

Compare SAP Cloud Platform Integration (SCPI) with SAP PO/PI

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To ‘Integrate’ means to bring the different pieces of your business or your operation together, often time under a common system or onto a single platform. Well, yes, that is fairly simple to define but to choose a software or package to deliver the same, efficiently and effortlessly is another matter altogether; and, when it comes to choosing between PI/PO and SCPI, the task is further complicated as both are middleware integration platforms provided by SAP used for designing and executing integration process. They can both be used for SAP and non-SAP or third-party systems integration, for all scenarios such as application to application (A2A) and business to business (B2B).

The architecture and functioning of SCPI and PI/PO are quite similar, to the extent that the integration flow designed in one system can be deployed in the other as well, thereby allowing for a smooth transition between the two systems. So, the main factors to consider while choosing the middleware are as follows:

- **Cost** – The cost of an on-premise system depends on whether you have an existing infrastructure of hardware/software and the associated licenses, your scope of requirements, availability of skilled resources and maintenance. If you have an existing infrastructure to support SAP PI/PO, then implementing it may cost less than implementing SCPI. However, if you have no existing infrastructure for SAP PI/PO, it makes more sense to explore the solution offered by SCPI as it is based on pay as you go subscription model and requires minimal upfront investment.
- **Landscape** – Your system landscape and its requirement are an important factor to consider. For example, if you are considering cloud-to-cloud communication, SCPI comes across as a more useful and robust alternative than PI/PO; whereas an on-premise to on-premise integration scenario is where PI/PO makes perfect sense.
- **Flexibility** – The middleware implemented should be flexible enough to incorporate any required custom changes or near future changes in your landscape e.g. a merger or a new application. PI/PO has a flexible development environment but it follows a very standardized approach which goes like this Connectivity-> Routing->Mapping->Connectivity, while SCPI is completely flexible and provides transparency about all the processing steps whether conversion, routing, transformation or security.
- **Scalability** – SCPI is highly scalable as it is cloud based while SAP PI/PO scores a little less in comparison.

The key technical features for each system and how they can help you make a more informed choice are listed below –

Key Features	PI/PO (Process Orchestration)	SCPI (Sap Cloud Platform Integration)
Deployment	On-premise installation in customer landscape. Responsibility of configuration and operations is with the customer.	Cloud based service hosted by SAP; Responsibility of configuration and operations is with SAP.
Message processing	Stateful message processing is mainly part of the BPM	Stateful message processing is integrated in <u>iFlow</u> . In addition, there is a powerful Data store to persist data.
License Model	Product license and annual fee	Subscription fee
Architecture	Single tenant solution, no built-in virtualization capabilities. Failover to be configured by customer.	Multi tenancy, data isolation, virtualization is possible with SCPI. Automated failover and rolling software updates are an added advantage.
Pre-packaged content organization and reuse	Pre-packaged content available for a wide variety of on-premise SAP/non-SAP applications. Strong governance enables reuse of integration content globally.	Pre-packaged content available for selected SAP Cloud solutions. Each <u>iFlow</u> is autonomous and lean, reuse exist only for user credentials.
Operations and Performance	Operation by customer integration with SAP Solution manager. Performance is excellent for on-premise systems, but can be better for on-premise to cloud integration	Operations by SAP Cloud managed services, integrated with service provider cockpit. Performance is excellent for cloud to cloud scenarios, but good in other scenarios as well

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Separation of Design & Configuration	PI/PO has clear separation, ESR for design time artifacts and DIR for configuration	Mainly managed in iFlow. Configurable elements can be externalized. Users are also managed outside of iFlows.
Asynchronous messaging	Guaranteed delivery in EO/EOIO mode	Transient Cloud messaging by default. EOIO is not available and EO must be modelled manually using Data store or via JMS

SAP PI/PO has its limitations in UI driven scenarios or for synchronous exchange of data. On the other hand, SCPI has its limitation in terms of data modeling (WSDL, XSD, etc.). The fact that SCPI is currently still evolving explains the lack of certain features that are readily available in PI/PO but it is not hard to imagine it improving on its performance as well as the feature-list with every subsequent upgrade.

