Elektron as a Service

Service Description

Version 1.07

Contents

About This Document

INTENDED READERSHIP

This document is intended for current and prospective customers of Elektron as a Service and its associated offerings.

IN THIS DOCUMENT

This document describes the service that you, as a customer of Elektron as a Service can expect, alongside the experiences and choices that are available to you out-of-the-box. It covers all the stages of your interactions with the company, from initial interest through to termination of service. It is not a legally binding document but intended to give a reasonable expectation of the service you will receive as part of Elektron as a Service, and also any obligations you might have.

Please refer to this document for any information about the service included with Elektron as a Service, whether as a prospective or ongoing client. If you have any further questions, do not hesitate to contact us in any of the channels listed below. More information about the general terms of service offered by Refinitiv *("The Financial and Risk business of Thomson Reuters is now Refinitiv")* is available upon request in the form of the Statement of Service, available via MyRefinitiv.

ABBREVIATION AND GLOSSARY

Term	Definition
APAC	Asia Pacific
API	Application Programming Interface
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
BYOC	Bring Your Own Communications
CAB	Change Advisory Board
Client	"Client", "You", "Customer"
DACS	Data Access Control System; a system for permissioning the full range of trading floor, enterprise and Internet users to data and other services
DD	Delivery Direct; is a next-generation customer connectivity solution that uses high performance private network connectivity from multiple telecommunications vendors to deliver Refinitiv products and services to customers
DN	Data Notification
DR	Disaster Recovery
DSS	Thomson Reuters DataScope Select
Eikon	Eikon; is a flexible, open platform that's purpose-built for trade innovation and lets you connect with the world's largest directory of verified financial professionals
EMEA	Europe, Middle East and Africa
FXT	Thomson Reuters FX Trading
GMT	Greenwich Mean Time
ITIL	Information Technology Infrastructure Library
ITSM	Information Technology Service Management
MIM	Major Incident Management
MyRefinitiv	The portal to view product guides, videos and FAQs, find answers & get support, view Notification & Alerts, access invoices and much more
PCN	Product Change Notification
PoP	Point of Presence
QoS	Quality of Service

Refnitiv	"Refinitiv", "We", "us" or "Our"
SoS	Statement of Service
UAT	User Acceptance Test
UTC	Coordinated Universal Time
VPN	Virtual Private Network

Elektron as a Service

ABOUT

Elektron as a Service is one of the fastest-growing businesses at Refinitiv, with over 450 customers across 20 sites globally (as of November 2018). The service comprises market data and associated infrastructure, as well as platforms and connectivity to data or trading venues. These capabilities are delivered as managed services from our Data Centres located around the world. Customers take advantage of the service to:

- Reduce costs and capital expenditures
- Remove the complexity of managing complex real-time data distribution systems
- Allowing you to focus on core businesses

This document will explain the underlying services of the Managed Feed and Managed Service offerings.

SCOPE AND SCALE

Elektron as a Service is delivered from 20 Data Centres in 10 countries.

All Data Centres are located in close proximity to leading financial centres around the world to facilitate customers' global trading requirements, providing access to infrastructure and data that delivers optimised levels of performance, faster time to market, streamlined operations and with full Refinitiv support.

Anything not described in this document is excluded from our standard service.

ELEKTRON AS A SERVICE DATA CENTRE FOOTPRINT

Note: The information below is accurate as of January 2019

Region	Country	DC Name	Data Centre ID
EMEA	United Kingdom	Cyxtera LHR2 (Docklands)	LO4
		Cyxtera LHR1 (Slough)	LO1
	Germany	Equinix Frankfurt FR2	FR4
		Equinix Frankfurt FR4	FR5
	Russia	IXcellerate Moscow	MS1
APAC	Singapore	Cyxtera Jurong East SIN2	SG2
		Cyxtera Tai Seng Drive SIN1	SG8
	Japan	Tokyo NTT	TY6
		Tokyo @Tokyo	TK2
	China	HKEx Colo	HK3
		Equinix AsiaTone	HK7
		Mega-iAdvantage	HK8
		GDS	SH1
	India	Netmagic BSE Colo	MB1
	Australia	Australian SE ALC Colo	SY1
Americas	United States	Equinix Chicago CH4	CH4
		Chicago CME Aurora	CH5
		Cyxtera EWR2 (NJ2 Phase 1)	NJ2
		Equinix New York NY4	NY4
	Canada	Toronto TMX Atrium	TMX

AVAILABLE SERVICES AND DATA

Elektron as a Service offers two types of managed datafeed services:

Managed Feed

Customers choosing our Managed Feed offering gain access to Refinitiv's real-time datafeed content, delivered from our managed services environment, and accessible through the full Refinitiv API suite. The service includes access to our low latency direct feeds as well as global exchanges and over-the-counter markets coverage via our consolidated feed.

Managed Service

In addition to the content available through Managed Feed, our Managed Service offering also provides you with access to the best-in-class market data distribution platform, alongside value-add and management services such as entitlements, publishing, contributions and third party datafeed management.

The table below illustrates the capabilities and data available through both the **Managed Feed** and **Managed Service** solutions.

		Managed Feed	Managed Service
Capability	**Application Connectivity**	✓	✓
	Internal Publication	✗	✓
	External Contributions *	✗	✓
	Third Party Datafeed Distribution *	✗	✓
	Eikon Connectivity	✗	✓
	End User Entitlements **	✗	✓
Data	**Real-Time**	✓	✓
	Direct Feed ***	✓	✓
	Quality of Service (QoS) ***	✓	✓

* For clarity this includes customer sourced and vendor sourced feeds. Customers must fully manage any 3rd party relationships. Refinitiv will be responsible for the Refinitiv component through which a third party service is provided. Refinitiv is not responsible for the quality of 3rd party contributed data

** End user entitlements refer to the capability to permission users of non-Refinitiv desktop products and applications. Limited application level entitlements are provided in Managed Feed Multi App.

*** Please contact your Refinitiv Account Manager or Contact Us for the services available in a specific centre

Datafeed Service Offerings

The feeds available through the service are the following:

- **Elektron Real-Time**, Refinitiv's aggregated feed from 400+ exchanges, comprising 20+ million instruments. This feed is available in Full-tick or various in-centre Quality of Service formats to fit your workflow and application needs. The data characteristics through Elektron as a Service follows the standard format of Elektron Real Time, in terms of the breadth, depth and any regional offerings.
- **Elektron Direct Feed**, Refnitiv's direct exchange feed for low latency access to a richer content set from the exchange or venue
- **Thomson Reuters News Analytics (TRNA)** processes English and Japanese language news items, producing sentiment scores against companies, commodities, and the news item as a whole.
- **Third Party Data Feed distribution**, such as another data vendor or your own provided feeds, is limited to the infrastructure provided by Refinitiv only. You remain fully responsible for the third party datafeed itself, including any vendor relationship, datafeed IDs and the ongoing capacity management and monitoring of the feed and bandwidth.

All Refinitiv feeds are provided in fully-resilient deployments at all locations from which the service is available and to which customers subscribe.

