
INTRODUCTION TO THE SERVICE PORTFOLIO AND CATALOGUE LANGUAGE (SPACL)

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SPACL CONSORTIUM MEMBERS

SPACL is a consortium of leading vendors in the IT and service catalogue management industry is working to create this standard for service catalog interoperability. These vendors are: BMC Software Inc., CA, Frontrange, IBM Corporation, NewScale Inc., Planview Inc.

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INTRODUCTION

This white paper is a product of the SPACL consortium; a collaboration of companies that have joined to develop an open-standard definition of service offerings and service requests that is vendor and tool agnostic. The SPACL consortium members are involved in the development of Service Catalogue, Service Portfolio and Service Level Management (SLM) tools and offerings.

The SPACL standard provides a clear set of content and data structures so that service management practitioners and service providers can succeed at implementing and exchanging service catalogues and service portfolio definitions.

This document describes the motivation behind the SPACL standard. It is designed for IT practitioners, managed service providers and technology vendors to help them understand the purpose of SPACL and the objectives of the SPACL consortium.

WHAT IS A SERVICE CATALOG? SERVICE PORTFOLIOS, CATALOGUE AND ITIL V3

The service catalogue is an expression of the operational capability of a service provider within the context of a customer or a market space. The service portfolio represents all the resources presently engaged or being released in various phases of the service lifecycle.

The service catalogue, according to ITIL, is the subset of the Service portfolio that is visible to IT Organizations. ITIL V3 speaks of both the service portfolio and the service catalogue as the “spine of ITIL” because all other processes, such as request, change, incident, access, etc need to refer to it. The service catalogue:

- Acts as the ordering portal for customers, including pricing and service-level commitments, and the terms and conditions for service provisioning. Users select service offerings from the service catalogue and generate service requests to have instances of those offerings fulfilled.
- Consists of services presently active in the service operations phase and those approved to be readily offered to current prospective IT Organizations.
- Is useful in developing suitable solutions for customers from one or more services.
- Contains items that can be configured and suitably priced to fulfill a particular need.
- Contains requestable services.

Service providers may have many customers or serve many businesses and therefore there may be multiple service catalogues projected from a service portfolio.

Many service management practitioners have come to the conclusion that a service catalogue is a key tool for the management of the services that they wish to offer to their internal and/or external customers. Unfortunately, they often struggle when they go to build their service catalogue. There are multiple reasons

for this, but chief among them are the lack of standards for defining content, lack of implementation guidance and the difficulty experienced in managing business objectives around catalogue implementations.

WHAT PROBLEM DOES SPACL SOLVE?

ITIL V3 outlines a persuasive case for the value of a rigorous Service Level Management (SLM) process to both service management practitioners and their external service providers. 70% of SLM practitioners in 2008 claimed they planned to build a service catalogue within 12 months. However, they often struggle to achieve their objectives due to various technical issues that are encountered during the design and development of the service catalogue.

The lack of standard semantic definitions between different service management tool vendors, customers and service providers means each maintains different detail about their services offerings. Also the lack of a standard electronic interchange format hinders the interchange of service offering definitions and service requests between different parties.

This can lead to the following sorts of problems when service management practitioners and service providers attempt to manage service portfolios and/or service catalogues:

- Duplicate efforts to define “services” across multiple systems
 - Different meanings, different models
 - Difficult to interchange service definitions and service requests between different systems
- Service portfolio and/or catalogue development projects don’t achieve business goals
 - Some critical parameters may be missing in some service catalogues / portfolios
 - Hard to get all different stakeholders to work together when they have different views of a single service
 - Unclear division of labor for maintenance
- Long term service documentation projects are not operationally adopted
 - Static catalogues are not useful for operations, provisioning, financial management, ordering, or configuration management
 - Most first generation, static catalogues achieve low penetration in the organization
 - Need to re-write static catalogues in order to make them operational
- Lack of supplier catalogues prevent standardization and governance over spend and SLA compliance
 - Maverick spending, overpaying for services
 - Lack of a standard set of “service components” to build the contract which results hard to implement service levels

