



## Cloud**CIX** Limited

Hollyhill Industrial Estate  
Cork T23 R68N  
Ireland  
Company Registration Number 117623  
**[www.cloudcix.com](http://www.cloudcix.com)**



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## 1 Facilities

### 1.1 Introduction

CloudCIX Limited is located at Hollyhill, Cork, Ireland where it operates a 2,500 sq. m. data centre with a 700kW electrical base load and a capacity to grow to 3MW on its existing footprint. The building is owned by the company.

CloudCIX can offer services ranging from pure Colocation through managed services including firewall and disaster recovery all the way to full Cloud infrastructure.

CloudCIX is a major edge data centre for the Munster region. It includes multiple diverse fibre ducts and a 30m telecommunications tower with approximately 80 antennae plus a 400 sq. m. LEO Deck with planning permission for satellite dishes.

The company operates AS47720 and has 10,240 IPv4 Addresses.

## 1.2 Internal Images



*Figure 1 24/7 x 365 Network Operations Centre*



*Figure 2 Internal Data Centre*

### 1.3 Internal Layout

The CloudCIX Limited facility consists of two adjacent data centres, CIX1 and CIX2.

|                     | Hollyhill Facility                                                                                                                                |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Data Centre Floor   | CIX 1A - 281m <sup>2</sup><br>CIX 1B - 281m <sup>2</sup><br>CIX 2A - 185m <sup>2</sup><br>CIX 2B - 95m <sup>2</sup><br>CIX 2C - 281m <sup>2</sup> |
| Raised Floor Height | CIX 1A - 800mm<br>CIX 1B - 800mm<br>CIX 2A - No Raised Floor<br>CIX 2B - No Raised Floor<br>CIX 2C - No Raised Floor                              |
| Customer Racks      | CIX 1A - 100<br>CIX 1B - 100<br>CIX 2A - 80<br>CIX 2B - 30<br>CIX 2C - 100                                                                        |
| Total Facility Size | 3,000m <sup>2</sup> (32,291ft <sup>2</sup> )                                                                                                      |