Quality of Service (QoS) Feed Overview

(1) **Full-tick** service allows you to consume all ticks (every bid, ask and trade update), normalised to the Refintiv Data Model across all the exchanges and OTC venues offered on Elektron Real-Time via one consolidated feed.

(2) **Conflation** is a bandwidth management capability that Refinitiv offer, whereby the first update and any other updates received within the specified interval are conflated (i.e. multiple quote updates are condensed into a single time based update that only delivers the latest value received within that time window). The conflation is "non-trade safe", in other words the conflation service includes Trade-type updates and sends all updates as conflated. Typical applications for this type of service would be for position keeping systems or for applications that need to provide a steady stream of updates whilst also managing bandwidth or processing on that consumer application.

(3) **Delayed** service delays each update according to the pre-set time span specific to each exchange and each vendor, thus allowing customers to benefit from lower access fees for those exchanges where this is applicable. Refinitiv manage the entire service, including the delay map for configuration per exchange, which is updated when additional venues are onboarded, or changes needed to existing data sources. The service is only available to customers with a TRKD license to ensure the agreements are in place with the relevant exchanges to consume and distribute fee-liable and non-fee-liable delayed data.

(4) In all use cases and locations, and in addition to any available feeds within the Data Centre, we will provide pre-delayed instruments known as 'slash RICs' and presented with a forward slash (/) before the instrument identifier. It is important to know the difference between these instruments and any delayed at source instruments. Your account team can guide you through our data structure.

Managed Infrastructure and Colocation

Available in conjunction with one of the datafeed services described above and in select locations, Refinitv can also offer hosting services where we provide either appropriate space within our infrastructure and/or hardware and infrastructure on to which you can add proprietary capabilities.

- **Managed Infrastructure** provides specific services that take away the operational ownership and capital expenditure of providing dedicated hardware and networks for your applications located next to the Elektron as a Service offering to which you subscribe.
- **Colocation**, provides specific services that take away the operational ownership and capital expenditure of providing data centre space for your own applications, located next to the Elektron as a Service offering to which you subscribe.

1. Discover

There are several channels available to contact Refinitiv for discovering Elektron as a Service with [MyRefinitiv](#) being the best place to find relevant information and documents no matter if you are existing or new Refinitiv customer

As well as [MyRefinitiv](#), you may also visit our [website](#) or [Contact Us](#).

MyRefinitiv was built using an agile design and build methodology. The portal provides a personalised experience with adaptive layout, content and capability. The portal is a key customer touch point with over 80k registered users globally in Market Data, End User Billing and IT roles

It is a single front door to our products and services and is mobile responsive too. More users are accessing our self-service tools via a mobile device than ever before.

With over 140 Refinitiv product pages, MyRefinitiv enables customer users to find out more about our product offerings, they can request demos and free trials subject to the availability.

2. Evaluate

ELEKTRON AS A SERVICE TRIALS

Managed Feed Trial – Process

Your Refinitiv Account Manager will be able to arrange a trial of the Managed Feed solution. **Software VPN (SW VPN)** connectivity will be arranged to enable access to the environment to experience our offerings. We will endeavor to provide a welcome email with a set of credentials to you within 48 hours of the request reaching our team.

Please note that during this trial period, you may utilise this service for **one calendar month**, and the trial period will commence once you are allocated the VPN and Managed Feed credentials. Passwords are reset at the beginning of each calendar month. At this point, you will no longer have access to the service and cannot request an extension of this service. This has been designed solely for customer application testing.

For the avoidance of doubt, should you request a Managed Feed trial and our pre-built VPNs are all in use, you will be added to the next available slot which may be the following calendar month.

Managed Feed Trial – Data Content

Content will be of a limited "non-fee liable" subset.

Managed Feed Trial – Support During Trial Period

Support shall be provided in a limited capacity and is not reflective of our service. Should any problems arise the first line support will be offered by your Refinitiv Account team. The team will resolve any issues that may have arisen with the appropriate Refinitiv support group.

In the event of a technical issue within the Elektron as a Service infrastructure, you will be reallocated a separate VPN. If all VPNs are being used or are booked to be used, you will have to wait for the next available space. If you are unable to get through to your contact from your Refinitiv Account Proposition team, please refer to the Elektron as a Service Product Management Team via the contact details in your welcome email. This e-mail address is valid and contactable during the trial period only.

3. Purchase & Renew

ORDERING

Our sales and account teams will work with you to gather the requirements for your use case. Your Account Manager will then facilitate orders for any Refinitiv market data content that is to be consumed and distributed by your Elektron as a Service solution as well as the services and applications related to distribution, transformation and contribution of data, and for the necessary connectivity and bandwidth.

Our standard minimum term contract is 12 months for Managed Feed and 24 months for Managed Service, although your Account Manager can provide you with options to extend these terms.

The minimum term for any Managed Infrastructure or Colocation service must align to the prevailing datafeed service to which they pertain.

SERVICE CHOICES

Managed Feed

There are two configurations of Managed Feed; (1) Single application and (2) Multi-application.

(1) **Managed Feed with Single application**: Provides data and services for a single application to connect to Elektron as a Service. Depending on your subscription, we will provide you with up to a total of 3 resilient connections from that same application to support, for example, production, disaster recovery (DR) or test (UAT) workflows. You may be liable to additional exchange penalties if you connect a different application under the premise of DR or UAT. Since this offering is for a single application only, all connections will be identically permissioned for services and data.

(2) **Managed Feed with Multi-application:** Provides data and services for up to 5 application connections. You may choose to use the connections for separate applications or for combinations of applications with production, disaster recovery and test workflows, but always up to a combined total of 5 connections. The Multi Application offering better suits customers with applications requiring unique content and service entitlements, provided to you through access to Data Access Control System (DACS).

Note that neither Managed Feed option has integrated functionality to permit end user permissioning, meaning entitlements will be relevant to the application connecting to Elektron as a Service but not individual end users of the application. Clients may, however, be able to achieve this with deployed DACS installed within your own infrastructure connected to the service.

Managed Service

This is a scalable solution that permits any number of applications to connect to the service, with the appropriate license, as well as access to the full suite of Enterprise Platform capabilities such as contribution to Refinitiv and third party vendors, publishing and proprietary data ingest, relevant to your license. In contrast to the Managed Feed solution, through the capabilities of Data Access Control System (DACS) you will be able to entitle applications and Refinitiv Eikon end users connecting to Elektron as a Service, as well as controlling the access at the individual end user level, again with the appropriate license.

To find out more, please visit MyRefinitiv to discover and learn about DACS best practice and the Open DACS options available to you.

If you subscribe to Managed Service we will prepare a Statement of Work (SOW) to define the scope of the deliverables related to the subscribed package and any other integration work, and it will be signed by both parties upon agreement. Any changes in the agreed SOW will constitute a change which will also require a sign-off and may require a new order.

