

SERVICE DESCRIPTION: SPC for SAP Digital Manufacturing

1. Overview

Syntax offers Statistical Process Control ("SPC") as an extension for SAP Digital Manufacturing, in which machine, process, and product data from various sources are linked and thus centrally monitored and analyzed using statistical key figures. Syntax Statistical Process Control for SAP Digital Manufacturing is a Software as a Service (SaaS) solution and includes the following components:

- The **Syntax SPC module** is the central Syntax SPC component. Equipped with a rule engine, it enables the calculation of statistical key figures and methods and rule-based alerting. It generates numerous insights into production and makes these available to SAP Digital Manufacturing (DM). It also serves as a persistent mass data store to keep key figures highly available.
- The **Syntax SAP Digital Manufacturing Connector** provides a ready-made, bidirectional communication interface between the SAP DM solution and the Syntax SPC module. On the one hand, this interface enables the enrichment of machine data with relevant master data. On the other hand, it ensures that the statistical process parameters are seamlessly displayed in the Production Operator Dashboard (POD) of Digital Manufacturing.
- The **Syntax SPC POD** plugin is the central user interface that provides production employees with comprehensive insights into current process data. Syntax SPC is offered as a turnkey solution that is connected to Subscriber's SAP DM instance as part of the deployment.

Syntax is responsible for maintaining the Syntax SPC standard solution.

Syntax SPC is based on infrastructure hosting resources and services ("AWS Services") provided by Amazon Web Services ("AWS"). Syntax is a certified Premier Partner and Reseller of AWS. 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.

The Services provided by Syntax are specified in more detail in the following description (including appendices) and the responsibility matrix ("RACI") in this Service Description.

2. Planning and Setup Services

Syntax will define the processes and system parameters required for the Service together with Customer in the planning phase within the framework of the agreed requirements.

The standard provision includes:

- Provision of the Syntax SPC module
- Provision of the SAP Digital Manufacturing Connector
- Provision of the Syntax SPC SAP DM plug-in

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").

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

Syntax SPC 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.

Maintenance Type	Description
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 system configuration questions
- Provision of updates and service packs for Syntax SPC
- Assistance with questions on updates 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.

5. 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.

6. 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/>.

6.1. SPC

The following Service Level Agreements (“SLAs”) shall apply.

Syntax SPC is based on AWS services and as such the Syntax SPC SLAs are dependent on the AWS services SLAs. The Syntax SPC 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/>.

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

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

** Syntax SPC PoC applies to the pre-operational phase, the pilot phase of the implementation project.

6.2. 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

7. 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 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. If required, use of the solution shall be restricted or stopped during maintenance work
- 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, 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/service-terms/> (use language selector at top of page for a different language). Subscriber shall ensure that each end user complies with the terms and conditions.

- Under the Syntax SPC Standard SLA, Subscriber agrees to connect at least one SAP DM resource to the test environment. Subscriber is also responsible for testing any updates deployed to the test environment within the defined timeframe.

8. 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.

8.1. SPC for SAP Digital Manufacturing

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	Maintain data center and infrastructure availability			R, A	See published AWS SLAs: https://aws.amazon.com/legal/service-level-agreements/
1.0.4	Provision Subscriber account on AWS	R, A	C, I		
1.0.5	Provision virtual data center and virtual machines within AWS	R, A	I		
1.0.6	Provision public IP	R, A	I		
1.0.7	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			
3.0.3	Implement network design	R, A			
4.0	Application Management				Gateway packages can be offered as Connectivity as a Service (CaaS)
4.0.1	Maintenance of the Syntax SPC Module, Syntax SAP DM Connector, and Syntax SPC POD Plugin	R, A	C, I		
4.0.2	Deploy updates for the Syntax SPC Module, Syntax SAP DM Connector, and Syntax SPC POD Plugin	R, A	C, I		
5.0	Backup and Restore				
5.0.1	Configure backup frequencies and retention periods for the data store	R, A			
5.0.2	Set up Amazon S3 bucket versioning	R, A			

Item	Description	Syntax	Subscriber	AWS	Notes
5.0.3	Set up data replica within the AWS region	R, A			Available only with the Standard SLA package
6.0	Database Management				
6.0.1	Setup and configuration of a DMBS	R, A			
6.0.2	Configuration of AWS-managed DMBS	R		A	Standard
7.0	Event Monitoring				
7.0.1	Monitoring, alerting, tracking and troubleshooting events in Syntax SPC	R			
7.0.2	Monitoring, alerting, tracking and troubleshooting database events in Syntax SPC	R			
7.0.3	Monitoring, alerting, tracking and troubleshooting interface events	R			
8.0	Configuration of External Systems				
8.0.1	Interfaces to the platform	R, A	C, I		
8.0.2	Availability of external systems and interfaces	I	R, A		
8.0.3	Retrieve data from external systems	R, A	C, I		
8.0.4	Send findings to external systems	R, A	C, I		
8.0.5	Send data from external systems	C, I	R, A		

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.