

# SystemInspection Service Suite for SAP Solutions

Your choice: Standard service, entry service or modular offering

## Service Overview

SystemInspection Service Suite for SAP Solutions (SIS) is an analysis and consultation package for SAP infrastructure environments, offered at a fixed price. As part of the service, customers get a complete understanding of the current workload, performance, and related resource consumption, plus guidance for optimizing SAP landscapes in line with the required service levels.

### Benefits at a glance

- Avoid over-provisioning and unnecessary investments in equipment.
- Increase the quality of services by helping to eliminate performance bottlenecks.
- Deliver individual and short-term results with minimum effort for the customer.
- Find the right sizing of DRAM memory for your SAP HANA database
- Get insights relevant to capacity planning for new requirements and strategic decisions
- Detect issues early which may impact service levels in the future
- GDPR compliant: No personal data and no business data is collected; only technical system statistics are processed.

The SystemInspection Service for SAP solutions analyzes the customer's operational SAP IT Infrastructure, builds an accurate mapping of the actual load profiles, and formulates an inventory list of the entire SAP IT infrastructure. It creates a holistic view and transparency of the performance and utilization of individual IT components and associated SAP systems.

The findings are presented and discussed during a final consultation session. Recommendations or instructions for actions are provided.

The SystemInspection service is applicable whenever decisions are to be derived in a data-driven manner, replacing feelings or opinions by data and facts. On a high level, the service covers the following usage scenarios:

**Infrastructure sizing:** Derive resource demands per SID and get clear sizing recommendations.

**Capacity and transformation analysis:** Support transformations such as the transition process to S/4HANA or organizational changes, e.g., mergers and carve-outs from an infrastructure perspective

**Performance analysis:** Evaluate performance KPIs, identify anomalies, potential bottlenecks and receive root cause analyses.

**Audit and trend analysis:** Analyze the effect of any changes in the SAP landscape or investigate load/data/usage growth trends over time



The service is available as full-scope standard service, covering any of these usage scenarios.

Alternatively, a modular offering is available to address specific customer needs for specific SAP systems. As an example, imagine an SAP landscape of 9 SIDs. Three of these would need to be analyzed: PRD, DEV, and QAS. PRD and QAS show performance problems while the hardware that serves DEV must be refreshed. In this example, the following modules are required:

- 1x base module
- 2x Performance analysis
- 1x Infrastructure sizing
- 3x Delivery module

The functional modules, their scope, and the analyzed data types are described in the following sections.

To understand how modules can be combined to individual offerings, please refer to the Section "Sales and Operations".

# Product Description

## Product description

### Scope

The SystemInspection service suite for SAP Solutions is applicable for:

- One SAP landscape, including Fujitsu and Non-Fujitsu hardware, including on-premises and off-premises SAP systems
- A defined number of SAP systems (identified by SIDs), which are subject to the analysis
- An arbitrary number of additional SIDs within the above-mentioned landscape can be measured but won't be subject to the analysis
- An arbitrary measurement period (typically 4 weeks to have a representative timeframe that covers monthly patterns)

### Deliverables

The service will be delivered in the following formats:

- **Result workshop:** A remote session (typically 2-3 hours in total) in which Fujitsu presents the findings and provides decision support on the customer's usage scenario. For the result workshop, Fujitsu uses an online analytical platform, which provides views as shown in Figure 1 to xx.
- **Structured report:** A PPTX file, handed over after result presentation, including a summary of the service outcomes and all measured data used as part of the assessment. The structured report holds Python-generated charts, which represent metrics presented in the result workshop.

### Use Cases

The SystemInspection service for SAP solutions covers the following usage scenarios.

- Infrastructure sizing
- Capacity and transformation analysis
- Performance analysis
- Audit and trend analysis

To enable fully flexible offerings, each usage scenario is supported by a respective orderable module. (See Section "Sales and Operations" for details on orderable modules.) Depending on the usage scenario, different sets of metrics are analyzed and presented. In the following, we provide details on each usage scenarios, example charts to be presented as part of the service, and example metrics, which are subject to the analysis.