Managed Infrastructure

Sold only in conjunction with one of the services described above, and available in the data centre in which we provide that service, Managed Infrastructure allows you to locate your key applications near to our feed services, offering improved latency over a deployed customer premises service. Connectivity will be provided via cross connects where Refinitiv provide any cables and associated consumable items such as optical plugs (SFPs) for fibre. Multiple hardware and operating system choices are available to you, and in all cases, you retain the responsibility to manage any application added to the provided hardware.

Hardware will include the necessary environmental services (space, power, cooling) and will typically be offered within a multi-tenant space. You must choose a suitable and supported connectivity method with which to access the managed equipment. For the avoidance of doubt, physical access to the environment is not permitted.

Service options include Managed Servers, Managed Firewalls, Managed Switches, Cross Connect, Internet.

The service demarcation point is the operating system on the managed infrastructure component relevant for your use case.

Colocation

Colocation is also only sold with one of the services described above, in the data centre in which we provide that service, and provides you with the necessary environmental services (space, power, cooling) that you require to install and manage your own equipment. The collocation service space will be dedicated just to you, and you retain full responsibility to install, manage and maintain any equipment within the environment. Refinitiv will provide the cross connect cabling you require whilst you retain the responsibility to provide any optical plugs (SFPs) for fibre, or any local consumables within the environment.

We recommend you choose a suitable and supported connectivity method with which to access the managed equipment. Access to your collocation environment is available through our helpdesk by raising an incident ticket which will be passed to the appropriate team to grant access. A ticket must be raised by a Qualified User, defined as someone who (i) is adequately trained in liaising with Refinitiv support staff, in initial situation diagnosis and in understanding severity levels; (ii) is registered with Refinitiv Customer Support and (iii) is registered on our Alerting Service.

Service options include Colocation Cabinets, Cross Connects, and Internet.

The service demarcation point is the collocation cabinet in to which you install your equipment.

Entitlements

Each application connection to the Elektron as a Service Data Centre requires a unique Elektron as a Service ID which will be permissioned with the Refinitiv and third party content to which you are both approved to consume and to which are you subscribed. Additionally you will require appropriate licenses relevant to the Elektron as a Service offering. The point at which the data is provided to you through the service, irrespective of the connectivity type you choose, forms the location at which you and we must seek approvals for any exchange provided content. For example, in a Delivery Direct connectivity model the location at which we install the customer end of the last mile circuit will be the location for approvals. Conversely if a intra data centre cross connect better suits your use case, the Elektron as a Service data centre address will form the location at which approvals must be sought. Your Refinitiv Account Manager will assist you as part of the ordering process.

ADMINISTRATION

Refinitiv will gather the data requirements from you prior to the completion of the implementation work. We recommend customers adhere to the standard data rules established by Refinitiv and / or third party for ease of maintenance post on-boarding.

BILLING

When the service is available for use, you will be given a Service Handover Document (SHD) by our Elektron as a Service On-boarding Manager after the successful commission test and the recurring billing will be activated in accordance with the customer agreement.

You may also refer to the corresponding section of the Statement of Service (SoS) which can be found at MyRefinitiv.

RENEWAL

Your Refinitiv Account Manager will contact you prior to the end of the minimum term or the renewal date as advised in the Elektron as a Service order form, whichever is sooner.

YOUR RESPONSIBILITIES

During the purchase and renew stage of the proposition lifecycle, all Elektron as a Service customers shall be responsible for the following:

- Provide Refinitiv teams with sufficient information with which we can design and recommend the most appropriate solution for your use case
- Manage direct bill exchange approval requests where applicable, and to the location at which we hand the data off to you
- Manage any third party relationships in respect to contributed data and/or third party data feeds

4. Setup

Refinitiv will procure, install and configure the infrastructure and supported applications that make up the managed service. The configuration is determined by the Elektron as a Service package to which you subscribe. You will retain the responsibility to procure any equipment you may need to connect to or use the service.

PLANNING

Planning will commence prior to ordering your Elektron as a Service package. With our implementation teams you will discuss your use case, design and technical aspects or options of the implementation. . A dedicated Regional Elektron as a Service On-boarding Manager will be assigned for all new customers to this service throughout the setup period.

RELIABILITY & RESILIENCY

All Elektron as a Service Data Centres are designed and built with resilience in mind. Networks in each Data Centre are designed to offer two diverse paths from which to deliver the service, whilst the infrastructure in each site is separated into two identical sides running the same components. This is commonly referred to as the A and B sides within a Data Centre and both sides actively subscribe to data from physically and logically separate instances of the same source, as well as distributing data to you. Likewise, customer connections are setup by default as dual, live-live connections to provide the highest level of availability. This design enables the service to target 99.9% availability during Normal Hours (see below). Each Elektron as a Service Data Centre is completely independent from any other.

In addition, Elektron as a Service typically offers two or more Data Centre options within a specific location. Some customers may choose to establish regional connections to separate cities or countries in preparation for DR and Business Continuity Planning (BCP). Customers can also perform BCP tests and application failover tests at their discretion, however Refinitiv involvement in these tests is not included in your subscription and may be subject to additional fees.

Failover and resiliency test can be carried out towards the end of the Elektron as a Service on-boarding with an objective to meet and confirm the behaviour of your Eikon desktops and applications during the agreed failover scenarios.

EIKON CONNECTIVITY

Our Eikon desktop product offers customers easy access to the breadth of content we provide, from multiple sources. In the vast majority of Elektron as a Service locations we will provide Eikon with real-time data and any available quality of service feeds, while non real-time data, such as fundamentals and time series, will be provided directly from the Eikon Platform, for which connectivity must be managed through your Delivery Direct connection. Your account team will explain how to connect to these non real-time services. In some scenarios, and if you are connecting to the service from South America, South Africa, Australasia, Japan or China, the Time Series service only will be provided from the Elektron as a Service Data Centre.

LAST MILE CONNECTIVITY

The Managed Feed connections described above allow up to 20 mounts per connection. Mounts are defined as a subscription using the same ID and from the same source IP address, serving the same application.

Managed Service customers are not limited by mounts per connection, rather the thresholds will be set in accordance with your license.

Depending on the centre, multiple last mile options are available to you over which to connect to the service. Your Refinitiv Account Manager will, however, assist you in selecting the best connectivity option based on your use case:

Connectivity Name	Managed Feed	Managed Service	Description
Delivery Direct (DD)	✓	✓	Our preferred connectivity method that can provide a private connectivity for up to 10 Gbps. It can be set up with full redundancy and provides access to multiple other Refinitiv Services outside of Elektron as a Service (such as FXT, DSS, etc.).
Internet VPN	✓		Available as software, as well as a managed or unmanaged hardware dedicated to creating the VPN tunnel for the connectivity
Cross-connect	✓	✓	Applicable when the consuming application is deployed at the same Data Centre of the Elektron as a Service. This is available for speeds up to 10 Gbps.
Micro PoP	✓	✓	Available in select Elektron as Service locations, offering redundant links to a non-Refinitiv data centre, from which you can use a cross-connect provided by the third party data centre vendor.
Bring Your Own Communications (BYOC)	✓	✓	In select locations, you can provide your own communication lines into an Elektron as a Service facility to establish a connection from their remote site.