The adapters available in each system play an important role in helping your cause in terms of ease of implementation and therefore the cost, hence it is always better to be up to date with the list to make a more informed decision. The list of adapters for each system as referenced from the web are as listed below.

SCPI Adapters (Image1) –

SAP Cloud Platform Integration
Connectivity Protocols

Connectivity Protocols

- HTTP (S)
- SOAP
- OData
- REST Client
- SFTP
- Email
- SAP SuccessFactor
 - SOAP
 - REST
 - ODATA
- IDoc
- SAP Ariba
- Facebook
- Twitter
- LDAP
- Adapter Development Kit

Partner Ecosystem*

- Salesforce
- HubSpan
- Here Maps
- AMQP
- Microsoft Dynamics CRM online
- ZATAR-Zebra (available via SAP Store)
- MQTT (available via SAP App. Center)

Adapter Development Kit

- Framework to create new adapters
- Certification available
- Can be used to create technical/application adapters

PI/PO adapters as of SAP PO/PI 7.4 (Image2) –

Name	Namespace	Software Component Version ▲
AS2	http://sap.com/xi/XI/AS2	B2B TOOLKIT 1.0
EDISeparator	http://sap.com/xi/XI/EDISeparator	B2B TOOLKIT 1.0
OFTP	http://sap.com/xi/XI/OFTP	B2B TOOLKIT 1.0
X400	http://sap.com/xi/XI/X400	B2B TOOLKIT 1.0
OData	http://sap.com/xi/XI/OData	CONNECTIVITY ADD ON 1.0
SFSF	http://sap.com/xi/XI/SFSF	CONNECTIVITY ADD ON 1.0
BC	http://sap.com/xi/XI/System	SAP BASIS 7.40
CIDX	http://sap.com/xi/XI/System	SAP BASIS 7.40
File	http://sap.com/xi/XI/System	SAP BASIS 7.40
HTTP_AAE	http://sap.com/xi/XI/System	SAP BASIS 7.40
IDoc_AAE	http://sap.com/xi/XI/System	SAP BASIS 7.40
JDBC	http://sap.com/xi/XI/System	SAP BASIS 7.40
JMS	http://sap.com/xi/XI/System	SAP BASIS 7.40
Mail	http://sap.com/xi/XI/System	SAP BASIS 7.40
Marketplace	http://sap.com/xi/XI/System	SAP BASIS 7.40
REST	http://sap.com/xi/XI/System	SAP BASIS 7.40
RFC	http://sap.com/xi/XI/System	SAP BASIS 7.40
RNIF	http://sap.com/xi/XI/System	SAP BASIS 7.40
RNIF11	http://sap.com/xi/XI/System	SAP BASIS 7.40
SOAP	http://sap.com/xi/XI/System	SAP BASIS 7.40
WVS_AAE	http://sap.com/xi/XI/System	SAP BASIS 7.40
SFTP	http://sap.com/xi/XI/SFTP	SFTP ADAPTER 1.0

Conclusion:

It is a really close call between the two and there are no clear winners here, but when both the products are from SAP there is no real downside to choosing one over the other. Broadly speaking, one may say that if you are implementing a middleware for the first time and you have cloud solutions, you should go for SCPI and if you are already on SAP on-premise it makes more sense to go for SAP PI/PO even if you want to integrate on-premise with cloud. Let us not forget when you want to move from one platform to the other SAP has full reusability of the iflows and mapping used in either PI/PO or SCPI or also opt for a hybrid solution to address both cloud and non-cloud-based system. An iflow from PI/PO can be imported in SCPI and vice versa. One way or another, it is really hard to go wrong, so go ahead and choose the best!!

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