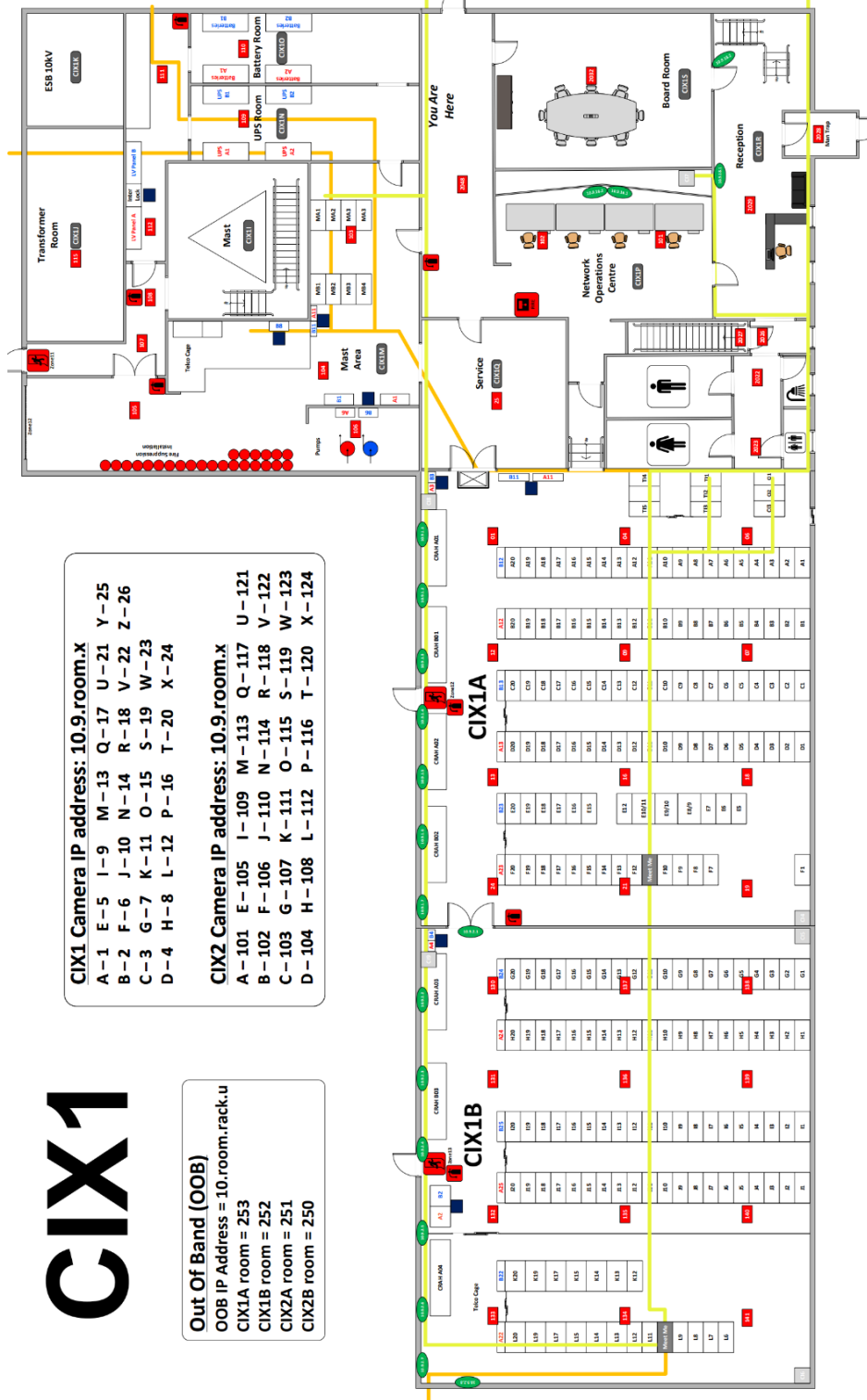


Figure 3 Floor Plan of CIX1

# CIX2

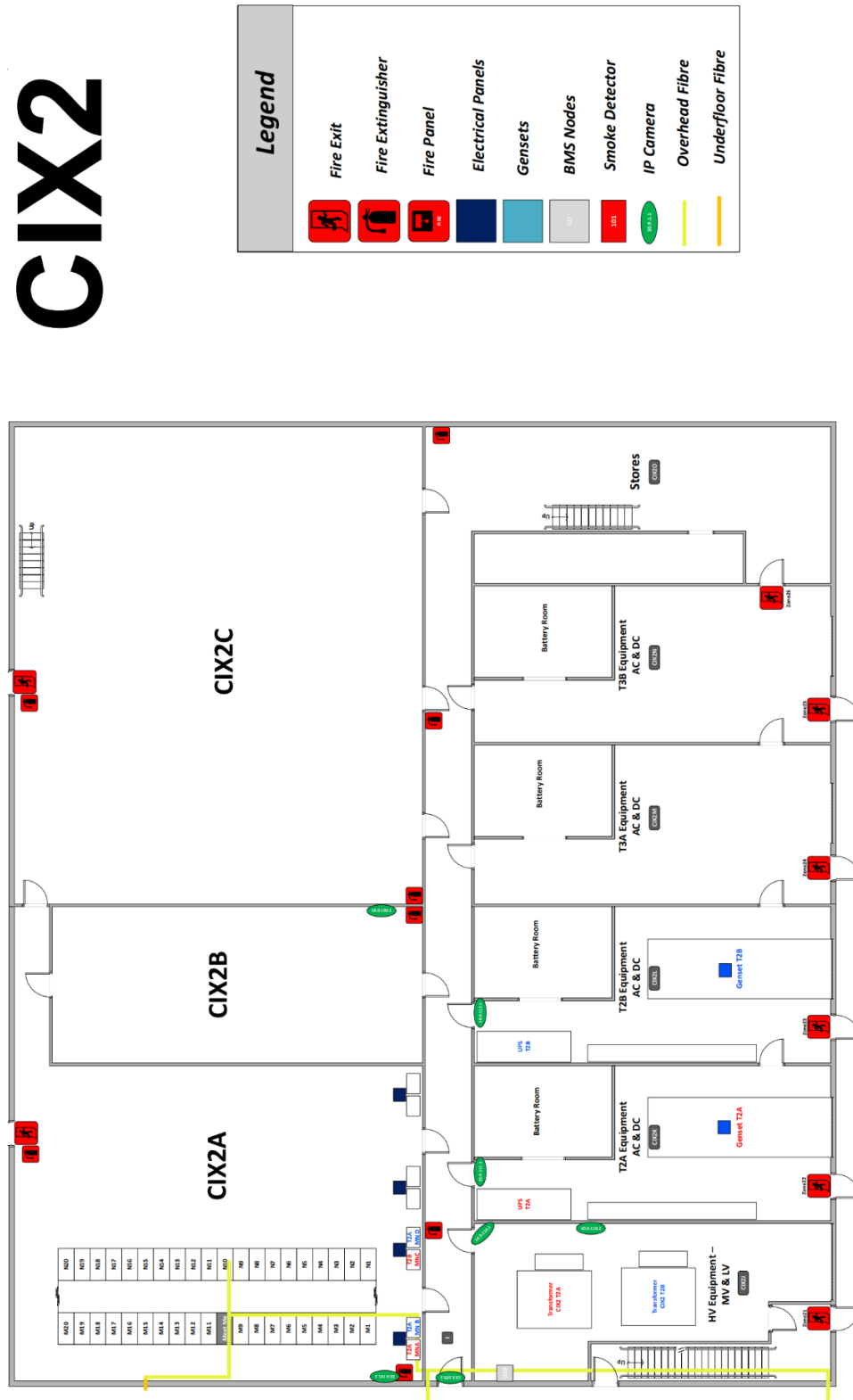


Figure 4 Floor Plan of CIX2

## 1.4 Physical Security

### 1.4.1 24x365 Occupancy

CloudCIX Limited is manned 24x7 by technically qualified staff members.

### 1.4.2 Camera Surveillance

Forty-two cameras, with 90 day recording, provide internal and perimeter surveillance.

### 1.4.3 Alarm System

A zoned alarm system is installed to detect unauthorized intrusion to the Data Centre, NOC & Service Areas.

### 1.4.4 Access Control

Access to the Data Centre (DC) is restricted to approved personnel only. All customers' staff or contractors requiring access to the DC Floor or Services Area must be approved by an "Authorised CloudCIX Access List Administrator" at the customer organisation. In order to gain access to equipment, visitors must have a current CloudCIX password associated with their email address and a government issued photo ID (passport or driver licence). Access is available 24x7.

## 1.5 Connectivity

### 1.5.1 Carrier Neutrality

As the only carrier neutral data centre in Ireland, outside of Dublin, CloudCIX Limited is one of the best-connected buildings in Ireland. Many telecommunications companies use the facility from which to build infrastructure. BT, eNet and Eir have resilient fibre ducting and Virgin have single duct entry. Two submarine fibre cables, one from North America and one from the UK, terminate in the data centre. These are the logos of the companies that have points of presence in the building.



Figure 5 Telco Companies

### 1.5.2 BGP Mesh

CloudCIX Limited maintains a BGP mesh of exceptionally high quality. Currently three carriers (Colt, C&W and EXA (formerly GTT)) plus three neutral exchanges (INEX Dublin, INEX Cork and LINX London) have eBGP sessions with the CloudCIX Mesh. The following diagram shows the closest BGP neighbours to CloudCIX Limited.