Delivery Direct

Delivery Direct provides a dedicated physical connection between Elektron as a Service and your premises, with fixed bandwidth capacity and a permanent connection fully monitored and managed by Refinitiv. As such, we recommend Delivery Direct be used for client production system access when your infrastructure is located external to the Elektron as a Service Data Centres.

Your connectivity experience will depend on the Delivery Direct option you choose.

Non-resilient Delivery Direct offers connectivity to both A and B sides of the service from a single circuit and a single last mile network Point-of-Presence (PoP).

Resilient Delivery Direct offers connectivity to each side of the service from discrete last mile circuits, designed in to a logical pair. For example, circuit 1 will connect to the Elektron as a Service A side, and the 2nd circuit will connect to the B side.

For more information on Delivery Direct behaviours and experience, please consult with your Refinitiv Account Manager and / or Customer Success Manager.

Internet VPN (for Managed Feed Solution Only)

Managed Hardware VPN

Managed Hardware VPN, also known as a site-to-site VPN, involves a hardware network component provided by Refinitiv, which is installed at your site. The hardware VPN will allow you to connect more than one application to Elektron as a Service through a single VPN connection over the internet. You will also be provided with an Out-of-Band (OOB) modem, a dial-up device which allows our Customer Support teams to manage the firewall even if the internet connection is down. Bandwidth and latency may be limited by your internet service. As such, Managed Hardware VPN is ideal for production, UAT and development access where the customer is not sensitive to latency.

Your responsibilities for this connectivity include:

- Provide a topology of the existing network including IP addresses for all network connections to the firewall;
- Maintain business grade internet connectivity with sufficient bandwidth;
- One unit of rack space, along with necessary shelves and mounting kits, and necessary power for the VPN network device and out-of-band modem.
- Static, Public IP addressing for the VPN network device.
- 100 / 1000 Mbps network connection into your switching infrastructure.
- Arrange and procure a standard Plain Old Telephone Service (POTS) line with direct inward dialing to enable remote network management.
- Allow sufficient firewall access between Elektron as a Service and the Managed VPN device.
- Provide Refinitiv the ability to monitor the VPN device.

Unmanaged Hardware VPN

Unmanaged Hardware VPN involves a networking device, provided by yourself and installed within your infrastructure, operating in the same way as the Managed VPN offering – a site-to-site VPN. You are fully responsible for the monitoring, management and configuration of the device. Bandwidth and latency may be limited by your internet service. As such,

Unmanaged Hardware VPN is ideal for Production, test and development access where the customer is not sensitive to data latency.

Your responsibilities for this connectivity include:

- Maintain business grade internet connectivity with a sufficient bandwidth.
- Static, Public IP addressing for the IPSec termination device.
- IPSec capable Customer Premise Equipment (CPE).
- Customers must purchase and use a business grade appliance
- Your CPE must be licensed to accommodate DES, 3DES and AES encryption standards.
- Administration of CPE (including licensing).
- Open the following services for bi-directional communication between the VPN peers: IKE, ISAKMP, udp/500, AH, echo-reply

Software VPN

Software VPN, also known as client to site VPN, requires a software component (Cisco AnyConnect) to be installed on a single client server/computer. Currently, as of January 2019, Windows 7, 8, 8.1,10 and Redhat 6,7 are supported, however, you must confirm the supported operating system at the time of ordering. An IPSec tunnel is created between your internet connection and Elektron as a Service. Software VPN does not provide automatic log-in or automatic reconnect functionality. As such, it is only recommended for test or development access.

Your responsibilities for this connectivity includes;

- Maintain business grade internet connectivity with a sufficient bandwidth.
- Download and configure software VPN. URL and credentials will be provided by Refinitiv.
- Allow 443/TCP port. If there is a firewall - allow UDP/500, IKE/IPsec, Echo/Echo-reply if outbound is restricted.

Intra Data Centre Cross-connect and Micro PoP

Elektron as a Service supports two physical connections (for resiliency) that connect to your Elektron as a Service instance providing that your infrastructure resides within the same Data Centre. Cross connects are available for both infrastructure that you manage and infrastructure we managed on your behalf. You may be required to provide and manage the cross connects within a subset of Data Centres where it is mandated by those facilities , however in the majority of cases Refinitiv will provide and manage the cross connects as part of your service. Cross connect is suitable for production, test and development access, and for application use cases as opposed to Eikon desktop services.

A Micro PoP on the other hand, is a pre-existing resilient network connection between an Elektron as a Service data centre and a non-Elektron as a Service customer data centre, available in select locations. Connectivity is provided through shared infrastructure with discrete paths dedicated to you, limited by the bandwidth to which you subscribe. The service demarcation point is the cable hand-off ports allocated to you on the Micro PoP switching devices. We provide a copper hand-off by default, however both single and multi-mode fibre options are available. The type of cabling required will typically be influenced by your location in the non-Elektron as a Service data centre. In all cases, Refinitiv will provide any cable plugs (SFPs) which might be required at the service demarcation point. Micro Pop is suitable for production, test and development access and for application use cases. Eikon desktop services are not supported.

Bring Your Own Communications (BYOC)

In limited use cases it might be appropriate for you to provide your own communications. In this scenario, Refinitiv provides two independent hand-offs, one to reach the A-side Elektron as a Service host and the other to the B-side Elektron as a Service host. To receive the full benefit of the resilience within Elektron as a Service, we stipulate that the customer make use of both hand-offs, providing all necessary cabling. Refinitiv will provide the optical plugs (SFPs) at the Refinitiv device end, and you must provide the relevant optical plugs to connect to your equipment. The hand-offs constitute the service demarcation point.

IMPLEMENTATION METHODOLOGY

We follow the implementation cycle and methodology described in the figure below.

Implementation Phase	Owner	Contributor	Description
PLANNING	Refinitiv	Customer	Producing a detailed design and approved project plan to deliver the on-boarding
PROCUREMENT	Refinitiv	Customer	Acquiring and receiving all necessary hardware, communication lines and circuits (as required) for setting up the Managed Service
INFRASTRUCTURE DEPLOYMENT	Refinitiv	Customer	Installing hardware, network and communications infrastructure following the design. Seeking exchange approvals and preparing entitlements.
SOFTWARE INSTALLATION	Refinitiv	Customer	Installing and configuring necessary software and applications, following the agreed design.
INTERNAL TESTING	Refinitiv	Customer	Both hardware and software components are tested by Refinitiv, ensuring all parameters meet the agreed standards and the design
COMMISSIONING TEST	Refinitiv	Customer	Required to validate the customer's contracted network bandwidth into Elektron as a Service and confirmation of connection to the application ports, as applicable, using our standard test tool. This will need to be completed prior to the issuance of the SHD which formally hands the service over to the customer. **With the successful commissioning test, the technical installation is complete which releases the service and infrastructure for billing.**
USER ACCEPTANCE TESTING	Refinitiv	Customer	Customer performs testing to ensure that the agreed solution meets expectations and delivers on the requirements set out at the start of the project. Testing can include end user and customer application behaviour during the pre-agreed data retrieval and failover scenario testing. **Billing for the implementation work commences once this phase is completed and signed off.**
USER MIGRATION & GO-LIVE	Customer	Refinitiv	Customer plans and executes the migration plan and transitions the project to Business as Usual (BAU). Refinitiv requires that the customer shares the plan so we can be aware of the migration and support accordingly. At this stage, the service is considered production ready and the Elektron as a Service On-boarding Project Manager will hand over the service to Refinitiv Customer Support.

