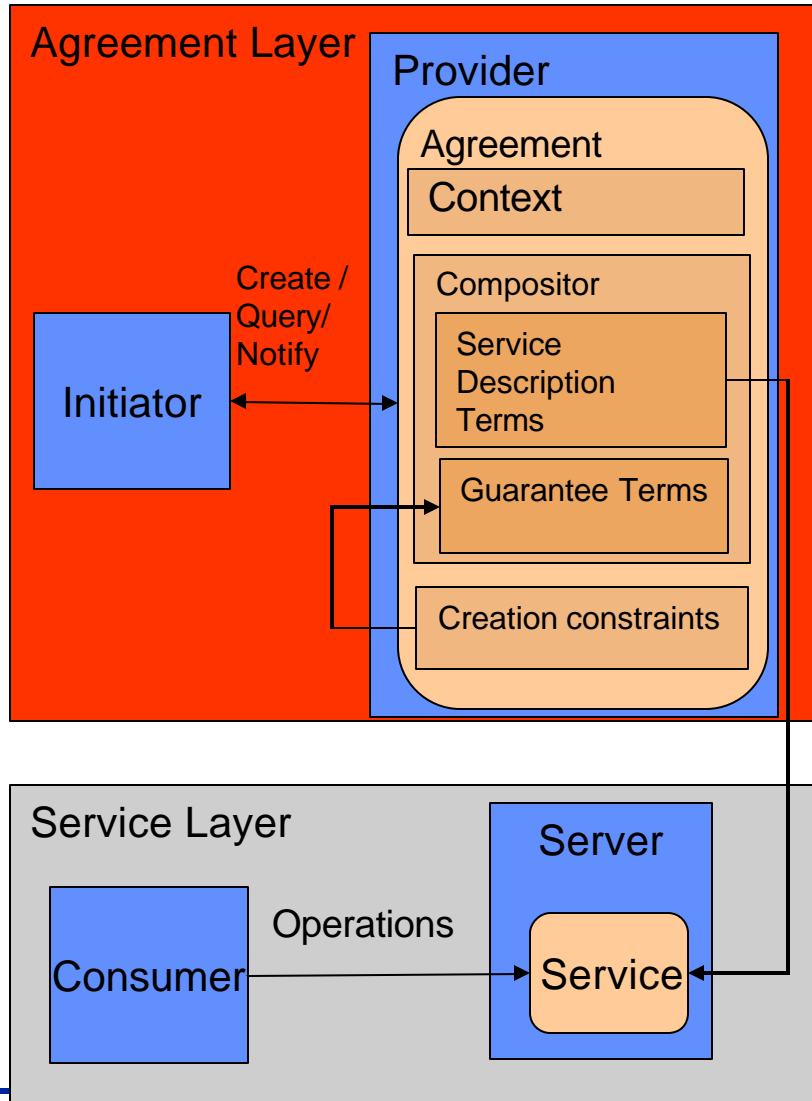


WS-Agreement Motivation

- **Today's service oriented architectures (l.e. Web/Grid services) provide no means of specifying requirements on service operations**
- **Need for a common method for describing the properties, and expected parameters for operation of services**
- **Methods for service providers to advertise the capabilities of their services**
- **Form a base for high-level scheduling and workflow services**
 - Co-Allocation typically requires Advance Reservation
 - Advance Reservation is an Agreement

WS-Agreement

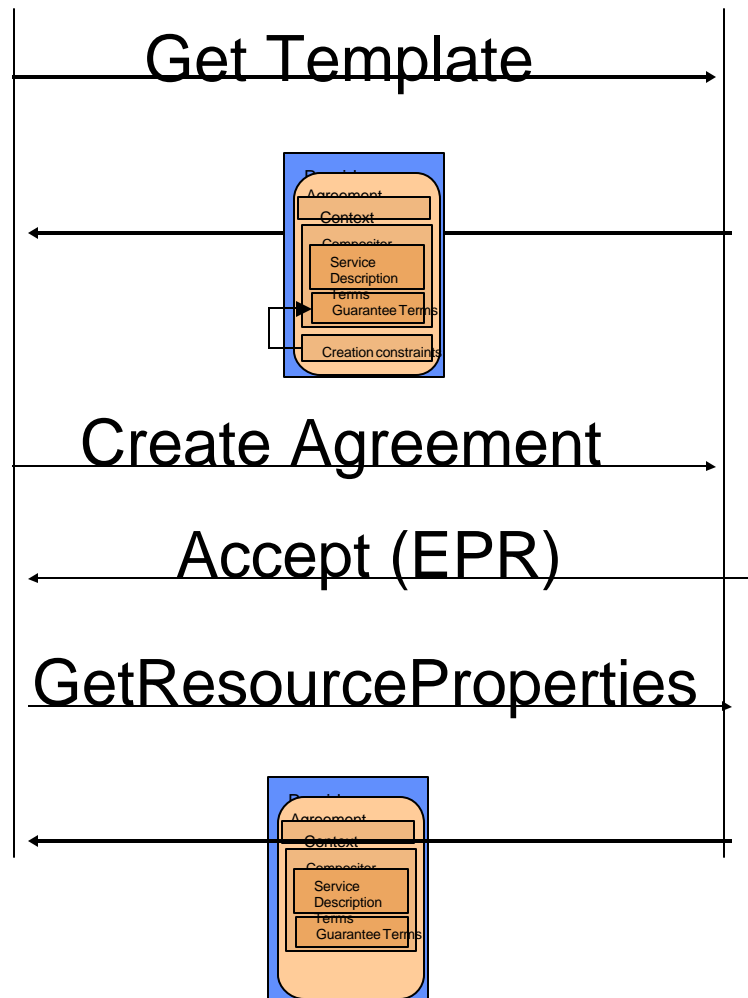


- **Agreements are XML documents defining policies (terms) governing interactions between service consumers and providers**
 - Terms can relate to the functional (descriptive) or non-functional (guarantee) properties of the interactions
 - Can be chained or nested to represent complex relationships
- **Agreements are services as a logical layer on top of the service layer, potentially involving new parties and over different time scales**
 - State can be in resource properties allowing notification of updates
- **Specification will be completed in Q3 '04 in the GRAAP-WG of GGF**
 - <http://forge.gridforum.org/projects/graap-wg>

Creating and Monitoring an Agreement

Initiator

Provider/Responder



Agreement Context

- **Defines invariant elements of an agreement**
 - Parties
 - Termination Time
 - Service Reference (simple)
 - TemplateName
 - Related Agreements
- **Parties**
 - AgreementInitiator
 - Identification or Endpoint Reference
 - AgreementProvider
 - Identification or Endpoint Reference
 - *AgreementInitiatorIsServiceConsumer*

Composition of Terms

- **Term Combination can be expressed using WS-Policy-style Compositors**
 - **ExactlyOne**
 - All
 - ServiceDefinitionTerm 1
 - ServiceDefinitionTerm 2
 - GuaranteeTerm A
 - OneOrMore
 - ServiceDefinitionTerm 3
 - GuaranteeTerm B

Reliances and Components

- **WS-Agreement makes use of:**
 - WS-RF / WS-ResourceProperties: to expose agreement documents and templates
 - WS-Notification: to signal updates of agreement state
 - WS-Lifetime: for setting lifetime of agreement
 - WS-BaseFaults: as a basis for the fault model
- **BUT:**
 - All are optional
 - Need not use templates or put agreement in property
 - Need not fill in lifetime field of agreement context
 - Support the agreement port-type which uses base faults