### Infrastructure sizing

This scenario is applicable if current hardware components must be refreshed. As part of the service, actual resource demands are identified for the SIDs, which are subject to the analysis. The outcome includes accurate sizing recommendations for CPU and memory resources. Growth rates, either derived from historical data or from existing future business plans, can be injected. Therefore, sizing is based on real usage data to avoid over- or underprovisioning.

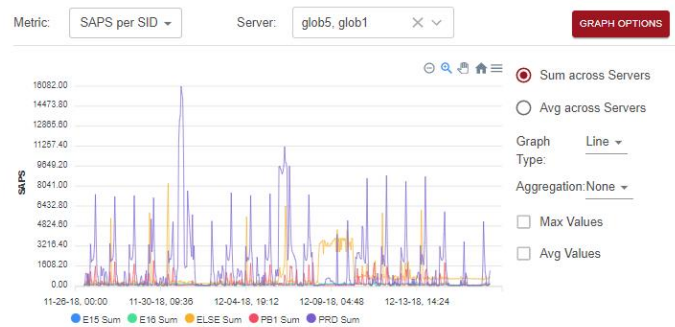


Figure 1: SAPS per SAP system (SID) – Identify SAPS demands of SAP instances, derive load peaks and patterns as a basis for demand-based sizing or instance relocation.

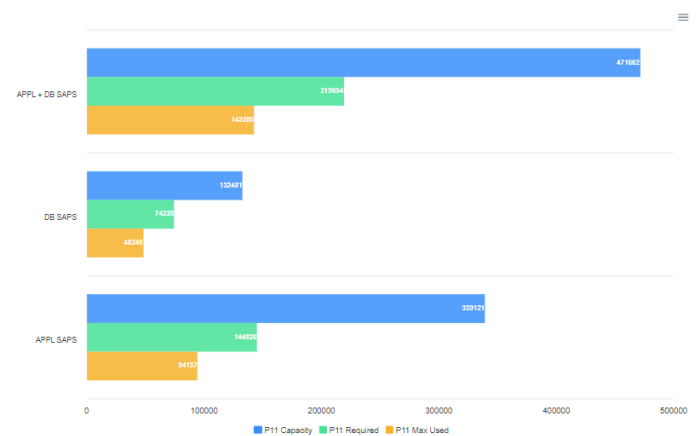


Figure 2: SAPS Capacity Overview - Compare capacity, which is available, required, and used for each SID.

Example metrics that are typically investigated for this use case include SAPS capacity per host or VM, SAPS demand per SID and application instance, memory demand per SID and application instance, SAP HANA component memory.

### Capacity and transformation analysis

Whenever a major change in the SAP application landscape is planned, it is vital to have a solid base of data to adapt the underlying IT infrastructure appropriately. The SystemInspection Service can support the transition process, e.g., to S/4HANA, or organizational changes, e.g., mergers and carve-outs from an infrastructure perspective. Data about the measured status quo and future requirements is used to define the target architecture.

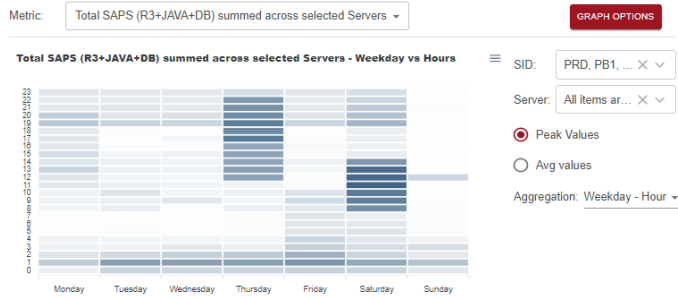


Figure 3: Heat map – Investigate your SAP landscape utilization, choose systems and servers of interest and discover periods of heavy load at a glance.