#### AS47720 IPv4 Route Propagation

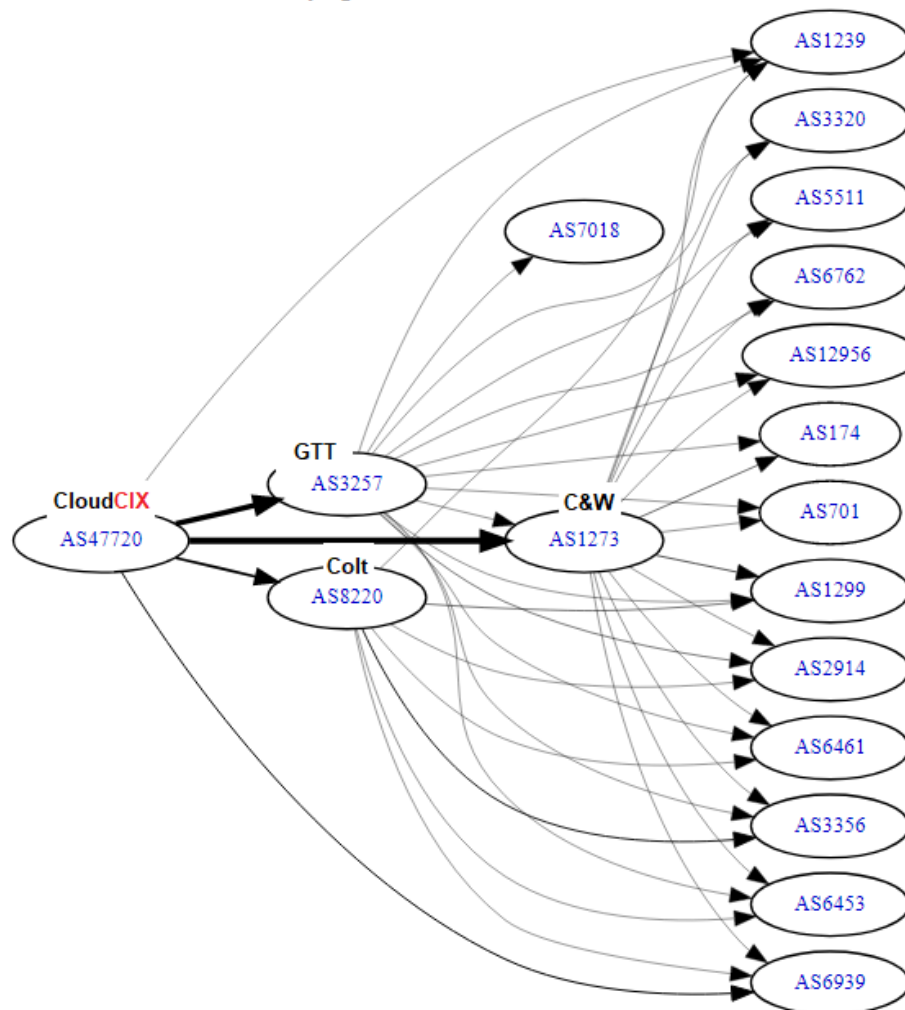


Figure 6 BGP Mesh

### 1.5.3 INEX Cork

CloudCIX Limited is home to INEX Cork, a neutral Internet eXchange point. As well as its many commercial members, INEX Cork hosts one of the RIPE DNS 'K' root servers and Akamai have a CDN platform connected.

### 1.5.4 Telecommunications Tower

CloudCIX Limited is located at an altitude of 112m and has a 30m telecommunications tower attached to the data centre. Total tower height is therefore 142m above sea level. This tower contains 84 antennae which distribute broadband and mobile phone telephony, wirelessly, throughout Cork City and County.



*Figure 7 CIX Tower*

It is extremely rare to have a tower that is so well connected to fibre networks on a secure site with full diesel and UPS backup.

## 1.6 Power

### 1.6.1 UPS & Diesel Generator Backup

CloudCIX Limited is a highly resilient data centre. Two separate electrical wiring systems, each with its own UPS and diesel generator supply every rack.

Each generator is load tested every two weeks. All generator tests are load tested for a duration that exceeds one hour. Each test involves the transfer of half of the electrical load from mains supply to battery backed up UPS and then to GenSet. After one hour the process is reversed. The occurrence of every test is tweeted on @CIXStatus as a public record. We are happy for customer representatives to visit our facility to oversee the electrical power of CloudCIX Limited data centre being switched to generator and back again.

### 1.6.2 Power Usage Efficiency:

- PUE for CIX1 is annualised at 1.25
- PUE for CIX2 is annualised at 1.18 but will reduce to 1.1 when capacity reaches 1MW.

### 1.6.3 Power Systems Infrastructure:

#### CIX1

- 2 x 900kVA Diesel Gensets
- 2 x 200kVA UPS Systems
- 2 x 300kVA UPS Systems

#### CIX2

- 2 x 1.4MVA Diesel Gensets
- 2 x 300kVA UPS Systems (extendable to 2 x 900kVA)

#### 1.6.4 Solar PV System

CloudCIX Limited operates 128kW of Solar PV producing an estimated 130MWh onsite generated electricity per annum.



*Figure 8 Solar PV System*

#### 1.7.5 Demand Site Unit

CloudCIX Limited operates as a demand site unit (DSU) in support of the National Grid. The facility was the first Data Centre in Ireland to operate as a DSU.

Pod T3A and Pod T3B not yet constructed.

### 1.7 Cooling

Cold aisle containment with a temperature of 23°C +/- 2°C and relative humidity within ASHRAE specified limits of 25% minimum and 75% maximum is provided in CIX1A and CIX1B. Cooling is provided by chilled water from chillers fitted with free cooling coils.

