SERVICE DESCRIPTION: IoT Foundation

1. Overview

Syntax will provide, with IoT Foundation, an IIoT platform in which machine, process, and product data from various sources are linked and can thereby be centrally monitored and analyzed. IoT Foundation is a Software as a Service ("SaaS") solution and includes modules such as the following:

- *IIoT Portal* is the central user interface and provides access to all other components. In addition to providing central user and device management, the portal also provides access to all other ordered IIoT platform components, as well as embedding additional Subscriber-owned and third-party solutions, in order that the portal can be used as the central IIoT platform in the organization.
- *Shop Floor Connector* is used for connection between machines, sensors, industrial gateways and the cloud-based modules ordered by Subscriber. The shop-floor connector generally handles edge-based optimization and prioritization of messages to optimize data traffic, as well as security-relevant settings such as point-to-point connections, encryption, certificate handling and geofencing.
- *IIoT Core* essentially serves as a central receiver of machine data but it features a rule engine that can be set by Subscriber. The rules engine supports use cases such as Condition Monitoring, Event Generation, and Statistical Process Control (“SPC”). The IoT Core is a mandatory prerequisite for using the Live Data Canvas to display the machine data for Subscriber's various personas. A persona symbolically describes a group of users with specific characteristics and specific usage behaviors, in this case e.g. machine operator, plant manager, line manager.
- *IIoT Dataspace* is a central data lake house that connects machine data, process data and product data for the first time and thereby creates the basis for reporting and analytics. The IIoT Dataspace is characterized by the fact that it supports both user-focused data management and data science-focused data management. The IIoT Dataspace is the central element for asset management and the central basis for all IoT Foundation data management.
- *IIoT Insights* is the basis for machine learning-based use cases such as predictive maintenance, predictive quality, energy monitoring and connected products. IIoT Insights can consist of ready-made user-oriented services, but is essentially based on predefined models or Subscriber-specific models that are tailored to Subscriber use cases
- *ERP Connector* is a ready-made solution for bidirectional communication with Subscriber's Enterprise Resource Planning (“ERP”) system that enriches the machine data with process and product data and triggers events from condition-monitoring or machine-learning-based use cases, e.g., creating a maintenance order, an order confirmation or creating a quality notification. The ERP Connector currently supports ERP systems such as SAP S/4, SAP S/4 HC and SAP RISE, as well as Oracle JD Edwards and Oracle eBusiness Suite. Other ERP systems can be connected via file interfaces or Subscriber-specific API interfaces through projects.
- *MES Connector* is a prefabricated bidirectional communication with Subscriber's Manufacturing Execution System (“MES”) that enriches the machine data with process data and triggers events from condition-monitoring or machine-learning-based use cases, e.g. order feedback or process parameter changes or triggering alarms. SAP Digital Manufacturing (“DM”) is currently supported as an MES. Other MES systems can be connected via file interfaces or Subscriber-specific APIs though projects.
- *Analytics Connector* is a ready-made interface between the IIoT Dataspace and Subscriber's data architecture. This is intended to ensure that Subscriber has unrestricted access to its data and can process it in accordance with its data strategy. The following analytical architectures are currently supported by default: SAP Datasphere and SAP Analytics Cloud. Other analytical architectures can be connected via file interfaces or Subscriber-specific APIs though projects.

IoT Foundation is a solution that is adapted to Subscriber's specific circumstances during implementation. The adjustments to be made are defined in an implementation project.

Syntax provides maintenance of the IoT Foundation standard solution and Application Managed Services (“AMS”). This also applies in particular to Subscriber-specific adaptations created for Subscriber in the implementation project. Maintenance and AMS for third-party solutions are explicitly not included.

IoT Foundation is based on infrastructure hosting resources and services ("AWS Services") provided by Amazon Web Services ("AWS"). The AWS Services used are implemented serverless wherever possible, enabling purely consumption-based cost scaling. Syntax is a certified Premier Partner and Reseller of AWS and will contract the AWS Services used by Subscriber under this SaaS Agreement. All AWS Services will be operated on a separate and dedicated AWS account managed exclusively by Syntax for Subscriber. All Subscriber data and servers remain within Subscriber's dedicated AWS account. Costs and fees of AWS and Syntax will be billed to Subscriber as specified in the Order Schedule.