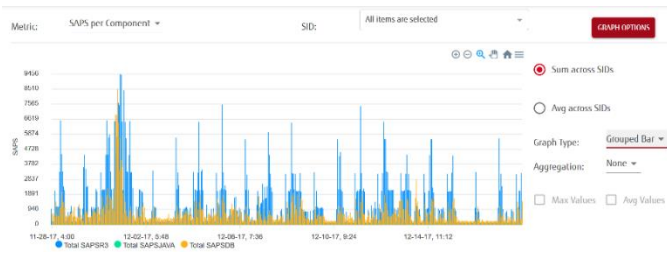


Figure 4: SAPS per Service Type – Map SAPS demands to service types such as ABAP and JAVA instances, or databases.

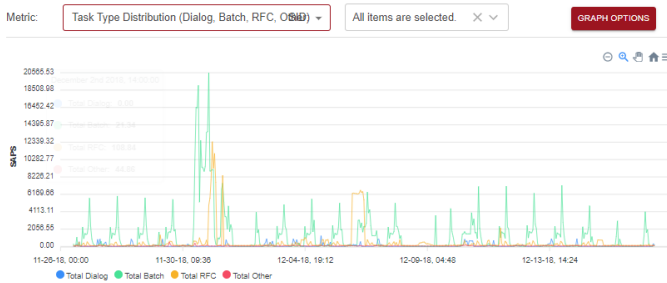


Figure 5: Task Type distribution - Investigate SAPS demands of tasks types such as dialog, batch, RFC, or other activities.

Transcode	CPU Sum	CPU %	Min Steps	Min	Avg CPU [ms/TS]	Avg DBS [MS]	DBSP%	Avg Bites [ms/TS]	Avg Resp [ms/TS]
Z-TRANSACTION0	70	0.02	8	7.00	0.23	3.00	0.00	0.00	16.75
Z-TRANSACTION7	2731	0.00	81	4.02	25.75	125.40	0.13	58.30	140.67
Z-TRANSACTION9	11	0.00	1	1.00	10.00	2.00	0.00	0.00	1507125.00
Z-TRANSACTION1	1751	0.11	47	10.00	75.10	1034.19	0.74	61.71	51.51
Z-TRANSACTION4	5	0.00	4	3.00	2.25	3.00	0.00	0.00	3.25
Z-TRANSACTION6	30	0.01	2	1.00	17.00	1.00	0.00	0.00	17.00
Z-TRANSACTION8	0	0.00	1	1.00	0.00	0.00	0.00	0.00	1.00
Z-TRANSACTION2	1974	0.85	21	3.00	81.00	5711.00	1.19	118.67	242.55

Figure 6: Top Transactions – Investigate transaction usage, database activity, and more, for a defined period of time, identify long-runners and resource killers as part of root cause investigations.

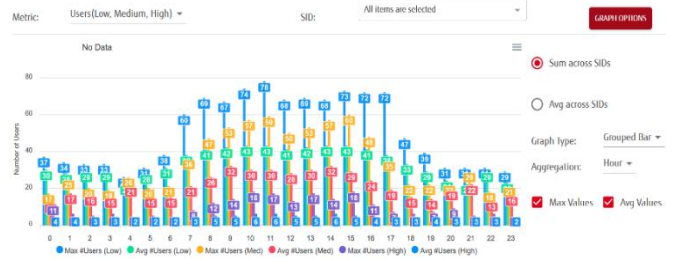


Figure 7: Users – Analyze how the measured load gets distributed across the number of users. Any metric may be aggregated on an hourly, daily, or weekly basis in order to derive existing load profiles.

Example metrics that are typically investigated for this use case include task type distribution, utilization heat maps, top transactions table, or user distribution.