Warm aisle containment with a cold aisle temperature of 25°C +/- 2°C and relative humidity within ASHRAE specified limits of 25% minimum and 75% maximum is provided in CIX2A. Cooling is provided by air-to-air heat exchangers assisted by adiabatic cooling.

### 1.8 Fire Suppression

A Honeywell Nitrogen Fire Suppression system is in operation in CloudCIX Limited with regular quarterly site inspections by CHUBB. Room integrity tests for fire suppression gas retention, fire extinguisher inspection and sample tests are carried out annually. An early warning smoke detection system with an automatic nitrogen fire suppression system is installed.

### 1.9 Earthing

The grounding system is based on a single earthing star point located in the Traffo 1 transformer room. Earth is provided by two copper grids buried to a depth of 1.5m outside the transformer room and three rods driven beneath a 30m telecoms tower attached to the data centre.

## 2 Certifications

### 2.1 ISO27001:2013

CloudCIX Limited has been assessed by Certification Europe and deemed to comply with ISO27001:2013. The scope of the registration is “The provision of communication, colocation, Infrastructure as a Service and Managed Services”.

### 2.2 PCI DSS

CloudCIX Limited has been assessed by Kyte Consultants and deemed to comply with PCI DSS section 9 and section 12. The scope of the registration is “The data centre, colocation and Infrastructure as a Service and Managed Services”.

### 2.3 SOC 2 Type 2

CloudCIX Limited is working to achieve the SOC 2 Type 2 Certification by the end of 2024.

### 2.4 Tier Status

The Managing Director of CloudCIX Limited is an Accredited Tier Specialist of the Uptime Institute.

- CloudCIX CIX1 is constructed broadly in accordance with the Uptime Institute Tier III standard but is not certified to that standard. Since the facility was upgraded to Tier III in September 2013 the facility has had zero outages due to power or cooling.
- CloudCIX CIX2 is constructed broadly in accordance with the Uptime Institute Tier IV standard but is not certified to that standard. The facility has had zero outages due to power or cooling.

## 3 Services

### 3.1 Communications

#### 3.1.1 Mesh Bandwidth IP Transit

CloudCIX Limited has positioned itself as the Carrier Neutral Edge Data Centre Internet for the Munster region. All optical fibre providers in the Munster region have a point of presence (POP) in CloudCIX Limited. This makes the facility ideal for cross connects between carriers. The highly resilient design of CloudCIX Limited makes the facility ideal for carriers to build out regional infrastructure. An estimated 30,000 homes and businesses take connectivity via CloudCIX Limited.

#### 3.1.2 Carrier Cross Connects

CloudCIX Limited has a policy of providing, inter-carrier cross connects (including to INEX Cork) and cross connects between carriers and customers of CloudCIX Limited, are free of recurring charges. Carriers and customers are expected to pay once off installation costs for trunk connections to one of three meet-me locations. Single mode LC-LC fibre connections is the standard interconnect type.

#### 3.1.3 Tower Access

CloudCIX Limited rents tower access to telecommunication companies. CloudCIX Limited does not provide wireless connectivity directly to end users.

#### 3.1.4 WAN Connectivity

CloudCIX Limited resells WAN connectivity from wholesale carriers such as BT, Eir and eNet.

### 3.2 Co-Location

CloudCIX Limited host customers' servers in our secure racks with choice of swipe card access or standard lock and key. Shared rack space, quarter rack, half rack and own racks are some of the options available. CloudCIX Limited provide two packages, one is our bundle package where rack space, power and Internet connectivity are all included. Alternatively, each item can be provided separately.

#### 3.2.1 Dedicated Racks

CloudCIX Limited dedicated racks offer the security and protection required to meet the most stringent security controls and access requirements. CloudCIX Limited dedicated racks provide secure lockable front and rear access doors.

- **High Density 6kW to 20kW:** The high-density solution is designed to meet the requirements of today's high-density workloads such as data mining and IoT analytics.
- **Low Density 2kW to 5kW:** This low-density solution is designed to meet the requirements of today's low-density workloads such as standard 1U and 2U server workloads.

