARGES

All PTW activities which are not contracted through Global Switch will incur a daily administration charge as set out in the Services Catalogue (please request via Customer Services).

THE PTW SHOULD BE RETURNED
TO GLOBAL SWITCH AS SOON AS
THE WORK IS COMPLETED.



12.0 REMOTE HANDS

GLOBAL SWITCH OFFERS A REMOTE HANDS SERVICE FOR WHEN CUSTOMERS CANNOT BE AT THE DATA CENTRE IN PERSON. THIS GIVES YOU A PRACTICAL WAY TO PERFORM ROUTINE MAINTENANCE TASKS REMOTELY, AS WELL AS A RAPID ON-DEMAND RESPONSE IF YOU NEED PHYSICAL INTERVENTION TO YOUR EQUIPMENT OR VISUAL ASSISTANCE. GLOBAL SWITCH'S REMOTE HANDS SERVICE WILL WORK UNDER THE DIRECTION OF THE CUSTOMER REQUESTING THE SERVICE.

12.1 THE BENEFITS

- Reassurance through an efficient and rapid service with guaranteed response times.
- Faster response times compared to third party maintainers that need to travel to site.
- Reduced costs and inconvenience by eliminating the need to send your own technical personnel to perform basic tasks.
- Maximising your operational uptime.
- Protection from the damage to your business or reputation that can come from an unexpected outage where mean time to repair (MTTR) is important.
- The service is available 24x7x365.

12.2 OUR SERVICES

Our Remote Hands service includes, but is not limited to, the following:

Manual support

Standard

- Adding, removing, or verifying a demarcation.
- Inventory/labelling of equipment.
- Physically moving equipment (powered off equipment only) including deliveries.

- Power cycling a router, server, switch and soft-booting a server storage.
- Swapping removable storage media.

Advanced

- Connecting a test set or test router to equipment.
- Disconnecting systems from the network in the case of a network security event.
- Entering commands on a console with keyboard.
- Equipment installations and configurations, depending on complexity.
- Inserting, ejecting and storing backup tapes if required.
- Installing or replacing modular blade equipment components.
- Planned maintenance support.
- Troubleshooting problems on servers or any other device installed in customer racks.

Cabling services

Standard

- Providing loopback cables.
- Re-seating or replacing components or cables, depending on complexity.

Advanced

- Carrier interface or circuit testing.
- Cable inventory and organising cables.
- Installing SFPS (Small Form-factor Pluggable) or GBICS (Gigabit Interface Convertors).
- Loop back and signal testing, equipment testing and complex cable configurations.
- Taking light levels.

REASSURANCE THROUGH AN
EFFICIENT AND RAPID SERVICE WITH
GUARANTEED RESPONSE TIMES.



12.0 REMOTE HANDS

Observations and reporting

Standard

- Equipment physical observation, describing or reporting on indicators or display information on equipment or consoles.
- Investigating equipment power issues.
- Site survey and inspection.
- Visual inspection/verifications of devices to assess equipment status to assist with remote troubleshooting.

Advanced

- Carrying out diagnostic and signal testing for cross connection circuits.

If you need additional services please contact Customer Services for further information.

12.3 ORDERING SERVICES

If you need to use our Remote Hands service, please make your request via the Customer Portal. You will need to supply the following information (failure to do so may result in a delay to the response times as outlined in 12.4 in this section):

- A reference number (for invoicing and tracking purposes).
- Your company name.
- Contact person's name, including their telephone number and email address.
- Location or suite name.
- Cabinet/rack number.
- Equipment type/name.
- Actions required.



IF YOU HAVE AN EMERGENCY REQUEST, PLEASE USE THE CUSTOMER PORTAL AS NORMAL, BUT IN ADDITION PLEASE TELEPHONE CUSTOMER SERVICES TO CONFIRM THAT IT HAS BEEN RECEIVED.

During the request process, you will be able to see the hourly rates, including those for Out of Business Hours. Once submitted a technician will be allocated and you will receive an email confirming that your request is being actioned. On completion of the work, you will receive a further notification via email and the request status on the Customer Portal will change to 'Completed'.

If we are unable to meet your request for any reason, we will send you a message via the Customer Portal and by email explaining why it has not been possible. Please contact Customer Services to discuss your requirements.

Any personal information that we collect from you, in the ordering process, will be processed in line with our Privacy and Cookies policies (please see the Global Switch website globalswitch.com).

12.4 RESPONSE TIMES

We understand the importance of rapid response times when you require our Remote Hands service, and we are committed to meeting the following response times (taken from the time of an authorised order to when the technician is ready to start):

Monday to Friday

08:30 hrs to 17:30 hrs

30 minutes

All other times

Including weekends and bank holidays

120 minutes



PLEASE NOTE GLOBAL SWITCH DOES NOT HANDLE OR ACCESS CUSTOMER DATA. PLEASE SEE NEXT PAGE FOR LEGAL NOTES.



12.0 REMOTE HANDS

12.5 PREPAY AND SAVE

Remote Hands Support Plans are available and offer you a discount programme based on a set number of pre-purchased hours with two payment options available, either monthly or annually. This allows you to better predict your operating costs and provides you with the ability to choose a plan that suits your needs.

Remote Hands Support Plans can be pre-ordered via the Customer Portal (during Business Hours only), giving you peace of mind that attendance can be arranged swiftly within the response times, see above. If you chose not to order a Plan, we will endeavour to support you with our Remote Hands service as normal.

12.6 CHARGES

Pricing for our Remote Hands service can be found in the Services Catalogue (please request via Customer Services).

LEGAL NOTE:

In respect of the provision of Remote Hands Services:

- except where expressly instructed to do so by the Customer, Global Switch is not responsible for, and is under no obligation to perform, any activities involving the Equipment including the inspection, installation, testing, configuration, replacement, operation, movement, connection or any other activity relating to the Equipment (Equipment Activities);
- to the extent expressly instructed to undertake Equipment Activities pursuant to the purchase of any Data Centre Services by the Customer (including as part of any Remote Hands Services), such activities are not subject to the GDPR or equivalent laws as Global Switch will not access, process or otherwise carry out any operation on any personal data when performing such activities; and
- Global Switch's obligations, in the performance of any Remote Hands Services, do not include making any decisions in relation to the Equipment or its management nor taking any proactive steps in respect of the same. In respect of any Remote Hands Services the Customer shall provide detailed instructions in relation to any Equipment Activities required pursuant to such services. Global Switch shall not be under any obligation to perform any Remote Hands Services unless and until it has received and acknowledged, in writing, such instructions and it has completed all reasonable checks in consultation with the Customer to ensure that those activities do not result in Global Switch accessing or otherwise processing any personal data stored on the Equipment.





13.0 SUPERVISION AND SPECIALIST SERVICES

VISITING AND WORKING IN A MISSION-CRITICAL ENVIRONMENT REQUIRES A CERTAIN LEVEL OF KNOWLEDGE AND AWARENESS OF THE COMPLEXITY, AND POTENTIAL HARM OF THE INFRASTRUCTURE.

Global Switch offers Supervision Services that provide additional protection to our data centres and peace of mind for our customers and their personnel. We have a team of qualified and skilled engineers, available 24x7x365, who are able to provide supervision, guidance and/or instruction.

13.1 OUR SERVICES

Our services include:

Supervision

Certain Permit to Work (PTW) (please see **Section 11**) activities undertaken by customers or their contractors present operational risk, and therefore it is necessary to have an appropriately qualified person to assist with the supervision and to provide immediate guidance to ensure that the work conforms with the PTW. This important service is designed to ensure the data centre's critical infrastructure is not compromised as well as to ensure all those involved adhere to local regulations and our strict safety procedures as outlined in this Handbook.

If you require, for example, an individual to tour the data centre, or alternatively have a person who needs to work in your technical space, who does not hold a valid Site Induction and you are unable to provide an inducted colleague yourself,

Global Switch is able to provide appropriate supervision in these circumstances. The benefit of this service is to ensure that your visitors remain safe at all times and adhere to our strict safety procedures while working in a mission-critical environment.

Specialist Services

Global Switch is able to offer Specialist Services to assist you with technical guidance, technical support, programme management and security management. To discuss your requirements and to order services, please contact Customer Services.



PLEASE BE REMINDED THAT IT IS IMPORTANT FROM A HEALTH AND SAFETY PERSPECTIVE THAT YOU ENSURE THE WORKS ARE SUITABLY SUPERVISED AND COMPLETED SAFELY BY COMPETENT CONTRACTORS.

13.2 CHARGES

All Supervision and Specialist Services will incur a charge as set out in the Services Catalogue (please request via Customer Services).

GLOBAL SWITCH OFFERS SUPERVISION SERVICES THAT PROVIDE ADDITIONAL PROTECTION TO OUR DATA CENTRES AND **PEACE OF MIND** FOR OUR CUSTOMERS AND THEIR PERSONNEL.



14.0 TECHNICAL CLEANING

CONTAMINATION WITHIN A TECHNICAL SPACE NOT ONLY CAUSES EQUIPMENT TO WORK INEFFICIENTLY, IT ALSO CAN LEAD TO UNPLANNED AND UNNECESSARY DOWNTIME. TO MINIMISE THE RISK OF CONTAMINATION, GLOBAL SWITCH HAS IMPLEMENTED A STRICT REGIME OF TECHNICAL CLEANING THROUGHOUT ITS DATA CENTRES, WITH ALL CLEANING CARRIED OUT BY ITS APPROVED CONTRACTORS.

These standards form part of our preventative maintenance strategy for improving service delivery to all Global Switch customers, enabling Global Switch to maintain ISO standard certification of air cleanliness throughout its data centres.

14.1 THE BENEFITS

- Both the monitoring of the environment and expert cleaning maintain the working integrity of our data centres.
- Our regular cleaning regime reduces potential failure from dust, particles from human traffic, oxidisation/zinc whiskers and from the installation of new equipment.
- Reduction in the risk of downtime.
- Compliance with ISO 14644-8.
- Global Switch's purchasing power ensures that our specialist technical cleaning services are competitively priced and compliant with recognised standards.
- Certification provided to satisfy warranty clauses by IT hardware manufacturers.
- Saving you administrative and management time to organise the delivery of technical cleaning and associated paperwork.

14.2 OUR SERVICES

We apply a standard benchmark for data centre cleanliness based on ISO 14644-8 which is independently verified through an industry recognised specialist. To achieve this requires a mandatory above-floor clean every six months and a sub-floor clean annually, please see **Appendix 3** for full details.

In order to achieve ISO 14644-8, we strongly recommend that customers request air and surface sampling for their space on a three-monthly basis as this can pre-empt issues that are known to occur in un-cleaned or poorly cleaned spaces.