### Performance analysis

The SAP system landscape is analyzed and evaluated with respect to a predefined set of performance KPIs. Potential bottlenecks are identified, and workload profiles are derived. The anomaly detection mechanism scans all measured data points and separates the normal from the anomalous. Results are visualized with an interactive 3D model. A root cause analysis is conducted based on comprehensive data sets.

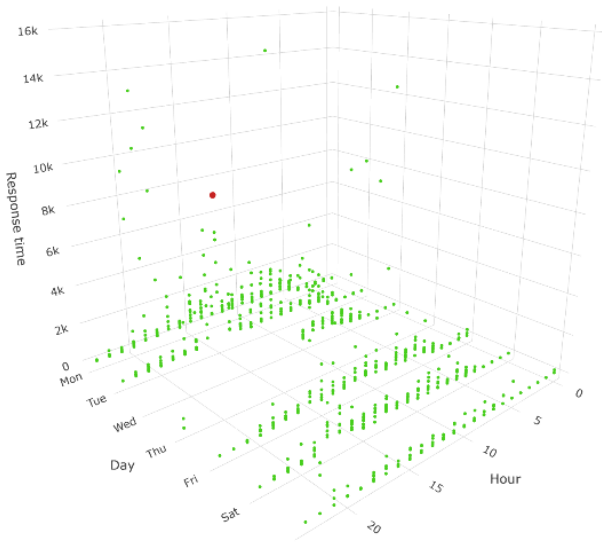


Figure 8: ML-supported performance anomaly detection - identifies critical performance anomalies (periods of irregular operations).

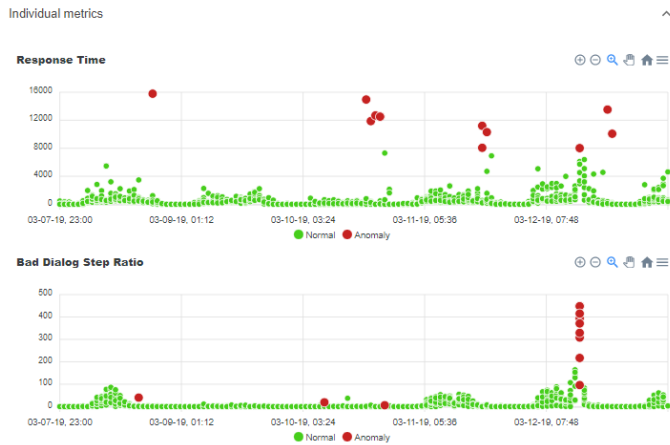


Figure 9: ML-supported performance anomaly detection - local outliers of individual metrics lead to global anomalies.

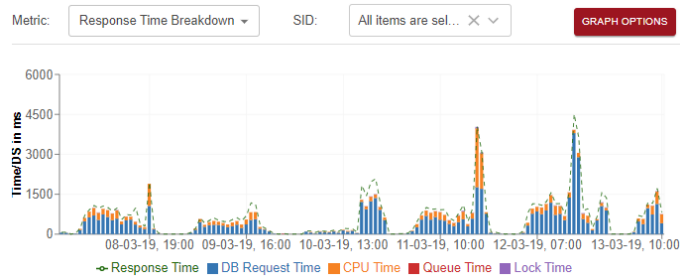


Figure 10: Response time breakdown - allows to break down response times into application and database components.

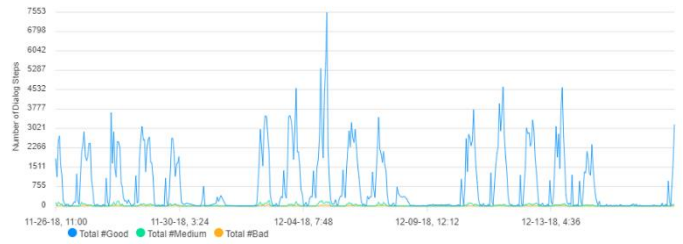


Figure 11: Dialog Step Quality – Review an evaluation of your dialog step quality and investigate periods of “good”, “moderate”, or “bad” response times.

