

Definition and usage of SLSs in the AQUILA consortium



`draft-salsano-aquila-00.txt`

Martin Winter
Siemens AG

How to describe a Service

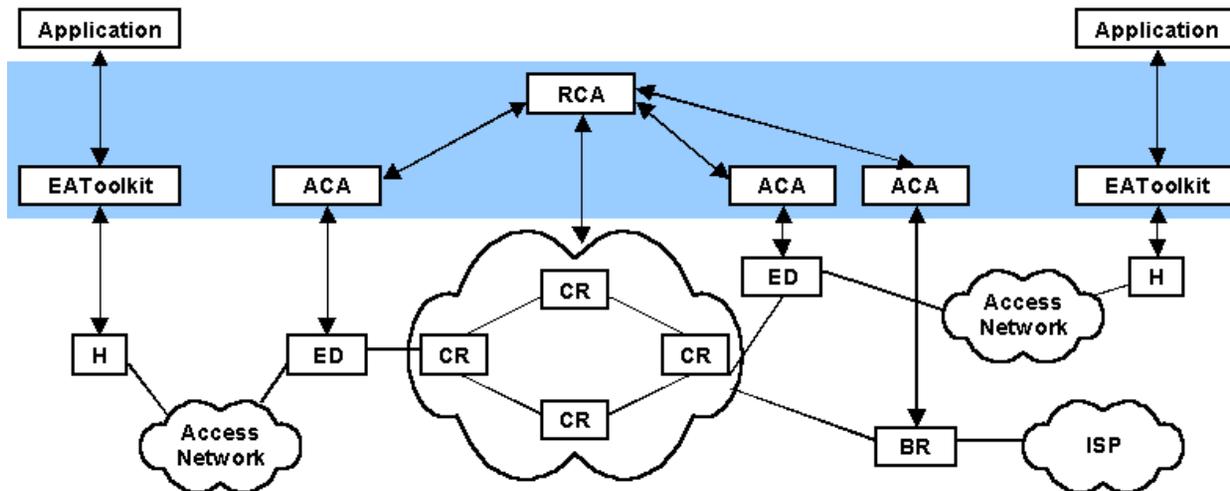
⌘ How to describe a product in a grocery store?

water	\	flour	\
vitamins	>	sugar	>
aroma	/	baking powder	/
		cake	

- ⌘ The product can hardly be described by its ingredients only.
- ⌘ Similar, a service can hardly be described - and successfully negotiated - by using its parameters only.

AQUILA - “Adaptive Resource Control for QoS using an IP based Layered Architecture”

- ⌘ Defines and implements a layered architecture for the support of QoS in IP networks.

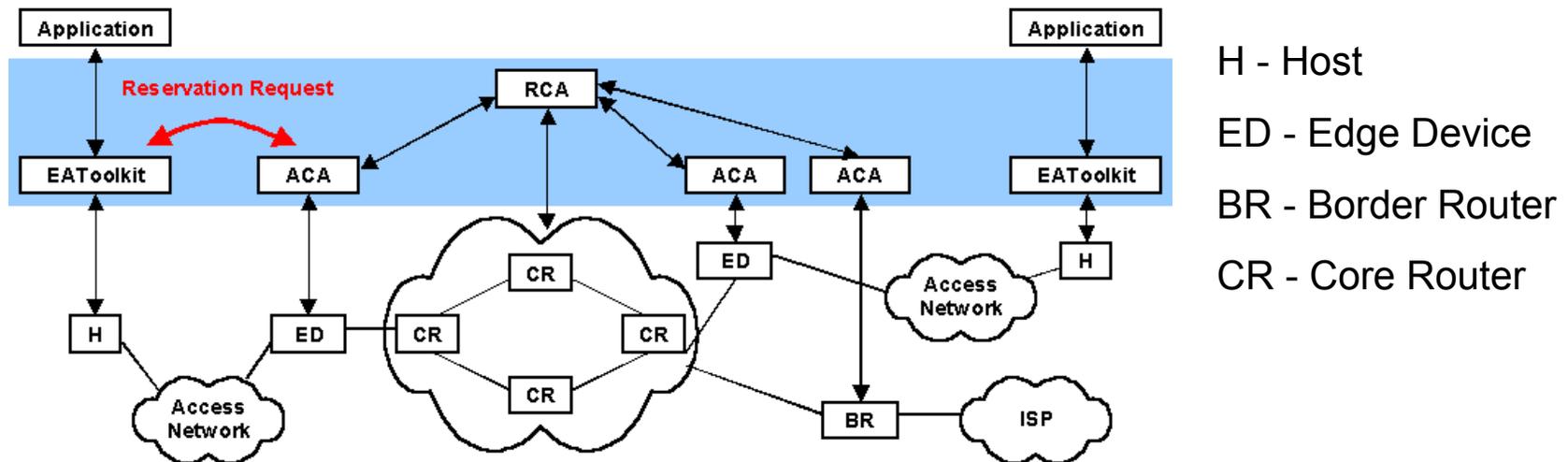


H - Host
ED - Edge Device
BR - Border Router
CR - Core Router

- ⌘ The resource control layer acts as a distributed bandwidth broker.

AQUILA approach to SLS

- ⌘ In the AQUILA architecture a “Reservation Request” is sent by the “End user Application Toolkit” (EAT) to the Admission Control Agent (ACA).



- ⌘ A reservation request contains a “predefined SLS type”

“Predefined SLS types”



- ⌘ AQUILA “predefined SLS types” are defined in terms of fixed values (or ranges of values) for some of the parameters (e.g. traffic descriptors, QoS requirements) and of restrictions on the allowed combination of parameters.
- ⌘ A “predefined SLS type” simplifies the SLS invocation.
- ⌘ It provides an easy way for SLS negotiation.
- ⌘ The “predefined SLS types” are not meant to be standardized.

Network Services



- ⌘ How will the network offer services to the customer?
- ⌘ There has been lot of discussion in the SLS mailing list on the issue of “Globally Well Known Services” vs. “Custom services”.
- ⌘ “Well Known Services” are very simple to handle, but restrict the definition of new services.
- ⌘ “Custom” network services allow freedom in specifying the QoS parameters, but may be very difficult to handle

“Predefined SLS types”



- ⌘ This approach simplifies the SLS negotiation procedures and the SLS mapping into network internal mechanisms, yet it is more flexible than having “globally well known” services.
- ⌘ The AQUILA framework is flexible enough to support the full range from Custom Services to Well Known Services.
- ⌘ We strongly suggest, that predefined SLS types have their role in SLS negotiation.

AQUILA predefined SLS types

⌘ In sec. 4 of the draft the set of predefined SLS types supported in the AQUILA first trial is described. It is not intended to recommend the usage of this specific set of SLS types it is just an example.

- ⊞ Premium CBR

- ⊗ Virtual leased lines, circuit emulation services

- ⊞ Premium VBR

- ⊗ Variable bit rate real time applications, like VoIP

- ⊞ Premium Multimedia

- ⊗ For adaptive applications using TCP requiring quite large bw

- ⊞ Premium Mission Critical

- ⊗ Non greedy applications using TCP, like short transactions.

Implementation and trial



- ⌘ The architecture is already implemented. First trial is expected in Feb 2001.
- ⌘ To prove the architecture independent of a protocol, we used CORBA for communication.
- ⌘ We hope to provide feedback on the SLS discussion!

Thank you!