Full details of our technical cleaning services can be found at **Appendix 3**.

14.3 ORDERING TECHNICAL CLEANING

If you require the standard Technical Cleaning services (six monthly or annually), please request these by completing a Technical Cleaning Request on the Customer Portal (globalswitch.service-now.com/gc_portal).

However, if you have bespoke requirements, please contact Customer Services in the first instance.

Outline charges for our Technical Cleaning service are set out in the Services Catalogue (please request via Customer Services) – the exact cost will depend on the services you require and the scale at which you operate.

BOTH THE MONITORING OF THE ENVIRONMENT AND EXPERT CLEANING MAINTAIN THE WORKING INTEGRITY OF OUR DATA CENTRES.



15.0 WASTE DISPOSAL

GLOBAL SWITCH DATA CENTRES ARE A SAFE ENVIRONMENT FOR YOU, YOUR EMPLOYEES, OUR STAFF, OUR CONTRACTORS AND FOR ALL OTHER VISITORS. EVERYONE WORKING AT OUR DATA CENTRES NEEDS TO OPERATE GOOD HOUSEKEEPING PRACTICES SO YOUR SPACE IS KEPT CLEAN, TIDY AND SAFE AT ALL TIMES.

Poor housekeeping can lead to contamination within technical spaces, increased health and safety risks, reduced efficiency of IT equipment and can also lead to unnecessary downtime.

All work areas need to be kept free of rubbish at all times and you are required to dispose of waste as it is generated. Global Switch provides a Waste Disposal service which can be requested via the Customer Portal.

If your area(s) is found to be non-compliant and presents an operational risk, we will contact you in the first instance to rectify this, failing which we reserve the right to make good these areas and to recharge any costs incurred. Please also see **Section 16 - Working in a Mission-Critical Environment** for more information.

15.1 THE BENEFITS

- Free up your time taking away the need to be on site and having to oversee the removal of waste.
- By keeping your area free of waste this will minimise the generation of harmful airborne particles which can result in equipment failure.
- Utilising Global Switch's purchasing power to provide competitively priced Waste Disposal services.
- Easy to order Waste Disposal service via the Customer Portal.

15.2 OUR SERVICES

- **General Waste:** Global Switch is able to dispose of most general items such as cardboard, pallets and plastics and will recycle as much as possible. Dedicated bins can be ordered to remove your waste. Please contact Customer Services for more information.

- **Electrical Waste:** Global Switch is also able to offer a disposal service for any items falling under the Waste Electrical and Electronic Equipment (WEEE) regulation or local variants excluding all solid state drives/disc drives/media. Please also see **Section 16 - Working in a Mission-Critical Environment** for more information.

15.3 DE-BOXING

In the interests of cleanliness, compliance with ISO 14644-8 and best data centre operation practice, de-boxing or removing packaging is not permitted within your technical areas. We have designated areas for this, so you can easily remove packaging before goods enter your technical space. If you would like to book one of these areas, please contact Customer Services. Please also note that it is your responsibility to retain any packaging required for warranty or return purposes.

15.4 REQUEST WASTE DISPOSAL

If you require the removal of waste, login to the Customer Portal (globalswitch.service-now.com/gs_portal) and complete and submit a Waste Disposal request. On submission a confirmation email will be provided and you will be able to track progress of your request via the Customer Portal.

However, if you have bespoke requirements, please contact Customer Services before submitting your request.

15.5 CHARGES

Charges for our Waste Disposal service are set out in the Services Catalogue (please request via Customer Services).



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

GLOBAL SWITCH HAS ROBUST OPERATING PRACTICES IN PLACE WHICH ARE VITAL FOR PROTECTING INDIVIDUALS, ORGANISATIONS AND THE COMPLEX OPERATING ENVIRONMENT OF OUR DATA CENTRES.

These practices are tailored to comply with country and local laws, regulations, specific requirements, standards, codes of practice, building codes, fire regulations, Health and Safety and other relevant statutory and regulatory requirements. It is the responsibility of all personnel visiting our sites to be aware of and comply with these local laws and regulations.

Inductions

- All those requiring access (both permanent and visitor access) must successfully complete a Site Induction and test to demonstrate an individual's understanding on how to behave in a mission-critical environment.
- Those undertaking physical work, such as cable management, equipment installation or mechanical and electrical work will also need to successfully complete a Safe Systems of Work Induction and test (please see *Section 4 - Inductions*).

16.1 CUSTOMER RESPONSIBILITIES

This Handbook contains the guidelines that must be adhered to by all customers, your contractors and other visitors while at our data centres. If these guidelines are ignored or breached, we reserve the right to sanction individuals or companies that we believe have worked, are working or plan to work outside them.

Global Switch data centres are tightly controlled environments where all work activity must be carefully planned by you to comply with recognised Safe Systems of Work. Your work instructions and procedures need to be documented and include a Risk Assessment and Method Statement (RAMS) which you need to review and where appropriate have approved via our Permit to Work (PTW) process (please see *Section 11*).

As a Global Switch customer, you are responsible for ensuring that your employees and contractors are competent, experienced, qualified, licensed and have the necessary personal protective equipment (PPE) to carry out work in your technical area.

You must also report any safety issues or concerns you identify to Global Switch immediately.



A RAMS WILL BE REQUIRED FOR MANY ACTIVITIES WITHIN THE DATA CENTRE. YOU SHOULD TAKE ADEQUATE SAFETY PRECAUTIONS AT ALL TIMES, FOR EXAMPLE, WHEN WORKING IN CONFINED SPACES AND AT HEIGHTS, USING RAISED ACCESS PLATFORMS, LADDERS OR WORKING WITH ELECTRICAL SERVICES, MECHANICAL SERVICES, CHEMICALS, HIGH INTENSITY LIGHT SOURCES OR COMPLETING HOT WORKS.

16.2 UNACCEPTABLE PRACTICES

In order to provide a safe working environment for all occupants and visitors to our data centres, we have identified various practices (general breaches and serious breaches) which constitute unacceptable practices. This list is not exhaustive but gives an indication of the type of unacceptable practice while working in a mission-critical environment. We recognise that on occasion people may make mistakes and may not deliberately endanger themselves or others, but we will nonetheless inform you of these if they apply. However, if we believe there is intent to ignore these guidelines we will take appropriate steps – please see 16.3 below.



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

General Breaches

- Breach of Health and Safety rules or local legislative guides.
- Failure to provide appropriate PPE to your personnel, together with failure to monitor and manage any misuse.
- Creating Health and Safety hazards.
- Carrying out work in such a way that it causes disruption to other occupants.
- Crossing permanent or temporary barriers or attempting to go into restricted areas. We apply these rules for the protection of everyone who uses our sites, including customers and their visitors.
- Misuse of access cards (e.g. giving it to another person to use).
- Removal of issued keys from the data centre without prior approval from Global Switch.
- Using cameras (including those in any mobile phone or other device) to take photographs or video content anywhere in a Global Switch data centre (unless you have first obtained the express consent of the data centre's Managing Director).
- Abandoning waste/rubbish anywhere within the data centre.
- Smoking, including the use of electronic smoking devices (e-cigarettes), anywhere other than the designated external smoking areas.
- Food and drink consumption in technical or other communal spaces such as corridors – this is only allowed in office, meeting or designated areas.
- Listening to audio devices and wearing headphones inside the technical areas.
- Ignoring any reasonable instruction from Global Switch.
- Threatening behaviour.
- Bullying or harassment.
- Inappropriate attire, both for general working in a mission-critical environment and where works are being performed under a PTW.

Serious Breaches

- A second or repeated first warning of any of the 'General Breaches'.
- Tailgating a person (using their pass to gain entry by following close behind) through restricted areas.
- Attempted or actual entry into unauthorised areas.
- Serious breach of Health and Safety rules or local legislative guides.
- Any activities or actions that impact the safe and effective operations at any Global Switch data centre.
- Prohibited work, i.e. working outside of the scope of your authorised PTW.
- Criminal behaviour and/or intent, e.g. theft, fraud, damage and dishonesty-related offences.
- Creation of a 'Global Switch' page on any social media website or unauthorised use of Global Switch's name or logo.
- Behaviour considered discriminatory based on age, race, gender, gender re-assignment, marriage and civil partnership, pregnancy and maternity, religion or belief, sexual orientation or disability.
- Behaviour which constitutes harassment of a sexual nature.
- Physical violence or threats of violence.
- The consumption of alcohol unless at a pre-arranged and authorised function in an approved designated area.
- Serious incapability while on duty which is believed to be as a result of consuming alcohol or drugs, the misuse of drugs or the possession of illegal/inappropriate drugs whilst at the data centre.
- Possessing (on-site) an offensive weapon or firearm.



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

16.3 ACTIONS BY GLOBAL SWITCH

Where a general breach has occurred, we will assess its severity and may give a verbal warning and issue a formal notice to the individual and their company.

In cases where repeated breaches and serious breaches occur, we may decide that the individual(s) should be excluded from the site temporarily or permanently. Depending on the nature of the incident, this exclusion may require retraining and/or completing the appropriate Induction(s) again.

We reserve the right to report to the relevant government authority any suspicions we have (and to provide evidence, e.g. CCTV footage) regarding activity that we believe to be criminal or a breach of statutory law.

16.4 SAFE SYSTEMS OF WORK

Safe Systems of Work is a globally recognised process, which protects all those working on critical systems from harm and minimises downtime. When working on mission-critical systems, for example electrical, mechanical and fire, the Safe Systems of Work principles are paramount. Please see both *Section 1 - Putting Safety First* and *Section 4 - Inductions*.

16.4.1 Critical Fire and Life Systems

Critical fire and life systems provide essential life safety services and safeguards to all customers and people working in or visiting the data centre during an emergency or provide building and fabric protection.

No work should be carried out on any fire and life safety system or equipment unless authorised by a Global Switch Responsible Person.

Only an approved Global Switch person may isolate and/or reinstate these systems.

16.4.2 Critical Electrical Systems

Critical electrical systems includes everything from the data centre's incoming utility power supply to your equipment's point of connection. It is important to note that no one should work on or near any live conductor(s) where danger could arise unless it is unreasonable in all circumstances for it to be 'dead'.

Only a Global Switch recognised electrical specialist (qualified and experienced) can carry out switching of circuit breakers.

No cable will be terminated until it has been inspected and tested in accordance with the local electrical regulations using certified test equipment. Likewise, no cable will be disconnected until the circuit has been tested and verified as 'dead'.

16.4.3 Critical Mechanical Systems

Critical mechanical systems include all equipment that provides cooling to the essential and non-essential heat loads within the data centre.