2. Planning and Setup Services

After execution of this SaaS Agreement, Syntax will define the processes and system parameters required for the Service together with Subscriber in the planning phase within the framework of the agreed requirements.

Planning and setup includes the following:

- Provision of IoT Foundation and the ordered components
- Corresponding adaptation to Subscriber's corporate identity (logos, colors)
- Administrator access for one or two of Subscriber's users
- Administrator training for Subscriber's one or two administrators
- Provision of support services in accordance with the Service Desk Schedule in in Customer's SaaS Subscription Agreement

Additional Services will be defined in the planning phase and executed in a separate project. This will be documented in a separate agreement (e.g., a SOW or CO/CR). This does not affect Syntax's setup of the agreed requirements after completion of the planning phase. Upon completion of the planning phase, Syntax will set up the Services based on the agreed-upon requirements for the Service. Upon completion of setup, Syntax will declare provision of the Service to Subscriber ("Start of Provision").

Planning and setup is divided into the two phases described below.

Phase	Description
Pilot	After a predefined start date, an IoT Foundation test occurs in an isolated environment. The objective of this phase is the evaluation of system functionalities and the development, setup, and testing of enhancements. The exact duration of the pilot phase for the IoT Foundation test will be agreed upon during the planning phase. During this phase, Subscriber is primarily supported by the project team.
Hypercare	After the pilot phase, IoT Foundation will be implemented in the live environment. The support team is increasingly deployed during this phase in order to be able to react immediately to any anomalies and ensure the stability of the system. This phase officially ends with the go-live of the use cases agreed in the planning phase by Subscriber. Subscriber acceptance takes the form of tests, which Subscriber carries out itself during the hypercare phase within a contractually agreed timeframe. The exact duration of the IoT Foundation hypercare phase is specified in the "Duration of the Statement of Work" section of the corresponding project SaaS Agreement. If no significant errors or faults are reported by Subscriber within this timeframe, the Hypercare phase shall end automatically and IoT Foundation shall be deemed to have been accepted by Subscriber. Significant errors or faults are those that impair the core functions of IoT Foundation or significantly impede system operation.

3. Support Requests

The scope of the services for support requests to be provided is defined herein and in Subscriber's SaaS Subscription Agreement. These support services are provided in accordance with the Syntax Service Desk Schedule in Customer's SaaS Subscription Agreement.

4. Maintenance

4.1. Maintenance Types

IoT Foundation maintenance is divided into different types to ensure that the system is always optimized and kept up to date. Each maintenance type has a specific focus as described below.

Maintenance Type	Description
Standard	Standard maintenance includes regular system inspections and the implementation of patches. In this phase, bugs that have already been identified are fixed and performance is optimized incrementally.
Extended	Extended maintenance focuses on the implementation of comprehensive system updates and the addition of new features. Adjustments based on changes in external systems or the database architecture can also be part of this phase.
Continuous	As an ongoing process, continuous maintenance includes constant system monitoring, implementation of security updates and modifications resulting from technological developments or changes in business requirements.

4.2. Maintenance Services

Syntax provides the following maintenance Services:

- Answering Subscriber questions about Syntax software
- Elimination of reproducible program errors
- Elimination of documentation errors
- Assistance with questions on using the programs

- Assistance with system configuration questions
- Provision of updates and service packs for IoT Foundation
- Assistance with questions on update and service pack installation
- Information about new features, improvements and changes to the Syntax software

The following services are out of scope and are not included in the agreed Syntax maintenance Services:

- Services required due to modification by the Subscriber of the Syntax software program code
- Services caused by the use of force, interference or conduct of the Subscriber in breach of duty
- Services incurred in connection with third-party software
- Modification and extension of existing and/or running systems and/or programs
- Training and introductory measures

It should be noted that system irregularities or interruptions may occur temporarily during planned maintenance work. Such planned interruptions are taken into account in the defined Service Level Agreements ("SLAs"). Planned maintenance work is announced to Subscriber at least 14 days in advance. If desired, planned maintenance can be scheduled in an annual Subscriber-specific maintenance calendar. If Subscriber minimizes the maintenance windows contrary to Syntax's recommendation, Subscriber shall solely bear the risk it may cause.