SPACL: MAKING THE CATALOG OPERATIONAL AND ACTIONABLE

ITIL V3, a best practice process framework, does not provide specifications for the technical elements that a service portfolio and a service catalogue needs to contain. Without that detail, every service definition is unique to. SPACL seeks to provide a semantic model that answers questions such as:

- What sorts of information needs to be documented in a service portfolio or service catalogue?
 - Content
 - Elements
 - Granularity
 - Hierarchies
- How will this information be used with other IT functional areas?
 - What operational attributes should traverse different systems?
 - How can one interchange catalogue information between different systems?
- How can a service management practitioner or a service provider be assured that their catalogue can be made actionable within a multi-vendor environment?
- How can a service management practitioner bring in a supplier's or a managed service provider's service offerings into their own service catalogue?
- What is the difference between business services, technical services?
 - How are these differences distinguished within a service catalogue?
 - How are they requested from a service catalogue?

EXAMPLE OF SPACL DEFINITION

SPACL brings For example, a user needs to see a price description and price structure such as “\$10.00 per gigabyte per month.” A system needs to understand that \$ is US currency, 10.00 is number, gigabyte is allowable Unit of Measure, and Month is date type recurrence. This same type of rigor will be applied to Service Level Objectives, descriptions, titles, basic configuration, and other elements.

SPACL definitions are content centric and machine readable, and include allowable attributes such as units of measure, and constraints to periods. SPACL in many ways is more akin to a B2B catalogue exchange standard than a traditional system definition, but is focused on service structures.

SERVICE DEFINITIONS NEED TO BE INTER-OPERABLE ACROSS SYSTEMS

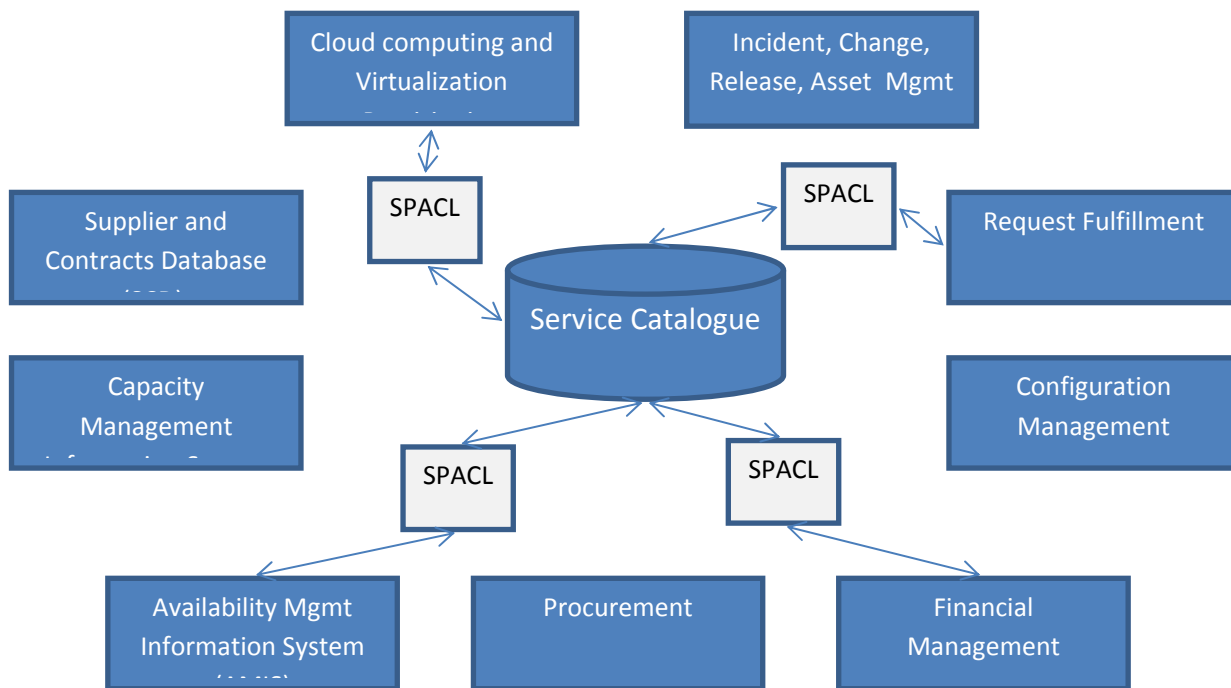
ITIL V3 defines a large set of new systems that need to have access to the service definitions in the service catalogue. Here are just some of the systems mentioned in ITIL v3.

