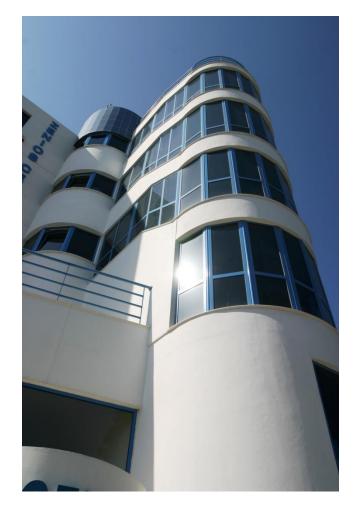# Data Center Operations

Presentation Outline

- Company Profile
- Data Center Operations
- Why Cyprus
- Data Center Facilities
- Services
- Why Simplex
- Advantages of Using Simplex
- Q&A

Company Profile

Simplex

- Cyprus company, established in 2005

- Privately owned offices and state of the art Data Center since 2007

- Services
    - ICT Consulting
    - Web & Internet
    - Data Center
    - Advanced Infrastructure

Company Profile - Clientele

- Customers from all over the world: Cyprus, Europe, Middle East, U.S., Latin America
- Clients from various industries/markets: banking and finance, oil and energy, shipping, manufacturing, distribution, security, ISPs, etc.

There is no customer that is too big or too small; we serve them all at the same high standards

Company Profile - Partners

Data Center Operations

Help organizations with today's IT challenges:

- Cost for IT infrastructure
- Reliability and availability of network, bandwidth, hardware and power
- Security
- In-house human expertise

Data Center Services

- Colocation
- Cloud services (IaaS/SaaS)
- Virtual servers (VMWare and OpenVZ/VPS)
- Web hosting
- Application hosting
- Business resiliency:
  - Offsite data backup
  - Disaster recovery
  - Business continuity
- Managed services and support

Why Cyprus

- Strategic location: at the crossroads of Europe, Asia, Africa and Middle East
- Time zone convenience
- Easy travelling distance
- Daily flights to all major destinations

Why Cyprus

- Political stability (U.N., E.U.)
- Friendly environment for foreign investment
- English widely spoken
- Highly educated workforce
- Advanced telecoms infrastructure

Data Center – Quick Facts

- Two fully interconnected (fibre, CAT6A, CAT6) yet fully independent computer rooms at 4th floor and basement, each with 10 racks

- Heart of Limassol (international business center)

- 215m^2 (approx. 2,314ft^2)

- SLAs:
  - 99.999% for electromechanical infrastructure
  - 99.9% for cloud infrastructure

Data Center Facilities - Racks

- 19" industry standard racks with RETMA rails and square holes (42U and 36U racks available)
- HP, IBM and APC
- Floor stabilized and bayed with each other
- Independently grounded
- Lockable
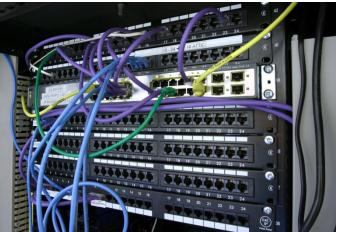- Cable management facilities

Data Center Facilities - Cabling

- 4th floor:
  - Raised antistatic fireproof (2hrs) floor
  - Separate under floor cable trays for power and data cabling
- Basement:
  - Rubber antistatic floor
  - Overhead power and data cabling in separate trays
- Copper (CAT6/CAT6A) and fibre data cabling between racks and between computer rooms

Data Center Facilities - Bandwidth

- Carrier neutral (CYTA and Cablenet)
- Two fibres from each ISP coming to the data center from different POPs through diverse paths
- BGP for automated route failover
- One fibre from each ISP to the 4th floor and one to basement
- Fully redundant core routers and switches
- Isolated VLAN for each customer
- 24/7 Monitoring

Data Center Facilities – Power

- Two independent 1-phase power feeds per rack (230V, 16A or 32A) with industrial type sockets (IEC309)

- Modular power distribution for quick and easy deployment of non-standard 1-Phase or 3-Phase power feeds