When risk assessing works on machinery and equipment for possible hazards, sufficient consideration must be given to any moving parts that can be reached. Loose clothing, long hair which is not tied back, watches and jewellery are not permitted near rotating plant/machinery.

Machine guards should remain installed or, when necessary, only removed under a PTW for maintenance and repair. Primary and secondary water systems valves must not be operated unless stipulated within the PTW.



IF YOU BELIEVE THERE IS RISK AT A LOCATION OR INSUFFICIENT CARE HAS BEEN TAKEN TO PROTECT PEOPLE AND PROPERTY, YOU AND YOUR CONTRACTORS HAVE A DUTY OF CARE TO CONTAIN THE RISK AND REPORT IT IMMEDIATELY TO GLOBAL SWITCH SECURITY.

16.4.4 Prohibited work

Prohibited work includes the removal or opening of any protective panels, doors or guards that could potentially lead to the exposure of mechanical or electrical components, unless specifically approved by Global Switch in your PTW.

16.4.5 Tools and equipment

We do not provide tools or equipment to you or your contractors. All tools used within a Global Switch data centre must be fit for the purpose for which they are being used. They should also be in good state of repair, tested, certified and must comply fully with local statutory safety requirements. Only 'general use' power sockets may be used for power tools/test equipment, and an earth leakage protection device must be used.



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

16.4.6 Personal Protective Equipment (PPE)

PPE is required in certain areas of our data centres and/or during works that involve risk. For example, appropriate ear protection must be worn when working in noisy plant/machine rooms.

We do not provide PPE for customers or their contractors.

In accordance with country law and the data centre practices as set out in this Handbook, it is the responsibility of you or your contractor to understand the PPE requirements and supply the appropriate PPE to your personnel while operating at Global Switch data centres.

The Project Manager or responsible person (from the customer or contractor) must ensure that the supplied PPE is being used appropriately during the work. They will also need to monitor and manage any misuse.

16.4.7 First Aid kits and spill kits

As part of your RAMS you will need to ensure that adequate First Aid kits and/or spill kits are available in the immediate vicinity and appropriate disposal facilities and arrangements are in place. Please see *Section 1 – Putting Safety First*.

16.4.8 Work activities

The following sections include, but are not limited to, the work activities that you may need to detail in your RAMS.

a) Work area containment

All physical assets and equipment near the work area must be protected against accidental damage or contact.

b) Safety signs and barriers

To safeguard everyone on the site and to ensure compliance with Health and Safety regulations, warning and/or safety signs together with rigid barriers, if required, must be erected and

positioned during the progress of any works. The use of a tape is not considered a barrier. Details of these measures will need to be defined in the RAMS accompanying the PTW.

c) Restricted access and egress (formerly Confined Spaces)

Your RAMS will need to include safe means of access and egress for any activity within restricted areas. Any identified areas will require the activity to be carried out under a permit by suitably trained persons.

d) Working at heights

You should avoid working at heights wherever possible. If this cannot be avoided, only suitably certificated equipment used by qualified and experienced personnel is permitted.

Access platforms should only be constructed by qualified personnel and must be in a good state of repair. The platforms must be appropriately certified (featuring certification tag(s)). All ladders and stepladders used in our data centres must meet approved local specifications and standards and be used in accordance with local Health and Safety regulations and guidance.

Global Switch requires the construction of access platforms to be of non-conducting material for example metallic aluminium ladders are not permitted. When working from cradles, hoists and platforms, safety harnesses and helmets must be worn.

e) Working alone

Global Switch's practices have been developed to avoid lone working in hazardous environments. Data centres are largely unoccupied spaces and customers need to consider the safety of their employees and contractors and put in place suitable lone working arrangements if deemed necessary by them. No solo work should be undertaken that may put an individual at risk.

PPE IS REQUIRED IN CERTAIN AREAS
OF OUR DATA CENTRES AND/OR
DURING WORKS THAT INVOLVE RISK.



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

f) Hot works (welding/cutting/soldering/braising)

The use of heat guns, blow torches or welding, grinding, soldering and other heat-generating equipment will require a Hot Works Permit for any work inside or outside the data centre. The conditions of the Permit must be followed, including a full fire watch starting the moment the work commences and continuing without a break, up to and including for an hour after completion of the works.

g) Containment of dust, particles, debris and liquid

Any activity that has the potential to produce smoke, dust, spills or other loose debris or residue must be identified in your RAMS and PTW. Adequate temporary precautions including the provision of additional ventilation or containment need to be provided. If necessary, the isolation of smoke detection apparatus will need to be arranged in advance with Global Switch.

Customers are responsible for the removal of waste material from their workspace, and where a vacuum cleaner is required it must contain a High Efficiency Particulate Air filter.

h) Maintaining fire zone integrity

On completion of work, all fire wall/barrier penetrations must be permanently and appropriately fire stopped, with temporary bag fillers or pillows used if the work is extended and cannot be completed in one day.

i) Housekeeping and clean-up

Rubbish and spills must be cleared as work progresses, with the area left clean and tidy and ready for inspection before you leave the data centre. Unpacking needs to be completed in a controlled manner to minimise the contamination of technical suites and areas. There are a number of de-boxing locations available (please speak to Customer Services).

Storing flammable or hazardous substances is not allowed without prior approval from a Global Switch Responsible Person.

j) Protection of surfaces

All floors and surfaces must be protected against possible physical damage during the work, including the use of approved fire retardant materials where necessary. We reserve the right to stop work where we believe the correct

precautions have not been taken. If you need more information or assistance, please contact Customer Services.

k) Floor loading

The loading capacity of floors should be checked prior to moving or placing any equipment or materials weighing more than 250kg. For loads of 250kg or greater a PTW should be requested and a detailed RAMS provided for Global Switch's review (see *Section 11 – Permit to Work*). Where necessary, load spreader plates should be used (please also see *16.4.9 (g) - Manual Handling* in this section).

l) Floor tile cutting

The cutting of floor tiles is prohibited. If you need tiles to be cut, please complete a PTW (please see *Section 11*).

m) Perforated/vented tiles

Air distribution tiles positioned within your dedicated area(s) may only be relocated or adjusted by personnel authorised by Global Switch. If you need to move these tiles, please contact us so we can offer guidance on ensuring that the cooling within your dedicated area is not compromised nor has potential to breach the environmental Service Level Agreement.

n) Removing floor tiles

The lifting of floor tiles or grilles by customers or their contractors can only proceed following authorisation and a PTW from Global Switch (please see *Section 11*).

o) Noise and vibration

Construction and installation works which produce significant noise or vibration will require a PTW. The PTW will need to limit the impact of such works on users of Global Switch premises. Please request a PTW via the Customer Portal.

p) IT load distribution connected to Global Switch's electrical infrastructure

For reliable performance it is important that there are balanced IT loads in cabinets, rows, cages and suites. In order to achieve this, you will need to review your load profile with Global Switch at the start of your deployment and then if the load changes (please see warning note below).

Only Global Switch approved persons are authorised to operate circuit breakers (please see *Section 11.7 – Permit to*



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

Work). However, in order to initiate switching, you will need to submit a PTW and request circuit energisation together with the initial load profile per phase and with the estimated load forecasts.

For single phase powered cabinets, Global Switch will select the phase applied. Where customers distribute single phase IT loads within their deployment from three phase supplies (e.g. within each cabinet) you will need to work with Global Switch to ensure that as loads are applied within your contracted space sufficient care is taken to balance the electrical loads drawn from Global Switch's infrastructure. This care is also required either at technology refresh or as you are nearing the end of your contract when loads will need to be removed.



NOTE: WHEN YOUR LOADS ARE GREATER THAN 30% OF YOUR CONTRACTED POWER, YOU WILL NEED TO MANAGE THE BALANCE BETWEEN PHASES TO WITHIN 5%. WHEN YOU REVIEW YOUR LOAD PROFILE AT LOAD CHANGES, WE CAN ASSIST YOU WITH ANY LOAD BALANCING. IT IS IMPORTANT THAT THRESHOLDS ARE MAINTAINED, AND IF CHANGES ARE NOT MADE WITHIN AGREED TIMEFRAMES, GLOBAL SWITCH RESERVES ITS RIGHT TO EITHER ADJUST OUT OF BALANCE LOADS, OR SUSPEND YOUR POWER SLA'S UNTIL YOU RECTIFY THE IMBALANCE.

16.4.9 Hazards

a) Incident and hazard reporting

Everyone visiting the data centre is responsible for reporting incidents and hazards, including 'near misses', as soon as they are aware of them. As mentioned in **Section 1** of this Handbook, all such occurrences should be recorded in the Site Accident Book.

If a hazard is identified, you must take all reasonable action to minimise the risk and report it to Global Switch Security for immediate action.

b) Control of Substances Hazardous to Health (COSHH)

Any potentially hazardous substances required by you or your contractors for use in our data centres will need to be approved by Global Switch prior to their arrival on site. We must also approve any request to store chemical/hazardous materials at the data centre – e.g. fibre splicing materials or equipment cleaning agents.

Storage will need to comply with the relevant local statutory and regulatory requirements (COSHH or local equivalent). You will need to provide Material Safety Data Sheets specifying, for example, the handling and dangers of the substance together with quantities, for inclusion in the site register.

No paints, paint thinners, petrol, oil, or any other highly flammable liquids, gases, or other material may be stored at this site without the prior permission from Global Switch – please contact Customer Services.

c) Batteries

The demand for improved battery performance has resulted in the adoption of new technologies, some of which can increase the fire risk compared to use of traditional cells. Should you need to install new technology, such as lithium-ion, batteries, Global Switch will need to review and agree your proposed installation. You will need to provide details on the design, fire suppression and emergency response.

d) Explosive and radioactive material

No explosive (including cartridge-operated tools) or radioactive material may be brought on to this site without the prior permission from Global Switch.

e) Laser light

Laser levelling or measuring equipment may be used only when approved through a PTW. It is your responsibility as a Global Switch customer to ensure that your staff or contractors who are working with laser equipment are trained in its use and that their health and safety is adequately protected (e.g. that the correct PPE is used and appropriate signage is displayed).

Only recognised and qualified personnel are permitted to work on fibre optic cabling equipment. Safety precautions and manufacturers' recommendations should be followed. All such activity will require a PTW. Particular care should be taken to comply with international signage guidance relating to lasers.



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

f) Hazardous waste

Hazardous waste is defined as waste that presents a physical or environmental hazard, such as batteries, asbestos, oils or chemicals. Customers generating hazardous waste should be able to demonstrate that it has been disposed of in accordance with local legislation.

g) Manual handling

Avoid manual handling where possible, by mechanising the process. If that is not possible, you are responsible under local legislation to ensure that your employees or contractors who are moving or handling loads are suitably trained and competent at manual handling. You are also responsible for ensuring that any equipment used in the course of such work is periodically inspected and tested as fit for use.