5. Subscriber's Obligations to Perform

As a precondition to the provision of Services by Syntax, the Subscriber shall fulfill various obligations. Alongside any obligation to cooperate that is specified in the SaaS Agreement or Master Services Agreement, Subscriber shall undertake the following obligations:

- Subscriber shall, within a reasonable time following the effective date of this SaaS Agreement and upon Syntax's request, provide all required tax and corporate documentation, including: (i) for U.S. subscribers, a duly completed and signed IRS Form W-9; (ii) for non-U.S. subscribers, a valid Tax Identification Number certificate and evidence of legal corporate registration; and (iii) for subscribers claiming tax exemption, a valid tax exemption certificate. All documentation shall be delivered promptly to tax@syntax.com.
- Subscriber will be responsible for maintaining the patch and configuration status of the applications and components supported by the vendor.
- Subscriber will provide Syntax with all data and information required to set up the Service, including especially that set forth in this SaaS Agreement (e.g., RACI).
- Subscriber will provide to Syntax the rights of use or software licenses that Syntax needs to provide the Service and will keep the software maintained and up to date at all times.
- Subscriber shall provide Syntax with access – including remote – to the Subscriber's IT infrastructure as well as any necessary authorizations needed to execute the Service (e.g. access to the premises in the buildings).
- For communication and processes (e.g. troubleshooting), Subscriber will use the processes described in the Syntax Service Desk schedule in Subscriber's SaaS Subscription Agreement.
- Subscriber will name a qualified main contact person and a secondary contact person for the performance of this SaaS Agreement.
- Subscriber will be responsible for the sufficient sizing of the resources provided to it in accordance with the contract and for its capacity management and will on its own authority order any addition to capacity that may be necessary.
- Subscriber shall inform Syntax about any planned maintenance of individual or groups of solution components.
- Subscriber shall specify its requests to the best of its ability and shall, in particular, follow the technical instructions provided by Syntax when describing, isolating, detecting and reporting errors. This includes cooperation in the generation and provision of required logs/log files/hardcopies. In the event of errors, the Subscriber shall inform Syntax of the context in which the error occurred and the consequences thereof.
- Subscriber shall report any errors it is aware of as quickly as possible and through the appropriate channels. Subscriber shall always report errors in a reproducible form and provide all technical information that the Subscriber observes and deems necessary to isolate the error and understand its impact.
- Subscriber is obligated to make regular backup copies of the data as is appropriate for the level of risk involved, including databases and configurations.
- Additional services resulting from Subscriber not reporting an error immediately are not covered by the support Services. Warranty rights of Subscriber remain unaffected.

- Subscriber shall be physically present when work needs to be performed by Syntax on the Subscriber's site or during test runs. Alternatively, Subscriber will designate staff who is authorized to assess and decide on defects, functional enhancements, solution modifications and interruption or suspension of work in progress. If needed, the Subscriber shall provide test/real data for testing. Use of the solution shall be restricted or stopped during maintenance, if required.
- Subscriber shall be liable for any costs or damages arising directly from any failure of the Subscriber to fulfill its obligations under this Agreement. Subscriber shall make every reasonable effort to keep damages to a minimum. If the Subscriber does not comply with its obligations to cooperate or perform, then Syntax may suspend the agreed maintenance services until such time as the Subscriber has duly fulfilled its obligation.
- Subscriber also accepts the terms and conditions of the AWS end user license terms, which are located here: https://aws.amazon.com/de/service-terms/. Subscriber shall ensure that each end user complies with the terms and conditions.
- Insofar as the solution is implemented as part of the Shopfloor Connector, Subscriber accepts the terms and conditions of Telit's end user license terms, which are located here: https://docs.devicewise.com/Content/LegalNotice/Legal-Notices.htm. Subscriber shall ensure that it complies with these terms and conditions.
- Insofar as the solution is implemented as part of the Shopfloor Connector, Subscriber accepts the terms and conditions of Cloudrail's end user license terms, which are located here: https://cloudrail.com/terms/. Subscriber shall ensure that it complies with these terms and conditions.

