

Managed Services  
**High Density**



# What is high density hosting?



High density solutions draw upwards of 20kW per rack

Equipment in data centres is getting smaller and more powerful. The arrival of blade servers means that computing power that once used to fit in several cabinets now can fit in a single rack. High density hosting is designed to support this massive increase of computing power in the same footprint. Instead of less than 4kW per rack, high density solutions now draw upwards of 20kW per rack.

High density hosting is attractive for companies with intensive processing requirements, in industries such as banking, pharmaceutical and gaming. In these cases, a 20kW rack housing blade servers with inbuilt switching can replace up to 20 cabinets with hundreds of metres of cabling. This gives you a smaller footprint with more reliability and simpler management, and ultimately lower installation and operational costs.

**TelecityGroup is the industry leader in high density hosting solutions. We already have the most dedicated high density space available in Europe and are continually reviewing our total capacity.**

## **How do I know if high density hosting is for me?**

TelecityGroup offers a full range of hosting environments, including dedicated high density, and mixed high density and standard density facilities. Our consultants will work with you to understand your business requirements and fit a solution around you. We need to understand what sort of processing you do and what sort of equipment you have. High density hosting is typically best suited for companies who want to consolidate a large number of high-load servers. But there is no simple formula, because not all applications warrant high density hosting.

## **What specific problems does high density hosting create?**

Cooling is the key issue that needs to be resolved. A rack that draws 20kW of power produces 20kW of heat – and this needs to be cooled. If the rack is not effectively cooled, the servers will overheat and fail, making applications unreliable. To overcome this problem, TelecityGroup uses the industry-leading hot-air containment (HAC) cooling system from APC.

## **Do I require any special equipment?**

A high density solution will typically involve blade servers to get the most out of the environment. Functionally, however, high density hosting is the same as standard density hosting.

## **Why TelecityGroup?**

TelecityGroup is the leading pan-European provider of network independent data centres offering a range of flexible, scalable data centre and value added services. From online security and managed connectivity to application management, TelecityGroup delivers a broad range of services to support businesses that need a resilient platform to support online business. Underpinned by our network of 20 resilient data centres across seven European countries including; Amsterdam, Dublin, Frankfurt, London, Manchester, Milan, Paris and Stockholm, these secure, controlled facilities offer high levels of data and network security, with multiple levels of redundancy on electrical and mechanical systems. Each facility is staffed 24x7x365 by highly-skilled engineers and provides customers with access to multiple network service providers and ISPs, enabling greater choice, flexibility, network resilience, cost savings and speed to market.

Having successfully deployed high density solutions for clients for a number of years, you can be confident TelecityGroup have the hosting expertise to help you meet your business objectives.

# Key benefits



## Availability

Highest cooling density available; our high density hosting environment currently delivers up to 20kW per rack for the very highest power requirements.

## Speed to market

TelecityGroup's high density hosting helps companies respond quickly to business and IT trends to effectively deploy key applications in a fit for purpose environment.

## Effective cooling

InRow cooling solutions enable confident and consistent deployment of high density servers in quantities and concentrations undeliverable by traditional data centres.

The InRow cooling can deliver up to 20kW per rack, effectively cooling high density solutions, including blade servers, without any impact on performance by removing the heat at source, rather than allowing heat to mix with ambient temperatures, driving inefficiencies as a result.

## Ease of management

Blade servers allow you to concentrate your computing power in a much smaller footprint and are easier to install and maintain.

By consolidating standard density cabinets into a high density rack-based environment the architecture is less complex to set up and manage.

## Cost savings

With up to ten times the power and cooling capabilities of traditional data centres, TelecityGroup's high density hosting offers a cost-effective solution for efficient high density hosting, preventing over-sizing and the need to purchase unnecessary and unwanted data centre space.

Integrated power, cooling, management and services in a rack-optimised architecture helps reduce your total cost of ownership by improving reliability and making savings on management.