#### 3.2.2 Half Racks

CloudCIX Limited half racks allow you the flexibility of commencing your co-location plan with a half rack option and scaling to a full rack or more as your footprint increases. CloudCIX Limited half rack solutions are 20u in height.

#### 3.2.3 Quarter Racks

CloudCIX Limited quarter racks allow you the flexibility of commencing your co-location plan with a quarter rack option and scaling to a half rack or more as your data centre footprint increases. CloudCIX Limited quarter rack solutions are 10u in height.

### 3.3 CloudCIX

CloudCIX is a multi-tenanted multi-region Cloud provisioning platform developed by CloudCIX Limited, Cork, Ireland. CloudCIX orchestrates and provisions compute, storage, networking, and security in a flexible and cost-effective manner, to create a Cloud of any size and for any purpose.

CloudCIX was developed in an operating data centre by automating existing engineer operated processes. It is a full production capable system with tried and tested operational procedures.

CloudCIX was developed with both use cases of **Private Cloud** for enterprises and **Public Cloud** for managed service providers. CloudCIX is delivered with complete installation and operation documentation.

You can consume our Public Cloud or ask us to build and support a Private Cloud for you.



*Figure 10 CloudCIX Architecture*

For more information about the CloudCIX Platform, please visit...

<https://docs.cloudcix.com>

### 3.4 Managed Services

#### 3.4.1 Dedicated Servers

CloudCIX Limited can offer excellent pricing for physical server hosting options and offers multiple platform architecture choices. Microsoft and Linux operating systems are supported and rental prices include Internet connectivity, power and rack space

#### 3.4.2 Backup as a Service

CloudCIX Limited provides a resilient, cloud-based backup and recovery solution. The CloudCIX Limited storage cloud offers full redundancy and utilises the latest compression and encryption technology to ensure that your data is safe guarded in the event of disaster or data loss. Tape, HDD and SSD shredding services are available onsite and certificates of destruction with CCTV evidence is available.

#### 3.4.3 CloudCIX AirGap Backup

With CloudCIX AirGap, your critical data is safeguarded through offline LTO9 tape storage, entirely isolated from any network. This ensures that your data remains impervious to cyber criminals, offering an impenetrable layer of defence against ransomware attacks. You can rest assured that your valuable information is secure and protected.

#### 3.4.4 Disaster as a Service (DaaS)

CloudCIX Limited maintain a server, storage and firewall disaster recovery (DR) suite to allow customers to recover from ransomware or critical failure. The suite also contains a pair of LT09 tape drives that can also be used to test the restoration of backups.

#### 3.4.5 Microsoft SPLA

CloudCIX Limited can provide dedicated and virtual servers with licenced Microsoft software under our Microsoft Service Provider Licence Agreement (SPLA).

#### 3.4.6 CloudCIX UI

All your interactions with CloudCIX, from setting up VPSs to getting a copy invoice, are managed from our CloudCIX portal.

#### 3.4.7 Firewall as a Service

CloudCIX Limited provides fully managed Firewall solutions, built on Palo Alto platforms with regular weekly updates ensuring that the services are consistently aligned with the current threats and attack vectors.

## 4 Support

### 4.1 Support Overview

#### Network Operations Centre

- The CloudCIX Network Operations Centre is occupied 24 hours x 365 days a year to provide proactive monitoring, incident handling, remote hands assistance and alerting to our customers.
- Critical issues are escalated up to senior network engineering within 10 minutes.
- Real-time traffic monitoring and polling of CloudCIX and Customer network elements is carried out every 20 seconds.
- CloudCIX Limited offers managed support services agreements to secure your entire infrastructure whether in our data centres or on your premises.

### 4.2 Ticketing

Customers can create, update, and view support tickets online, via the CloudCIX Helpdesk App.

### 4.3 Live Chat

Live support chat, with a member of our NOC staff, is available 24 hours x 365 days a year via the CloudCIX Limited support page located at <https://www.cloudcix.com/#/support>

### 4.4 Phone Support:

Phone support is available at the following numbers.

- **NOC Direct Dial:** +353 (0)21 2373060
- **Main Number:** +353 (0)21 2373050
- **Emergency Mobile:** +353 (0)87 2778589
- **2nd Support:** +353 (0)87 6681692

### 4.5 Online Resources

- CloudCIX Limited publishes service affecting issues to its twitter account @CIXstatus.
- Check your latency to our data centre using <https://corkix.speedtest.net/>