- Two redundant metered Power Distribution Units (PDU) per rack

- Static Transfer Switch (STS) sockets for redundant power to single corded devices
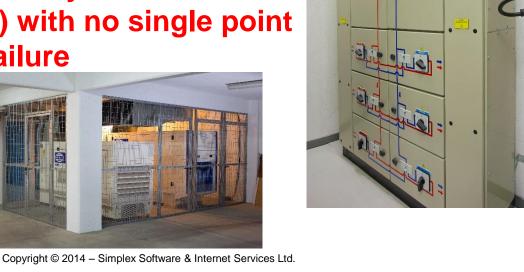
Data Center Facilities - Power

- Fully independent and redundant (2N) UPS units with hot swappable batteries and electronics modules

- Redundant prime power generators

  Fully redundant power (concurrently maintainable) all the way from source to the rack (incl. path) with no single point of failure

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Data Center Facilities – Fire Detection

- SystemSensor FAAST IP Controlled Aspiration Sensing Technology: very early, highly accurate and reliable fire detection
- Optical/laser HSSD (high sensitivity smoke detectors)
- Sensors underneath and above floor
- Local and remote monitoring on a 24/7 basis
- Redundant wired and wireless signalling and alerting
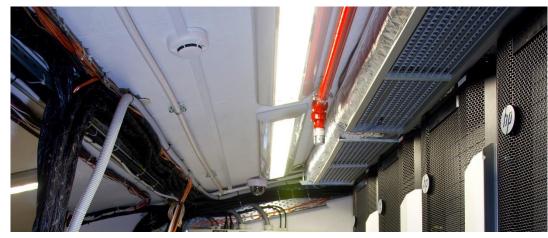- 48-hour battery operation

Data Center Facilities – Fire Suppression

- Fully automatic double-knock FM200 fire suppression system
- Nozzles above and underneath floor
- Manual triggering possible
- 48-hour battery operation
- Hand CO2 Fire Extinguishers

Data Center Facilities - CCTV

- Full coverage of all entry ways, building areas and site's interior
- Infrared colour cameras
- High quality time lapse video
- Recordings stored on UPS powered DVR
- Retention of recordings for a minimum of 30 days

Data Center Facilities – Access Control

- Multiple zones
- Multiple levels of access
- Dual identification (proximity cards & access codes)
- Full event recording
- Monitoring of all doors
- Indefinitely retained access records, door transactions, incident reports and access requests
- Battery operation
- Customer-defined access lists

Data Center Facilities – Security Breach Alarm

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Data Center Operations

- Alarm system for all entry ways
- Complex electronic perimeters by motion detectors
- Local and remote monitoring on 24/7
- Redundant wired and wireless signalling and alerting
- Battery operation
- Patrol service by external security firm during night hours

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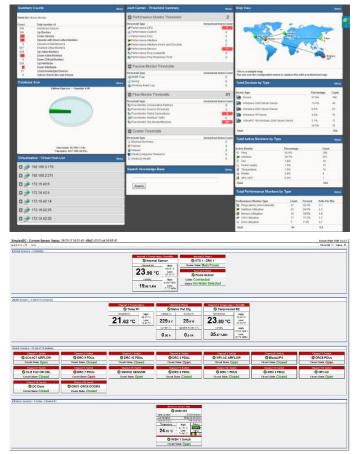# Data Center Facilities – Environmental Control

- Fully redundant down-flow HVAC system in hot and cold aisles arrangement

- Full compliance to ASHRAE 2011 standard for A1 class Data Processing Environments

- Room temperature 25 ⁰C (±2 ⁰C)

- Humidity level 50% (±20%)

- 24/7 environment monitoring

- Blanking panels for optimum air flow

- Fan kits for hot air extraction where necessary

Data Center Facilities - Management

- 24/7 monitoring:
  - Cooling equipment
  - Electrical systems
  - Fire control systems
  - Security equipment
  - Environmental conditions
- Regular maintenance and service contracts (generators, UPS, HVAC, fuel, etc.)
- Procedure-based reaction to any possible incident (ISO9001:2008)

Data Center Facilities - Other

- Remote emergency office space with private LAN for fast direct access to your servers/data and high speed Internet connectivity for quick recovery of fundamental operations

- Fully equipped conference room with 47" screen, whiteboard, IP video conference and telephone

- Staging area for secure and comfortable equipment configuration with Internet access and direct private VLAN access:

  - Clean and tidy data Center

  - Minimum human interference

- Secure equipment storage

- Larger office spaces at remote locations

Technical Expertise

Simplex

Data Center Operations

- Minimal investment for in-house skills
- Highly skilled engineers
- Systems management, maintenance and support
- 24/7 expert rapid response to any fault
- 2-hour guaranteed response time
- Services:
  - Equipment fixes
  - Equipment racking
  - Complex installations
  - Systems configuration
  - Troubleshooting
  - Solution design & implementation
  - Equipment supply/procurement

Services - Equipment Housing

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- 36U or 42U whole rack
- Half rack (18U or 21U)
- Per U space
- Fully redundant UPS/PDU power
- STS facilities
- Generator backed power
- Use of rack mountable keyboard/monitor/mouse
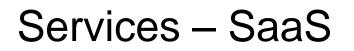
Services – Internet Connectivity

- Dedicated or shared bandwidth

- Option for dedicated direct fiber connectivity from preferred ISP (carrier independence)

- High speed point to point (wired or wireless), VPN or MPLS connectivity with customer premises

- Dedicated real/Internet IP addresses

Services – IaaS

- Reliable and affordable servers according to client needs (CPU, RAM, Storage, O/S, etc.) – **NO CAPEX**

- Fully redundant highly available infrastructure (servers/storage/network)

- Microsoft, Symantec, VMWare and Veeam licenses on a monthly basis (SPLA, ExSP, VSPP, VCP)

- Daily granular backup

- Endpoint security (anti-virus)

- Dedicated IP addresses

- Ability to integrate into hybrid setup (on-premises or collocated infrastructure)

- 24/7 monitoring of infrastructure and services

- 24/7 technical support for business critical and high impact issues

Services – SaaS

- Cost effective: no upfront investment, monthly usage-based fee
- Highly available secure infrastructure
- Granular backup with 2-week retention
- 24/7 technical support

Services – Virtual Servers

- VMWare virtual/cloud servers (IaaS): performance like dedicated server, separate resources for each VM

- OpenVZ/VPS:
  - Entry-level, low spec requirements
  - Optimal and fair resource allocation
  - Self-managed
  - Value for money

Services – Backup & Disaster Recovery

- Offsite Data Backup
  - SQL Server, Oracle, Exchange, files, etc.
  - Full privacy/encryption
- Disaster Recovery
  - Redundant servers and applications
  - Live or batch data replication
  - Remote access
  - Rented licenses
  - Option for use of affiliated data centres

Services – Business Continuity

- Full business resiliency

- All facilities of disaster recovery

- Use of fully equipped private office (local or remote depending on number of people to accommodate)

- Full resume of fundamental operations within 24 hours

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Services – Remote Hands & Eyes (RHE)

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Data Center Operations

- Receive and safely store customer equipment until ready for deployment
- Storage of cold spares
- Help in racking up and configuring equipment
- Extend reach and sight
  - Visual inspection of equipment
  - Equipment and parts replacement
  - Machine restarting
  - Accompanying of third party engineers
  - Log reading

Services - Other

- Web hosting, domain and DNS services
- Application hosting
- Dedicated servers
- Managed servers
- Solution design & implementation
- Supply/procurement of equipment

Managed Services & Support

Simplex

- For solutions designed by us or not
- For solutions located in our Data Center or another, remote, location
- Ensure 24/7/365 smooth running of infrastructure/systems
- Maximize systems and data availability
- Systems administration, monitoring and management
- Preventive action (upgrades/patches) and re-configuration
- For servers, storage, network infrastructure (firewalls, switches, routers, etc.), security, operating systems, databases, etc.
- Managed backup and restore

Why Simplex

- Single point of contact for all your IT needs
- Strategic location
- Workforce expertise
- Partnership with global leading vendors (APC, Cisco, HP, etc.)
- State-of-the-art Data Center
- Physical and network security
- Fully redundant and reliable core infrastructure with world-class SLAs
- High bandwidth connectivity
- Scalability
- Operational Support

Advantages of Using Simplex

Simplex

- Focus on core business thus increasing efficiency and most importantly profitability for your organization

- Reduce IT-related capital expenditure and running costs

- Enjoy the advantages of IT expertise without incurring the cost and effort to manage, maintain and operate an in-house IT department which cannot ever be fully fledged anyway

- Peace of mind: highest levels of availability, reliability and security

- Reduced time to market and lower costs of IT products and services

- High customer service standards

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Q & A

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Data Center Operations

Thank You!