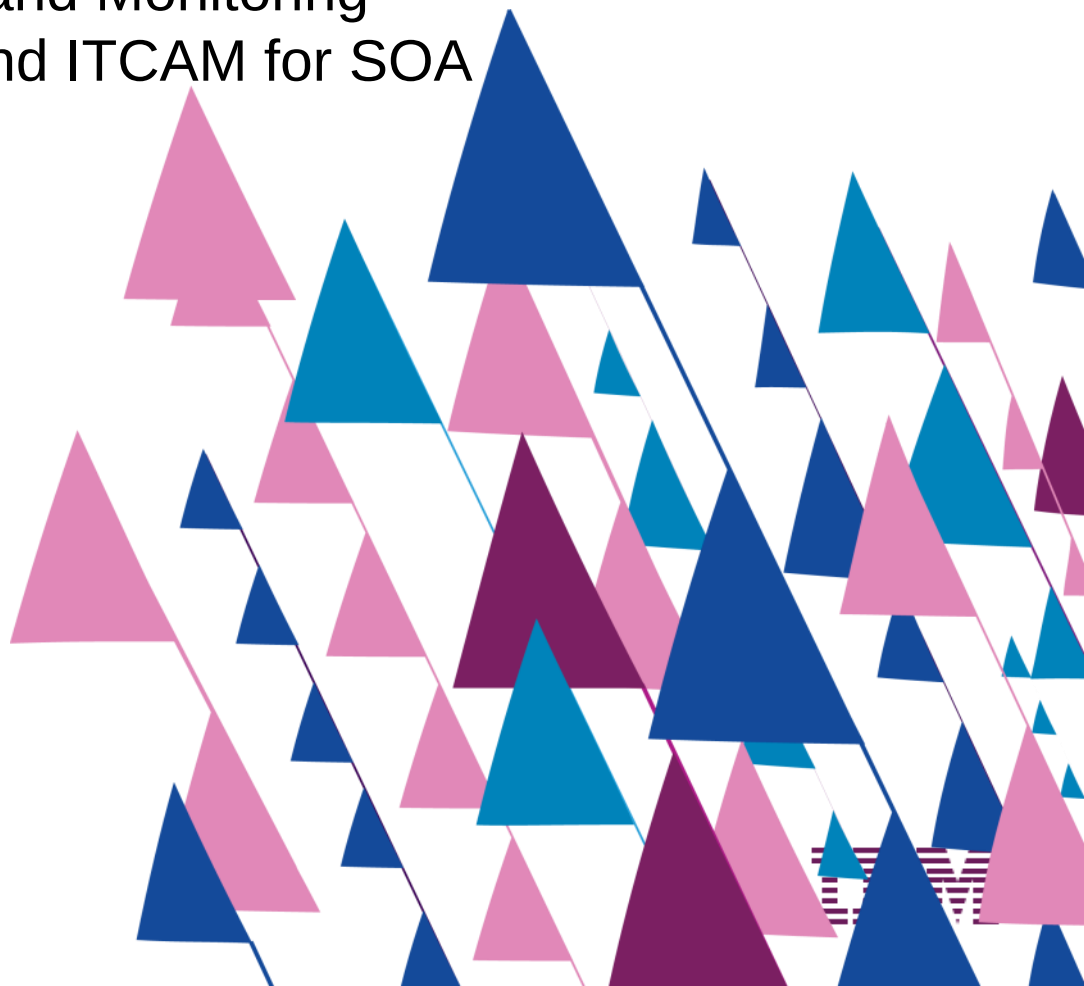
# Policy and SLA Management / Monitoring at the Edge

Governance, Enforcement, and Monitoring
using WSRR, DataPower, and ITCAM for SOA



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# Agenda

- Runtime SOA Governance @ Edge
  - Why is it needed?
- SLA Enforcement @ Edge
  - Configuration and Scenario
- SLA Monitoring @ Edge
  - Configuration and Scenario
- Governance Trends & Strategy
  - Trends and Futures

# Runtime SOA Governance @ Edge

Why is it needed?

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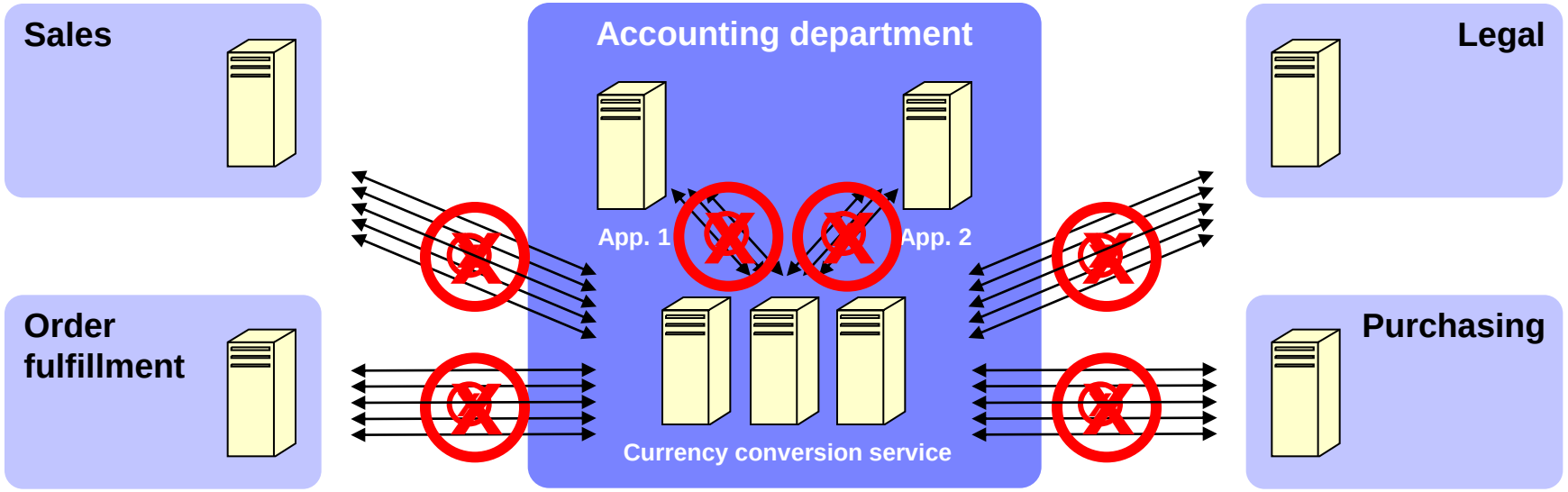
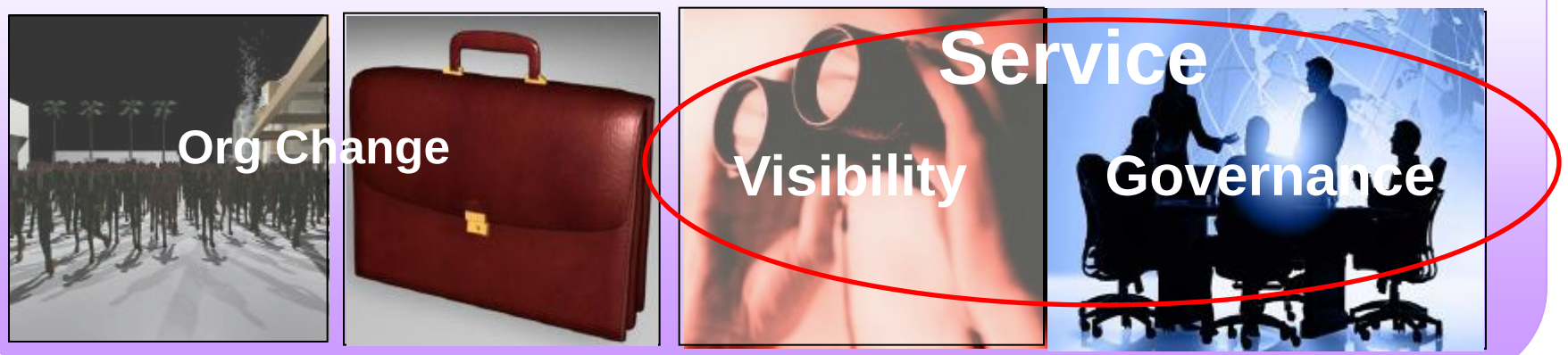
# Why is Governance is Important - A real life scenario




1. Provide a currency service that fills a specific line of business (LOB)
2. Other LOBs start using the service
3. LOBs increase use of services / quality suffers
4. Service is fixed at provider's expense
5. Fix works temporarily but problem reappears
6. Maintenance costs soar / provider ends service

# Service Visibility and Governance

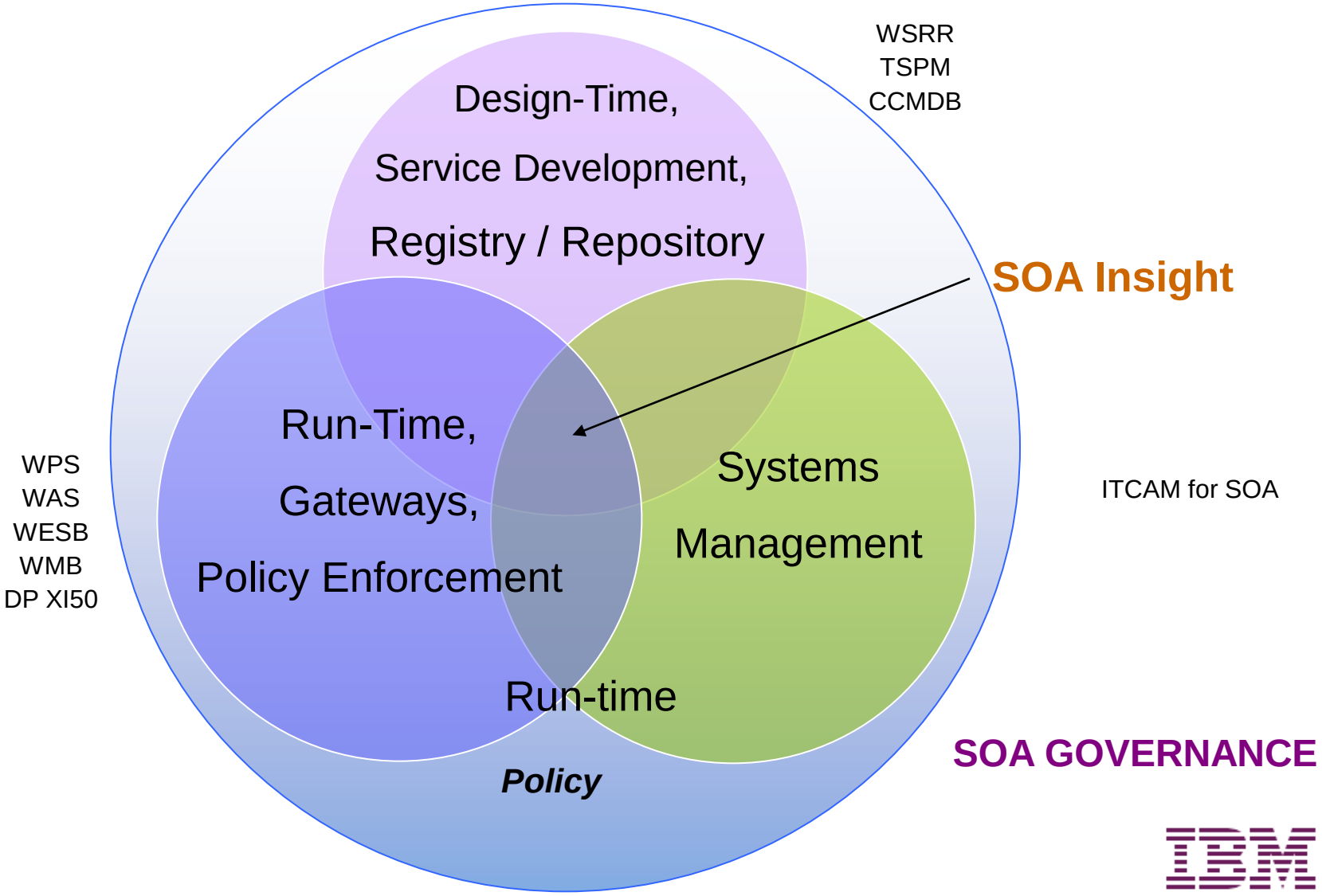
## SOA Governance and Service Lifecycle Management




Process Modeling Services
Portfolio Management
Organizational Change
Human Collaboration
Risk Management

Service Lifecycle Management
Registry & Repository Support
Policy Lifecycle Management
Service Level Agreements
Change Management

# Components of a Governed SOA Infrastructure



# The **Edge** of what?...

- … the trusted Network
  - The boundary between the trusted and untrusted network
  - Focus: network infrastructure, firewall, SLA enforcement

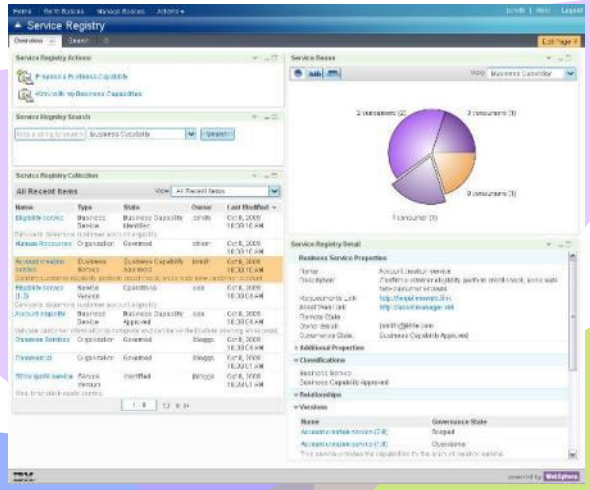
- … customer access (internal and external)
  - The boundary between users and the applications and services they use
  - Focus: intranet serving, caching, access points

- … the Data Center
  - Providing secure and reliable access to the service in the data center
  - Focus: Web serving, e-mail, intrusion detection

SLA enforcement is best applied at “The Network Edge” using an appliance like DataPower!