- Service Level Management (SLM)
- Request Fulfillment
- Service Knowledge Management System (SKMS)
- Configuration Management System (CMS)
- Capacity Management Information System (CMIS)
- Availability Management Information System (AMIS)
- Security Management Information System (SMIS)
- Supplier and Contracts Database (SCD).
- Incident, Change, Release, and Asset Management
- Other Service Catalogues such as from external provider

And it gets more difficult when we consider the need to integrate with other processes such as:

- Provisioning for Virtualization, Cloud computing, Server, Desktop, Network, and Applications
- ERP components such as Procurement, Human Resources, Financial, GL, Contract and Supplier management
- Project Portfolio
- Facilities management tools

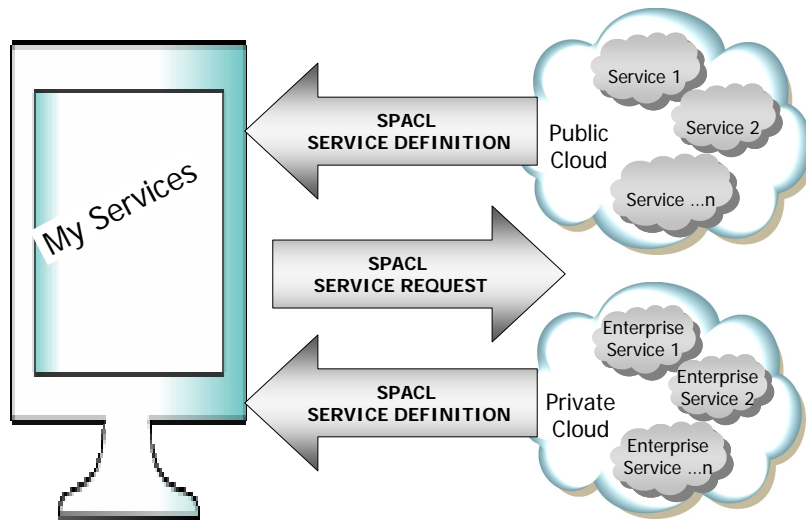
Below is a simple, pragmatic example of the role we plan for SPACL: different systems are able to exchange SPACL service definitions with a service catalogue.



SERVICE CATALOGUES ENABLES PRIVATE AND PUBLIC CLOUD COMPUTING

Customers increasingly ask to receive their IT services from a “Cloud”, whether from an enterprise-level *private* cloud or an internet facing *public* cloud. Service catalogues are well positioned to play a key role in “cloud” computing because they serve as the means to produce customer facing service definitions that tie to operational service delivery.

Key to virtualization and cloud computing is the rigorous definition of standard packages and allowable “changes” For example, define a 2 gigabyte, XEON server running Linux Fedora, with the options of Apache and MySQL installed. SPACL provides a standard for defining package service offerings and it’s requestable components in a structure that can be exchanged between a customer and a service provider. As customers look for an aggregated catalogue of services that may be requested, SPACL provides the definitions for building this aggregated catalogue.



THE SPACL STANDARD

The heart of the SPACL standard is an open-standard definition of Service Offerings and Service Requests that is vendor and tool agnostic. SPACL delivers an industry standard set of document models to facilitate exchange of definition both between systems and between different players.

The SPACL language will provides an XML-based schema that is sufficiently rigorous to drive service portfolio management and service catalogue management tool sets. SPACL is designed to be extensible so that customers and vendors can add new elements and attributes while maintaining interoperability.

