PMC107

Integration of Cloud Solutions from SAP

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SAP NetWeaver Process Integration & SAP NetWeaver Cloud Integration
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Agenda

SAP NetWeaver Cloud Integration

Required capabilities on the Cloud

Experience for customers

Demo

Next Steps

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SAP NetWeaver Cloud Integration

SAP NetWeaver Cloud Integration

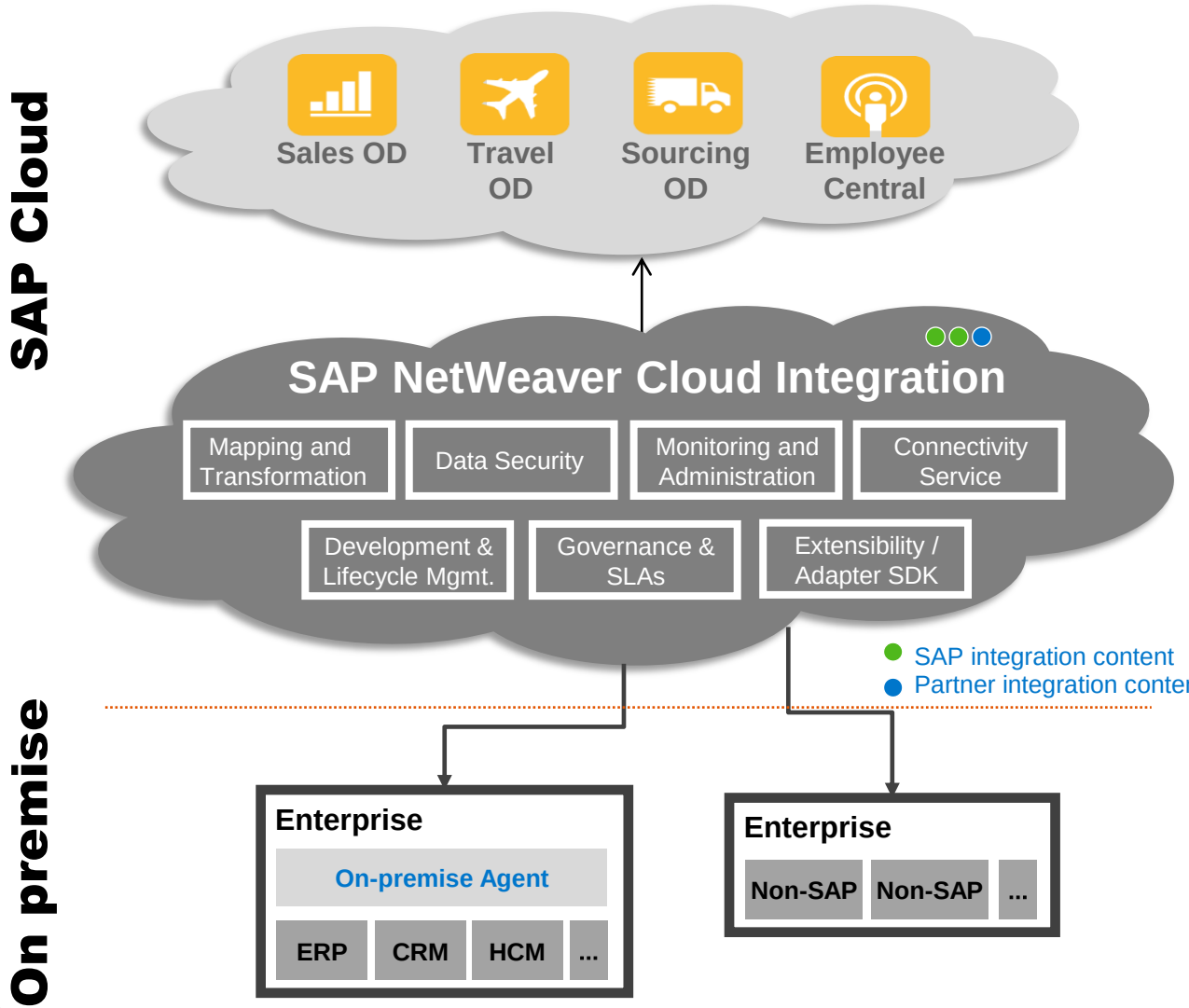
- Integration service running on SAP NetWeaver Cloud
- Core Runtime for processing, transformation, and routing of messages
- Out-of-the-box connectivity support (WSRM, IDOC, sFTP, etc)
- Eclipse based design time capabilities
- Embedded Operations cockpit for monitoring and administration

