

Co-location Services at Elisa Data Centers

Elisa's Co-location Services comprise a package of services provided from Elisa's state-of-the-art co-location, which respect green values, as well as supplementary services aimed at securing a safe, reliable operating environment for customers' devices.

Elisa's co-location are divided into different categories according to their features. Customers can install their equipment in a co-location in the category that best meets their needs. If required, customers' equipment can be decentralised and placed in several of Elisa's co-location, guaranteeing business-critical equipment the best possible availability.

We provide customized services from shared rooms to private suites.

Service content

The following sections describe the content of Co-location Services provided for Elisa's co-location and provide definitions for basic services and supplementary services.

Basic infrastructure of Co-location Services	
Placing of devices	●
Management of rack list and data co-location map	●
Power supply	●
Ensuring power supply and reserve power for co-location	●
Cooling	●
Fire extinguishing systems	●
Safety	●
Access control	○
Basic tasks of building maintenance	●
Telecommunications infrastructure in co-location	
Co-location network	●
Telecommunications connections from operators to co-location	○
Hands on site services	
Receipt and insatallation of goods agreed in advance	○

- A basic service, which is always included in the service. Invoiced on a monthly, unit-based or hourly charge basis.
- An optional supplementary service, which is billed in terms of monthly, item-based or hourly charges.

Elisa's co-locations

Elisa has several high-quality co-locations, which are located in Helsinki, Espoo and Raisio.

Energy efficiency of co-location

The energy efficiency of the Tapiola co-location is among the best in the world. Heat generated in the co-location by servers is processed and recycled for the use of Espoo households.

In its targets, Elisa is committed to continuously improving its energy efficiency. An external auditor regularly measures these values.

Service level categories

Subject	Service level category
Co-location infrastructure	Availability 99.99% annually Service hours 24/7 Response time 15 min Resolution time target 1h
<ul style="list-style-type: none"> • Telecommunications network at the co-location • Air conditioning and power supply 	

Basic infrastructure of Co-location Services

Placing of racks

Devices in a co-location are placed in racks, which can be protected from vibration if required. All the device racks and rack positions are numbered and marked. Connections and locations of devices are marked and documented electronically. In addition to cable markings, cables are colour-coded to minimise errors.

Customers can provide their own device racks. All customer devices must meet the requirements of the Traficom and the Electrical Safety Act (1135/2016). In the case of a whole room, the responsibility for the investment and the rack list is provided by the customer.



Management of rack list and co-location map

Elisa is responsible for maintaining and updating the floor plan.

Power distribution

The power distribution in co-location is planned in such a manner that sufficient power distribution is always guaranteed for the devices.

All devices have redundant power distribution.

Uninterrupted operation of a co-location's power distribution is ensured with the following solutions and measures:

- Technical solutions used to ensure uninterrupted power supply
- Processes and guidelines that guide the actions of personnel
- Work management aimed at ensuring that the personnel act in accordance with the guidelines
- Continuity testing regularly carried out by Elisa to ensure that technical solutions function and people act as planned, ensuring uninterrupted power distribution in the event of a service disruption at a co-location

As regards more extensive continuity testing of the power distribution, such testing also always includes the participation of the electricity unit responsible for a co-location's electro-technical design (or the building's supervisor), UPS and reserve power distribution, as well as other necessary parties.

Ensuring power distribution and emergency power for a co-location

The power distribution to the co-location is guaranteed with fault-tolerant, non-volatile power distribution devices. A batteryless CPS is in use in the Tapiola co-location. Other co-locations use UPS systems. Emergency power for all co-location is guaranteed with backup generator devices.

The systems that safeguard the operations of co-location – UPS/CPS devices, cooling devices and backup generators – are located separately from the actual data rooms.

The entire emergency power system can, if required, be completely overridden in a controlled way and without interruptions, for example for maintenance or repair work.

Cooling

The temperature in co-location is kept at $23\text{ °C} \pm 2.0\text{ °C}$.

For monitoring, the system is connected to a centralised alarm system.

If required, the correct temperature and humidity can be maintained using humidifiers and cooling devices. Cooling devices also keep the temperature of devices in a co-location standard. As an energy-efficient solution, devices in co-location can be cooled with "free cooling", which utilises cold air from outdoors for cooling.

Fire extinguishing systems

Fire safety is ensured with smoke and heat detectors connected to fire suppression equipment. Fire safety system varies by a co-location as gaseous or water based.

