VISP – Virtual Internet Service Provider

What, Why, Business context, Technical solutions chosen

Nicolas Fonrose (Valtech)
What is VISP - Very Briefly

VISP is an IST FP6 Research and Development project whose objective is to develop a software platform enabling a cluster of SMEs to collaborate and operate as a single business entity, in multiple dynamic business models, for the automated production of tailored ISP solutions adapted to local business needs.
Why - Where does it come from?

Local loop unbundling didn't really succeeded for small ISPs:
- Access infrastructure still closed to these ISPs for scalability reasons.
- Cost structure often directly proportional to the area size to be covered.
- Small ISPs don't have the customer density but have to cover all areas.
- Constrained by reselling wholesale services of incumbent operators.

Struggle to lower prices on typical added-value services:
- E.g. e-mail, hosting, DNS, firewall, backup, etc.
- Some are becoming expensive to provide: spam filtering, regulation, etc.
- These services are monolithic and easy to compete with.

Solution: try to differentiate by offering tailored services:
- SMEs are more flexible than large companies.
- SMEs are stronger at local business
Why service tailoring in particular?

The famous Michael Porter's curve

Market Share

Profitability

Niche markets, exceptional services, premium price

Commodity services (mass market), lower prices, use efficiency of scale

Small players

Big players

VISP: niche market of tailored services

Two ways to reach profitability according to Porter:

- Commoditize the services and go as quickly to the right as possible.
- To play in a niche market: almost infinite number of small players.
What means service tailoring?

Classical monolithic services are decomposed to be recomposed:

- E.g. Firewall service = {Filtering service, Intrusion detection service, Proxy service, Anti malicious software service, Spam filtering service, Network address translation service, Virtual private network service}.

Each atomic service is an object with a list of characteristics. Important to identify key distinctive characteristics representing:

- A "value" for the customer (monetary, technical, strategical, etc).
- A "cost" for the provider (because it influences the sales price).

Postulate: customers prefer offers giving details and justifying the price.

But too many services to be done alone: cluster of partners!
What is a VISP Cluster?

- Partners are independent organisations (SMEs) with their own business objectives and strategies.
- Business and technical workflows are required inside of the cluster with a common unique portfolio of services.
- Every partner can sell services offered by all others and each new partner makes the Virtual ISP more attractive, stronger and resilient.

- Ally: entity whose products and/or services help to enhance the demand of the cluster.
- Supplier: entity from which the cluster or any other entity obtains goods, services or information.
How is VISP built?

As a cluster of inter-connected systems

- Each independently running at each partner location

Executing processes which

- Span the OSS and the BSS of partners
  - Integration between the two
- Can cross the boundaries of each partner
  - Automated business trading between partners
  - Automated activation and provisioning of complex, multi-partners ISP services
Business and Technical processes

Automating as much as possible

- Translation of BPMN diagrams into executable BPEL
High level technical architecture
Main technical choices - SOA

BPMN and BPEL
  • process modeling and execution

WebServices
  • « KISS » inside – *vanilla* SOAP over HTTP
    ▪ With WS-Addressing
  • « Business ready » outside
    ▪ WS-ReliableMessaging
    ▪ WS-Security
    ▪ WS-Notification

Services
  • Data repositories
  • Mediation with Network elements and ERPs
Technical architecture

WS-* based inter-partner communication
(WS-Notification, WS-Security, WS-ReliableMessaging)

Technical architecture diagram with components labeled.
Thank you!

Any questions?