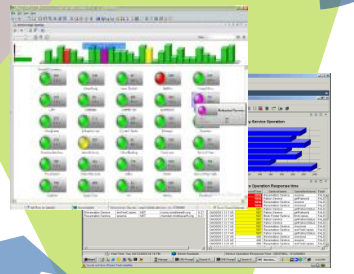
# IBM Policy and SLA Managements Solution

**WSRR**




## Visibility and Control

- Reduce costs and increase operational efficiency of enterprise boundaries
- Increase enterprise agility through rapid realization of policies and SLAs in response to business change



**DataPower**

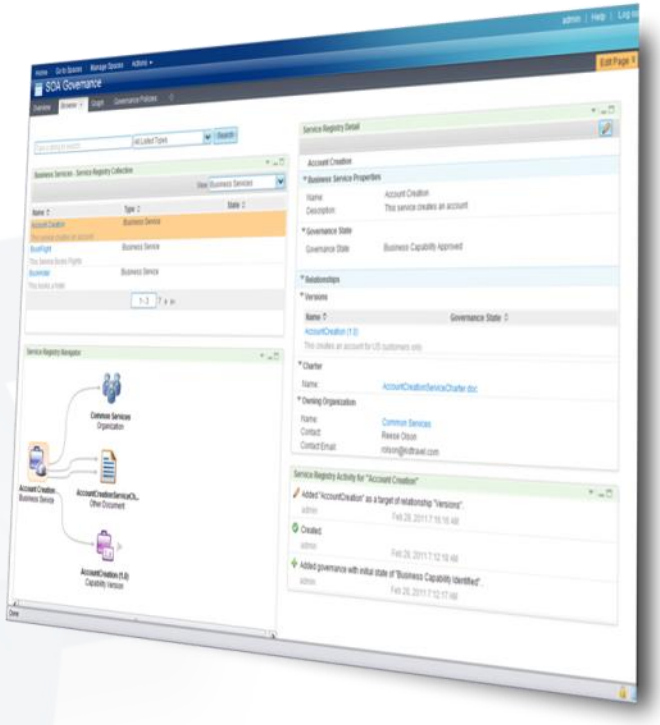
**ITCAM for SOA Platform**

- Centrally manage and govern service and associated policies exposed at service gateway
- Enable automatic deployment of operational policies and SLA to service gateways
- Be alerted and proactively react to situations and changes in your SOA

# WSRR is your Enterprise SOA Registry / Repository

*Highly Prescriptive Service Lifecycle Governance*

- Optimize resource costs by ***governing service consumption*** with service contract management
- Accelerate reuse with ***Automated Service Discovery*** across heterogeneous environment
- Reduce business risk with ***prescriptive service lifecycle*** governance including MQ Applications
- Tailor Service Governance implementation to ***fit your business needs*** with WSRR Studio
- ***Apply operational policies consistently*** to help achieve reliability and compliance




*Gain insight into SOA services and their consumption, policies and associated metadata in your enterprise*

# Secure and Fast SLA Policy Enforcement into your SOA

*WebSphere DataPower Appliance V4.0.2*

- **SECURE** your SOA, Web 2.0, B2B, and Cloud environments
- **SIMPLIFY** your connectivity infrastructure
- **ACCELERATE** your time to value
- **GOVERN** your evolving IT architecture


WebSphere DataPower Appliances provide a low startup cost, helping clients **increase ROI** and **reduce TCO** with specialized, consumable, dedicated appliances that combine **superior performance** and **hardened security**



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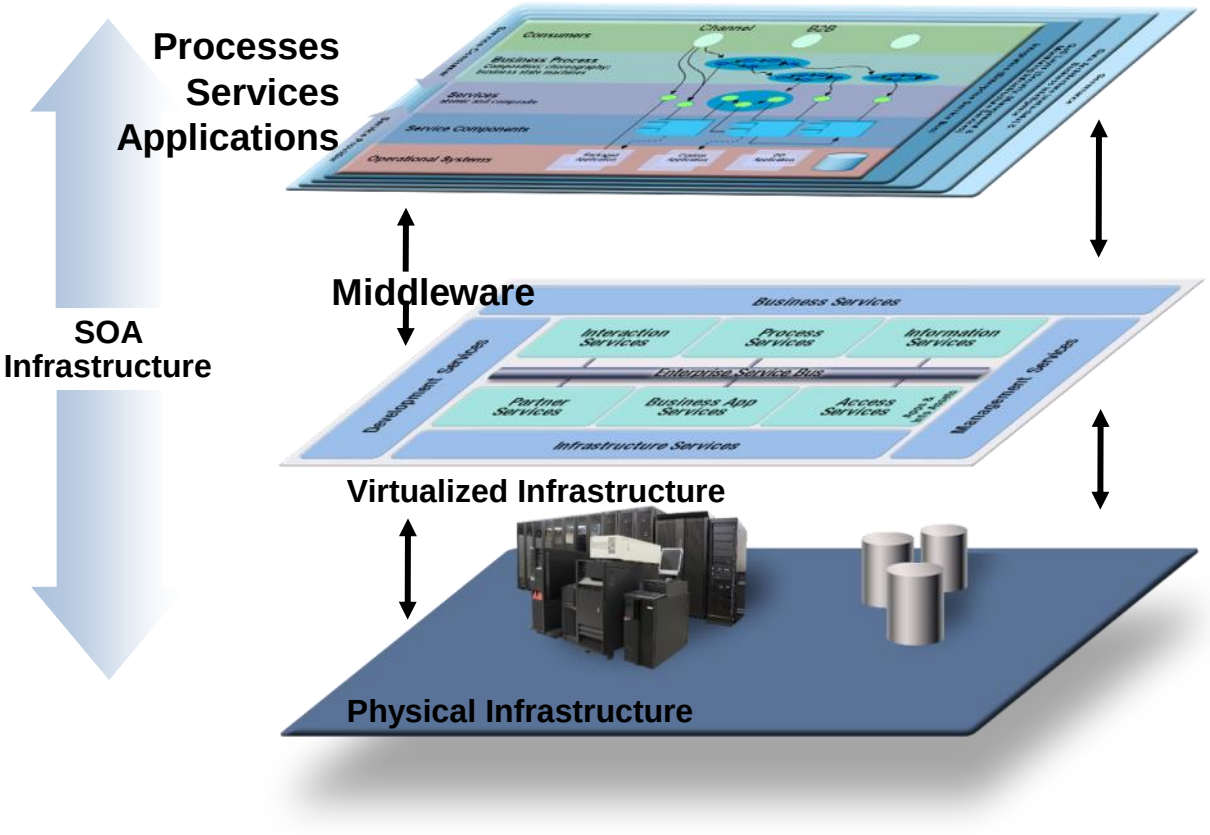
# ITCAM for SOA Platform

*Monitor and Manage Services and the end-to-end SOA Infrastructure*




- Monitor and manage ***services and service performance***
- Monitor and manage ***application servers***
- Monitor and manage ***messaging backbone***
  - WebSphere MQ
  - WebSphere Message Broker
- Monitor the ***health & availability of DataPower appliances***
- Monitor and manage ***virtual environments***
- Monitor and manage ***operating systems***

**Quickly *identify, isolate, and repair* service level problem areas**

# SLA Enforcement @ Edge

Configuration &
Scenarios

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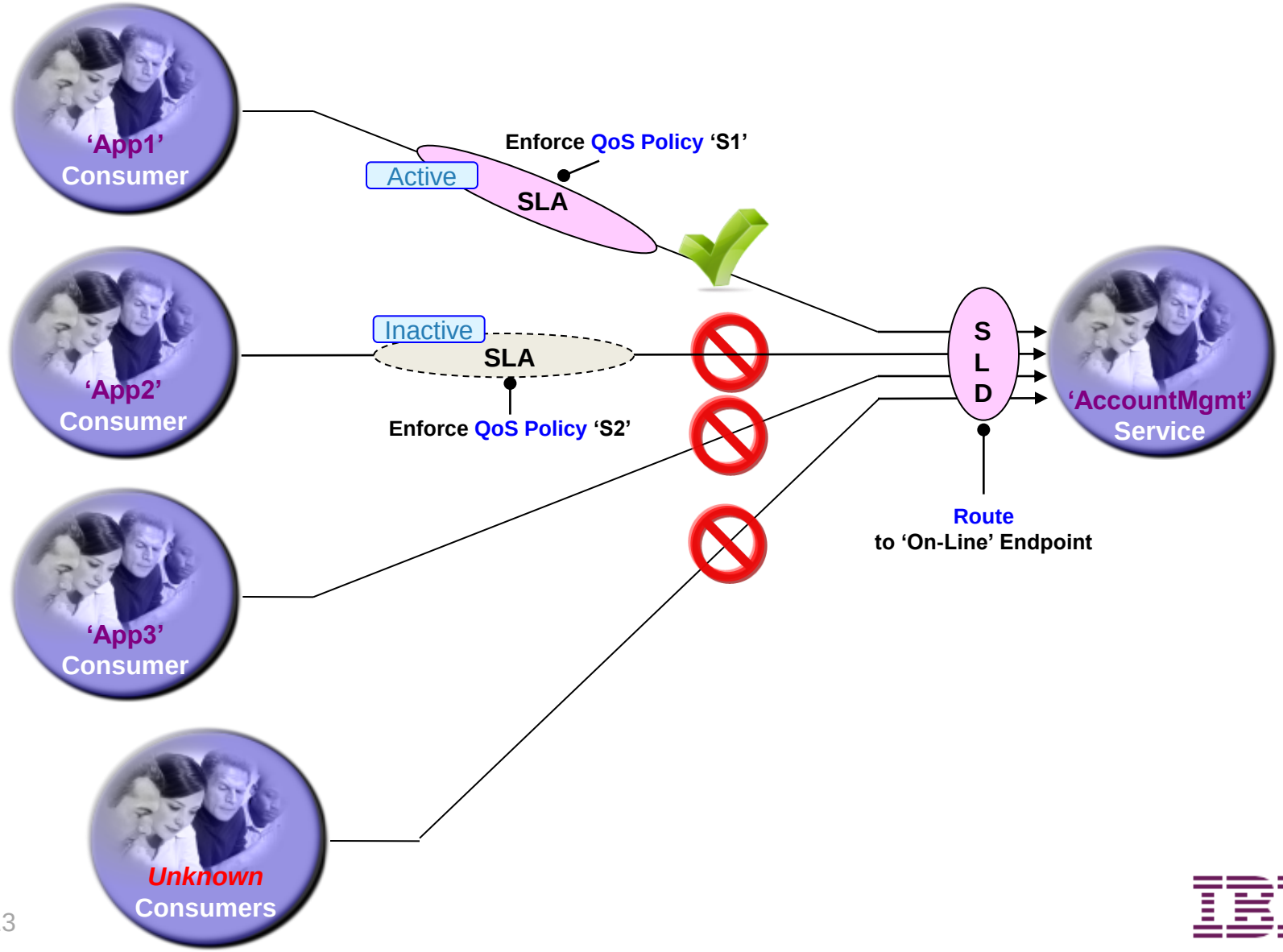
# Presentation Scope

- Assume that design time governance is already in place
  - services and their interfaces are specified in a consistent way
- We will talk about an architecture for runtime governance enforcement
- We will illustrate the solution using WebSphere DataPower and assume WSDL described services using SOAP/HTTP.
- The presentation assumes capability currently available in:
  - WebSphere Service Registry and Repository (WSRR) v7.5
  - WebSphere DataPower XI/XG/XB/XE v4.0.2 appliances