Professional Implementation Services

Please refer to the corresponding section in the Statement of Service stored at MyRefinitiv.

Customer Migrations

In the event your current Refinitiv product subscription includes services which could be considered similar or as a migration to an Elektron as a Service offering, such as deployed Enterprise Platform, special consideration should be given to the current configuration of both the Refinitiv services and any consuming applications. The Refinitiv project team can help you assess the impact of a migration, in particular any configuration parameters which may not transfer to the Elektron as a Service solution.

For customers currently operating a customer managed Data Access Control System as part of a broader Enterprise Platform solution, we can provide a method to migrate some or all of the database and the associated user configurations, depending on the size and complexity of the database. In the majority of cases we can help you transfer the permission history and user settings to assist with any future exchange audits or questions. Only one DACS database can be migrated and we will perform the migration only once through the implementation project. Our onboarding teams will help you to decide the most ideal point at which to select the database.

MANAGED INFRASTRUCTURE AND COLOCATION

Refinitiv will procure, provide and install any relevant equipment pursuant to the Elektron as a Service order form. Physical access to the environment for installation activity is only available for Colocation services.

YOUR RESPONSIBILITIES

During the setup stage of the proposition lifecycle, all Elektron as a Service customers shall be responsible for the following:

- Manage direct bill exchange approval requests where applicable
- Manage any third party relationships in respect to contributed data and/or third party data feeds
- Installation, support, maintenance and capacity management planning of all of customer's communication links, endpoints and software required to transfer data between the Elektron as a Service and the customer's sites.
- Installation or configuration of any networking components required to connect to the service, such as firewalls
- Adherences to the required standards made available to customer by the Elektron as a Service team.
- Develop and maintain any device or application connecting to the service
- Implementation of resiliency at the application level so that both connections allowed are used offering the best available failover experience
- During the technical implementation period, a single point of contact with appropriate technical knowledge should be allocated to the project.
- Dedicated resources should be provided to verify and test the implementation.
- Participating in the commissioning test.
- Conducting any user acceptance testing, as appropriate
- Sufficient information related to a third party datafeed such that adequate Delivery Direct bandwidth can be ordered
- Manage any third party implementation tasks through your relationship with that vendor, where required.
- Capacity monitoring and management for any third party feed handler devices, including but not limited to the feed ID and the bandwidth used by the feed
- Procure the necessary cabling required in the non-Refinitiv data centre for any Micro PoP connectivity solution
- Manage and complete any implementation tasks related to proprietary or non-Refinitiv software applications and components provided through our Managed Infrastructure and Colocation services.
- In respect to Managed Infrastructure:
    - Installation, support and maintenance of all of Client's communication links, endpoints and software required to transfer data between the Hosted System and the Client's Sites, according to the standards required and made available from time to time by the Elektron as a Service Data Centre managers.
    - Capacity management and planning
    - Monitoring, management and restoration of all application software installed on top of the server managed operating system
- Additionally, in respect to Colocation:
    - Installation, support and maintenance of all Clients hardware including, but not limited to servers or network devices within the Colocation Environment
    - Monitoring, management and restoration of all application software installed on any equipment within the Colocation Environment
    - Compliance of all Client equipment with the electrical regulations of the region where Client Equipment is installed

- o Client Equipment shall be capable of utilising dual power sources and shall be capable of operating at 100% of load without sustaining an outage on either source if power is lost to one of the sources
- o Equipment shall be plugged directly into both the A power strip and the B power strip, unless otherwise provided in an applicable Elektron as a Service Order Form
- o Not permitting power consumption to exceed the power rating identified for the Colocation Environment
- o Cabling used by the Client shall meet national electrical and fire standards and any specifications provided by Refinitiv Data Centre managers

5. Product & Usage

CAPACITY MANAGEMENT

Capacity Management is performed using 3 sub-processes as standard. This ensures that the capacity of services and the infrastructure is maintained in accordance with your licensed limits, and to meet your business requirements. Changes in your business requirements may require a new order to adjust your Elektron as a Service configuration.

Business Capacity Management

- Maintaining sufficient headroom to accommodate new customers with approximately 40% of headroom kept for watchlist size and network bandwidth within each Elektron as a Service Data Centre
- Insights from early negotiations with existing consumers and upfront planning of capacity expansions
- Data Centre investment planning and prioritization

Component Capacity Management

- Automated capacity data is collected from our monitoring tools for all key hardware and software components and parameters.
- Each capacity issue is logged as a service incident with appropriate priority and resolution time
- Internal regular capacity forum meets to review incidents and potential candidates for upgrades identified through capacity monitoring and forecasting.
- Runout dates forecast from historical data to prevent hitting breaking points benchmarked through performance tests
- Collection of utilisation and performance data to form a capacity plan

Service Capacity Management

- A 25% discretionary buffer is implemented by default to allow customers to temporarily burst above their licensed access limit. Your Refinitiv Account Manager will contact you to update the terms of the service if the limit is consistently breached. Refinitiv reserves the right to adjust this buffer at our discretion.
- Collection of utilisation and performance data to form a capacity plan

COMMUNICATION

All our product and content related communications will be delivered via Product Change Notification (PCN) and Data Notification (DN). Please visit [MyRefinitv](#) for subscription and registration.

INFORMATION SECURITY

Refinitiv maintains its reputation for providing reliable and trustworthy information through a variety of means, including an information security management framework supported by a wide range of security policies, standards and practices. Our Cyber Security and Technology Risk organization is led by our Chief Information Security Officer. Our involvement in industry and government security forums and groups further demonstrates our proactive approach to understanding and countering the threats we face.

Refinitiv is the world's leading source of news and information content for professional markets. Our customers rely on us to deliver the intelligence, technology and expertise they need to find trusted answers. At Refinitiv, protecting our customers' information is at the core of our Information Security strategy. We have established policies and a governance structure to mitigate and respond to potential security risks.

We align ourselves to multiple security and risk frameworks and assess the effectiveness of our security program on an ongoing basis. We are committed to providing a secure environment for the personal data and confidential information we hold.

Similarly, your privacy and trust are important to Refinitiv. Please refer to our [Refinitiv Privacy Statement](#) for more information. Lastly, Refinitiv global legal department will interpret the laws and regulations that apply in the countries we operate in and provide appropriate policies to enable us to comply with them. We operate a 24x7 Business Compliance and Ethics Hotline for guidance or to report ethical, legal or policy issues.