Example metrics that are typically investigated for this use case include anomaly detection, mean response time per hour globally or for each transaction, dialog step quality, response time breakdown, or top transactions table.

### Audit and trend analysis

Most performance or infrastructure-related issues develop over time and could have been prevented if action had been taken earlier. The trend analysis allows to investigate load/data/usage growth trends over a long period of time or to compare these across multiple measurements. This way, estimations can be given about when capacity limits are expected to be hit and business continuity is at risk. Furthermore, any changes in the SAP landscape can be audited by comparing before- and after measurements.

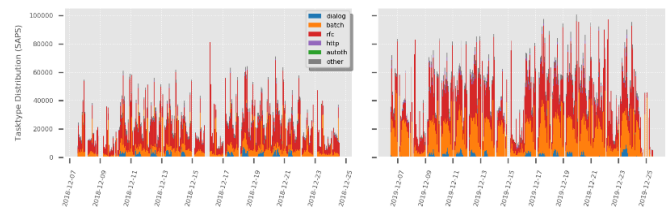


Figure 12: Task type distribution comparison – Compare metrics of interest across multiple measurements to identify trends and growths rates.

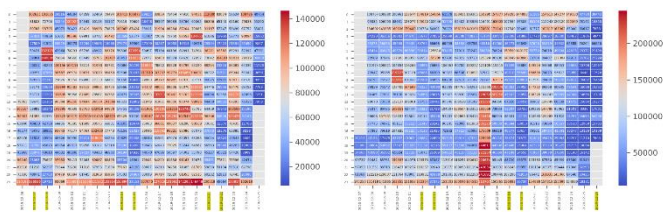


Figure 13: Heatmap comparison - Compare usage patterns of a system at different time periods and derive changed infrastructure requirements.

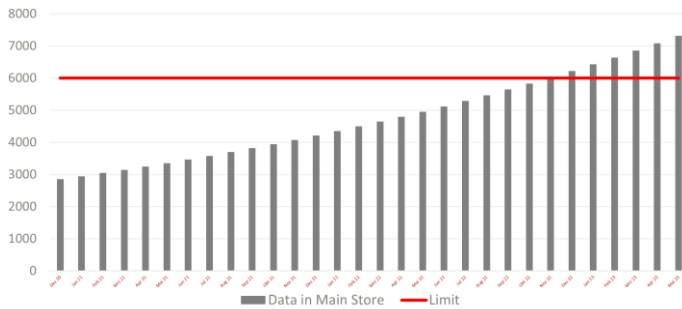


Figure 14: Growth rate - Derive growth rates within the measurement period and estimate a point in time where capacity limits (e.g., size of SAP HANA main store) will be reached.

Example metrics that are typically investigated for this use case include data growth rates, resource demands over time, task type distribution trend, or user distribution trend.

### Delivery Process

The delivery process can be separated into four phases:

- Kick-off
- Data collection
- Data discovery
- Decision support

During the Kick-off, project stakeholders are identified and introduced to the process and timeline of the service delivery. Furthermore, the main contact persons, the scope and the timeframe of the measurement are defined together with the customer. SAP systems to be measured and to be analyzed are defined.

Following the Kick-Off, the measurement software is set up by the customer with support from Fujitsu. After a minimum runtime of 24 hours, a snapshot of the data will be used to evaluate the measurement status and data quality.

The data discovery phase is conducted by Fujitsu but cannot be started before all data of the completed measurement was transferred to Fujitsu. Data transfer must be initiated by the customer after the defined measurement period has been completed.

Insights of the discovery phase will be presented by Fujitsu to the customer in the decision support workshop. According to the covered usage scenarios, clear recommendations are given.