# SLA Enforcement - Common Usage Scenarios



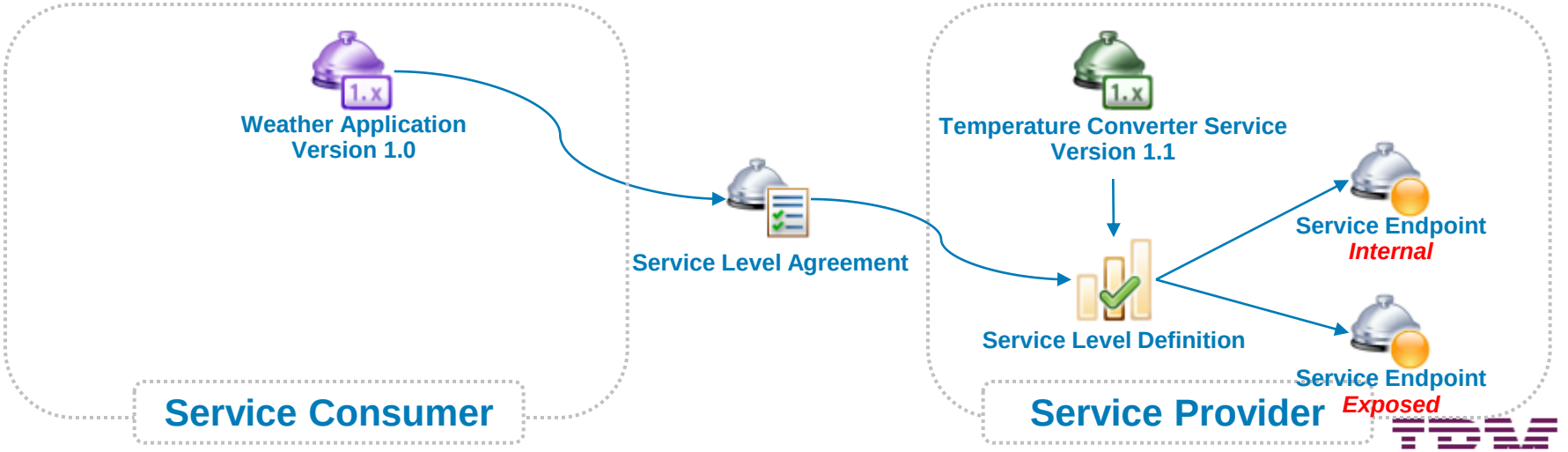
# Sample Scenario

- A **Weather application** makes use of a **Temperature Converter service**
  - Specifically, version 1.0 of the Weather application consumes version 1.1 of the Temperature Converter service
- The Temperature Converter service is called via a DataPower appliance to police access to the service

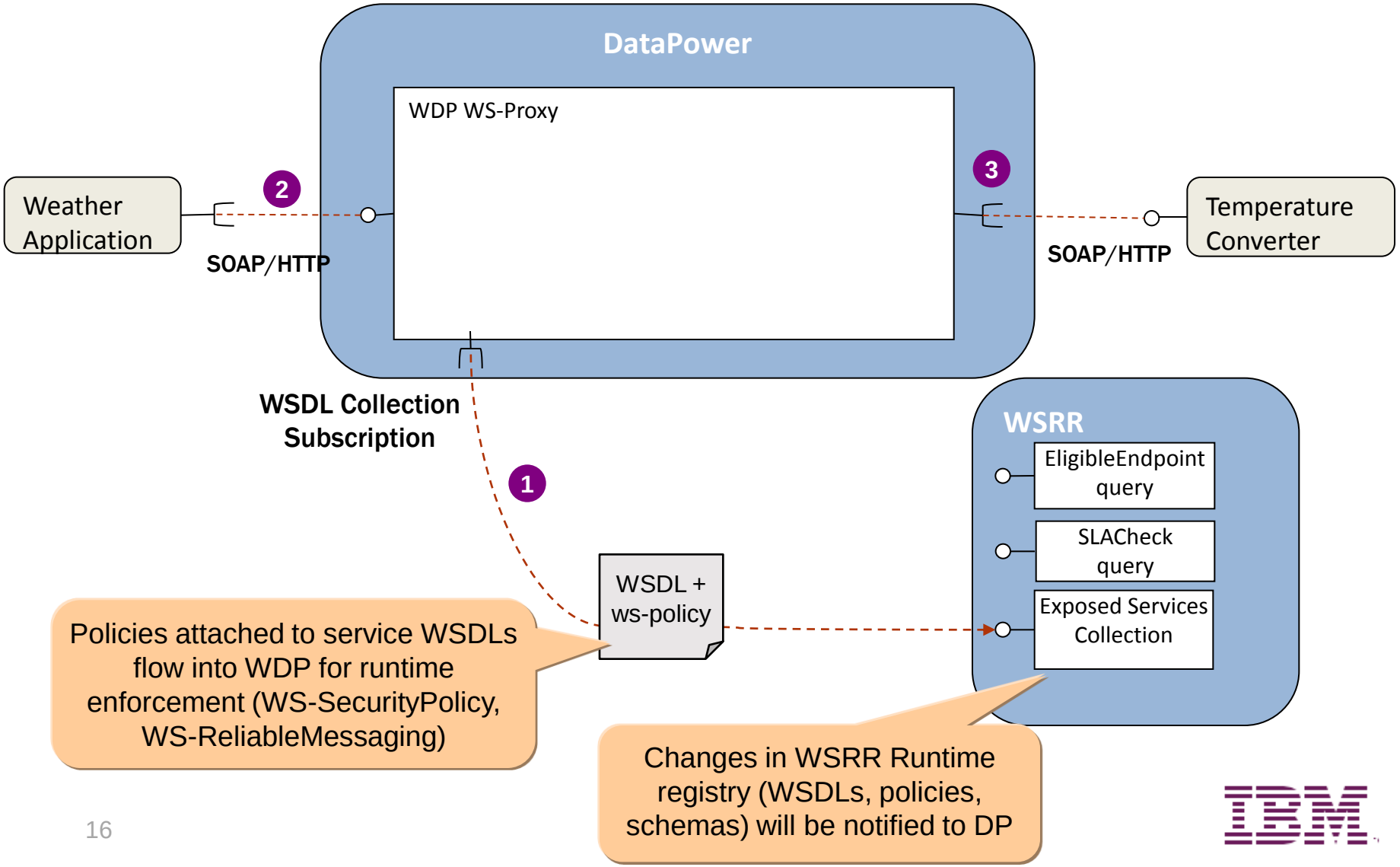
# Sample Scenario (cont)

- The detailed terms of the Service Level Agreement (SLA) between the app and service are defined using a pre-configured **SLM Policy** in DataPower
- The **Service Level Agreement** object in WSRR contains a property that identifies the specific SLM policy DataPower should use for this particular SLA.

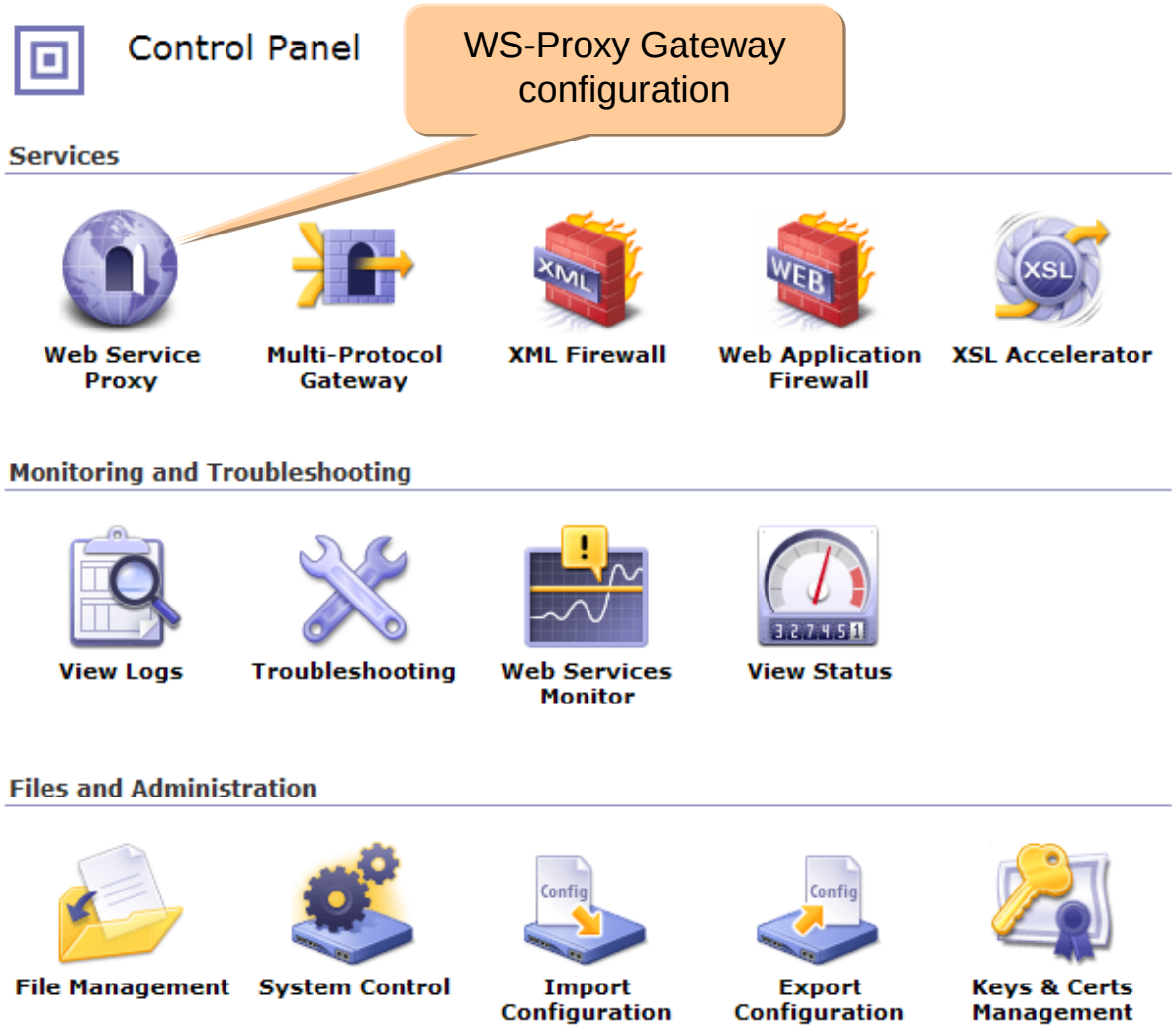

modelled in WSRR as …



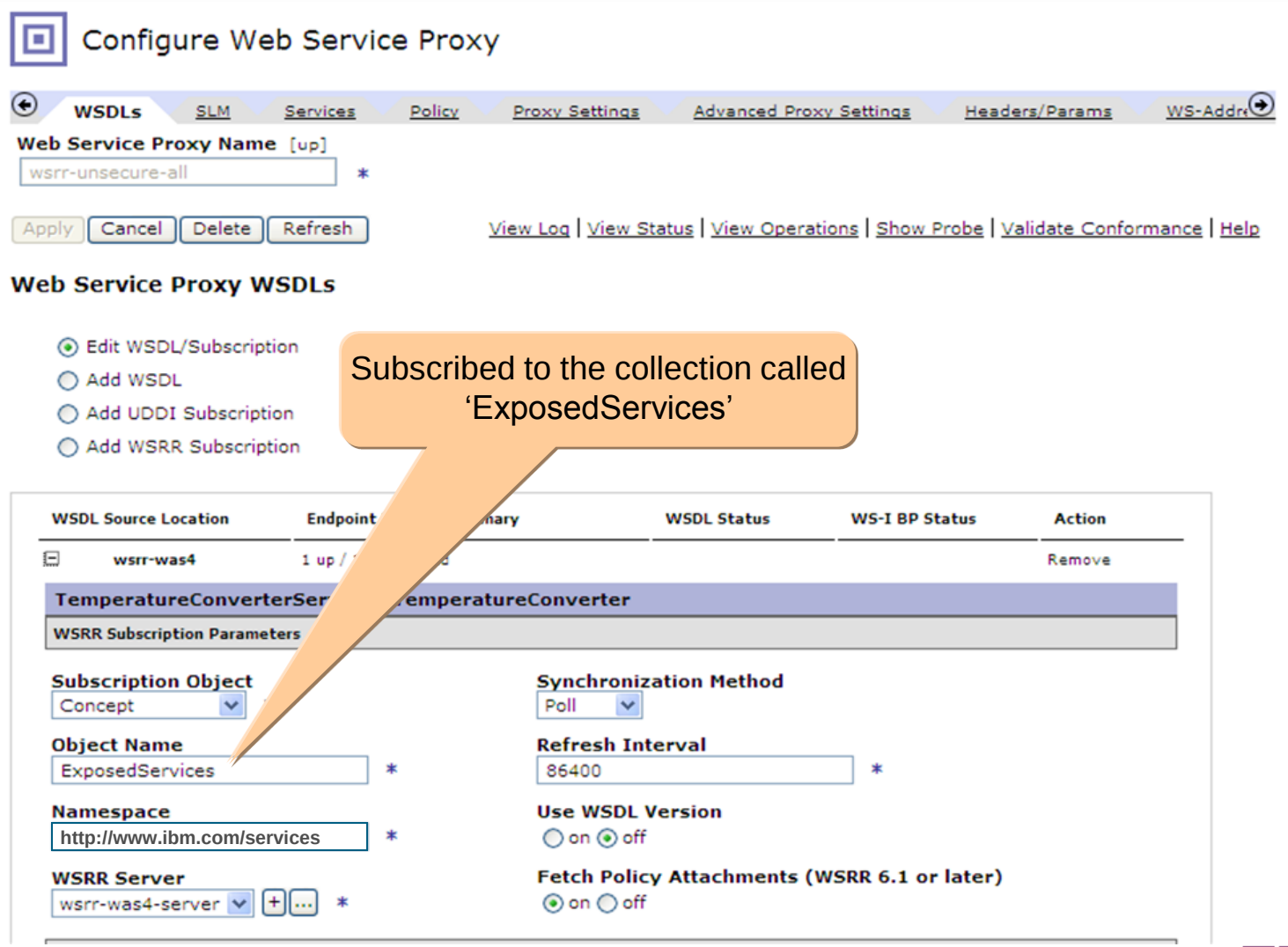
# Integration with the IBM WebSphere DataPower Appliance
## **Initial Configuration** using WSRR Subscriptions