16.4.10 Restricted materials

Our systematic approach to restricted materials keeps all data centres clean and reduces the risks associated with system failure. Restricted materials include anything that could potentially cause harm to the data centre's infrastructure.

Examples of restricted materials include, but are not limited to:

- Electro-plated zinc surfaces.
- Food and/or drink (except in designated areas).
- Materials that shed surface particles, or negatively affect the environment or surrounding materials.
- Packaging materials, including cardboard and foam.
- Wood, including wooden pallets and ladders.
- Water.
- Any other materials or items that could affect the normal operation of technical space or customers' operations at the data centre.

16.4.11 Energy efficiency of the critical environment

Global Switch has committed to purchase 100% renewable electricity across all its data centres by 2030.

Energy efficiency plays an important role in the management of the energy consumed. Reduction in electricity usage can be achieved through good energy efficiency practices such as airflow management in the technical space.

Global Switch recommends the practices that are set out as Best Practice Guidelines in the EU Code of Conduct on Data Centre Energy Efficiency.

Areas for the customer to consider include:

a) Airflow Management

Within the raised floor any obstructions are likely to cause airflow restrictions which can lead to the overheating of IT equipment and a reduction in energy efficiency. Global Switch works with customers to ensure airflow management is optimised for the layout required. Please see *Section 9 – Fit-out*.

Above the raised floor, at the rack level, airflow management is also important. Customers should manage their IT containment as follows:

- Installation of blanking plates or cover plates within the IT racks to avoid short circuiting of cooling.
- Installation of aperture brushes (draught excluders) at floor openings at the base of the rack.
- Blanking plates across gaps at the sides, top and bottom of the rack.

Customers with private suites need to deploy air containment systems, i.e. 'hot' or 'cold' aisle, and should install blanking panels to their rack aisles to avoid short circuiting of the cooling airflow. Doors to any containment system should be kept closed.

b) Technical suite temperature and humidity ranges

Global Switch designs and installs its suite cooling infrastructure to operate within ASHRAE TC9.9 guidelines, using supply air control systems.

Customers must operate their IT equipment to complement these operating conditions to maximise energy efficiency.

c) Customer equipment

Customers should consider installing equipment that meets global energy standards, for example EU Eco Design/Energy Star compliant hardware.

In pursuit of energy efficiency, Global Switch recommends that customers avoid installing equipment that generates excessive harmonic currents or those with a poor power factor.



16.0 WORKING IN A MISSION-CRITICAL ENVIRONMENT

d) Phase balancing

It is important for energy efficiency to balance loads across each of the three phases supplied from the Global Switch infrastructure. For more information on electrical power balancing, see **16.4.8 (p) - IT load distribution connected to Global Switch's electrical infrastructure** above.

e) Environmental awareness

As countries across the globe become more environmentally focused, legislation is being introduced to control and monitor emissions and energy use, such as the new EU directive on Energy Efficiency. This will require customers to declare both the emissions metrics from the use of your technical space and the volume of data processing and transmission you are undertaking.

16.5 GLOBAL SWITCH PLANNED PREVENTATIVE MAINTENANCE (PPM)

In accordance with manufacturers' recommendations and good data centre practice, we carry out a PPM programme across our asset register of mechanical and electrical plant. If this work might temporarily affect your dedicated area(s), we will inform you in advance of the maintenance scheduled to take place.

AS A GLOBAL SWITCH CUSTOMER,
YOU ARE RESPONSIBLE FOR ENSURING
THAT YOUR STAFF AND CONTRACTORS
ARE COMPETENT, EXPERIENCED,
QUALIFIED AND LICENSED.



17.0 SERVICES CATALOGUE

THE SERVICES CATALOGUE CONTAINS THE PRICING INFORMATION FOR THE VARIOUS SERVICES AVAILABLE AT GLOBAL SWITCH DATA CENTRES. YOU CAN REQUEST SERVICES VIA THE CUSTOMER PORTAL AND THE SERVICES CATALOGUE CAN BE REQUESTED FROM CUSTOMER SERVICES.

17.1 SERVICES AVAILABLE VIA THE CUSTOMER PORTAL:

- Access to the data centre including the Site and Safe Systems of Work Inductions.
- Cross Connects.
- Customer Reports.
- Deliveries and Storage.
- On-Site Facilities, e.g. meeting rooms.
- Permit to Work.
- Remote Hands.
- Technical Cleaning.
- Waste Disposal.

17.2 SERVICES CURRENTLY AVAILABLE THROUGH CUSTOMER SERVICES:

- Fit-out.
- Specialist Services.
- Supervision.

17.3 PRICING

Pricing for Data Centre Services can be found in the Services Catalogue which can be requested from Customer Services.

YOU CAN REQUEST SERVICES AND FIND AN UP-TO-DATE LIST OF WHAT WE OFFER ON THE CUSTOMER PORTAL OR FROM CUSTOMER SERVICES.



18.0 INVOICING – GLOBAL SWITCH AMSTERDAM

IN ORDER TO ASSIST YOU WITH THE PAYMENT OF YOUR RENT AND POWER TOGETHER WITH OTHER SERVICES REQUESTED THE RELEVANT INFORMATION FOR GLOBAL SWITCH AMSTERDAM IS:

18.1 BILLING/CREDIT CONTROL DETAILS

As a Global Switch customer, you will be billed for rent and power in accordance with the terms and conditions set out in your contract. Rent is normally billed quarterly or annually in advance. Power recharges are billed either at a flat rate or as an actual usage – this will be stipulated in your Agreement.

Data Centre Services, outlined in the Services Catalogue (available via Customer Services), that you order will be billed separately and normally within one month of those services being received. Payment should be made within 30 days of the invoice date, with late payments incurring penalty fees.

18.2 PAYMENT DETAILS

We accept payments by BACS to the following accounts:

Account Details

Global Switch Amsterdam

Account Name

Global Switch Amsterdam BV

Reference

Global Switch Customer

Bank

HSBC The Netherlands

Sort Code

N/A

Account Number

421-006677-001

BIC

HSBCNL2A

IBAN

NL54 HSBC 0782 5351 00

18.3 REMITTANCE ADVICE

To ensure efficient processing of your payment, please provide a remittance advice for each payment made. You can send it to us by email (see [Section 19 - Contacts](#)) or post it to:

GLOBAL SWITCH AMSTERDAM BV

Johan Huizingalaan 759
1066 VH Amsterdam
Netherlands

18.4 CONTACTING US ABOUT INVOICING

If you wish to query or dispute a charge, please contact us immediately so we can address the issue before the due date for payment. You should also contact us immediately about any other issue that may delay payment, to avoid any unnecessary interruption to access or service. In the first instance please contact us immediately by raising a Case Ticket in the Customer Portal.



19.0 CONTACTS – GLOBAL SWITCH AMSTERDAM

WE ARE COMMITTED TO PROVIDING THE HIGHEST LEVEL OF SERVICE AND SUPPORT TO OUR CUSTOMERS. IF YOU WOULD LIKE MORE INFORMATION ABOUT ANY OF OUR SERVICES OR NEED ASSISTANCE, PLEASE CONTACT US.

Our Customer Services team can help you with any enquiries relating to Global Switch Data Centre Services and information contained in this Handbook. They should also be your first port of call if you have any suggestions or queries or if you are unable to access the Customer Portal.

19.1 CUSTOMER SERVICES

Phone: +31 20 6666 300

Email: customerservicesamsterdam@globalswitch.com

19.2 OTHER CONTACTS:

Sales

Phone: +31 20 6666 300

Email: salesamsterdam@globalswitch.com

Invoicing and billing

Phone: +31 20 6666 300

Email: financeamsterdam@globalswitch.com

Emergency/Out of hours' assistance

Phone: +31 20 6666 300

Email: securityamsterdam@globalswitch.com

Global Switch Amsterdam

Johan Huizingalaan 759

1066 VH Amsterdam

Netherlands

T: +31 20 6666 300

Global Switch Corporate Office

2nd Floor, Nova North

11 Bressenden Place

London

SW1E 5BY

United Kingdom

T: +44 20 8054 9000

OUR CUSTOMER SERVICES TEAM CAN HELP YOU WITH ANY ENQUIRIES RELATING TO GLOBAL SWITCH DATA CENTRE SERVICES AND INFORMATION CONTAINED IN THIS HANDBOOK.

APPENDICES

APPENDIX 1:

LOCATION MAP – GLOBAL SWITCH AMSTERDAM

APPENDIX 2:

EVACUATION AND MUSTER POINT – GLOBAL SWITCH AMSTERDAM

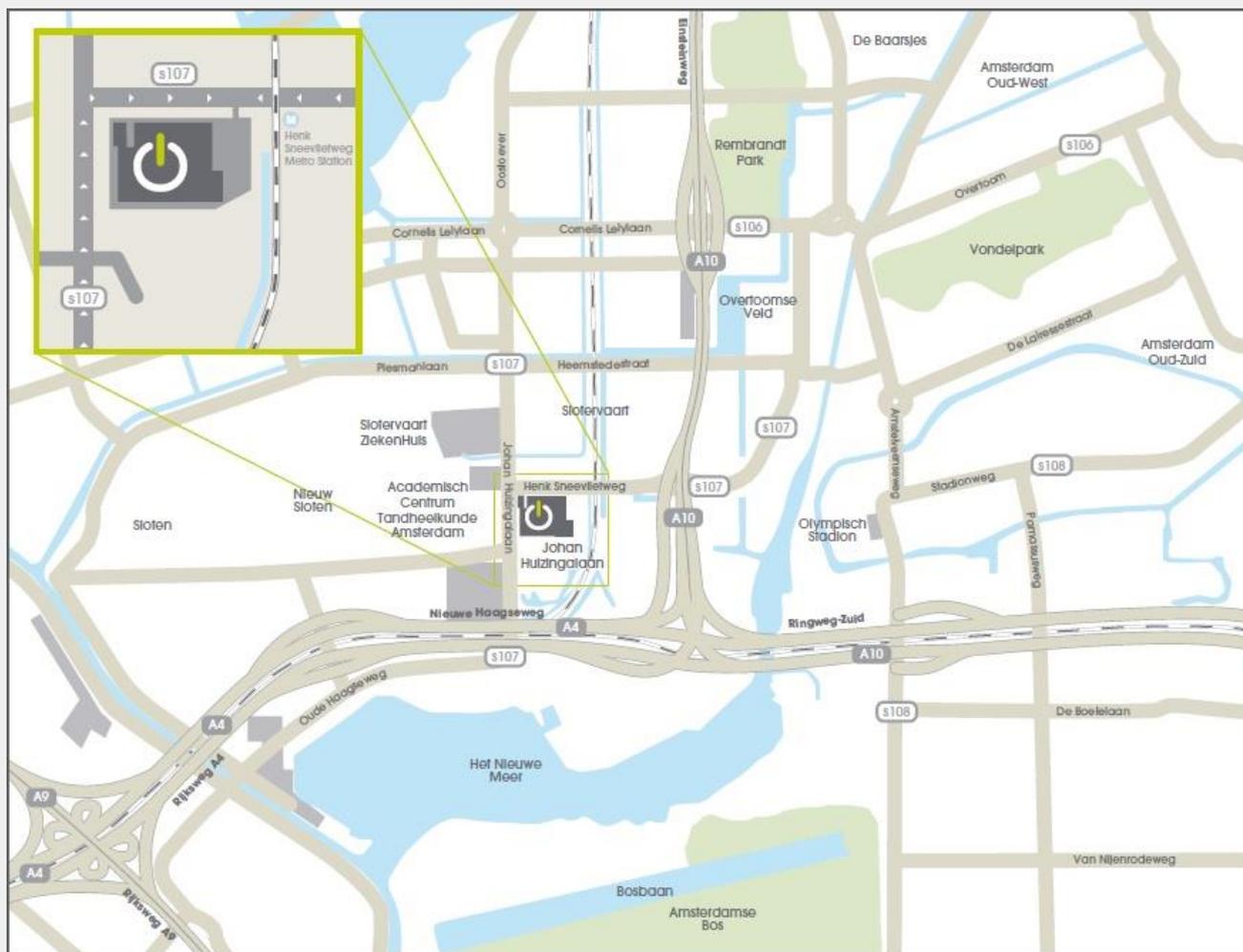
APPENDIX 3:

TECHNICAL CLEANING

APPENDIX 4

GLOBAL SWITCH GLOSSARY

APPENDIX 1: LOCATION MAP GLOBAL SWITCH AMSTERDAM



BY TRAIN

Nearest railway station: Lelylaan. Global Switch is a five minute taxi ride from the station, or you can connect with the Metro to Henk Sneevlietweg station.

BY CAR, FROM SCHIPHOL AIRPORT

Leave Schiphol Airport via the A4 motorway in the direction of Amsterdam.

Leave the A4 at the S107 exit (Sloten).

At the T-junction, turn right and follow Oude Haagseweg into Johan Huizingalaan.

Go under the motorway (A4/A10) and take the first turning on the right on to Henk Sneevlietweg.

BY CAR, FROM CENTRAL AMSTERDAM, ZAAINSTAD (COENTUNNEL) AND UTRECHT (A2)

Join the A10 - Amsterdam Ring Road.

Leave the A10 at the S107 exit (Sloten Schinkel).

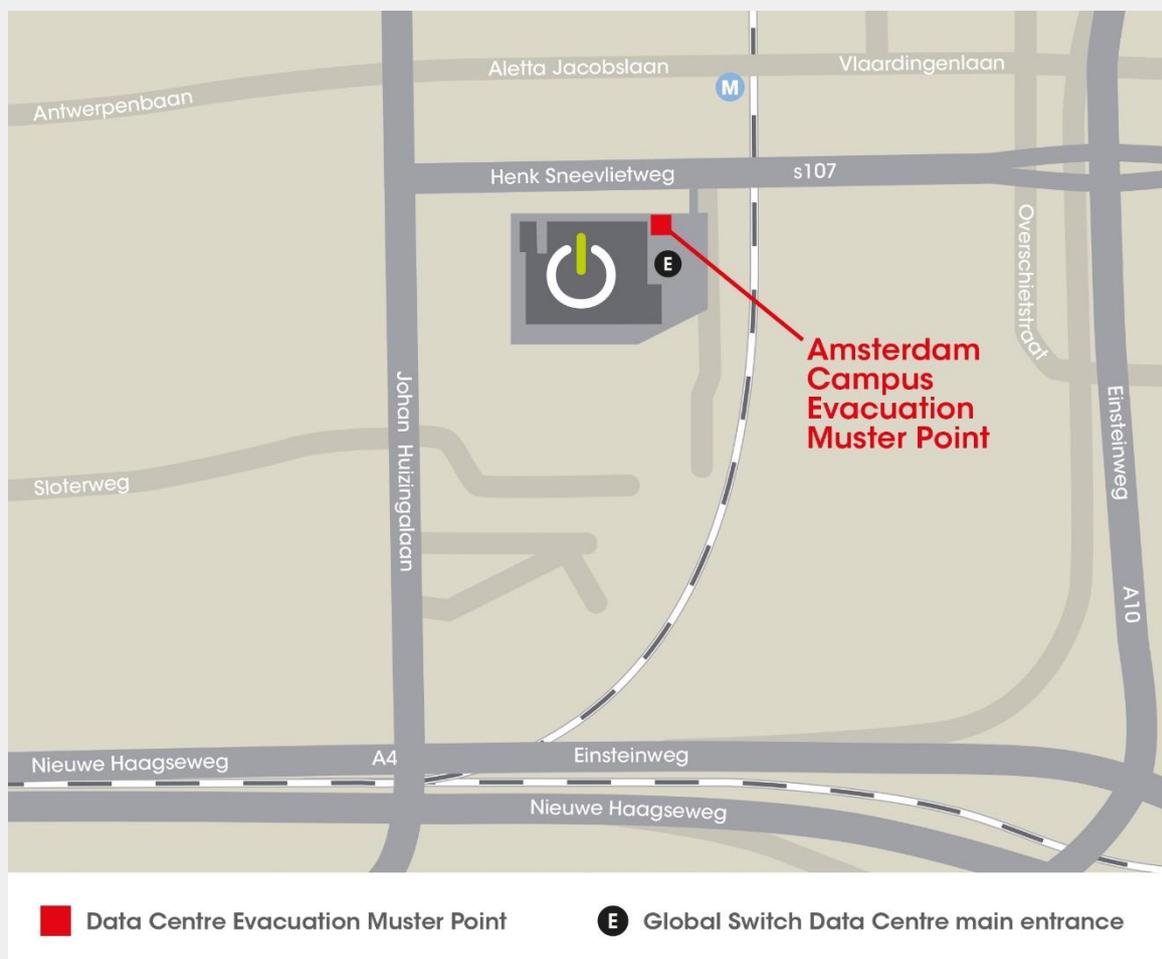
At the traffic lights turn right onto Henk Sneevlietweg.

Go under the railway bridge and take the second street on the left.

BY METRO

Nearest Metro station: Henk Sneevlietweg (Line 50). Global Switch is a 2 minute walk from the station.

APPENDIX 2: EVACUATION AND MUSTER POINT GLOBAL SWITCH AMSTERDAM



EMERGENCY EVACUATION PROCEDURE

Global Switch maintains and operates an “Emergency Response Plan” which includes evacuation drills and training of Global Switch staff to protect the building, equipment and our customers. In the event that the building must be evacuated, please follow the following procedures.

ON DISCOVERING A FIRE

- Activate the Fire Alarm by the nearest Fire Break Glass Unit.
- Evacuate the building by the nearest fire exit, if it is safe to do so.
- Help others to leave the building.
- Follow directions from security and fire fighters.

ON HEARING THE STAND-BY FIRE ALARM MESSAGE

- Prepare for the evacuation and await further instructions.
- Persons who are physically impaired should make their presence known to the nearest Fire Marshal who will assist with their immediate evacuation.

ON HEARING THE EVACUATION MESSAGE

- Immediately leave the building by the nearest and safest exit.
- Proceed to the Fire Muster Point, which is located on the left as you exit the building.
- Remain at the Fire Muster Point until advised otherwise by the senior Fire Marshal.



IMPORTANT NOTES

- DO NOT IGNORE ALARMS.
- DO NOT USE THE LIFTS.
- DO NOT COLLECT PERSONAL BELONGINGS.
- ONCE YOU HAVE LEFT THE BUILDING, DO NOT RETURN UNTIL CLEARANCE TO DO SO HAS BEEN GIVEN.

APPENDIX 3: TECHNICAL CLEANING

These services are mandatory and charges will apply. Please request the Services Catalogue from Customer Services for details.

FREQUENCY	DESCRIPTION	OBSERVATION
Six-monthly	<p>Technical cleaning of above-floor surface consisting of:</p> <ul style="list-style-type: none"> — Doors. — Flat surfaces of plant. — High level cable containment. — Ledges. — Outer casing of PDUs and CRACs. — Overhead light suppression systems. — Overhead lights and diffusers. — Perforated tiles/grills. — Skirting strips. — Top of racks/cabinets and outer casing. — Top surface of vinyl floor tiles. — Walls. 	<p>An assessment of the condition of the raised floor will also be carried out consisting of:</p> <ul style="list-style-type: none"> — De-rocking of floor. — Floor tiles (covering). — Trip hazards. <p>All defects and general house-keeping breaches of this Handbook (e.g. combustible materials being kept within the technical area) will be logged and reported. Reports and certification will be readily available to the customer on completion of the technical cleaning.</p>
Annually	<p>Technical cleaning of floor plenum, consisting of:</p> <ul style="list-style-type: none"> — Cable containment. — Data/telephony cables (cables will not be moved). — Debris removal. — Decontamination of perforated tiles. — Floor slab. — Lip support for floor tile. — Power cables (cables will not be moved). — Raised floor sub structure. — Stringers. — Sub-floor columns and walls. — Underside of floor tiles. — Upper side of vinyl floor tiles. <p>An airborne particle test which will provide data analysis of the cleanliness of the environment will then be conducted.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p> NOTE: Control panels, switches, buttons etc will not be cleaned.</p> </div>	<p>An assessment of the condition of the floor plenum will also be carried out consisting of:</p> <ul style="list-style-type: none"> — Condition status of floor slab. — Contamination including zinc whiskers. — Damaged floor pedestals. — Holes/unsealed penetrations within the floor void. — Missing stringers (if used). <p>An assessment will also be carried out to ensure the integrity of the raised floor. This will include:</p> <ul style="list-style-type: none"> — De-rocking of floor. — Floor tiles (covering). — Trip hazards. <p>All defects and general house-keeping breaches of this Handbook (e.g. combustible materials being kept within the technical area) will be logged and reported. Reports and certification will be readily available to the customer on completion of the technical cleaning.</p>

APPENDIX 4: GLOBAL SWITCH GLOSSARY

2N

Two times the capacity of equipment or systems required to support the critical load.