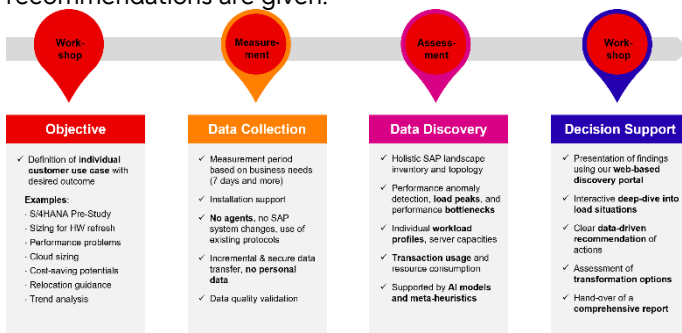


Figure 15: Summarizes the phases of delivery process

After the decision support workshop, a report with the presented information and the measured data will be sent to the customer.

### Pre-Requisites and Limitations

Due to the dependency on measurement data, the service is limited to SAP systems which run on the technology platform SAP NetWeaver. For SIDs that use the JAVA Stack, any measurable resource demands are limited to CPU requirements, measured in SAPS. Measured network traffic is limited to the RFC protocol.

Furthermore, the customer agrees to the following conditions as pursuant to the delivery of the service defined:

- Make available necessary personnel with authority and associated skills
- Define goals, number SAP systems to measure and the representative time period
- Installation of the collector software is performed by the customer according to the Installation Guide
- Secured transfer of the collected data by the customer to the Fujitsu central FTP server in line with GDPR regulations for data privacy

### Data Collection, Protection and Privacy

- Data Security
  - No change of customer' s SAP system (no transports)
  - Connection via RFC, SOAP, SQL and ssh
  - No business data collected, only SAP statistics and OS performance data
  - SAP usernames are anonymized by default and thus not transferred to Fujitsu
  - No additional agents, just a collecting server or VM with the data collector required
  - Secure access to the collecting server
  - SystemInspection is GDPR compliant, no personal data transferred to Fujitsu
- Performance
  - Data collection is not relevant for the performance of customer' s SAP system
- Password Security
  - All passwords are encrypted, no login data transferred to Fujitsu
- Data Sovereignty
  - Completely w/ the customer
  - No automated upload / no automated opening of firewall
  - Data are password protected before upload, Fujitsu's datastore be connected via sftp and https

## Partners

Some of the features used by the SystemInspection Service for SAP Solutions, were developed, and evaluated together with external scientists from the Otto von Guericke University Magdeburg. The university acts as scientific partner, therefore, data collected as part of the service will be shared with involved data scientists. Shared data does not include any personal information or details that would allow to identify the customer.

## Sales and Operations

To provide a flexible offering that adopts to customer-individual needs and landscapes, SystemInspection is available as traditional standard service (full scope) or as modular offering (selectable modules for each use case and SID).

When choosing the modular offering, the following modules are available:

- Base module (always required 1x per project)
- One or more of the following functional modules (required for each SID, which undergoes this use case):
  - Infrastructure sizing
  - Capacity and transformation analysis
  - Performance analysis
  - Audit and trend analysis
- Delivery module (required for each analyzed SID if the service is delivered by the central team)

The base module covers the measurement of an arbitrary number of SAP systems within the customer's SAP landscape. Only the composition of functional modules chosen determines how many of the measured systems will be analyzed.

For each SID to be analyzed, a functional module is required depending on the targeted the use case (see Section "Use cases" for details). In case of multiple use cases for a given SID, all desired functional modules are required for this SID. The offering may be envisioned as a pit stop model where every SID, which is to be analyzed, must stop at functional pit stops, depending on the desired usage scenarios for this SID. Figure 16 depicts the available modules and how these can be applied to measured customer SIDs in a flexible manner.