# Set Up a WS-Proxy Instance
## Create new Web Services Gateway



# Set Up a WS-Proxy Instance
## Subscribe to a Service 'Collection' in WSRR



# Set Up SLM Policy Instances

## Create SLM policy enforcement ‘vocabulary set’

Configure SLM Policy

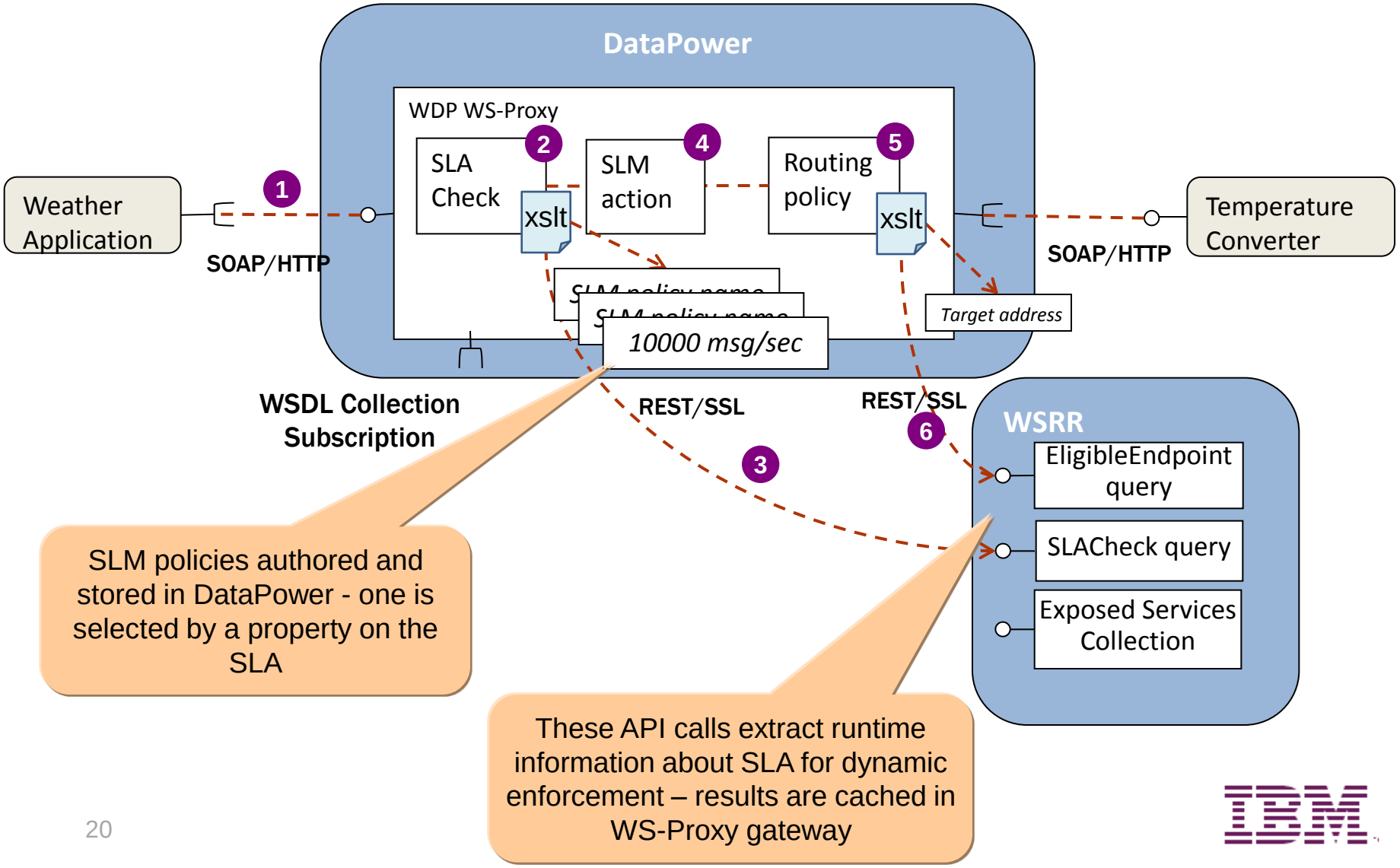
Refresh List

Pre-configured **SLM Policy** options which are part of the appliance configuration deployment

| Name | Status | Op-State | Logs | Administrative State | Comments |
|---|---|---|---|---|---|
| AcmeCoSLMPolicy_Max1000MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max100MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max10MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max250MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max5000MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max500MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max50MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max5MsgPerMin | new | up | | enabled | |
| AcmeCoSLMPolicy_Max750MsgPerMin | new | up | | enabled | |

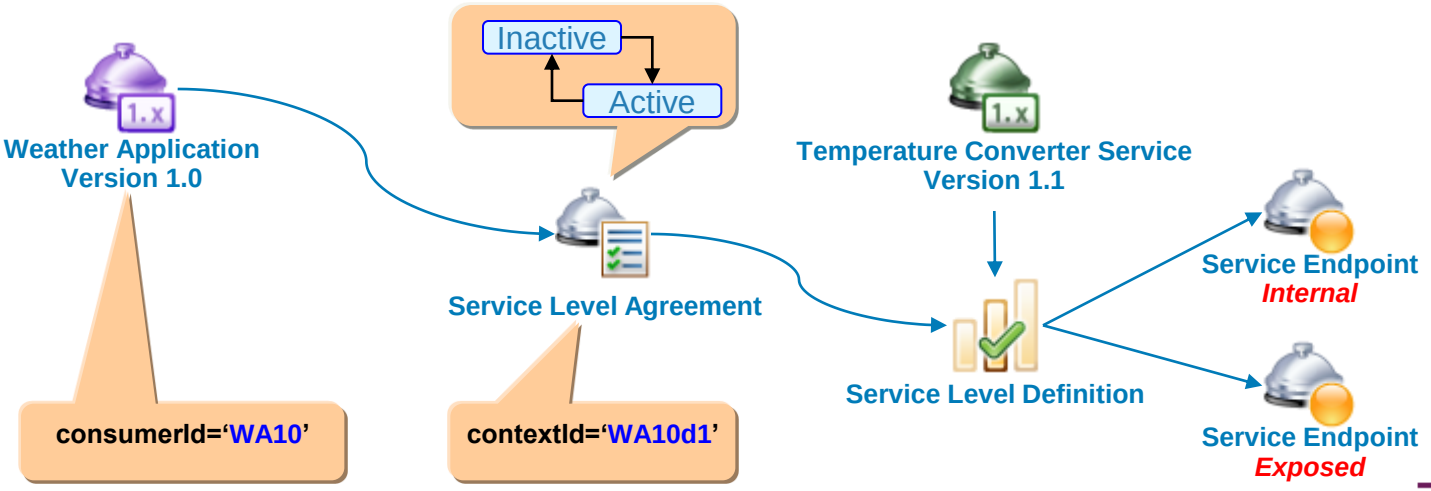
Add

# Integration with the IBM WebSphere DataPower Appliance
## **Initial Configuration** using WSRR Subscriptions



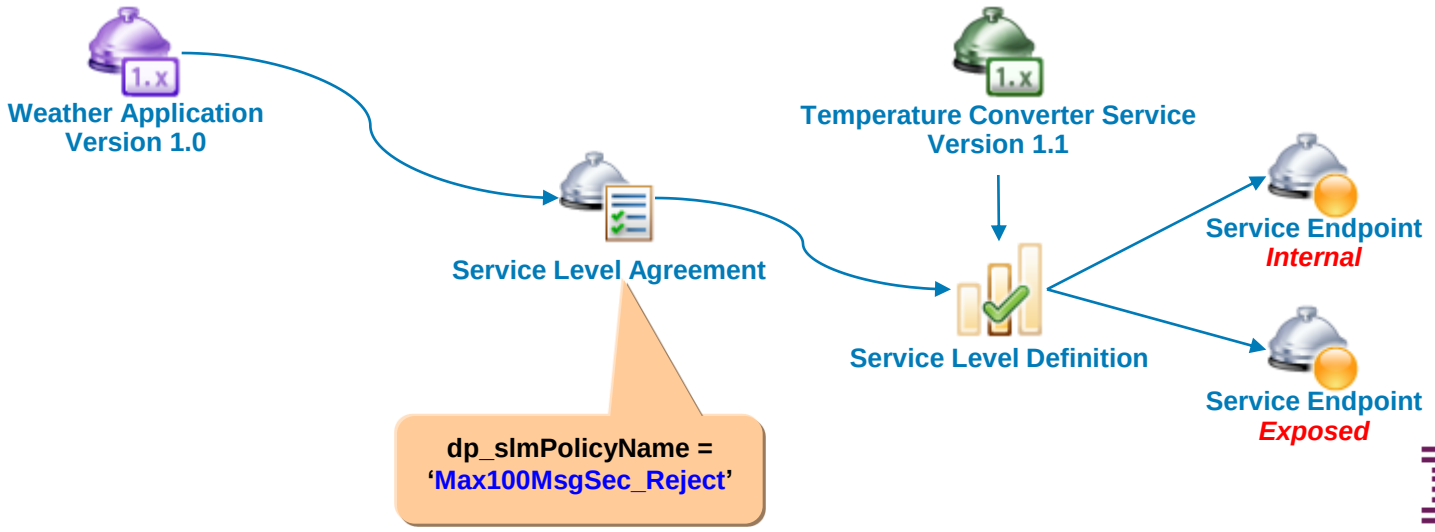
# Querying for Available SLAs in WSRR (SLA Check)

- The typical criteria used by enforcement point for finding suitable SLAs in WSRR must be:
  - '**SLAActive**', and
  - match the **consumerId** and **contextId** specified in message



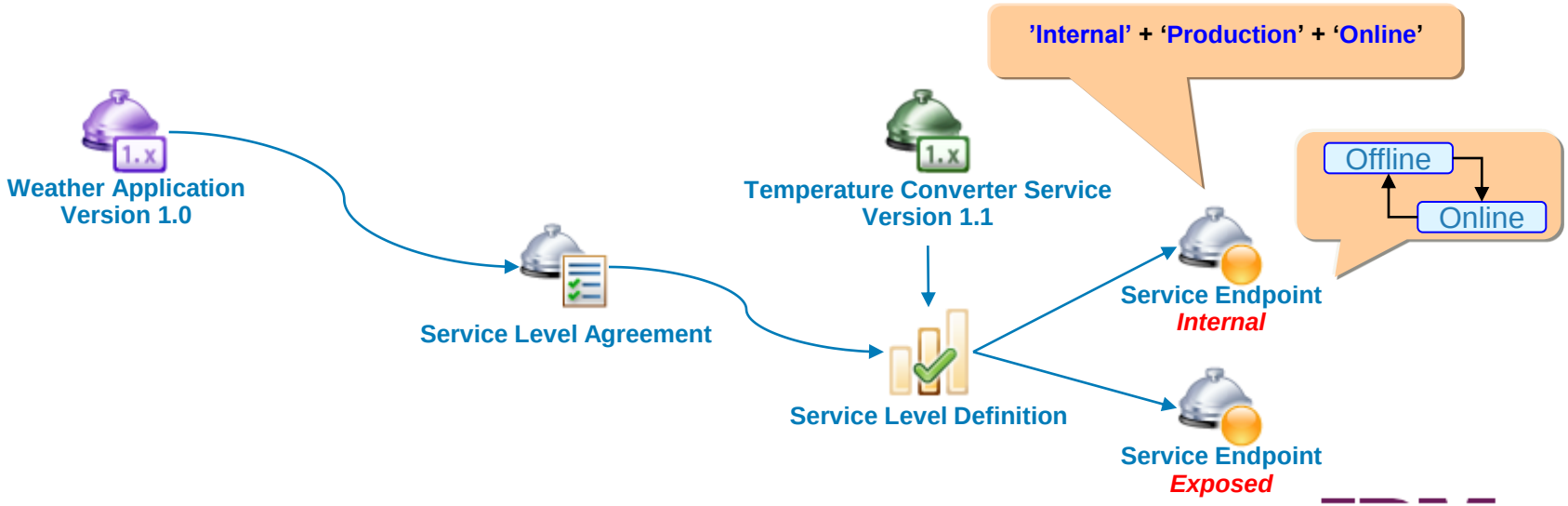
# Extracting SLM Policy names from SLAs (SLM Action)

- Retrieving optional SLM policy name to be enforced as part of matched SLA metadata:
  - '**dp_slmPolicyName**' property (which must be added using WSRR Studio)
  - Contains name of DataPower SLM Policy to be enforced
  - Optional – if not specified, then no traffic restrictions are enforced



# Querying for Available Endpoints in WSRR (Routing Policy)

- The typical criteria used by infrastructure for finding suitable endpoints in WSRR are:
  - Must be:
    - '**Online**', and
    - Classified as '**Internal**' – the private endpoint that the gateway routes to, and
    - Classified for the appropriate runtime area – e.g. '**Production**'



# Conveying Request Context

- In SOAP Message, can use a WS-Addressing header (as in this example) or some custom header:

```
<soapenv:Envelope xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance
   xmlns:xsd=http://www.w3.org/2001/XMLSchema
   xmlns:soapenc="http://schemas.xmlsoap.org/soap/encoding/"
   xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
   <soapenv:Header>
      <wsa:EndpointReference
         xmlns:wsa=http://www.w3.org/2005/08/addressing
         xmlns:gep63=http://www.ibm.com/xmlns/prod/serviceregistry/profile/v6r3/GovernanceEnablementModel">
         <wsa:Address>http://edgedp.ibm.com:9553/TemperatureConverter/services/TemperatureConverter</wsa:Address>
         <wsa:ReferenceParameters>
            <gep63:consumerIdentifier>WA10</gep63:consumerIdentifier>
            <gep63:contextIdentifier>WA10d1</gep63:contextIdentifier>
         </wsa:ReferenceParameters>
      </wsa:EndpointReference>
   </soapenv:Header>
   <soapenv:Body>
      <p728:kelvinToCelcius xmlns:p728="http://ejbs">
         <kelvin>273.0</kelvin>
      </p728:kelvinToCelcius>
   </soapenv:Body>
</soapenv:Envelope>
```

Consumer and Context IDs as Reference Parameters

- This information provides any downstream agent with context for the request.