24x7x365

Operations conducted 7 days per week, 24 hours per day for 365 days a year.

A and B Electrical Supplies

Electricity provided through two separate cables from diverse electrical feeds.

AC Power

Alternating current power.

Abnormal Incident

An event that:

- Directly and immediately impacts the functionality of the data centre.
- Compromises the safety of an individual within the data centre and its environment.
- Failure of any equipment or service that jeopardises the normal operation of the data centre.

AEWSD

Aspirated early warning smoke detection system. Sometimes referred to by the trademark VESDA.

Agreement

A customer contract with Global Switch for the rent of space and/or power including:

- Services Agreement (suites and cages).
- Colocation Agreement (single racks).

Air Handling Unit (AHU)

A mechanical ventilation unit comprising fans and air treatment i.e. humidity control that supplies or extracts air from a space.

Amp (A)

A unit of electrical current.

ANSI/TIA 942

An American National Standard that specifies the minimum requirements for telecommunications infrastructure of data centres and computer rooms including single tenant enterprise data centres and multi-tenant Internet hosting data centres. Further information can be found at tiaonline.org.

Anti-Pass-Back Doors/Portal

A sophisticated control implemented on a set of doors or portals which prevent tailgating.

Argonite

A gas suppression agent that is safe for human occupants. Works primarily by inhibiting oxidation of flammable materials and by physically removing heat from the fire.

Aisle

The open space between rows of cabinets.

Annual Recurring Charge

The Annual Recurring Charge (ARC) is the yearly charge applied to all cross connect installations for the capacity management, control and administration of cross connect cabling infrastructure.

As-Built

A drawing depicting the data centre infrastructure as it was constructed and subsequently modified.

ASHRAE

American Society of Heating, Refrigerating and Air Conditioning

Engineers (ASHRAE) is an international engineering society. Further information can be found at ashrae.org.

Asset Categories

Definitive list of Global Switch asset types.

ASTS

Automatic Static Transfer Switch (solid state device).

ATS

Automatic Transfer Switch.

Authorised Personnel

Customer Personnel who have been given authority to request specific data centre management activities and order services at Global Switch data centres through the Customer Portal.

Balometer

An air balancing instrument primarily used for efficiently taking direct air volume readings at diffusers and grilles.

BCP

Global Switch Business Continuity Plan (please also see below Business Continuity Management).

Biometric Access

A technique used to authenticate an operator using physical characteristics, i.e. facial recognition, fingerprint scans, retinal scans, iris recognition and hand geometry.

Black Building Test (BBT)

A Black Building Test is a planned action to remove the utility (mains) power supply to a facility and confirm the stand-by systems operate as expected and protect critical load.

APPENDIX 4: GLOBAL SWITCH GLOSSARY

Blanking Panel

A device mounted in unused U spaces in a cabinet (rack), also called blanking or filler plates. Used to prevent bypass air, preventing cool air from moving through the cabinet without cooling the electronics.

BREEAM

Building Research Establishment Environmental Assessment Method (BREEAM) is an environmental standard that rates the sustainability of buildings. Further information can be found at bregroup.com.

Building entry points (also known as cable entry points or chambers)

External entry points or chambers provided by Global Switch at the border of the data centre where communications infrastructure providers can interconnect their own external duct infrastructure. These entry points or chambers provide onward access to the duct or sub duct building entry systems to enable connectivity into the data centre.

Building Management System (BMS)

An integrated computer system that monitors and, where appropriate, controls a building's key engineering systems and critical services.

Business Continuity Management (BCM)

A holistic management process that identifies potential impacts which could threaten an organisation and provides a framework for building resilience with the capability for an effective response that safeguards the interests of its key stakeholders, reputation, brand and value creating activities. (Source: The Business Continuity Institute).

Cabinet

Device for holding IT equipment, sometimes also referred to as a rack.

Cable Baskets

Secure system to support either electrical or telecommunication cables.

Cable Management

The process of managing the routes of all cables entering and travelling within the data centre, ensuring that they are labelled and documented to facilitate installation and removal.

Cage

A secure and restricted area built within a Shared Data Suite to the customer's security requirements. Normally constructed of perforated sheet steel or wire mesh, hence 'cage'.

Carbon Footprint

A measurement of the volume of carbon dioxide generated by business operations, usually measured in metric tons.

Carrier Neutral

A carrier neutral data centre is independent of the telecommunications operators located in the facility and allows interconnection between multiple telecommunication carriers and/or colocation providers.

CEN

European Committee for Standardization who are responsible for the European Norms (EN). It provides a platform for the development of European Standards and other technical documents in relation to various kinds of products, materials, services and processes. Further information can be found at cencenelec.eu/about-cen.

CENELEC

European Committee for Electrotechnical Standardization who are responsible for standardization in the electrotechnical engineering field. Further information can be found at cencenelec.eu.

Change Control Process (CCP)

A Global Switch procedure to mitigate and or control the effect of human error in the data centre maintenance, repair and/or installation of systems and/or equipment.

CHW

Chilled Water.

CFD

Computational Fluid Dynamics (CFD) is a numerical analysis technique commonly used in the analysis of airflow in data centres.

Close Control Units (CCUs)

Equipment delivering cooling to technical spaces within the data centre.

CMMS

A Computerised Maintenance Management System (CMMS) enables Global Switch to manage the maintenance of Global Switch assets within the data centre.

Cold Aisle

An aisle where rack fronts face into the aisle. Chilled airflow is directed into this aisle so that it can then enter the rack fronts to provide a cooling effect to IT equipment contained within the racks.

Co-location (CoLo)

Housing of IT equipment in a shared area, available from a single rack upwards.

Computer Room Air Conditioner (CRAC)

The perimeter cooling equipment installed within each data suite.

Connectivity

The provision of facilities such as cables, devices or bandwidth to support voice and data connections.

APPENDIX 4: GLOBAL SWITCH GLOSSARY

Corrective Maintenance

Also known as Reactive Maintenance, includes:

- Maintenance services arising from an unplanned fault or event in respect of Global Switch assets.
- Repairs, small works, and other similar non-specialist handyman tasks in relation to the building fabric.

In each case provided or managed by Global Switch and which are in addition to the Planned Preventative Maintenance Services (PPMS).

Corporate Governance

The system/process by which the directors and officers of an organisation are required to carry out and discharge their legal and regulatory accountabilities and responsibilities.

COSHH

Control of Substances Hazardous to Health (COSHH) is a law that requires employers to control substances that are hazardous to health (applicable in the United Kingdom). Further information can be found at hse.gov.uk/coshh.

Critical Environments Programme (CEP)

The Global Switch Critical Environments Programme (CEP) is a comprehensive programme that governs the operations and maintenance of all Global Switch critical infrastructure to a common global set of best practice standards, systems, policies, processes and procedures. The CEP is the mechanism for maintaining and continuously improving the quality of operations and maintenance programmes.

Critical Facility Equipment

Critical Facility Equipment includes the following:

- All electrical equipment from the site utility incomer to the individual distribution panels and power circuits within the technical customer areas including generators, battery plant and UPS systems.
- All mechanical equipment that provides cooling to the essential and non-essential heat loads within the data centre including air handling units, heat exchange equipment, pumps and piping.
- Protective equipment including fire and smoke detection and suppression systems, leak detection, security systems and remote monitoring equipment.
- Control equipment including Power Monitoring Systems, Building Management Systems or other systems that are in any way connected to the Critical Facility Equipment for control and/or monitoring purposes.

Critical Facility Works Rules

Global Switch Critical Facility Works Rules apply to work being performed on or around Critical Facility Equipment which are authorised by Global Switch under a Method of Procedure (please see MOP below).

Critical Load

A system that directly affects business operations so must be kept running even in the event of mains power failure, i.e. is uninterrupted.

Critical Spare Part(s) (or list)

A Critical Spare is a vital component part which may be subject to failure in service and is used in plant and machinery necessary to service a critical environment. Critical Spares would typically be required to affect an immediate repair on site at the building.

Cross Connects

Cross Connects are interconnections between defined A and B points from a suite or rack providing direct access to our extensive carrier and cloud service provider community.

Customer Incident Report (CIR)

A Global Switch report for distribution and communication to customers affected by an Incident.

Customer Portal

An online Global Switch customer facing system to facilitate and enhance the provision and management of Global Switch products and services by customers.

Customer Portal Administrator

A customer representative that has administrator privileges for their company in respect of the Customer Portal. Personnel with this type of user account are able to make all types of customer requests and create other administrator users for their company within the Customer Portal.

Customer Services Handbook

A document for Global Switch customers that sets out the measures determined by Global Switch as necessary to mitigate any risks to the environment, business, operational efficiency, security and physical well-being of Global Switch data centres, personnel at those data centres and to protect its customers' on-going business operations.

APPENDIX 4: GLOBAL SWITCH GLOSSARY

Daisy Chain

The inter-linking of electrical sockets from one electrical power distribution strip to another is not permitted. This is sometimes termed as 'Daisy Chaining'.

Data Centre

A Global Switch facility.

Data Risers

Conduits between floors or areas within Global Switch data centres for the purposes of running cross connects or other associated data cabling.

DC Power

Direct Current power.

Down Flow Unit (DFU)

Computer room Air Conditioning unit used to distribute conditioned air within the underfloor plenum. Also known as CRAH.

DG

Diesel Generator.

Disaster Recovery Sites

Off-site locations set up by organisations to allow them to re-establish operations and continue to trade in the event of a disaster.

DRUPS

Diesel Rotary Uninterruptible Power Supply.

Emergency Control Procedures

The procedures implemented by Global Switch which all Personnel must adhere to in the event of an emergency.

EMI

Electromagnetic Interference.

EMS

Energy Management System.

EOP

An Emergency Operating Procedure (EOP) is a Global Switch process document within the Critical Environments Programme outlining procedures to be followed in an emergency or scenario test.

EPO

Emergency Power Off (EPO) is implemented on a per equipment or per location basis to interrupt the power supply to equipment immediately. This can be triggered by human operation of an EPO button, or by automatic system operation.

Ethernet

Ethernet is a packet-based network technology that segments data and transports it inside a set of frames. Throughput ranges from 10 megabits per second to 100 gigabits per second with further development expected.

EU Code of Conduct on Data Centre Energy Efficiency

The European Code of Conduct for Data Centres was launched in 2008 with the aim of improving the energy efficiency in data centres. Please see this link for more information: joint-research-centre.ec.europa.eu/energy-efficiency/energy-efficiency-products/code-conduct-ict/code-conduct-energy-efficiency-data-centres_en.

Evacuation Muster Point

An external gathering point used in the event of an evacuation of a Global Switch data centre.