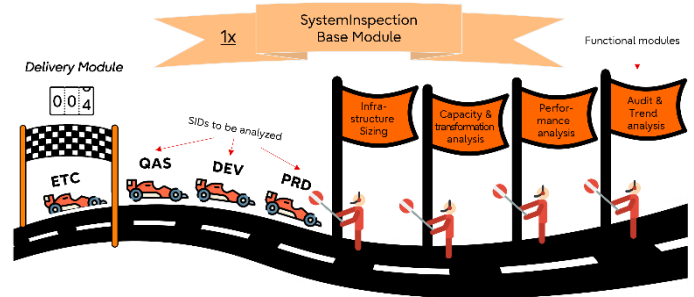


Figure 16: Pay-per-use - The modular offering provides full flexibility to order only the functionality that is needed.

If the targeted usage scenario is rather broad or unclear, a full standard service can be ordered alternatively. The standard service includes the measurement of up to 20 SIDs while 4 of these are analyzed with respect to any of the above-mentioned use cases. If additional SIDs are to be analyzed in this setting, the scope can be extended using expansion packages. Each expansion package covers the measurement of additional 5 SIDs while 1 of these is analyzed. Finally, if the use case shall be limited to infrastructure sizing and the SAP systems to be analyzed do not include SAP HANA databases, the SystemInspection entry service builds a functionally limited offering at a fixed low price. Entry covers measurement and sizing of up to 5 SIDs, delivered by a local presales consultant.

Table 1 summarizes the available packages, covering both the modular offering and the full-scope standard service.

Table 1: Summary of orderable packages. Do not combine traditional and modular packages.

Order Code	Short Description	Mode	Scope
FSP:G-IC20900PRSER	Entry Support Pack SP SOL Con SAP Sys Insp. Entry	traditional	Measurement of up to 5 SIDs, Basic static reporting to cover infrastructure sizing excluding SAP HANA databases.
FSP:G-IC08800PRSER	Standard Support Pack SP SOL Con SAP Sys Inspection	traditional	Measurement of up to 20 SIDs while 4 of these are subject to the analysis. Any of the described use cases is covered for any of the 4 SIDs.
FSP:G-IC14100PRSER	Expansion Support Pack SP SOL Con SAP System Insp. Expansion	traditional	Expansion to the Standard support pack. Covers the measurement of additional 5 SIDs while 1 of these is subject to the analysis.
FSP:G-PW29900PRSER	SI4SAP (modular) Base module, per project	modular	Base module, required 1x per project to cover the measurement and preprocessing of the SAP landscape.
FSP:G-PW31800PRDDS	SI4SAP (modular) Infrastructure sizing, per SID	modular	Functional module to cover the use case "Infrastructure sizing", required for each SID going through this use case
FSP:G-PW30000PRSER	SI4SAP (modular) Performance analysis, per SID	modular	Functional module to cover the use case "Performance analysis", required for each SID going through this use case
FSP:G-PW30100PRSER	SI4SAP (modular) Capacity and transformation analysis, per SID	modular	Functional module to cover the use case "Capacity and transformation analysis", required for each SID going through this use case
FSP:G-PW30200PRSER	SI4SAP (modular) Audit and trend analysis, per SID	modular	Functional module to cover the use case "Audit and trend analysis", required for each SID going through this use case
FSP:G-PW29700PRSER	SI4SAP (modular) Analysis and result workshop delivery by TC&E SAP, per SID	modular	Delivery module, required for each analyzed SID if the service is delivered by the central team.

# More information

## Fujitsu products, solutions & services

Fujitsu provides a range of platform solutions. They combine reliable Fujitsu products with the best in services, know-how and worldwide partnerships.

### Fujitsu Portfolio

Built on industry standards, Fujitsu offers a full portfolio of IT hardware and software products, services, solutions, and cloud offering, ranging from clients to datacenter solutions and includes the broad stack of Business Solutions, as well as the full stack of Cloud offerings. This allows customers to select from alternative sourcing and delivery models to increase their business agility and to improve their IT operation's reliability.

[www.fujitsu.com/global/products](http://www.fujitsu.com/global/products)

## More information

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Using our global know-how, we aim to contribute to the creation of a sustainable environment for future generations through IT.

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