## Specialist support

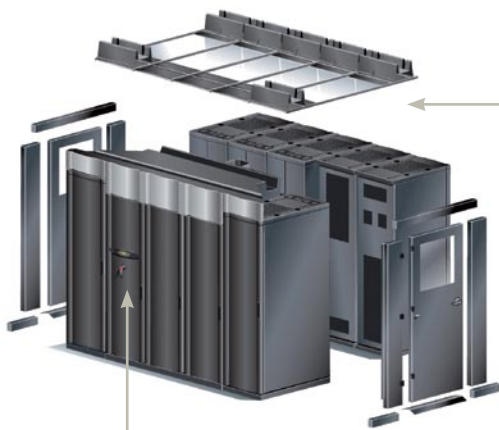
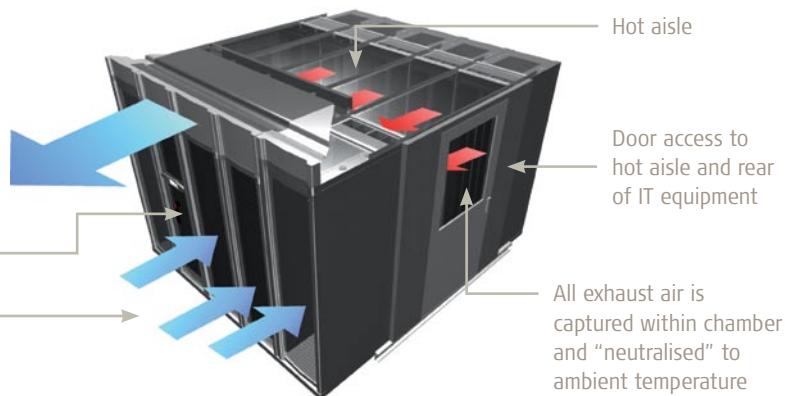
TelecityGroup offers a range of customer support and engineering services available, delivered by a team of highly-skilled professionals. Customer support is available 24x7x365 offering a single point of contact to ensure that teams can move quickly to intervene in fault scenarios and provide technical skills that will help ensure the maximum uptime of your web infrastructure.

### Dedicated High Density Area: Power / Cooling Technology

Ambient-temperature air is returned to room

Integral rackair conditioner

Equipment racks take in ambient air from front



### Hot aisle containment – capture the heat

#### Roof for Hot Aisle

Converts Hot Aisle to a plenum to minimise air mixing

#### Chamber Doors

Access to hot aisle, locks for security

#### Dedicated Air Unit

Back to front air flow

# Environment specification



## Power

- Localised per rack/per bar power management
- Customer power of up to 20kW per rack
- 2N power distribution.

## Cooling

- 2N redundancy on cooling system
- Hot aisle containment system seals in hot air, which eliminates mixing and hot air recirculation into sensitive IT equipment. The system captures the hot IT equipment exhaust air by enclosing the aisle and then immediately cools the air with integrated in-row, rack-based air conditioners. The cool air is then discharged back into the room at ambient temperature.

## Fire detection & Suppression

- Very early smoke detection and alarm system (VESDA)
- Fully addressable two stage fire detection system that monitors the under floor, room, and ceiling space (smoke & heat)
- State-of-the-art fire suppression system
- Network monitored, fully integrated fire protection system.

The systems are designed to minimise any possible customer disruption and ensure that any problems remain localised.

## Security

- Independent client card & biometric identification access system
- Secure & monitored entry point
- Unique Key locks on each rack and to each pod
- Fully recorded, Integrated digital video camera surveillance
- Secure access procedures ensure you and your nominated staff can gain access to the facility whenever you require, day or night.

## Monitoring

- Localised rack monitoring to include power, cooling, air flow & system health
- Close localised monitoring of cooling systems within the rack detects any minor changes to the temperature. The system will automatically respond to reduce the temperature by increasing the chilled water to the AHUs, increase fan speed or both, directly delivering greater MTBF (mean time between failures)
- Facility building management system (BMS) monitors the core aspects of the mechanical and electrical infrastructure (M&E), from power supply, temperature and humidity, to fire detection & suppression, access and security.



“For a company that manages and analyzes data flows, guaranteeing service continuity is a key factor in customer satisfaction and loyalty. By meeting our growing need for high density power and cooling, TelecityGroup has allowed us to reach this goal, with guaranteed security.”

**Ludovic Lacoste**  
IT Director at Yacast