SERVICE AVAILABILITY

We endeavour to achieve a service availability performance target or "Performance Target" of 99.9% uptime in relation to the Elektron as a Service Data Centre to which you subscribe. Downtime is calculated during Normal Hours on a calendar month. Downtime is calculated based on Severity 1 Incidents as defined in this document. Severity 2 & 3 Incidents and Excluded Events are excluded from any calculation of downtime or service availability. Notwithstanding any other provision in this document to the contrary, Refinitiv shall not be responsible for any failure to provide any part of the service or to achieve any Performance Target if caused by or resulting from an Excluded Event.

Refintiv will use reasonable endeavours to provide continual service in Normal Operating Hours, and use of the service is permitted during Maintenance Windows however at which time redundancy may be impacted. Refinitiv will endevour to complete any necessary maintenance work on a single side of the platform before commencing work on adjacent servers.

Where customers opt to take services from more than one Elektron as a Service Data Centre, Refinitiv will endeavour to complete any necessary maintenance work on a single side of the platform in a single Data Centre before commencing work on adjacent servers and centres.

Service Availability – Colocation only

Subject to the performance of the Client Responsibilities set out above, Refinitiv shall use commercially reasonable endeavours to achieve the following performance targets per month in relation to the Colocation Environment:

- Power Availability: 100%
- Environmental:
    - o Temperature: within the allowable ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) range of 59°F and 90°F
    - o Non-condensing Humidity Range: within the allowable ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) range of 20% relative humidity to 80% relative humidity or a 62°F dew point
- Network Availability: 99.99%

HOURS OF SERVICE "NORMAL HOURS"

Hours of Service

- 7am – 7pm Monday to Friday local time of the Elektron as a Service Data Centre constitutes normal operating hours ("Normal Hours")
- 24x7 Monitoring and management including proactive notification services and Severity 1 and 2 incident resolutions
- 24x7 Refinitiv Global Service Centres for incident logging

Notification of Changes / Maintenance

Planned changes or maintenance of Elektron as a Service infrastructure will be communicated as below:

- Global Weekday Change window: 7pm – 7am local to the data centre Monday to Thursday
- Local weekend change window: 7pm – 7am local to the data Friday to Monday, for changes limited to a single time zone
- Global weekend change window: 7pm – 7pm GMT/UTC Friday to Sunday, for changes affecting 2 or more time zones

These constitute our reserved change windows for changes or maintenance that might degrade service delivery and be visible to a customer application. Planned changes or maintenance during these periods will; (a) be a subject to notification by Refinitiv via Service Alert to a customer only if such changes or maintenance would or may cause any visible effect to the customer, (b) not be implemented during the change windows to the extent that this would impact on the Normal Hours set out above, (c) make commercially reasonable effort to ensure that service impacting changes made to the environment during these times ensures a resilient service is still in place wherever possible.

In the event of a Severity 1 Incident being recognised by Refinitiv that requires a service disrupting change during Normal Hours Thomson Reuters will make commercially reasonable efforts to notify Client via Service Alert prior to taking action.

Hours of Service – Colocation Only

- The Colocation Environment is available 24x7. Access to Client racks subject to documented Elektron as a Service Access Control Procedures.
- Refinitiv services being consumed through the Colocation Environment are subject to the services change and maintenance windows relevant to such Refinitiv services.

SUPPORTED DATA TYPES

The data provided through any of the Elektron as a Service offerings is accessible through any of the APIs in our Elektron suite, for example the Elektron API and the Enterprise Platform API. For more information on API suitability for your use case please see the developer section on MyRefinitv.

YOUR RESPONSIBILITIES

During the product usage stage of the proposition lifecycle, all Elektron as a Service customers shall be responsible for the following:

- Use of supported versions of the Elektron API or and supported versions of TREP for connecting to the service.

- Ongoing reporting regarding Information provided by Third Party Providers (third party vendors and/or exchanges) in accordance with the Agreement and/or any contracts between Client and applicable Third Party Providers adherence to all Refinitiv rules, procedures, notifications, and processes that are specific to each Elektron as a Service Data Centre as provided in the applicable Order Form or otherwise provided in writing to customer.

6. Support

Refinitiv Customer Support is your central point of contact for all questions associated with our products, data and services.

SCOPE

Refinitiv applies Information Technology Infrastructure Library (ITIL) best practices for IT Service Management (ITSM). Key elements of Elektron as a Service are managed exclusively by Refinitiv and its associated partners.

Our scope of support includes:

- Exchange and Data Centre incoming communications except for issues originating at the source of the data where this is owned by a 3rd party provider
- Network connectivity
- Any hardware provided as part of the overall service, including the Operating System
- Last Mile communications, including cross-connections within Data Centres
- Environmental services in respect of Elektron as a Service systems, being appropriate space, power and cooling
- Hardware replacement / repair / upgrade as required
- Periodic installation of hardware maintenance patches and updates for Refinitiv managed Operating System and security management software
- Monitoring of Elektron as a Service system availability
- LAN switching, load balancing, firewalling, addressing, bandwidth services the extranet/internet, and network security management as specified pursuant to the Order Form
- Incident Management and Incident Reports
- Restoration of the Elektron as a Service system (excluding for the avoidance of doubt any customer application software installed on top of any managed Operating System) in the event of service disruption

SUPPORT CHANNELS

Please refer to the Refinitiv Statement of Service which can be found at MyRefinitiv for the various support channels available to you.

LANGUAGES AND AVAILABILITY

Elektron as a Service Customer Support is available 24x7 in English only. Japanese language support is available and it is limited to Japanese business hours between 7AM and 8PM only. Please refer to the Refinitiv Statement of Service available on MyRefinitiv for details.

CUSTOMER SUCCESS MANAGEMENT

Elektron as a Service customers will have a designated Account Manager and/or Customer Success Manager to manage the overall customer relationship. Any post-sales commercial inquiries will be handled by them. They will also be the trusted advisor for customers' long-term planning, capacity management and any commercial implications evolving from changes, migrations, upgrades or other roadmap items due to compliance, regulatory or life-cycle management perspective.

INCIDENT MANAGEMENT

Elektron as a Service is a single service and it is delivered by the combined efforts of a variety of Refinitiv groups and external service partners and suppliers. Refinitiv Customer Support will provide the first line support and will always retain the frontline ownership for all cases reported. They will receive and log calls from customers and attempt to resolve them at the frontline where possible. You should state that issues you are reporting are with the Elektron as a Service.

Where the issue reported cannot be diagnosed or appears to be an anomaly in the Elektron as a Service environment the call will be assigned to respective Elektron as a Service support groups for investigation and resolution. Non-technical queries such as content, administration etc. will be assigned to the relevant specialist groups.