The SPACL standard is-

An open-standard definition of Service Offerings and Service Requests that is vendor and tool agnostic

- Provide sufficient rigor to guide service management practitioners content generation
- Clear set of content and data structures so service management practitioners can succeed

A definitional model so catalogue development is decoupled from operations

- Content can be defined independently of how it will be use operationally
- This simplifies projects, enriches the usability of the catalogue

Rigorous, normative schema that enables automated exchange of definitions

- Portfolio can send service definitions to CMDB, Provisioning, Finance, HR, Billing, PPM, etc

The SPACL standard may also, in latter phases, tackle address inter-communication between different Service Portfolio and Service Catalogue systems. Therefore, it will also explore in latter phases additional definitions that would facilitate such inter-communication.

SPACL USE CASES

The SPACL consortium has reviewed a variety of use cases presented by its members for consideration. This section details the three major use cases that SPACL consortium has decided to address in its first phase.

In these four examples, BigCo is a large company with an internal IT organization. Eric is a Service Catalog Manager at BigCo. SupportCo is an outsourcer who provides IT services to multiple companies. Lisa is a Service Catalog Manager at SupportCo.

The appendix of this document contains both relevant role definitions and a short glossary of terms.

1) ADD AND PUBLISH A SERVICE OFFERING

Overview

To publish service offerings to customers using different vendor service catalog tools, SupportCo needs to publish its service offerings in multiple formats. As the company expands its offerings into broader markets, the cost of supporting multiple formats has proven to be cost prohibitive.

SupportCo has decided to add a new "E-mail" service offering to their catalog. It will provide standard e-mail capabilities (e.g. send and receive e-mail messages) as well as a set of requestable offerings (e.g. Add/Delete e-mail user, Change e-mail user configuration, etc).

Process Flow

1. Lisa adds the E-mail service offering in the vendor service catalog tool used by SupportCo that supports the SPACL format.
2. The SupportCo vendor service catalog tool produces a SPACL compliant service offering that Lisa sends to Eric at BigCo.
3. Since BigCo prefers to use a different vendor's service catalog tool than SupportCo, when Eric receives the SPACL compliant service offering he adds it to BigCo's service catalog tool.

Value of SPACL in this Case

- SPACL provides the structure to capture a portfolio of service offerings. The standard attributes of a service offering include:
 - Descriptive information (text, pictures, video, etc.)
 - Service Level Warranty information
 - Pricing options
- SPACL provides tool vendors with the data representation to follow when defining a service offering.
- SPACL provides a common interchange format between service offering tools of different vendors.

- This can include different tools that are used within different phases for the service offering lifecycle.
- SPACL allows for expandability

2) ADD AND PUBLISH A REQUESTABLE OFFERING

Overview

To publish requestable offerings to customers using different vendor Service Catalog tools, SupportCo needs to publish its requestable offerings in multiple formats. As the company expands its offerings into broader markets, the cost of supporting multiple formats has proven to be cost prohibitive.

SupportCo has decided to use the new “E-mail” service offering and **add its requestable offerings to their catalog**. The Email service offering will provide standard e-mail capabilities (e.g. send and receive e-mail messages) and a set of associated requestable offerings (e.g. Add/Delete e-mail user, Change e-mail users configuration, etc).

Process Flow

1. Lisa of SupportCo adds the requestable offerings for the E-Mail Service Offering in a vendor tool that supports the SPACL format.
2. The SupportCo service catalog tool produces a SPACL compliant requestable offering that Lisa sends to Eric of BigCo.
3. Since BigCo prefers to use a different vendor’s service catalog tool, when Eric receives the SPACL compliant requestable offerings, he adds them to BigCo’s service catalog.

Value of SPACL in this Case

- SPACL provides the structure to capture a catalog of requestable offerings. The standard attributes of a requestable offering include:
 - Descriptive information (text, pictures, video, etc.)
 - Service Level Warranty information
 - Parameter Name, Data Type, Optional Indication, Default Value, and Description information for all the parameters that can or must be specified when requesting an instance of the offering
- SPACL provides tool vendors with the data representation to follow when defining a requestable offering.