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# Using Named Queries in WSRR

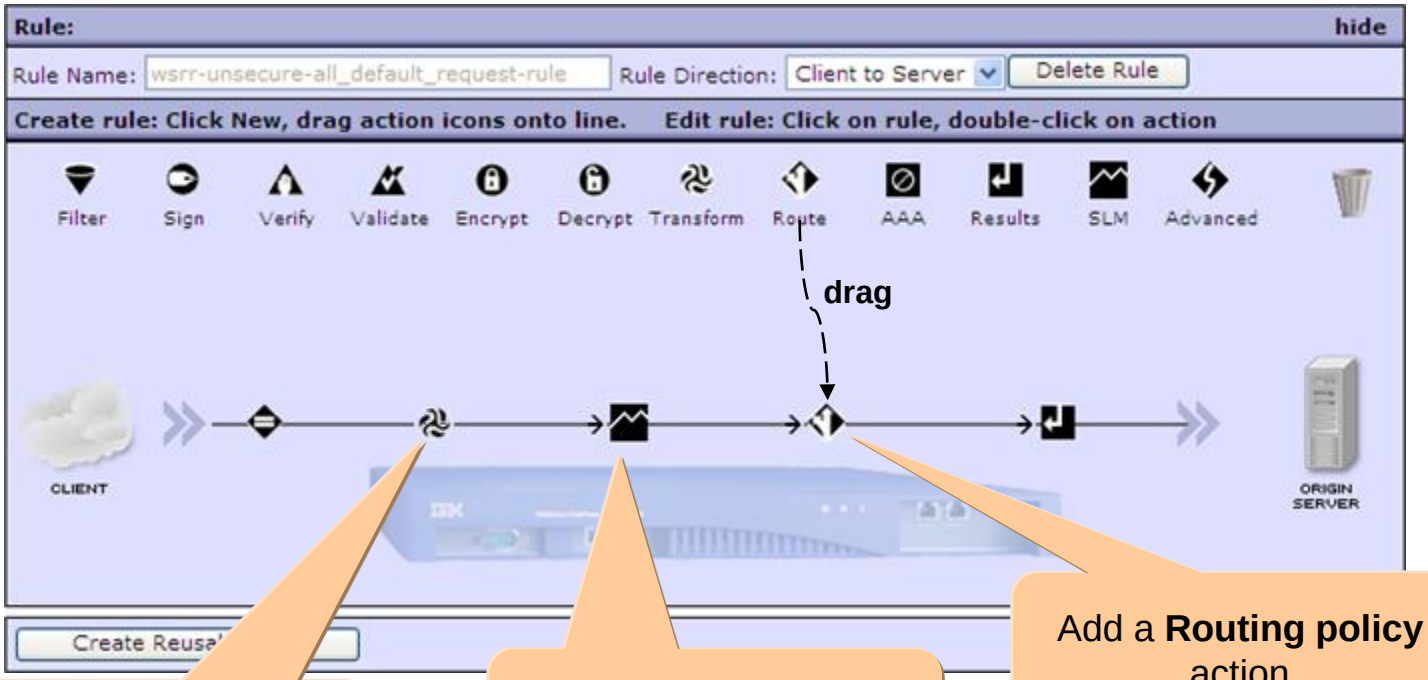
- 'Named Query' feature allows pre-canned queries to be included as a part of the configuration
  - Somewhat akin to stored procedures
  - ***Very*** useful for runtime integration, to reduce coupling to WSRR information structure
  - Defined using WSRR Studio

- E.g. SLACheck and EligibleEndpoints queries in this example
  - Returns SLA object metadata if matched against a given consumer, context ID, and endpoint
  - Returns the online endpoints that are classified in a particular way (e.g. "Exposed") for which a consumer has an active SLA, with a given context ID, i.e. the valid endpoints for this request

- Named queries are invoked in WSRR via a REST API (HTTP GET)
  - E.g.

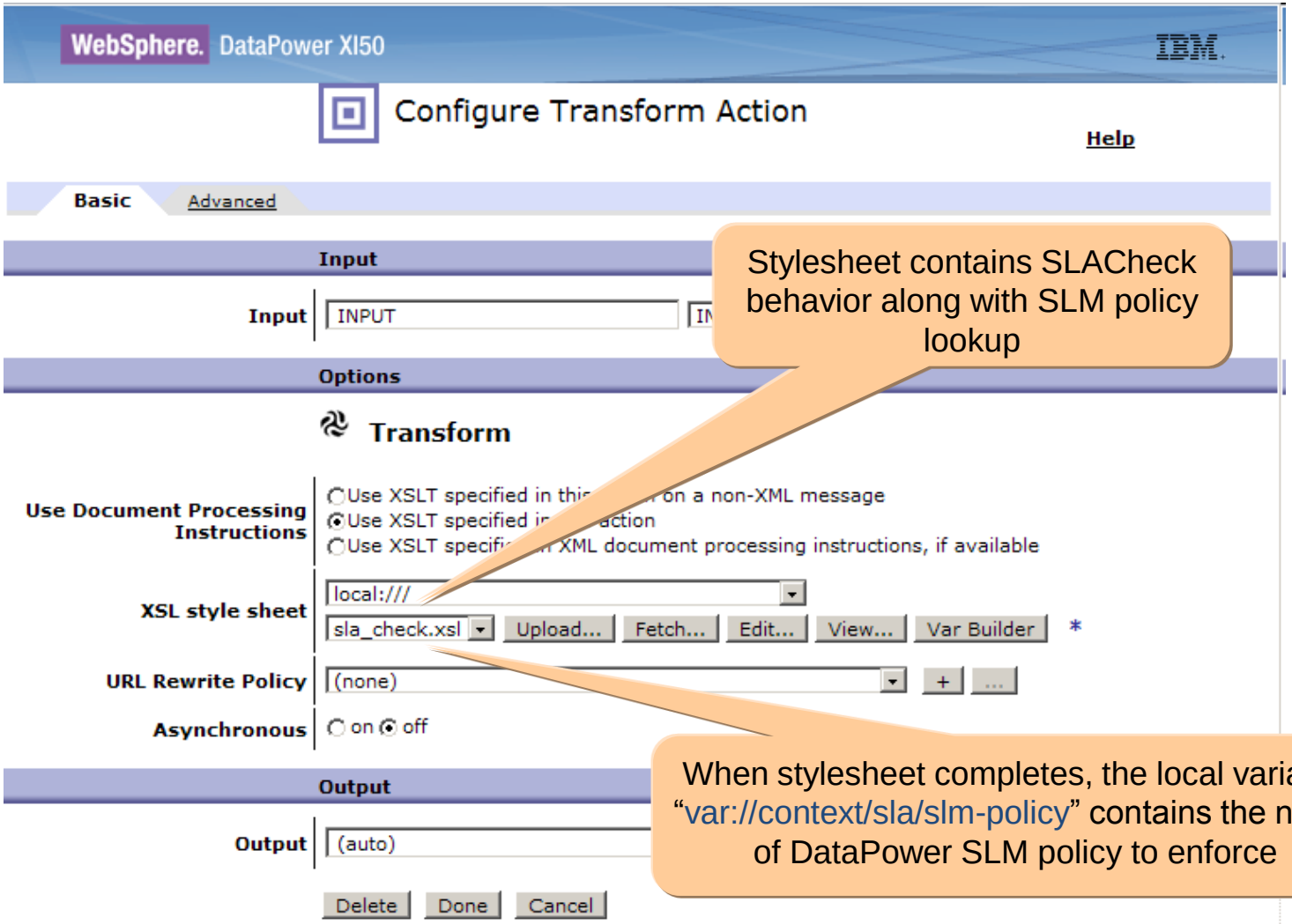
```
https://hostname:9443/WSRR/7.0/Metadata/XML/Query/SLACheck?p1=WA10&p2=WA10d1&p3=http://edgedp.ibm.com:9553/TemperatureConverter/services/TemperatureConverter

http(s)://<host:port>/WSRR/6.3/Metadata/XML/Query/EligibleEndpoints?p1=WA10&p2=WA10d1&p3=http://www.ibm.com/governance/it%23Exposed
```

# Add to Processing Policy for Late Binding to WS-Proxy



# SLA Check

## Provide a Stylesheet that can Invoke a WSRR query



# An example of an ‘SLA Check’ Stylesheet

Transform

```
<xsl:template match="/">
   <xsl:variable name="SLACheckQuery"
      select="concat(
          $dpquery:wsrr-hosturl,
          '/SLACheck',
          '?p1=', /soap:Envelope/soap:Header/wsa:EndpointReference/wsa:ReferenceParameters/gep63:consumerIdentifier,
          '&amp;p2=', /soap:Envelope/soap:Header/wsa:EndpointReference/wsa:ReferenceParameters/gep63:contextIdentifier,
          '&amp;p3='var://service/URL-in''
       )" />
      <xsl:variable name="queryResult">
      <dp:url-open target="{$endpointQuery}" response="responsecode" />
   </xsl:variable>
   <xsl:variable name="responsecode" select="$queryResult/url-open/responsecode" />
   <xsl:choose>
      <xsl:when test="$responsecode = '200'">
      <!--
         check that SLA was found, if so, make sure it is 'Active' and then extract
         DP SLM policy name from the response from WSRR
      -->
      <xsl:variable name="dpSLMPolicyName"
         select="$queryResult/url-open/response//resources/resource/properties/property[@name='dp_slmPolicyName']/@value" />
      <dp:set-variable name="'var://context/sla/slm-policy'" value="$dpSLMPolicyName" />
      </xsl:when>
      <xsl:otherwise>
         <dp:send-error override="true">
            <env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
               <env:Body>
                  <env:Fault>
                     <faultcode><xsl:value-of select="$responsecode" /></faultcode>
                     <faultstring>No available or active SLA found.</faultstring>
                  </env:Fault>
               </env:Body>
            </env:Envelope>
         </dp:send-error>
      </xsl:otherwise>
   </xsl:choose>
</xsl:template>
```

Extract the context values from the inbound request and query WSRR, use gateway local endpoint value.

Note that this is not an entire stylesheet. The namespace declarations etc. have been omitted for clarity.