Key objectives of the Incident Management process are as follows:

- Accelerate and prioritise the service impacting incident service restoration
- Achieve incident resolution target
- Avoid incidents from escalating to Business Critical
- Define a clear path to resolution
- Regular and informative updates to the customer on the progress of incident resolution
- Normal service operation is restored as quickly as possible and the customer business impact is minimized
- Assign the incident to the most appropriate support group for investigation and resolution
- Escalate to Refinitiv management team if needed, in timely fashion
- Invoke the Major Incident Management process when appropriate based upon the impact and duration of incident

INCIDENT SEVERITY AND RESOLUTION TARGET

Refinitiv endeavors to respond to all customer concerns promptly. To match the response time against the level of urgency, Refinitiv Customer Support assigns a priority level based on the incident severity.

Severity 1 Incident

- A situation in which both the primary and any standby elements of the Elektron as a Service system produces materially incorrect results, fail catastrophically or are otherwise rendered inoperable, and in which all or multiple end users are experiencing the same failure.

Severity 2 Incident

- A situation whereby some elements of Elektron as a Service are simultaneously inoperative which results in loss of data, functionality or degraded performance, but where a temporary, on site, workaround is available; or
- A situation whereby the loss or compromise of a resilient part of an Elektron as a Service system not directly impacting customer, greatly increases the risk of a Severity 1 Incident occurring

- Emergency situation whereby a single communication line delivered site has failed

Severity 3 Incident

- All password resets or new password requests
- Content search and explanation questions
- Functionality / How-to questions
- Non-service impacting requests, product enhancements, and routine maintenance
- All other incidents impacting the customer service other than Severity 1 and 2 incidents where an acceptable workaround exists

Escalation Commitments

	Initial Update	Subsequent Updates	Invoke Global Escalation Management Process	Invoke Major Incident Response Process
Sev 1	30 min	1 Hour or as agreed with the customer	Immediate	
Sev 2	1 hour	2 hours or as agreed with the customer	If Business Critical	
Sev 3	3 hours	Daily or as agreed with the customer	If Business Critical	

Proactive Incident Management

Proactive Incident Management occurs when an interruption to service is identified by any part of the supply chain and appropriately reports the interruption of service.

Major Incident Management (MIM)

Refinitiv has a clear framework in place to deal with major incidents. The MIM process is designed to coordinate service recovery efforts to ensure prompt restoration of service, with clear and concise communications to impacted customers. Once initiated, the MIM process operates on a 24x7 basis until the incident is resolved.

An overall framework assures that incidents are managed with the appropriate level of management visibility with clear escalation paths up to Refinitiv Executive Committee members.

MONITORING AND NOTIFICATION

Elektron as a Service monitors 24x7 for the service health, including but not limited to cache state limits, mount limits, and capacity thresholds, including the bandwidth for the connectivity into the service (only applicable to Delivery Direct).
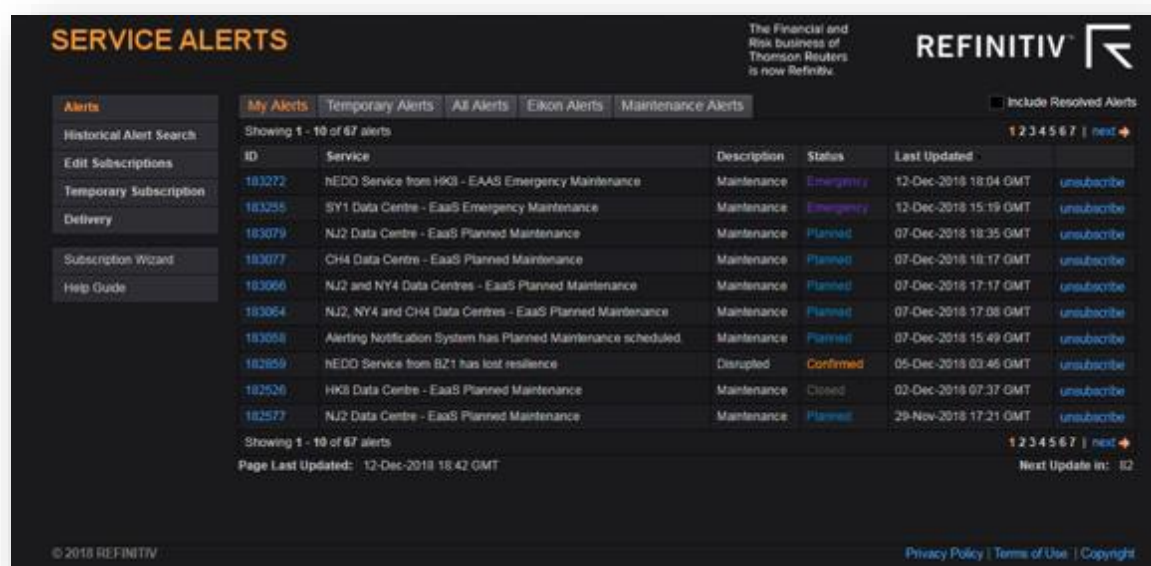
Refinitiv will use commercially reasonable endeavors to inform you via Refinitiv Service Alerts of any Severity 1 and 2 incidents within fifteen (15) minutes of the incident detected by Refinitiv. Once the alert is raised it will be updated until the incident is resolved.

Any scheduled change or maintenance that over runs or does not complete within the stated window in the respective Service Alerts notification, or the change produces an incorrect result, is treated as an unexpected event and will be managed through the Incident Management process.

The service also notifies customers of upgrades, changes, change freezes, outages and updates on outages, as well as product lifecycle events. Notifications are delivered through [MyRefinitiv](). For product, data and content related notifications, customers are responsible to review and understand the impact of the PCN (Product Change Notification) and DN (Data Notification) delivered by Refinitiv.

Alert Subscription

To subscribe to an alert notification, please visit our [Service Alert Homepage]() via [MyRefinitiv]() and follow the subscription wizard. The image below is an example of the browser view for service alerts.

Conditions & Exclusions

- Refinitiv reserves the right to subcontract the Services set forth herein at any time
- Refinitiv measurements will be definitive for purposes of determining performance against the Performance Targets
- The Performance Targets listed in this document are targets only. A failure to meet such Performance Targets shall not be considered a breach of the Agreement, provided that Refinitiv has exercised commercially reasonable endeavors to achieve those targets.
- For the avoidance of doubt, Refinitiv does not provide any Performance Targets in respect of (i) communications links to/from the end point of the Elektron as a Service system and any data feeds (equipment and communication links required to feed data into the Elektron as a Service infrastructure from different data sources) or any customer site or (ii) or customer applications which may run on the Elektron as a Service system

PROBLEM MANAGEMENT AND INCIDENT REPORT

Formal incident reports are available to customers who ask for detailed information about significant incidents that impact them and where Refinitiv is accountable for the root cause. They are designed to provide customers with increased visibility of significant incidents, and Refinitiv plans to reduce the risk of recurrence. Incident reports are produced referencing Refinitiv best practice post incident Problem Management process. Each incident report aims to provide a summary of the event including:

- Details of the incident and its impact
- Description of the root cause
- Details of the action plans to reduce recurrence

Incident reports are generally published on an 'as requested' basis where there is significant impact to multiple customers, the incident has been classified with a high severity, and Refinitiv were accountable for the root cause. Refinitiv publish 'Initial', 'Interim' and 'Final' incident reports and target publication as follows:

- Initial Incident Report published within the same business day or within 24 hours post the resolution of incident
- Updated (root cause) Incident Report within 3 business days of the incident
- Final (root cause and action plan) Incident Report within 5 business days of the incident

CHANGE MANAGEMENT

There are two categories of change activity: operational changes and upgrades or migrations. Operational changes reflect any form of modification to an in-situ service, including but not limited to hardware, operating system and Enterprise Platform changes, where your use of the platform remains the same, and will be covered in this section of the document.