Evacuation Procedure

The procedure by which a Global Switch data centre is evacuated in the event of an emergency.

Facility

A Global Switch data centre.

FM

Facilities Management, and also the delivery of Facilities Management services.

FM200

A gas suppression agent that works primarily by inhibiting oxidation of flammable materials and by physically removing heat from the fire.

Front Desk (also termed Reception)

The principal point of entry into a Global Switch data centre with 24x7x365 manned presence.

Goods In

See Loading Bay.

HA

High Availability refers to a system or a component that is continuously operational for a long duration. Measured relative to 100% availability.

Harmonic currents

The presence of harmonics in electrical systems means that current and voltage waveforms are distorted. IT equipment can generate such loads which are harmful for energy efficiency.

Hazardous Substances

Solids, liquids, or gases that can harm people, other living organisms, property, or the environment.

HEPA

High Efficiency Particulate Accumulation (HEPA) is a type of vacuum air filter that catches a very high percentage of all particles that could damage or destroy sensitive data centre equipment. These filters are able to trap extremely small particles missed by other types of filters.

APPENDIX 4: GLOBAL SWITCH GLOSSARY

Horizontal Distribution Area (HDA)

The horizontal distribution area (HDA) is the space that supports cabling to the equipment distribution areas. The LAN, SAN, console and KVM switches that support the end equipment are typically located in the horizontal distribution area for nearby equipment or the entire computer room if the computer room is small.

Hot Aisle

An aisle where cabinet backs face into the aisle. Heated air from the equipment in the cabinets is exhausted into this aisle.

Hot Spot

An area, typically related to a rack or set of racks, where ambient air temperature is above acceptable or specified levels. Typically caused by poor airflow management (insufficient cool air supply or an excess of recirculation).

Hot Works

The use of any smoke or flame producing apparatus, for example: hot air guns, torch cutting, grinding, soldering irons, welding or Oxy-Acetylene equipment.

Hot Works Permit

Hot Works permits are required for any operation involving open flames or producing heat and/or sparks and must be prepared by a competent person and approved by Global Switch following the Permit to Work process.

HSSD

High Sensitivity Smoke Detector (HSSD) – sometimes referred to using the trademark VESDA (Very Early Smoke Detection Apparatus).

HV

An electrical supply of greater than 1,000 Vac between conductors.

HVAC

Heating, Ventilating and Air Conditioning (HVAC).

IDF

An Intermediate Distribution Frame is used in telecommunications equipment systems and networks.

Inlet Air

The air that enters the IT equipment so to cool the respective piece of equipment.

Inergen

An inert gas consisting of nitrogen, argon, and carbon dioxide that is used for fire suppression, and is electrically non-conductive.

Infra-Red

Infrared (IR) is invisible radiant energy with longer wavelengths than those of visible light, extending from the nominal red edge of the visible spectrum at 700 nanometres.

In Row Cooling

Cooling equipment that delivers targeted cool air. Usually positioned between equipment cabinets in a row, but can also be placed within a cabinet.

IP

The Internet Protocol is the principal communications protocol which forms the infrastructure of the internet and enables interworking between devices.

ISO

International Organization for Standardization (ISO) is an independent, non-governmental membership organization and the world's largest developer of voluntary International Standards. ISO International Standards ensure that products and services are safe, reliable and of good quality. Further information can be found at iso.org/home.html.

ISO 9001

A Quality Management System. Defines a quality management system to help businesses manage processes efficiently and effectively and to incorporate best practice methodology.

ISO 14001

An Environmental Management System. Defines environmental management processes to help businesses manage their environmental responsibilities.

ISO 27001

An Information Security Management System. Provides a systematic approach to security information management. Assists businesses in identifying, analysing and addressing information security risks.

ISO 45001

An Occupational Health and Safety management System. Defines requirements for occupational health and safety management best practice. It exists to help all kinds of organisations put in place demonstrably sound occupational health and safety performance.

ISO 50001

An Energy Management System. Using energy efficiently helps save money as well as helping to conserve resources and tackle climate change. ISO 50001 supports all sectors to use energy more efficiently.

Isolation

An isolation is an action performed by Global Switch to remove a potential hazard from an installation, most often used prior to a maintenance operation. Typical examples include isolation of the power supply or a fire protection system. Returning the installation to an operative state is usually referred to as removal of the isolation, re-energisation or re-instatement.

APPENDIX 4: GLOBAL SWITCH GLOSSARY

<p>KPI Key Performance Indicator. A measurable value that demonstrates how effectively a company is achieving key business objectives.</p>	<p>subscriber's premises. The local loop can be provided over any suitable transmission medium.</p>	<p>Material Safety Data Sheet A form containing data regarding the properties of a particular substance; used to estimate necessary precautions. Sometimes referred to as Material Safety Data Sheets (MSDS).</p>
<p>kW A derived unit of power (Joule/second). 1 kilowatt = 1,000 watts. In electrical circuits, power = current (amps) x potential (volts), and in AC electrical circuits power = power factor x current x volts.</p>	<p>Lockout-Tagout (LOTO) A safety procedure which is used to ensure that potentially dangerous machines or sources of energy are properly shut off and not able to be energised or started up again prior to the completion of maintenance work. The relevant circuit breaker or operating switch is locked in an off position using a padlock and identified with a tag. These remain in place until removed by the technician following completion of the works.</p>	<p>Media Physical objects, stored data such as paper, hard disc drives, tapes and compact discs.</p>
<p>kWh A unit of energy equivalent to one kilowatt (1 kW) of power sustained for one hour.</p>	<p>Low Smoke Zero Halogen (LSOH, LSZH) Refers to the classification of material used in cable sheathing. In the event of a fire, LSOH cable will emit lower levels of smoke, and non-toxic levels of halogen-based gases.</p>	<p>Meet-Me Rooms (MMR) Highly secure areas in Global Switch data centres specifically designed to house telecommunication providers' network equipment and cable termination infrastructure.</p>
<p>Laser A laser is a device that emits light through a process of optical amplification based on the stimulated emission of electromagnetic radiation. Used in the transmission of data along fibre optic cables.</p>	<p>LV An electrical supply of less than 1,000 Vac between conductors. (Low Voltage).</p>	<p>Metered Power A way of measuring power consumption that ensures the customer only pays for the amount of power used over a designated period of time.</p>
<p>Latency Latency is the amount of time it takes for a packet of data to get from one designated point to another.</p>	<p>M&E Mechanical and electrical.</p>	<p>Method of Procedure (MOP) A Method of Procedure (MOP) forms part of Global Switch's Critical Environments Programme describing the detailed actions which must be undertaken in the carrying out of Mechanical and Electrical services.</p>
<p>LEED Leadership in Energy and Environmental Design (LEED) is a set of rating systems for the design, construction, operation, and maintenance of buildings with strong green credentials. Further information can be found at usgbc.org/leed.</p>	<p>Main Distribution Area (MDA) The main distribution area (MDA) is the central space where the point of the distribution for the structured cabling system is located. The data centre shall have at least one main distribution frame. The core routers and core switches for the data centre network are often located in or near the main distribution area.</p>	<p>Method Statement A 'Method Statement' is a detailed document describing the works or activity which will bring about a change in operating condition, including any mitigating steps required to make the work safer as highlighted in a risk assessment.</p>
<p>Loading Bay (also termed 'Goods In') A point of entry into a Global Switch data centre allowing, in most instances, vehicle access for the loading and unloading of deliveries.</p>	<p>Managed Diverse Fibre Ingress Multiple entry points for fibre running into the building which are owned and managed by Global Switch.</p>	<p>Mission-Critical Critical operational and/or business support activities (either provided internally or outsourced) without which an organisation would quickly be unable to operate.</p>
<p>Local Loop The physical connection from the telecom carrier's Point of Presence (POP), and the</p>		

APPENDIX 4: GLOBAL SWITCH GLOSSARY

Mitigation

Activities designed to reduce or eliminate risk to persons or property or to lessen the actual or potential effects or consequences of an incident.

Multimode Fibre

Multimode fibre is a physical transmission medium used in data networking and supporting high bandwidths, typically used within buildings and supporting distances of up to 500m.

MVA

A mega volt amp is a unit of apparent power. The apparent power refers to the total current and voltage in an electrical circuit. The term is preferred in descriptions of total electrical power in installations, and it captures both true and reactive power in an electrical circuit. It is the common rating used in major electrical installations, such as transformers and generators.

MW

A megawatt is a measure of real power equal to one million watts. Often used to describe the power capacity of a data centre or an installation within a data centre.

N

The required capacity of equipment or systems to support the critical load; refers to the sizing of infrastructure capacity to support business operations.

N+1

N+1 redundancy is a form of resilience that ensures system availability in the event of component failure. Components (N) have at least one independent backup component (+1).

Non-Critical Spares

A component or spare part (other than consumables and Critical Spares) that would need to be replaced in the event of a plant and/or machinery failure.

Occupational Health Safety Standards (OHSS)

Country specific Occupational Health and Safety Standards (OHSS) regulations and practices which are required to be complied with when working in Global Switch data centres.

OEM

An original equipment manufacturer is the manufacturer of assets used by Global Switch within the data centre. Maintenance is performed on such assets by contractors appointed by Global Switch which could include the OEM manufacturer, a specialist contractor, or the FM contractor.

Optical Distribution Frame (ODF)

An Optical Distribution Frame (ODF) is a passive piece of equipment where a fibre cable can be terminated to provide easy access to individual fibres using standards-based interface types.

Optical Fibre

Sheathed strands of glass fibre used to transport information (digital signals) from one point to another.

PDU

Power Distribution Unit (PDU) is a point of electrical connection to a customer's cabinets.

Permanent Access Card (PAC)

A Global Switch data centre Access Card allocated to a particular individual. It must be carried and displayed by the individual at all times and allows the individual access to the data centre for 24x7x365 without the need for pre-booking or clearance by security.

Permanent Access Schedule

A list of Permanent Access Card holders to a Global Switch data centre which is available via the Customer Portal.

Permit Holder

Personnel nominated on a Global Switch Permit to Work as being responsible for the work that is due to be or is being carried out.

Permit to Work (PTW)

A Global Switch document that controls access to a data centre for the purpose of undertaking work.

Personal Protective Equipment (PPE)

Protective clothing and other devices designed to protect an individual while in potentially hazardous areas or performing potentially hazardous operations.

PFF

Portable fire-fighting equipment.

Planned Preventative Maintenance (PPM)

A series of planned maintenance works in a Global Switch data centre against a specific timetable or schedule. The work tickets are managed by a computerised system and are normally accompanied by a documented procedure describing the work to be performed and permits required or isolations to be implemented prior to the work taking place.