The functionality of the fire extinguishing system is tested in accordance with the fire extinguishing system manufacturer's maintenance programme. The supplier of the fire extinguishing system performs the continuity testing required in accordance with the maintenance programme and delivers reports of the testing to Elisa.

Co-location safety

Access control is handled centrally in all of Elisa's properties. Access to co-location is only granted to named personnel. Elisa reserves the right to require a basic background check for the person, in accordance with the Finnish Act on Background Checks (726/2014).

Security arrangements:

- Secured access arrangements (security clearance in accordance with operator-level processes)
- Remotely managed access control
- Recording camera surveillance
- CCTV monitored 24/7
- Alarm system



The co-location has recording camera surveillance and an alarm system that transmits alarms to Elisa's control centre. The co-location is monitored and guarded around the clock.

Access to the co-location is through doors equipped with electronic locks, which Elisa is responsible for managing. Elisa audits, nominates and monitors third parties with access to the co-location (for example, building maintenance workers).

The co-location has motion control and motion controlled video monitoring. Alarms are forwarded to Elisa's control centre. The centralised alarm system automatically raises an alarm at the security firm to a security guard investigate the reason for the alarm.

Access control

Access control at Elisa has different categories based by: personal access with key, remoted door control access and escorted access or their combination.

The escorted access is not included in the basic service. It is separately billed in accordance with Elisa's price list.

Elisa may require a personal non-disclosure agreement.

Basic tasks of building maintenance

Building maintenance is part of Co-location Services. Basic building maintenance tasks include:

- Maintenance of premises and basic repairs
- Maintenance of technical devices used for building maintenance and basic repairs
- Cleaning services for co-location

The customer takes care of the cleaning of their own packaging materials to the recycling point.

Telecommunications infrastructure in co-location

Co-location network

Co-location infrastructure is designed in accordance with high availability principles to guarantee availability performance and safety.

Connectivity to the co-location is performed via one or more defined connectivity points named Meet Me Room (MMR). Inside cabling is performed via Optical Distribution Frames (ODF) to all the co-location rooms. Elisa has its own standby devices and components where this is reasonable in view of operational criticality.

Telecommunications connections between operators and co-location

It is possible to establish connections between Elisa's co-location and all key telecommunications operators operating in Finland, Estonia or Europe. These connections are not included in the basic service. The customer shall agree with Elisa about setting up a connection from MMR to rack or room ODF.

Maintenance services "Hands on Site"

Elisa provides maintenance service "Hands on Site" as an additional service.

Co-location ratings

Traficom's regulation M 54 B /2014

Elisa has premises that comply with this regulation and that can be used to host the customer's services.

IEC 27001

Elisa's data centers are certified with IEC 27001:2013 (ISO 27001:2013) standards.



Fulfilment of the VAHTI 2/2013 protection level

Below is a description of the fulfilment of the VAHTI 2/2013 categories regarding the various requirements for all the co-location.

Class of premises	Requirement	Tapiola	Raisio	Säteri
1	Theft	Yes	Yes	Yes
	Access control	Yes	Yes	Yes
	Penetration	Yes	Yes	Yes
	Fire	Yes	Yes	Yes
	Vandalism	Yes	Yes	Yes
	Heat	Yes	Yes	Yes
	Smoke	Yes	Yes	Yes
	Water damage	Yes	Yes	Yes
	Dust and cleanliness	Yes	Yes	Yes
	Device damage, maintenance	Yes	Yes	Yes
	Training	Yes	Yes	Yes
	HR Doors and locking	Yes	Yes	Yes
	Fire compartmentalisation	Yes	Yes	Yes
	UPS	Yes	Yes	Yes
2	Condition monitoring alarm	Yes	Yes	Yes
3	Backup power	Yes	Yes	Yes
	Camera surveillance	Yes	Yes	Yes
	Shaking and vibration	Yes	Yes	Rack-specifically, if required
	Structural solution	Yes	Yes	Yes
	Explosives	Yes	Yes	Yes
	Contingency plan	Rescue plan	Rescue plan	Rescue plan
	Extinguishing equipment	Yes	Yes	Yes
	Visits and briefing	Yes	Yes	Yes
4	EMP and radiation	Yes	Yes	-
	HPM	Yes	Yes	-

Agreement period

The minimum duration of the Co-location Services agreement is twelve (12) months unless it is part of some other connection agreement or transaction.

General terms and conditions

General Terms for Operator Products apply to Co-location Services at Elisa Data Centers.