- SPACL provides a common interchange format between requestable offering tools of different vendors.
 - This can include different tools that are used within different phases of the requestable offering's lifecycle.
 - It allows for expandability

3) SUBMIT A SERVICE REQUEST

Overview

SupportCo receives service requests in multiple formats because customers use different vendor products. The cost of supporting multiple formats has proven to be prohibitive. SupportCo is interested in reducing the cost of processing service requests from its customers by leveraging a standard format.

Sarah, an end user at BigCo, wants to increase the size of her e-mail inbox.

Process Flow

1. Sarah uses the BigCo service catalog tool to select the "Modify E-mail Storage Limit" requestable offering.
2. Sarah fills in the request parameters as prompted by the service catalog tool
3. Sara "Submits" the request and the BigCo service catalog tool produces a SPACL compliant service request.
4. The service request is sent to SupportCo.
5. Nancy, a service fulfillment agent at SupportCo, receives the service request and loads it into the SupportCo fulfillment tool.

Value of SPACL in this Case

- SPACL provides the structure required to generate a Service Request from a Requestable Offering. The standard attributes of this request include:
 - Identification of the requestor
 - Optionally, identification of who the request is being made for
 - Optionally, indication of the required date/time by which the request must be completed
 - Parameter Name, Data Type, Optional Indication, and value information for all the parameters that can or must be specified within a request

- SPACL provides a common extensible interchange format for a service request generated from a requestable offering

SPACL ROADMAP

The SPACL working group has identified several objects and transactions that would help the industry standardize interchangeable service definitions. See the glossary for a definition of these terms.

- 1) A definition for Service Offerings
- 2) A definition for Requestable Offerings
- 3) A definition of a Service Request

Others that are under consideration are a definition to exchange a service request transaction and a definition to exchange service agreements.

Our goal is to take SPACL and deliver it to a Standards Group (to be selected) and make the specification available to the industry.

DELIVERABLES

SPACL deliverables include:

- A Web Site to make the spec available to the industry and users.
- A White Paper
- Reference Model
- Schema Definition for Service Offering
- Schema Definition for Requestable Offering
- Schema Definition for Service Request

The schema definitions contain:

- XSD's for service offering and service request that are documented and normative
- Extensible model to create new elements, that include rules of the road for vendors to add new elements as needed and preserve interoperability.
- An on-going group to grow the standard in future moments (web-services, future extensions, SLA definitions, etc)

FREQUENTLY ASKED QUESTIONS

WHAT'S THE RELATIONSHIP WITH ITIL?

We have chosen wherever possible to adopt ITIL definitions for roles, processes and objects to simplify the usage and adoption by ITIL practitioners. ITIL itself is not a standard as it provides no data model or structure; thus SPACL is complementary in that it provides the rigorous structure that can make many ITIL processes operational and automatable.

There's no legal relationship with the owners of ITIL, the UK Office of Government Commerce.

WHAT'S THE BENEFIT TO AUTHORIZED TRAINING ORGANIZATIONS THAT TEACH ITIL?

One of the challenges students face when learning about service catalogues in ITIL is the lack of examples and templates for service definitions. SPACL documents can be added to training curricula to provide "real" life example of a service catalogue. SPACL is freely available and can be used by any training organization.

HOW CAN OTHER VENDORS PARTICIPATE?

SPACL itself is a consortium and it's open to add more members upon approval of a majority of its existing members. The goal of SPACL is to create an open standard that can be used by any vendor. To this end, SPACL will submit the draft of its work to a standards group.

ARE THERE OTHER STANDARDS LIKE SPACL?

There are a number of standards that try to define services, but none that tackle the issue of "how do I marry human-meaningful, structured content with technical definitions?" No other standard today is focused on bridging the content and structure gap.

- CMDBf focuses on federation of CMDB but is agnostic of content. For example, it does not contain a set of units of measure. It could be used to query a system for service definitions that have been populated with SPACL content.
- SML is too abstract for users. It provides no guidance on best practices. So while you can model low level system services, you can't model something like Service Offerings.
- DCML is focused on automated provisioning of server configurations.