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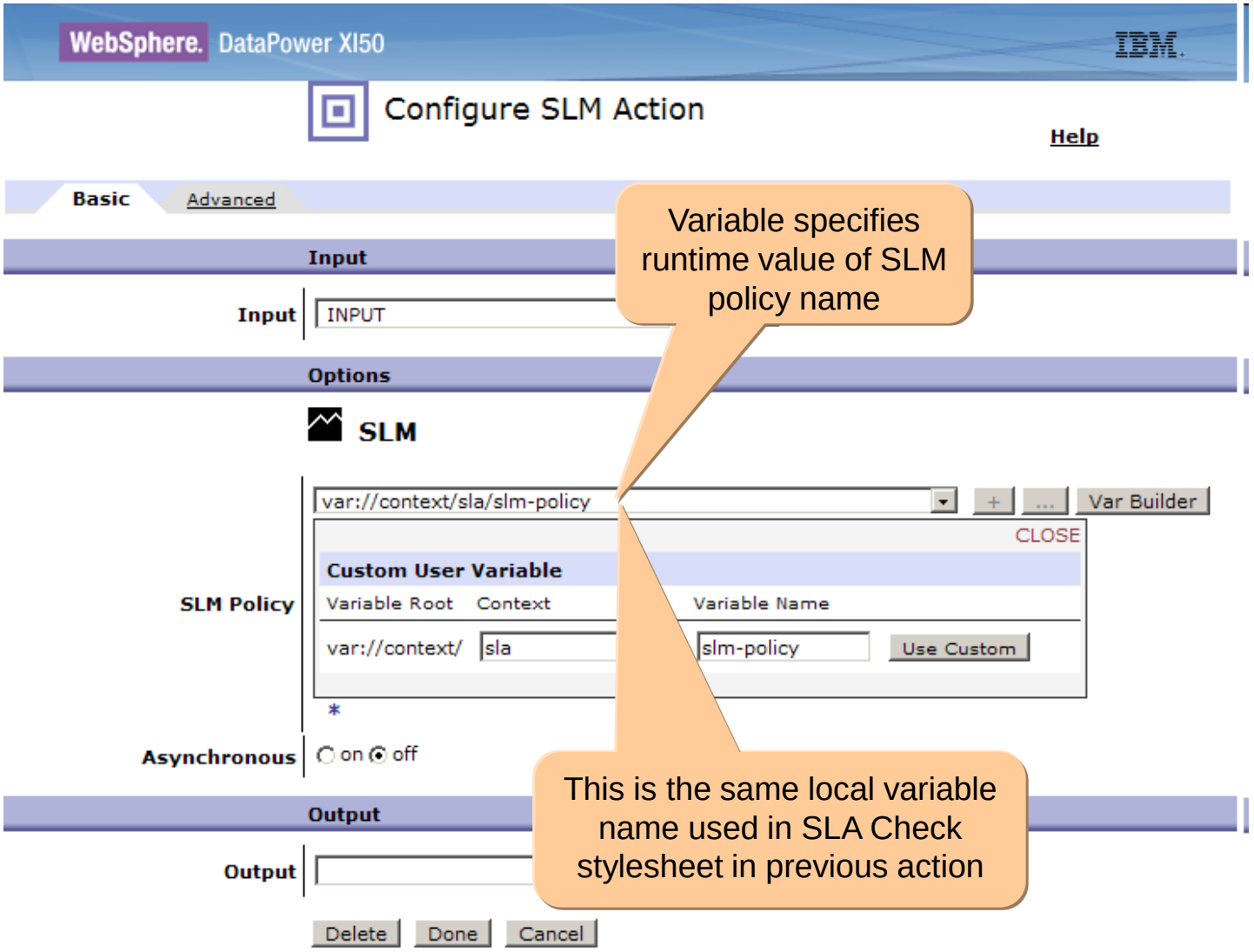
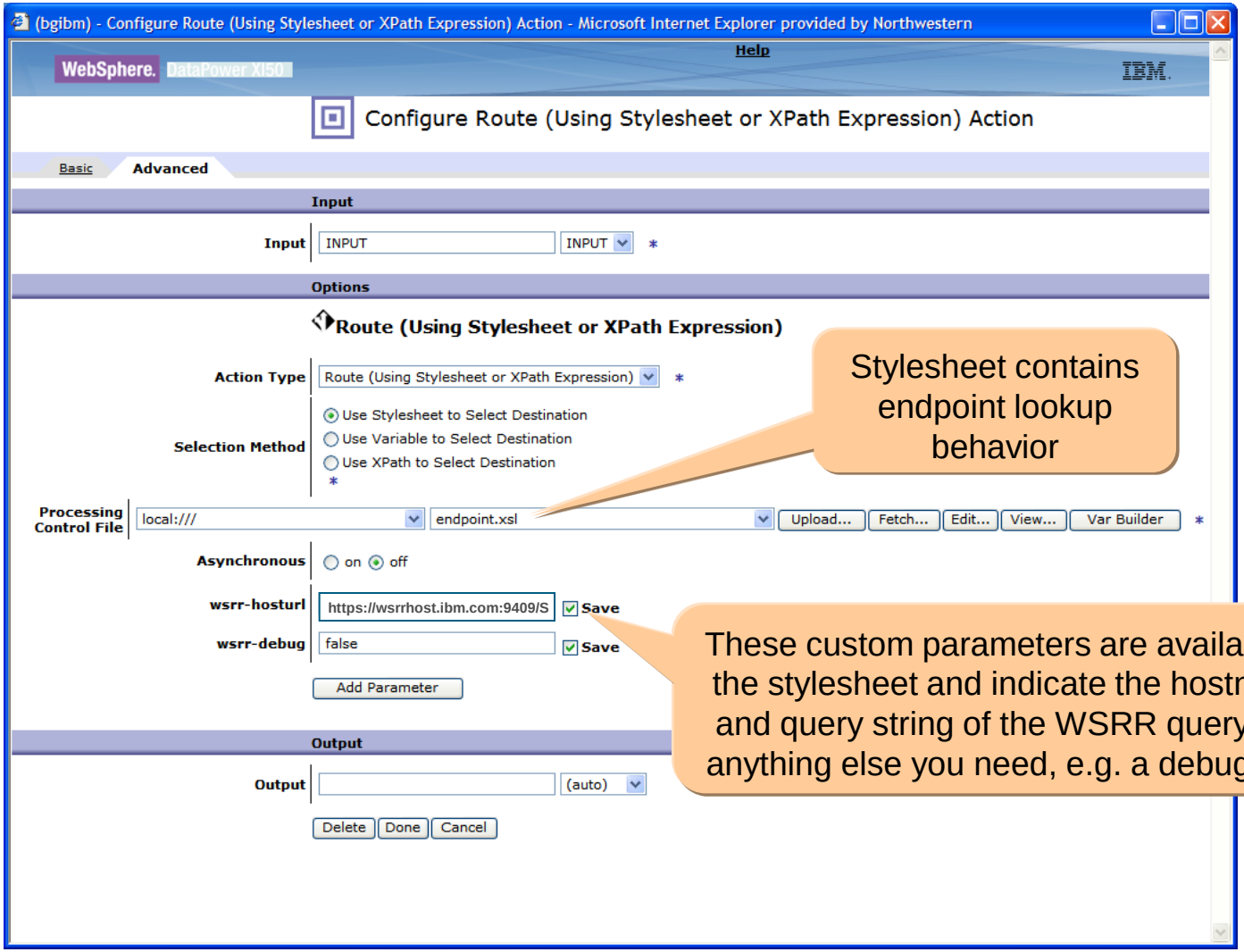
# SLM Policy Action

## Reference SLM policy name using variable



# Routing Action

## Configure Stylesheet that can Invoke a WSRR query




# An example of a ‘Routing Policy’ Stylesheet

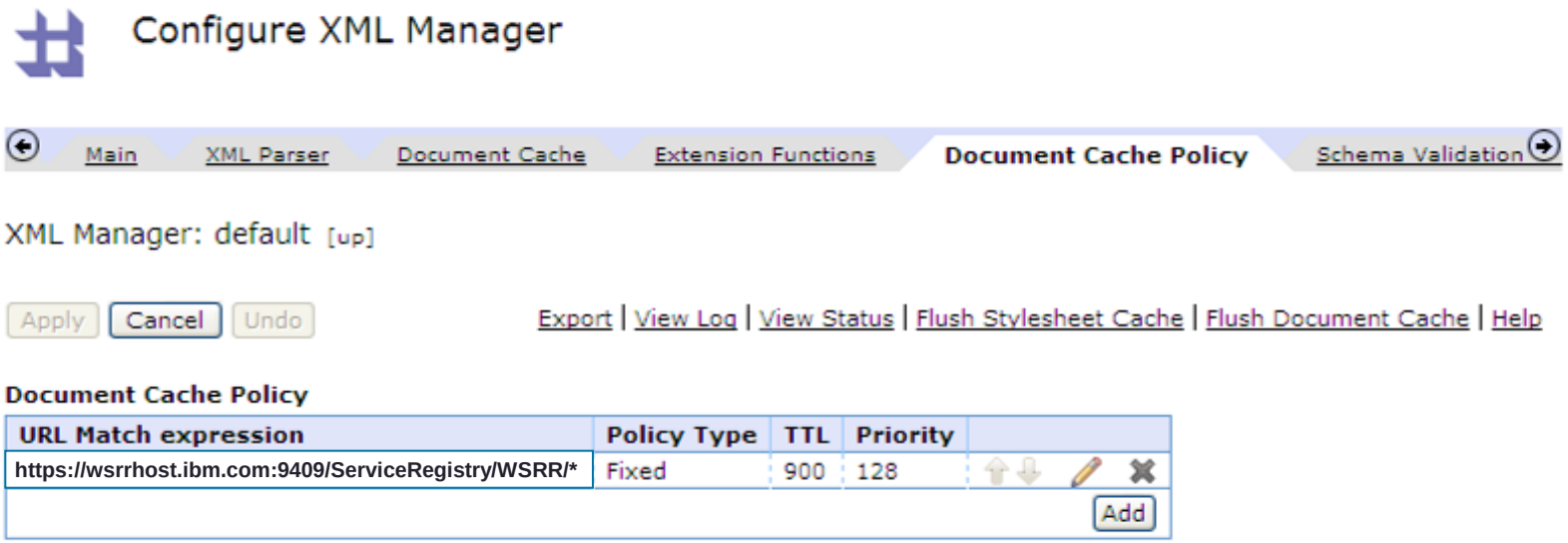
```
<xsl:template match="/">
   <xsl:variable name="endpointQuery"
      select="concat(
          $dpquery:wsrr-hosturl,
          '/EligibleEndpoints',
          '?p1=', /soap:Envelope/soap:Header/wsa:EndpointReference/wsa:ReferenceParameters/gep63:consumerIdentifier,
          '&amp;p2=', /soap:Envelope/soap:Header/wsa:EndpointReference/wsa:ReferenceParameters/gep63:contextIdentifier,
          '&amp;p3=http://www.ibm.com/governance/it%23Internal'
       )" />
      <xsl:variable name="queryResult">
      <dp:url-open target="{$endpointQuery}" response="responsecode" />
   </xsl:variable>
   <xsl:variable name="responsecode" select="$queryResult/url-open/responsecode" />
   <xsl:choose>
      <xsl:when test="$responsecode = '200'">
      <!--
         set the target address for the forwarded message to the value found
         in the response from WSRR
      -->
      <xsl:variable name="url"
         select="$queryResult/url-open/response//resources/resource/properties/property[@name='name']/@value" />
      <dp:set-variable name="'var://service/routing-url'" value="$url" />
      </xsl:when>
      <xsl:otherwise>
         <dp:send-error override="true">
            <env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
               <env:Body>
                  <env:Fault>
                     <faultcode><xsl:value-of select="$responsecode" /></faultcode>
                     <faultstring>No available end-points found.</faultstring>
                  </env:Fault>
               </env:Body>
            </env:Envelope>
         </dp:send-error>
      </xsl:otherwise>
   </xsl:choose>
</xsl:template>
```

Extract the context values from the inbound request and query WSRR, assume internal endpoints.

Note that this is not an entire stylesheet. The namespace declarations etc. have been omitted for clarity.



# Configure DataPower to Cache Endpoint Lookups




- Set the XML Manager in DataPower to cache requests to the WSRR server.
- The WS-Proxy cache does not cache these requests

# Recap: What has this accomplished?

1. Consumers can access services only if they have an SLA in the ‘SLAActive’ state (protects capacity).

2. Routing decisions are based on subscribed Service Levels, infrastructure can route according to intent.

3. Late binding of both Combining Consumer late binding lookup with Infrastructure late binding minimizes Environment coupling and eliminates application ‘knowledge’ of infrastructure.

4. Scalable service proxy architecture
   - a single Proxy instance can manage requests for all services that have a similar policy pipeline.

# Recap: What has this accomplished?

5. Enables the use of impact analysis for risk management and resource consolidation via formal consumer dependency tracking.

6. Solution can enforce SLA-defined SLM policies

7. Improves stability through the use of Governance policies and Lifecycle authority, assuring that only well-formed and certified meta-data is used.

# SLA Monitoring @ Edge

Collecting Metrics &
Generating Events

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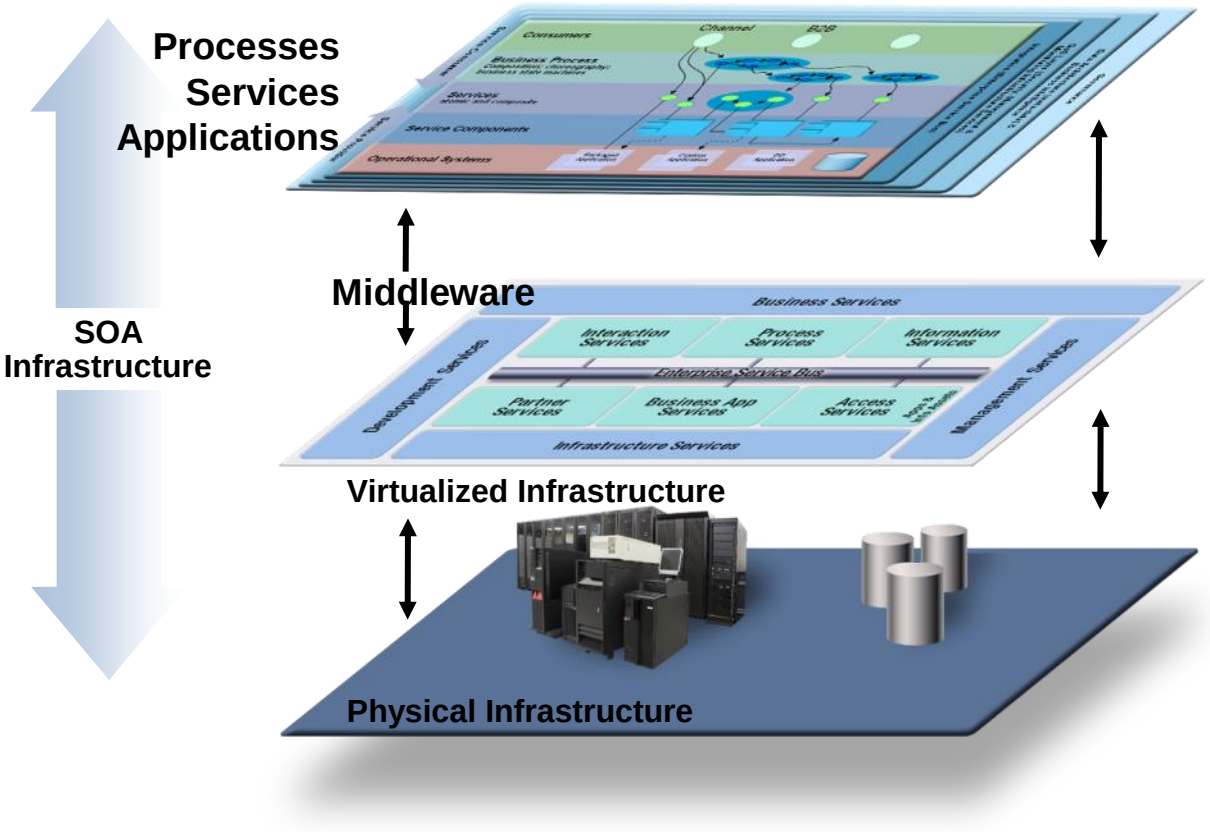
# ITCAM for SOA Platform