Packaged Integration

- Packaged integtration for SAP to SAP (partly via RDS)
- Partner ecosystem to build integration content for Non-SAP
- Compatibility of message mappings (can be deployed on both SAP NetWeaver Cloud Integration and SAP NetWeaver PI on-premise)

Application Scenarios

- Sales OD ↔ CRM OP
- Financial Services Network
- SFSF BizX OD ↔ HCM OP
- SFSF EC OD ↔ ERP OP



Legend: OD = on-demand / op = on-premise / EC = Employee Central / ByD = Business By Design / PI = Process Integration

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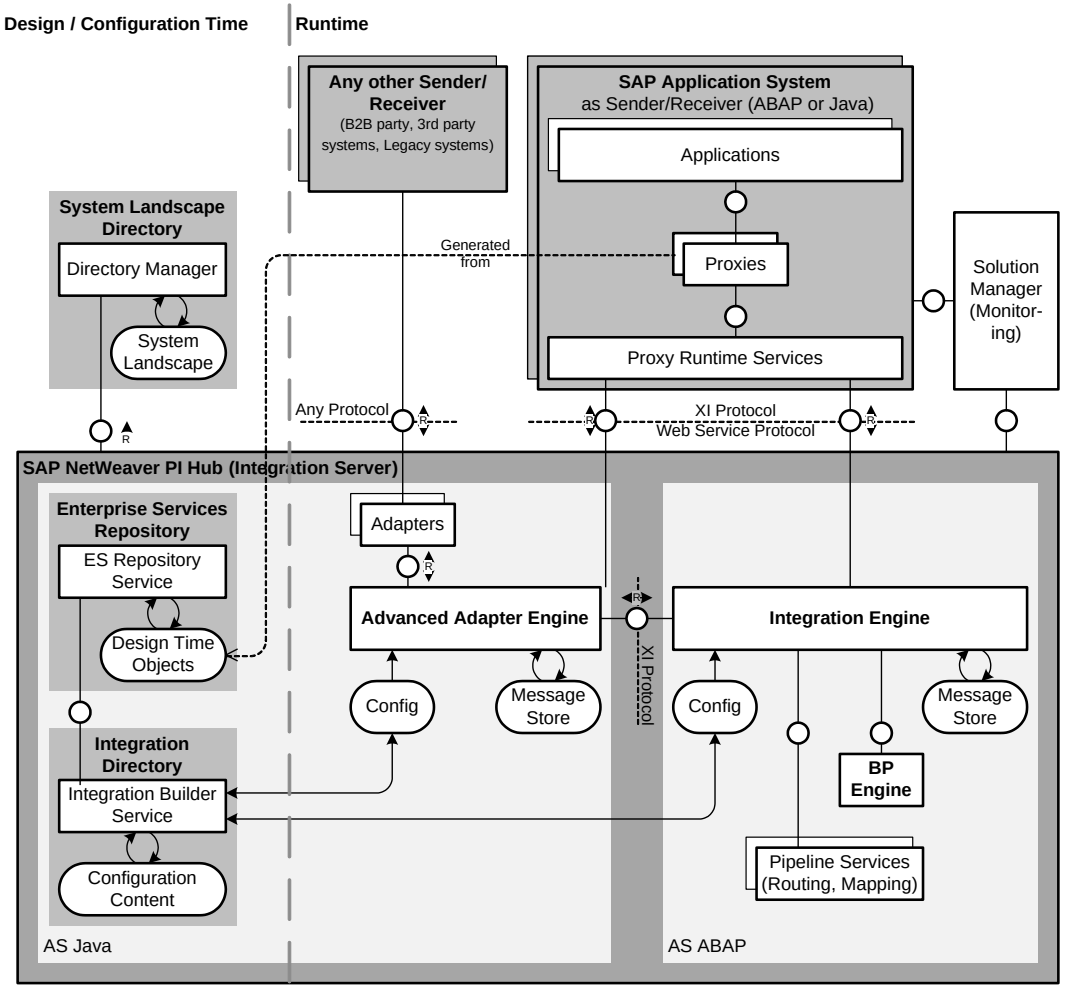
Why is the current integration technology not Cloudy

1. **Implemented as single tenant solution**
2. **No further TCO optimization beyond single stack possible**
3. **Dependencies to other on Premise systems (e.g. SAP Solution Manager)**
4. **Optimized for A2A and recently also B2B**
5. **Architecture not based on virtualization**