Upgrades and migrations capture everything else with specific focus on areas where you may or may not, depending on the change, be required to alter your connectivity or use of the service. Typically, this will include core Enterprise Platform upgrades or changes to infrastructure components.

In order to control the lifecycle of all changes as well as to enable beneficial changes to be made with minimum disruption to the services, no changes will be applied into the Elektron as a Service environment unless it is determined and approved at the regular Change Advisory Board (CAB) forum, and by a group of people that support the assessment, prioritisation, authorisation and scheduling of changes.

Sample Changes Applied in Elektron as a Service

Following change scenarios are samples of changes applied as a part of service operations. Please contact our Customer Support team should you seek further information on a change notification you received from a Service Alert.

- Software related changes e.g. application upgrade, launching new service / user
- Hardware related changes e.g. security patch, regular reboot, commissioning / decommissioning
- Network related changes e.g. security patch, commission / decommission, configuration change to accommodate new service / user
- Software / Hardware changes identified and approved at Incident Management process
- Security patch to mitigate the risk of exposing our infrastructure to a known cyber security threat

Notification of Changes

Planned changes or maintenance of Elektron as a Service environment will be communicated as below:

Minor change, defined as those with a low risk of failing and no significant impact to business processes will have a minimum of 2 days (48 hours) notice. The notification for the change will be provided by Service Alert.

Moderate or Major change, defined as those with a moderate risk of failure and/or a potentially significant impact to business processes if the change fails, will have a minimum of 7 days notice. The notification for the change will be provided by Service Alerts.

Refinitiv will notify the you of changes or maintenance to your dedicated infrastructure using commercially reasonable efforts to ensure at least ten working days advance notice, with the exception of changes or maintenance that are scheduled by 3rd parties e.g. some communications provider that does not fit into this lead time, emergency changes.

In the event of a Severity 1 Incident being recognised by Refinitiv that requires a service disrupting change during the Normal Hours, Refinitiv will make commercially reasonable efforts to notify customer via Service Alert prior to taking any actions.

THIRD PARTY FEED SUPPORT

In all of the scenarios described below, Refinitiv reserves the right to adjust our service commitment in relation to 3rd party feeds.

Applications

Refinitiv permits the use of third party applications and services to connect to Elektron as a Service. We are unable to take any liability for any failures of those third party applications or services as a result of connectivity to Elektron as a Service, or for any disruption your third party applications cause to your Elektron as a Service solution.

Data Distribution

Refinitiv also permits the collection and distribution of third party data feed services, as mentioned briefly at the beginning of this document, which are defined as customer or vendor sourced feeds. You retain full responsibility to arrange and liaise directly with the third party provider for the delivery and support of the feed handler, any relevant IDs or similar for the feeds, and the associated bandwidth monitoring and capacity management as required to provide the feed in to your Elektron as a Service solution.

Entitlements

Refinitiv provides the capability for our Managed Service customers to leverage our DACS service to support end user entitlements for 3rd party datafeeds, including the ability for you to provide a 3rd party map collect file and client defined subject base entitlement rules that will allow you to set the structure for the feed entitlements. Aside from the capability to provide us with the map file, Refinitiv are unable to take any responsibility or liability for any issues which may be caused through the 3rd party feed entitlement workflow, including but not limited to the investigation of permissioning issues and the quality checking of the map files or client defined subject based entitlement rules.

YOUR RESPONSIBILITIES

During the support stage of the proposition lifecycle, all Elektron as a Service customers shall be responsible for the following:

- Monitoring, management and restoration of all application software installed on top of the server managed operating system.
- Post service check to ensure the systems and services are functional post change
- Registration on Thomson Reuters alerting mechanisms for change and incident notification via MyRefinitiv, and actioning the PCN and DN as appropriate.
- Informing Refinitiv with minimum of three months lead time on any major changes to the use of the service e.g. 'major increase in capacity' is required.
- Capacity Management and planning for hardware / software outside of Elektron as a Service
- Monitoring, management and restoration of any customer provided communications links (BYOC)

7. Evolution

UPDATES & UPGRADES

IT lifecycle management activities such as updates and upgrades are part of the service. Unless exceptional scenarios such as customer specific solutions or compliance/regulatory requirements, these activities will be performed as part of the product roadmap and lifecycle management plan. Below are the guidelines which are applicable for updates and upgrades.

- All update and upgrade activities are scheduled outside of the Elektron as a Service Normal Hours
- Refinitiv aims to complete updates and upgrades within a four-week cycle
- Non- service impacting and standard* change notification will be given at a minimum of 2 days (48 hours) prior to the activity*
- Potential service impacting / experience change notification will be given at a minimum of 3 months prior to the update**
- Major version upgrades which add additional features or limitations will be notified to the customer 3~6 months prior to the update as per the program structure

A pre-authorised change that is low risk, relatively common and follows an established procedure or work instruction

**With an exception to the activities that are scheduled by 3rd parties e.g. some communications providers that do not fit into this lead time and the emergency changes*

RIGHT TO POSTPONE

You reserve the right to postpone major version upgrades or changes that might require you to alter how you interact with the service, on the basis that a postponement date will be immediately rescheduled within the planned four-week cycle. If updates are not rescheduled or confirmed, we will update our infrastructure to assure integrity of our services. If for any reason we have been prohibited in maintaining our operational policies and standards, where necessary, commercial changes may be needed or we may remove the managed devices from our monitoring systems, and in extreme cases from our infrastructure, to protect our services and other customers.

YOUR CHANGES

From time to time your may have a business or technical need to adjust or augment the service features we provide to you. Increasing the quantity or breadth of data you need, adding more applications or users, and support of new or additional use cases, are examples of the changes you may need through the lifecycle of your service. Your account team can help to guide you and facilitate any orders you might need for new services.

Changes to your applications or anything that might use the services we provide may need also adjustments over time. When a change is likely to represent a disconnect from the service, producing 'false alerts', you should contact us through the relevant Support Channel for your use case.

MIGRATIONS & DECOMISSION

Should there be a physical site migration (either an Elektron as a Service data centre or a customer managed data centre), you are responsible for any new exchange data permissions application, as relevant. Six months advance notification will be given for any service decommission.

YOUR RESPONSIBILITIES

During the evolution stage of the proposition lifecycle, all Elektron as a Service customers shall be responsible for the following:

- Any changes to an API or application managed by the customer
- You must subscribe to Elektron as a Service Product Change Notifications via [MyRefinitiv](#) to receive the notification of major lifecycle activity
- Request an order for any increase in capacity if required