6. Responsibility Matrix ("RACI")

Responsibilities Abbreviations

Below are explanations for the abbreviations used in the "Subscriber" and "Syntax" columns in the RACI table(s).

Responsibility	Abbr.	Description
Responsible	R	The Party performing the activity.
Accountable	A	The Party who oversees and approves the activity.
Consulted	C	The Party whose opinions should be considered when performing the activity.
Informed	I	The Party who must be made aware that the activity is being performed.
Time & Materials	T&M	Any work that is not part of the standard scope of the Service; incurs additional fees.

Note: The table below is inclusive of the responsibilities and services that Syntax provides as part of the standard Service unless otherwise specified in the Notes column. Anything that is not specifically identified below may not be provided by Syntax and is assumed to be Subscriber's responsibility.

6.1. IoT Foundation Services

Item	Description	Syntax	Subscriber	AWS	Notes
1.0	**Virtual Data Center Management**				
1.0.1	Manage environmental controls			R, A	See published AWS SLAs: https://aws.amazon.com/legal/service-level-agreements/
1.0.2	Manage Data Center physical plant			R, A	See published AWS SLAs: https://aws.amazon.com/legal/service-level-agreements/
1.0.3	Provision Subscriber account on AWS	R, A	C, I		
1.0.4	Provision virtual data center and virtual machines within AWS	R, A	I		
1.0.5	Provision public IP	R, A	I		
1.0.6	Provision management infrastructure	R, A	I		
2.0	**Compute Management**				
2.0.1	Manage data files, file systems, and hard disks according to the standards	R, A			As required
2.0.2	Set up and configure Lambda functions and container infrastructure	R, A			
2.0.3	Provision and manage EC2 instances	R, A			As required
3.0	**AWS Tenant Management**				
3.0.1	Design and implement solution based on Syntax best practices	R, A	C, I		Deviations from the Syntax standard require a CR/CO
3.0.2	Implement security group design	R, A			

Item	Description	Syntax	Subscriber	AWS	Notes
3.0.3	Implement network design	R, A			
3.0.4	Deploy planned or existing server VMs based on design specifications including regional deployment	R, A	C, I		As required
3.0.5	Deploy new server VMs based on Subscriber requirements	R, A	C, I		As required
3.0.6	Troubleshoot access and authentication issues	R, A	C, I		As required
4.0	**Hardware Management**				**Gateway packages can be offered as Connectivity as a Service ("CaaS")**
4.0.1	Provision, set up software, and manage edge gateways	R, A	C, I		
4.0.2	Install the hardware	C, I	R, A		
4.0.3	Monitor LTE consumption	R, A	I		
5.0	**Operating System ("OS") Management EC2 Instances and Edge Gateways**				
5.0.1	Determine the optimum performance settings for the operating system parameters	R, A			Syntax list of recommended OS parameters for the individual operating systems
5.0.2	Configure the operating system parameters	R, A			As required
5.0.3	Check the operating system adjustments for impact on the application software	R	R, A		Subscriber is responsible for testing the hosted software
5.0.4	Define the OS security architecture	R, A	I		
5.0.5	Set up the OS security controls	R, A	I		Only before Start of Provision
5.0.6	Create and manage OS users	R, A			
5.0.7	Create and manage OS groups	R, A			
5.0.8	Troubleshoot operating system problems, monitoring the system log and file systems	R, A	C, I		As required
5.0.9	Cooperate with the operating system vendor in resolving operating system problems	R, A	I		As required
5.0.10	Apply OS patches and updates	R, A	C, I		As required and within the planned maintenance time; Subscriber is responsible for testing hosted software
5.0.11	Perform OS upgrades	R, A	C, I		As required and at Subscriber's request, maximum 1 time per year and per system, additional downtimes with Subscriber's consent. Fees for Syntax Professional Services may apply; Subscriber inquiries require a lead time of at least 5 working days
5.0.12	Create file systems and/or logical volumes	R, A	C, I		As required
6.0	**Backup and Restore**				
6.0.1	Definition of backup frequencies and retention periods for the data store	R, A	C, I		Upon Subscriber request; optimization workshops possible; effort-based billing based on the Syntax shopping cart
6.0.2	Setup of Amazon S3 bucket versioning	R, A	I		
6.0.3	Create a data replica within the AWS region	R, A	C, I		Standard
6.0.4	Create data replica in an additional AWS region	R, A	C, I		Upon Subscriber request; replication within the AWS region is standard
7.0	**Database Management**				
7.0.1	Setup and configuration of a DMBS	R, A			
7.0.2	Configuration of AWS-managed DMBS	R		A	Standard
7.0.3	Configuration of AWS-unmanaged DMBS	R, A			As required
8.0	**Event Monitoring**				
8.0.1	Monitor, alert, track, and troubleshoot events	R			
8.0.2	Monitor, alert, track, and troubleshoot database events	R			
8.0.3	Monitor, alert, track, and troubleshoot operating system events	R			