WHAT'S THE VALUE OF SPACL TO SERVICE MANAGEMENT PRACTITIONERS?

SPACL will provide a variety of benefits to service management practitioners.

- SPACL provides a core set of objects, attributes and extensible elements that will simplify the complicated conversation of "what is a service," "what should we document?" The value is that

service management practitioner will be able to start their catalogue work with a minimum set of structure and questions eliminating wasted work and saving time.

- SPACL will provide a normative structure for exchanging service definitions across systems and between customers and service providers. This means a managed service provider can extract from their catalogue the subset of contracted service offering and it's requestable components and give them to a customer to put in their catalogue. The value of this is reduced work for the customer while maintaining internal controls over service requests.

GLOSSARY

The following glossary maps SPACL terms to ITIL v3 terms.

Term	Definition	ITIL Terms
Business Service	An IT Service that directly supports a Business Process, as opposed to a Technical Service which is used internally by the IT Service Provider and is not usually visible to the Business.	Business Service
Line of Service	A Line of Service is a Core Service or Supporting Service that has multiple Service Offerings.	Service Offerings = Service Level Packages
Requestable Offering	Requestable Offerings are actionable items that are supported by operational activities required to fulfill the request.	None
Service Contract	A Contract to deliver one or more IT Services. The term Service Contract is also used to mean any Agreement to deliver IT Services, whether this is a legal Contract or an SLA.	The ITIL term "Service Contract" is being used in place of the term "Service Agreement".
Service Offering	<p>A Service Offering brings specific value to an internal customer by establishing a well defined utility or functionality that is supported by definite and measurable warranties or guarantees that the expected level of service/value will be met.</p> <p>The primary customer of Service Offerings are Business Owners who establish their expectations via a Contract with the Service Provider.</p>	Service Offerings = Service Level Packages
Service Request	A Service Request is a request from a user for information, or advice, or for a standard change or for access to an IT service.	Service Request
Technical Service	An IT Service that is not directly used by the Business, but is required by the IT Service Provider so they can provide other IT Services. For example Directory Services, naming services, or communication services.	Technical Service = Infrastructure Service

ROLE DEFINITIONS

Since the user community is still working out how ITIL v3 roles correspond to real titles and job descriptions, SPACL use cases use the following set of role definitions. Where possible, SPACL roles will align closely to ITIL roles.

Roles outside of IT	
Business Owner	<ul style="list-style-type: none">• Primary service recipient on behalf of each business unit who define business requirements, monitor services, raise service requests and own budgets• Subscribes to Service Offerings on behalf of business units and define entitlements for end user/consumer of services• Determines the terms and conditions of each subscription
Business Users	<ul style="list-style-type: none">• Participate in the acceptance testing of new service rollout during the transistor phase• Provides approval for service requests made by consumers
Business Customer	<ul style="list-style-type: none">• This is the organization that needs and consumes services provided for them by a Service Provider, and it is the organization for the Business Owner.
Service Catalogue Manager	<ul style="list-style-type: none">• Responsible for maintaining the Service catalogue,• Ensuring that all information within the Service catalogue is accurate and up-to-date.
Service Provider	<ul style="list-style-type: none">• An organization supplying services to one or more internal or external customers. Within the context of the Service Catalog, the Service Provider plays the role of the provider, but can also be a subscriber or consumer of services offered by other providers
End User/Consumer	<ul style="list-style-type: none">• Consumer of the “requestable service” published in the Service Catalog

Roles within IT	
Service Portfolio Manager	<ul style="list-style-type: none">• Decides on a strategy to serve customers in cooperation with the IT Steering Group• Develops the service provider's offerings and capabilities.
Service Catalogue Manager	<ul style="list-style-type: none">• Responsible for maintaining the Service catalogue,• Ensuring that all information within the Service catalogue is accurate and up-to-date.

Service Owner

- Responsible for delivering a particular service within the agreed service levels.
- Responsible for continual improvement and the management of change affecting the services under their care
- Works with CSI Manager to identify and prioritize service improvements
- Is the point of escalation (notification) for major Incidents
- Participates in negotiating SLA and OLAs