*Monitor and Manage Services and the end-to-end SOA Infrastructure*




- Monitor and manage ***services and service performance***
- Monitor and manage ***application servers***
- Monitor and manage ***messaging backbone***
  - WebSphere MQ
  - WebSphere Message Broker
- Monitor the ***health & availability of DataPower appliances***
- Monitor and manage ***virtual environments***
- Monitor and manage ***operating systems***

**Quickly *identify, isolate, and repair* service level problem areas**

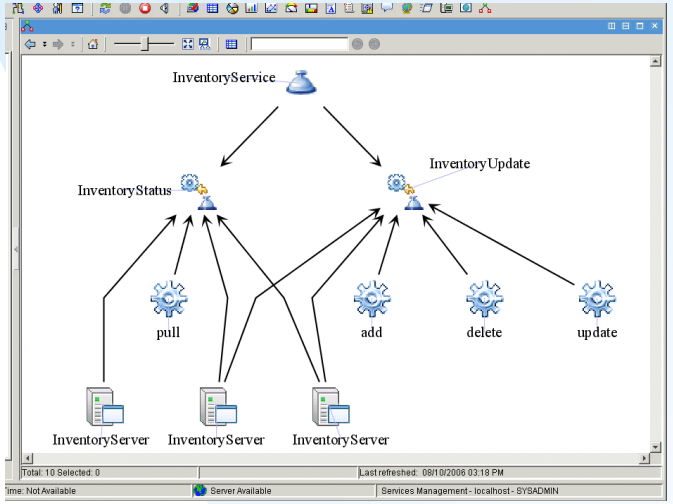
# Sophisticated and Scalable Operations Management in your SOA

*ITCAM for SOA Platform and WSRR*

- **Reconciliation of services** registered in WSRR with those monitored in target systems by ITCAM for SOA

| Service Port | Operation | Service | Application Server | Computer System | Observed | Registered |
|---|---|---|---|---|---|---|
| <no filter> | <no filter> | <no filter> | <no filter> | <no filter> | <no filter> | <no filter> |
| Catalog | order | CatalogService | | | | ✓ |
| Catalog | cancelOrder | CatalogService | | | | ✓ |
| InventoryStatus | pull | InventoryService | InventoryServer | host1.austin.ibm.com | ✓ | ✓ |
| InventoryStatus | pull | InventoryService | InventoryServer | host2.austin.ibm.com | ✓ | ✓ |
| InventoryStatus | pull | InventoryService | InventoryServer | host3.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | update | | InventoryServer | host1.austin.ibm.com | ✓ | |
| InventoryUpdate | update | InventoryService | InventoryServer | host2.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | update | InventoryService | InventoryServer | host3.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | delete | InventoryService | InventoryServer | host1.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | delete | InventoryService | InventoryServer | host2.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | delete | InventoryService | inventoryServer | host3.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | add | InventoryService | InventoryServer | host1.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | add | InventoryService | InventoryServer | host2.austin.ibm.com | ✓ | ✓ |
| InventoryUpdate | add | InventoryService | inventoryServer | host3.austin.ibm.com | ✓ | ✓ |

- Topology views show **relationships between service operations** for impact analysis




- Forwards status information to WSRR to allow **selection of services based on performance** and other metrics

- **Author ITCAM service situation** with WSRR's Policy Wizard and attach to Service Level Definition

# SOA Governance – SLA Policy Automation

WebSphere software

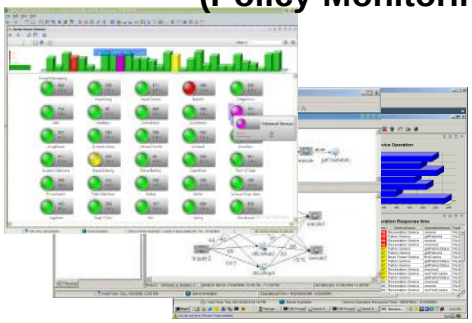
**WebSphere Service Registry & Repository (Policy Administration Point)**


**Monitoring Policy**

**Event Status**

Tivoli software

**ITCAM for SOA (Policy Monitoring Point)**



- **SLA Policy Automation – monitoring of a service based on its Service Level monitoring policy**
  - Using **WebSphere Service Registry and Repository (WSRR),** users can associate a Service Level Definition (SLD) policy to a service, and have **ITCAM for SOA** automatically define and deploy situations and automated take actions based on that service's SLD policy.

***Available Now ITCAM for SOA monitors a web service, based on its SLA policy as defined in WSRR***



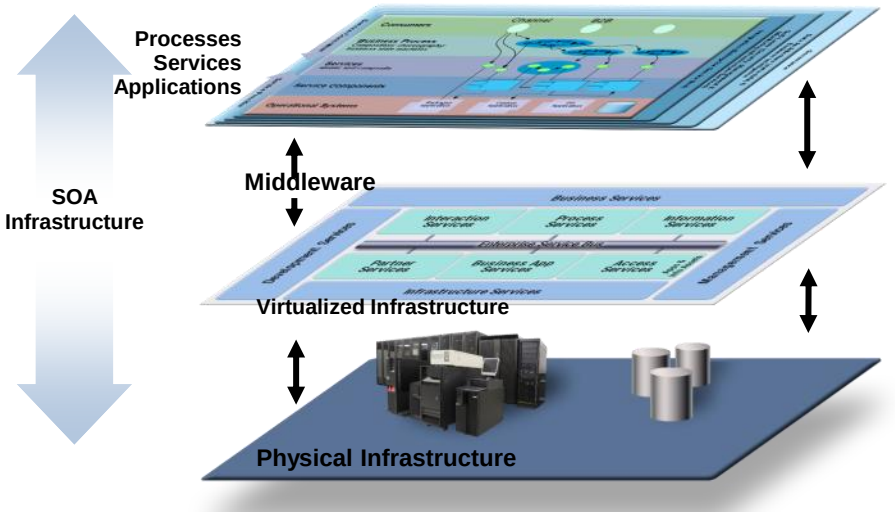
IBM

# ITCAM for SOA Platform – Benefits

*A comprehensive view of SOA*

## Business Value

- ITCAM for SOA Platform helps you meet the demanding service levels required of SOA-based applications
- ITCAM for SOA Platform delivers quick time to value for IT operations, architects and subject matter experts alike
- End-to-end visibility from services, applications, middleware, and infrastructure



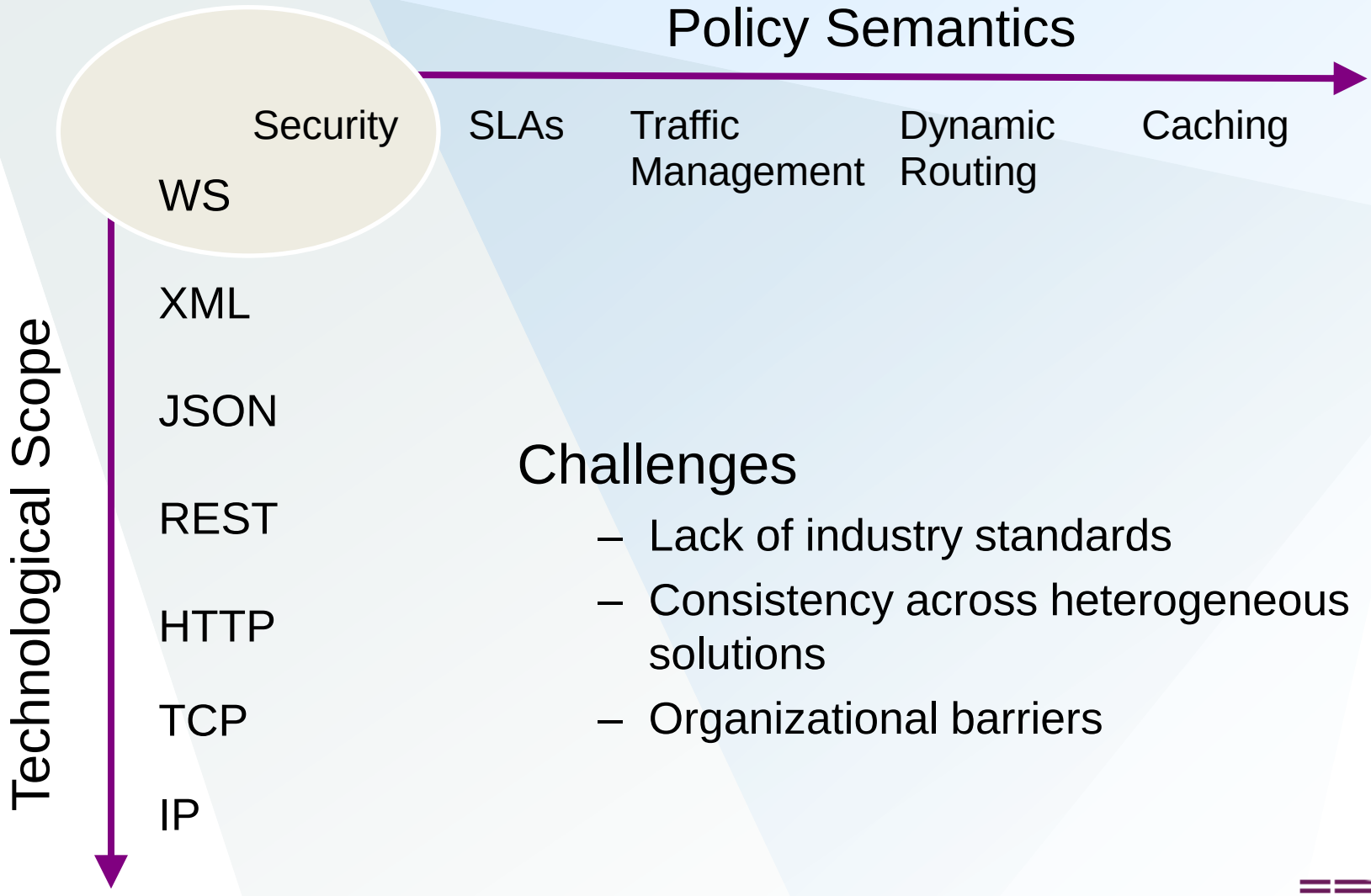

## IT Operations Value

- An end-to-end graphical services topology tool to visualize service flows and relationships
- Integrated support for IBM WebSphere Application Server, WebSphere ESB, WebSphere Process Server, WebSphere DataPower, WebSphere Message Broker, CICS, JBoss, WebLogic, .NET and other application runtime environments
- Seamless integration into your existing enterprise level Tivoli Monitoring environment
- Real-time status of the health of applications, helping to identify and quickly resolve service problems

# Governance Trends & Strategy

Policy Management Vision and Futures

# Technological Convergence




## Challenges

- Lack of industry standards
- Consistency across heterogeneous solutions
- Organizational barriers

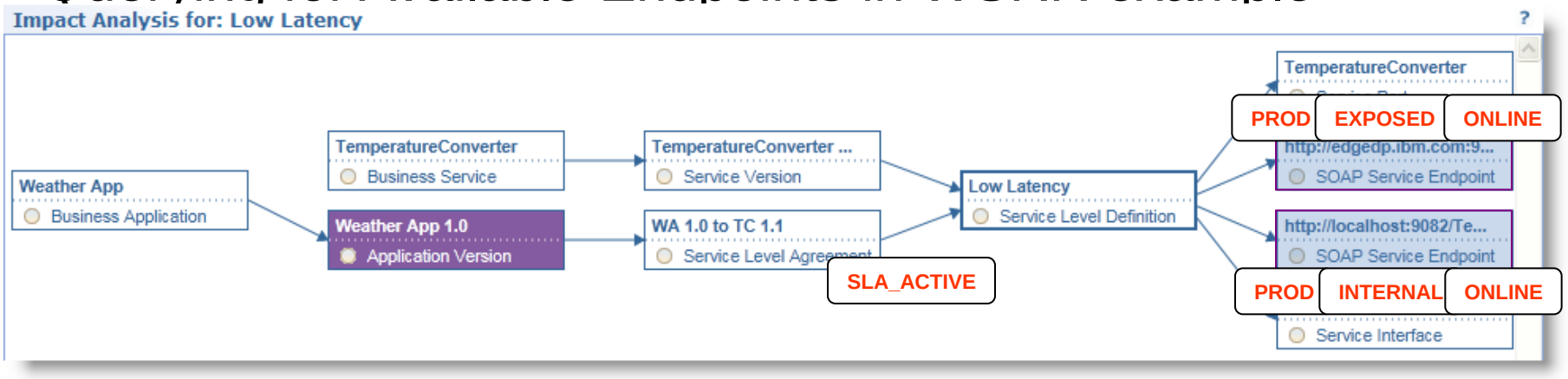
# Thank You!... Questions?