Plenum

Plenum refers to a housing that is at a positive pressure to the surroundings and is commonly used for air distribution. This space is commonly found between two ceilings or between a raised floor and the actual floor.

APPENDIX 4: GLOBAL SWITCH GLOSSARY

Point of Presence (POP)

The locations at which a carrier establishes itself to provide access to its network infrastructure, to interconnect customers to its services, or to interconnect with other carriers or third parties for the purpose of exchanging network information and traffic.

Power Factor

Power Factor is a measure of how effectively the supplied power is used within customers' IT equipment and is defined as the ratio of Real (kilowatts) power to Apparent (kilo volt amps) power. By improving the power factor, one can reduce electricity costs.

Power Usage Effectiveness (PUE)

A metric used to determine the ratio of total facility energy to power IT equipment energy. Total facility energy is defined as the energy dedicated solely to the data centre (e.g. the energy measured at the utility meter of a dedicated data centre facility or at the meter for a data centre or data room in a mixed-use facility). The IT equipment energy is defined as the energy consumed by equipment that is used to manage, process, store, or route data within the compute space. A ratio closest to unity is preferred. There is considerable misuse of this term in the data centre industry and great care is required when using or quoting such metrics.

Private Suite

A highly flexible, resilient and self-contained private data centre space within purpose-built facilities.

Proximity Card System

A computer-controlled access system using electrically controlled locks that are released when an authorised card is placed against a proximity reader.

Purchase Order (PO)

The reference number issued from customers to Global Switch when purchasing a product or service.

RFI

Radio Frequency Interference or Request For Information.

Raised Flooring

A flexible suspended access flooring system mounted above the concrete floor slab with removable tiles. The void that is formed provides an air plenum and space for cable basket and other building services to pass underneath the finished floor level.

RAMS

See Risk Assessment and Method Statement.

Re-energisation

Following completion of work which has required isolation of the whole or part of a system, a removal of the isolation, re-energisation or re-instatement is required.

Reception

See Front Desk.

Request User

A group of users within the Global Switch Customer Portal which are permitted by a Global Switch customer to request products and services through the Customer Portal.

RCA

Root Cause Analysis.

Redundancy

Having one or more back-up components or systems available in case of failure of the prime system. See N, N+1.

Registered Email Address

The email address of a customer's 'Authorised Personnel'; associated with the authorisation levels each individual has in respect of data centre management requests and ordering of Global Switch services through the Customer Portal.

Restricted Areas

Space(s) within the data centre where sensitive business operations take place and access is strictly controlled.

Restricted Materials

Any material prohibited from entering technical space due to the potential for it to cause harm or damage to the operation of equipment within the technical space.

Risk Assessment and Method Statement (RAMS)

A RAMS document details the way a work task or process is to be completed. It contains a risk assessment highlighting the significant hazards and control measures required to prevent injury or ill health while carrying out the task. The method statement should include a step-by-step guide on how to do the job safely. The method statement must also detail which control measures have been introduced to ensure the safety of anyone who is affected by the task or process.

Risk Management

The culture, processes and structures that are put in place to effectively manage potential opportunities and adverse effects.

Risk Mitigation

A selective application of appropriate techniques and management principles to reduce or mitigate either likelihood of an occurrence or its consequences, or both.

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Safe Systems of Work (SSW)

A Safe System of Work is a formal procedure which results from systematic examination of a task in order to identify all the hazards. It defines safe methods to ensure that hazards are eliminated or risks minimised.

Safe Systems of Work Induction

The process whereby each person undertaking work under a Permit to Work such as cable management, equipment installation/recovery or mechanical and electrical work in a Global Switch data centre is educated and/or briefed on relevant health and safety and safe working practices to ensure adherence to relevant legislation and to comply with the strict working procedures required in a mission-critical data centre environment.

Services Catalogue

A list of prices for specific services available at Global Switch data centres.

Service Level Agreement (SLA)

A formal agreement between a service provider (whether internal or external) and their customer (whether internal or external) which covers the nature, quality, availability, scope and response of the service provider.

Service Provider Neutral

Not allied to any telecommunications or IT service provider, which means the customer has complete freedom to select their provider of choice.

Set Point

A Set Point is the value against which the variable that is being controlled is compared in an engineering control system. Temperature and humidity set points are common in data centre cooling systems.

Shared Data Suite

A suite for multiple customers sharing services with optional secure caging.

Single Mode Fibre

Single mode fibre is a physical transmission medium used in data networking supporting high bandwidth over very long distances.

Single Phase

Single Phase power refers to a two wire Alternating Current (AC) electrical circuit. Typically there is one 'line' conductor and one neutral conductor. In most jurisdictions, 230V is the standard single phase voltage with one 230V power conductor and one neutral conductor. Current flows between the line conductor (through the load) and the neutral conductor to provide power. These two conductors are normally accompanied by an earth conductor for reasons of safety and electrical protection.

Site Accident Book

A book held at each Global Switch data centre for the reporting of all accidents and near misses.

Site Induction

The process whereby each person entering a Global Switch data centre is educated and/or briefed on relevant health and safety and safe working practices to ensure adherence to relevant legislation and to comply with the strict working procedures required in a mission-critical data centre environment.

Site Services

External services that enter the data centre, for example, services such as power and connectivity.

SOS

A Scope of Service is a document associated to a specific asset category outlining the frequency and the actual

steps required for Planned Preventative Maintenance for that type of asset.

Specialist Services

A professional resource provided by Global Switch to facilitate customers ad hoc requirements offering, but not restricted to; technical advice, technical engineering support, security management and programme management.

Specialist Services Charge

The charge to a customer associated with 'Specialist Services'.

Splicing Chamber

A large highly secure pit or room where telecommunication cables are joined. Used to change from external grade cables to internal grade LSOH cables.

SPOF

Single Point of Failure.

Standard Operating Procedure (SOP)

Procedures that are undertaken in Global Switch data centres on a day-to-day basis to ensure the safe and continuous running of the data centres.

Statutory and Regulatory Requirements

Local country, region or location specific legislative requirements that must be followed or put in place.

Structured Interconnect System (SIS)

Global Switch's managed cabling infrastructure.

STS

Static Transfer Switch (solid state device).

Sub Duct

Duct connectivity between a telecommunication provider's external chamber or pit and the Global Switch operated chamber or entry point into the data centre.

APPENDIX 4: GLOBAL SWITCH GLOSSARY

Sub Floor

The open area underneath a raised computer floor, also called a sub-floor plenum.

Supervised Access Cards (SAC)

A Global Switch access card allocated to a visitor who has not completed a Site Induction and therefore must be supervised at all times by a PAC or VAC holder. The card must be returned to Global Switch security prior to the visitor departing the data centre at the end of the day.

Supervision

The resource provided by Global Switch to oversee work or visits.

Supervision Requirement

The term used by Global Switch to estimate the resource that will be provided to oversee work or visits.

Supervisory Services Charge

The charge to a customer associated with 'Supervision'.

SUPS

Static Uninterruptible Power System. A solid state UPS system which uses pre-charged batteries as the source of energy in the event of a power failure.

Supply Air

The cooled airflow emitted from air conditioning equipment.

Technical Real Estate

Purpose-built, resilient environments in which IT equipment is securely housed.

Three Phase

Three Phase power refers to three wire Alternating Current (AC) power circuits. Typically there are three (L1, L2, L3) line conductors (120 degrees out of phase with one another) and one neutral conductor.

TIA

The Telecommunication Industry Association represents manufacturers and suppliers of high-tech communications networks. Further information can be found at tiaonline.org.

Tie Cable

A cable that connects two distribution points within a network.

Tier 1

Single path for power and cooling distribution, no redundant components and 99.671% availability (as defined by Uptime Institute).

Tier 2

Single path for power and cooling distribution, redundant components and 99.741% availability (as defined by Uptime Institute).

Tier 3

Multiple power and cooling distribution paths, but only one path active, redundant components, concurrently maintainable and 99.982% availability (as defined by Uptime Institute). Also known as concurrently maintainable.

Tier 4

Multiple active power and cooling distribution paths, redundant components, fault tolerant and 99.995% availability (as defined by Uptime Institute). Also known as fault tolerant.

Tier 1 Market

A Tier 1 market is a principal metropolitan business, communication and internet hub.

U

A unit of space in a cabinet (rack), equal to 4.4cm. The vertical dimension of racks and IT equipment is often specified in U, for example, 42U.

Uninterruptible Power Supply (UPS)

A system which provides continuity of power in the event of a mains power failure. The source of energy in UPS systems is typically battery, generator and/or kinetic.

Uptime

See HA (High Availability).

Uptime Institute

A commercial organisation that developed a 'Tier' system adopted by most data centres. Further information can be found at uptimeinstitute.com.

Valid Photo Identification

Acceptable forms of identification at Global Switch data centres, including a Passport or National Identity Card, photo Driving License, Government issued photo ID or company issued photo ID with a bank card.

VESDA Systems

Very Early Smoke Detection Apparatus.

Visitor

An individual that has been authorised to access a Global Switch data centre, or specific areas of the data centre and who has not been issued a Permanent Access Card.

Visitor Access Card (VAC)

A Global Switch Access Card issued to a visitor which allows entry to the data centre or specific areas of the data centre for a single day. It must be carried and displayed by the individual at all times and must also be returned to Global Switch security prior to the visitor departing the data centre at the end of each day.

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WEEE

Waste Electrical and Electronic Equipment (WEEE) is a European Union directive that designates the safe and responsible collection, recycling and recovery procedures for all types of electronic waste.

Work

Any activity within the data centre which may potentially affect or disrupt Global Switch or customer operations.

Work in a Confined Space

Any work in an enclosed or partially enclosed space as defined by local statute.

Work on Electrical Systems

Any work on Global Switch electrical plant, distribution pathways or customers' Power Distribution Units (PDU) that could impact Global Switch's infrastructure.

Workplace Substance Register

The register of chemical or hazardous materials stored within the data centre (see COSHH).

Works Supervision

The resource provided by Global Switch to oversee work.

Zinc Whiskers

The name given to very small particles of zinc that resemble hairs which can appear as a result of zinc electroplated materials residing in the data centre. Most commonly found on floor tile components and equipment brackets, they are considered a risk to continuous operation of IT equipment because if dislodged and able to enter IT equipment, can cause electrical short circuits.

Zone

A location or group of locations within a Global Switch data centre. It is normally used when discussing customer data suites and cages.

Zone Distribution Area (ZDA)

The zone distribution area should be limited to serving a maximum of 288 coaxial or twisted pair connections to avoid cable congestion, particularly for enclosures meant to be placed overhead or under floor tiles.

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