Item	Description	Syntax	Subscriber	AWS	Notes
8.0.4	Monitor, alert, track, and troubleshoot hardware events	R	C, I		
8.0.5	Monitor, alert, track, and troubleshoot interface events	R	C, I		For example: machine interfaces (deviceWise), database interfaces, MES
9.0	**Configuration of External Systems**				
9.0.1	Interfaces to the platform	R, A	C, I		As required
9.0.2	Availability of external systems and interfaces	I	R, A		
9.0.3	Retrieve data from external systems	R, A	C, I		As required
9.0.4	Send findings to external systems	R, A	C, I		As required
9.0.5	Send data from external systems	C, I	R, A		

7. Application Managed Services ("AMS")

Services include processing by Syntax of requests (Service Requests and Incidents) in accordance with the Syntax Service Desk information explained below. Services include provision of support to Subscriber by this Service Desk as specified below.

Syntax's 1st-level support is available to Subscriber 24x7 for processing requests. If a request cannot be processed at this level, then it is forwarded to qualified application specialists in 2nd- and 3rd-level support for further processing within the defined Service Hours specified in the Syntax Service Desk schedule in Customer's SaaS Agreement.

8. Service Levels

The following Service Level Agreements ("SLAs") shall apply.

IoT Foundation is based on AWS services and as such the IoT Foundation SLAs are dependent on the AWS services SLAs. The IoT Foundation SLAs do not apply to the availability of the data center or infrastructure. AWS is responsible for the data center and infrastructure availability. The AWS services SLAs can be found here: https://aws.amazon.com/legal/service-level-agreements/.

8.1. Platform for IoT Foundation

Service Level	Availability of IoT Foundation Each Year	Environment Landscape	Backup
IoT Foundation Standard*	95.0% (maximum downtime: 438 h/yr)	2 Environments (Test, Prod)	Simple
IoT Foundation Standard Light (Proof of Concept)	Best Effort	2 Environments (Test, Prod)	Simple
IoT Foundation Basic**	Best Effort	PoC Account	N/A

* IoT Foundation Standard applies to the standard architecture of IoT Foundation for operational use, which does not include high availability.

** IoT Foundation Basic applies to the pre-operational phase, the pilot phase of the setup.

8.2. AMS

Of the Incident priority classes used by Syntax for Service Desk tickets, only priority classes 3 and 4 apply for the Services. See the Syntax Service Desk schedule in Subscriber's SaaS Subscription Agreement for additional information.

Incident Priority	Incident Impact Description	Incident Response SLA
P3 - Normal	Normal urgency – minor impact, ability to conduct business with workaround	2 business hours
P4 - Low	Subscriber inquiries, features, or research requests	8 business hours

9. Unreasonable Defect Notices

Subscriber will bear expenses incurred by Syntax for troubleshooting or remedial action that is not part of the agreed Services. This applies especially if it is not a case of maintenance in the sense of this Agreement or if the defect cannot be attributed to Syntax or if the Syntax software is not used in accordance with the documentation. Subscriber shall also bear expenses incurred by Syntax for the remedial action caused (i) by Subscriber's failure to properly fulfill its obligations to cooperate or perform or (ii) by Subscriber's improper operation of the Syntax software or (iii) if Subscriber fails to perform services classified by Syntax as necessary or (iv) Subscriber fails to make use of such services.