## 100 Years In the Making:

- Market share leadership
- Strongest ecosystem
- Unparalleled expertise, and level of investment
- Broadest, deepest portfolio

# Copyright and Trademarks

# Querying for Available Endpoints in WSRR example



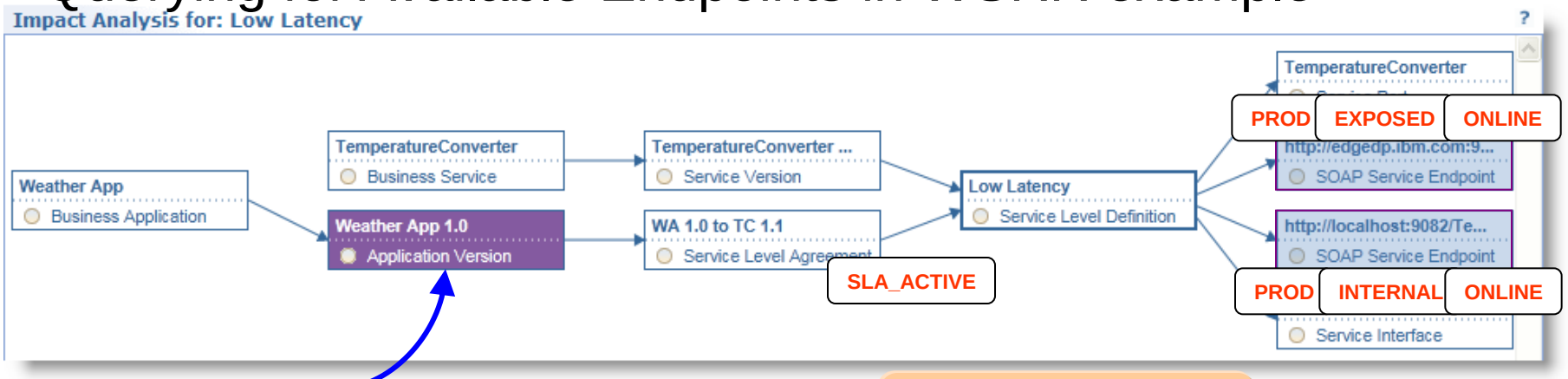

Query:

/WSRR/GenericObject[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/profile/v6r3/GovernanceEnablementModel#CapabilityVersion') and gep63_consumes(.) and @gep63_consumerIdentifier='%1']/gep63_consumes(.)[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/lifecycle/v6r3/LifecycleDefinition#SLAActive') and @gep63_contextIdentifier='%2']/gep63_agreedEndpoints(.)/gep63_availableEndpoints(.)[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/lifecycle/v6r3/LifecycleDefinition#Online') and classifiedByAnyOf(.,'%3')]

%1 = consumer Identifier (‘WA10’ for this example)
%2 = dependency ID (‘WA10d1’ for this example)
%3 = External or Internal classification

No reference to Environment

# Querying for Available Endpoints in WSRR example




Query:

Matches any type of consumer

/WSRR/GenericObject[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/profile/v6r3/GovernanceEnablementModel#CapabilityVersion') and gep63_consumes(.) and @gep63_consumerIdentifier='%1']/gep63_consumes(.)[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/lifecycle/v6r3/LifecycleDefinition#SLAActive') and @gep63_contextIdentifier='%2']/gep63_agreedEndpoints(.)/gep63_availableEndpoints(.)[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/lifecycle/v6r3/LifecycleDefinition#Online') and classifiedByAnyOf(.,'%3')]

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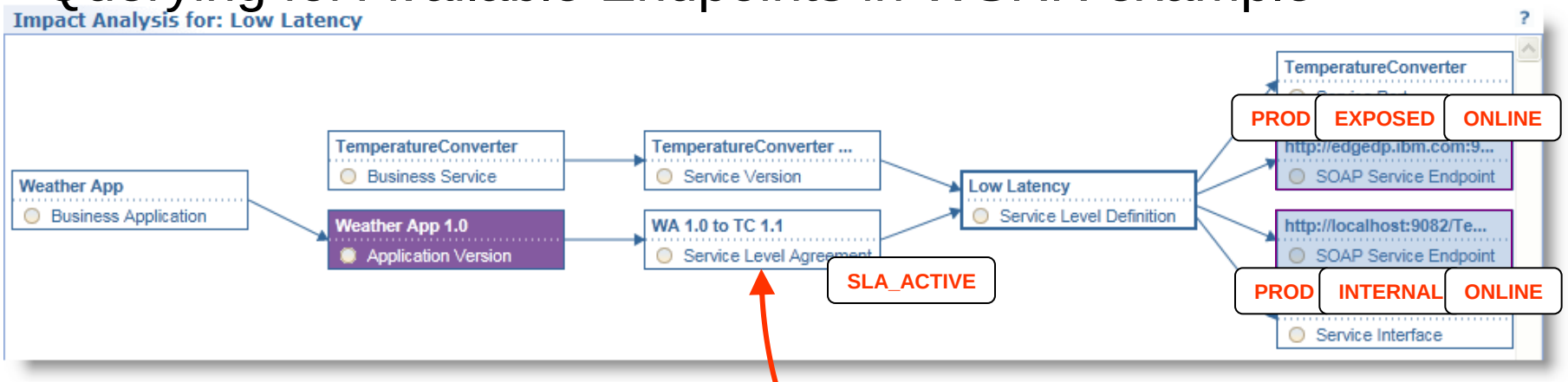


Query:

Only Active SLAs will satisfy this query.

/WSRR/GenericObject[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/profile/v6r3/GovernanceEnablementModel#CapabilityVersion') and gep63_consumes(.) and @gep63_consumerIdentifier='%1']/gep63_consumes(.)[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/lifecycle/v6r3/LifecycleDefinition#SLAActive') and @gep63_contextIdentifier='%2']/gep63_agreedEndpoints(.)/gep63_availableEndpoints(.)[classifiedByAnyOf(.,'http://www.ibm.com/xmlns/prod/serviceregistry/lifecycle/v6r3/LifecycleDefinition#Online') and classifiedByAnyOf(.,'%3')]

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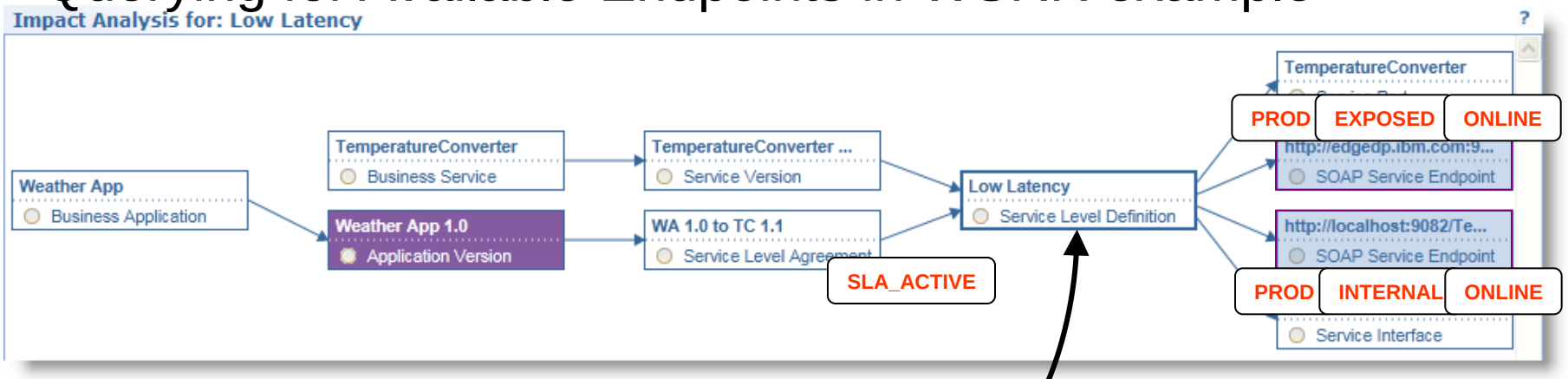


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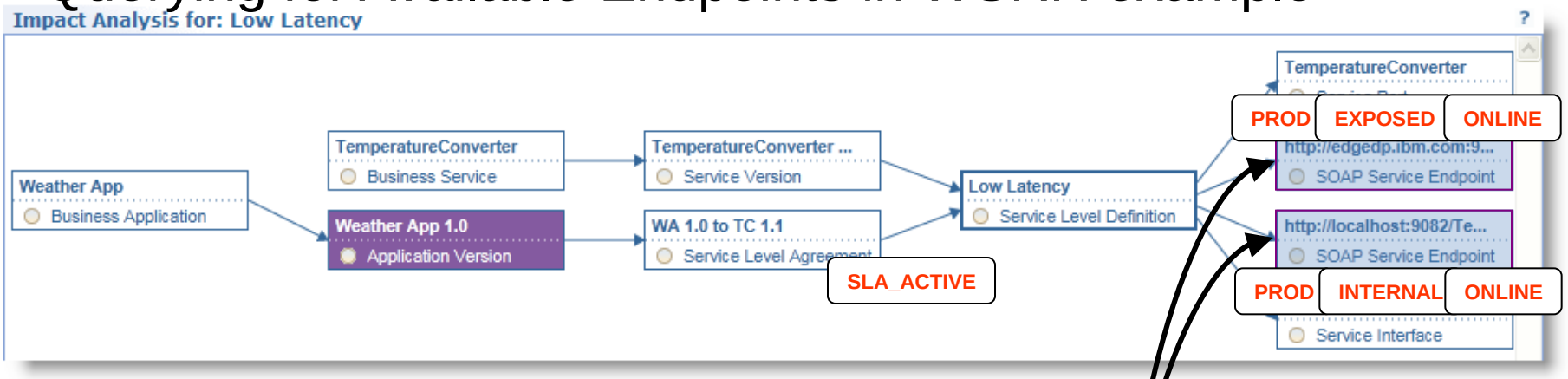


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Only Online Endpoints will satisfy this query.

# Result of Invoking a Named Query: '**EligibleEndpoints**'

```
<?xml version="1.0" encoding="UTF-8"?>
<resources>
  <resource bsrURI="f8b89cf8-8237-4778.9044.859c8f8544c9" type="GenericObject">
    <properties>
      <property name="bsrURI" value="f8b89cf8-8237-4778.9044.859c8f8544c9"/>
      <property name="name" value="http://edgedp.ibm.com:9553/TemperatureConverter/services/TemperatureConverter"/>
      <property name="namespace" value="http://ejbs"/>
      <property name="version" value=""/>
      <property name="description" value=""/>
      <property name="owner" value="admin"/>
      <property name="lastModified" value="1265264591540"/>
      <property name="creationTimestamp" value="1265264278932"/>
      <property name="lastModifiedBy" value="admin"/>
      <property name="primaryType" value="http://www.ibm.com/xmlns/prod/serviceregistry/v6r3/ServiceModel#SOAPServiceEndpoint"/>
      <property name="sm63_portName" value="TemperatureConverter"/>
      <property name="sm63_serviceNamespace" value="http://ejbs"/>
      <property name="sm63_serviceVersion" value=""/>
      <property name="sm63_endpointType" value="SOAPAddress"/>
      <property name="sm63_serviceName" value="TemperatureConverterService"/>
    </properties>
    <relationships>
      <relationship name="sm63_soapAddress" targetBsrURI="a2b862a2-86af-4fc5.8021.628091622134" targetType="SOAPAddress"/>
      <relationship name="sm63_sourceDocument" targetBsrURI="ea3237ea-fecb-4bfd.bb7e.0ae2da0a7ef3" targetType="WSDLDocument"/>
      <relationship name="sm63_wsdlPorts" targetBsrURI="53369253-6d61-41ec.8017.06bc5a061748" targetType="WSDLPort"/>
    </relationships>
    <classifications>
      <classification uri="http://www.ibm.com/governance/it#Exposed"/>
      <classification uri="http://www.ibm.com/xmlns/prod/serviceregistry/v6r3/ServiceModel#SOAPServiceEndpoint"/>
      <classification uri="http://www.ibm.com/xmlns/prod/serviceregistry/6/1/GovernanceProfileTaxonomy#Production"/>
      <classification uri="http://www.ibm.com/xmlns/prod/serviceregistry/lifecycle/v6r3/LifecycleDefinition#Online"/>
    </classifications>
  </resource>
</resources>
```

The value of the 'name' property for a SOAP Service Endpoint is the address

Classifications on this endpoint, some of which satisfied the query, i.e. Online and Exposed