⇒ **Not suitable for multi-tenant, virtualized cloud environments**

⇒ **New architecture approach**



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Required Changes for Cloud Infrastructures (*)

Top-6 Challenges:

1. Costs
2. Lightweight/Performance
3. Scalability
4. Multi-Tenant
5. (Regional) Distribution
6. Advanced Security

Engineering Responses:

1. Optimize operation costs
2. Small Java Runtime
3. Virtualization Awareness
4. Runtime isolation and data partitioning
5. Distributed, heterogeneous cluster
6. SSL mutual client/server certificates, payload related security features

(*) For private cloud technologies as well as SAP Cloud

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Experience for customers

- **Service is always up and running and scales (no IT ops) – so SLAs will be critical!**
- **Integration at ‚cloud speed' – from weeks/months to hours/days**
- **No coding!!!**
- **No time and material projects to deal with integration but a fixed price end result guaranteed service**
- **Customers can consume Cloud applications in a very granular way following their business needs**
- **Enabling the ecosystem will be critical**

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What are the SLAs for SAP NetWeaver Cloud Integration?

- **Availability**
  - Service availability
  - Message processing capabilities will be available 24 hrs a day, 7 days a week, 365 days in a year
- **Message Transfer Protocol**
  - 100% no data loss

  for example: Asynchronous "at least once" via WS-RM over https and sFTP
- **Optimized Maximum message processing time**
- **Performance optimized for the scenario**
- **Security**
  - Access control & audit logs supporting ISO27001 and legal terms & conditions
- **Auditing log**
  - No message processing, no system change, and no artifact change without log creation

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Security is a key decision criteria for CIOs!

- **Only registered users via SAP Cloud Professional Services can leverage the service**
- **Security @ multiple levels – Transport, message and payload**

  One https URL per tenant which is secured at different levels, Authentication and authorization @ runtime via

  - X.509 certificates for WSRM over https
  - sFTP via exchange of public and private keys

  Encryption/Decryption and signing of messages at runtime

- Authentication and authorization @ runtime PKCS7, PGP , XML DigSig
- Payload validation planned @ runtime
- **Multitenancy supported at all levels**
- **Logging of all actions (failed inbound authorization, config changes and deployment of nodes), audit trails**
- **Archival of messages – no usage of OS for archiving, avoid unencrypted storage of confidential data**
- **ISO 27001 and SAS 70 type certifications planned**

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Personas and Tools

SAP NetWeaver Cloud Integration

SAP NetWeaver Cloud Integration Services
Target Personas (1)

Customer Side

- **Tenant admin**
  configure backend systems (e. g. install and configure FSN Corporate Agent, configure sFTP connectivity, upload and download of communication information, such as WSDLs, certificates, directory and file name, polling interval)

- **LOB user**
  trigger updates in business scenarios (e. g. payment requests, business partner updates etc.) -> which in turn triggers a message exchange to SAP NetWeaver Cloud Integration

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SAP NetWeaver Cloud Integration Services
Target Personas (2)

SAP

- **SAP Cloud Professional Services aka Developer**
  support customer extension scenarios i.e. create integration flows, build mappings, generate configuration bundles

- **SAP Cloud Managed Services aka SaaS admin**
  create tenants, start nodes, deploy right configuration bundle and certificates to corresponding node, react on alerts on SPC (Service Provider Cockpit), drive software updates, message monitoring

- **SAP Application Content developer**
  create standard integration content which includes creation of APIs and mappings, e. g. from SoD to CRM 7.0

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Initial provisioning of Tenant by SAP Cloud Managed Services

Dear Tenant Owner, Please find enclosed in this email the details of your SAP NetWeaver Integration OnDemand Tenant.

Requested via-

Tenant Owner: Ankur Bhatt

Tenant Purpose Dry run

Operations server URL: https://nmdravatarprod-central.netweaver.ondemand.com

Worker Node URL: https://iflmaphko007dravatarprodhko007.intaas.netweaver.ondemand.com/cxf

For access, please use SCN credentials www.scn.sap.com

Project link https://projectportal.wdf.sap.corp/projects/dryrun

Access enabled for all participants in dry run.

ESR http://vmw5464.wdf.sap.corp:50100/dir/start/index.jsp

User Name: PIADMIN

Password: pidryrun01 - For support, please use the below link :

https://byd-support.wdf.sap.corp/sap(bD1lbiZjPTAwMSZkPW1pbiZpPTE=)/crm_logon/default.htm?sapclient=001

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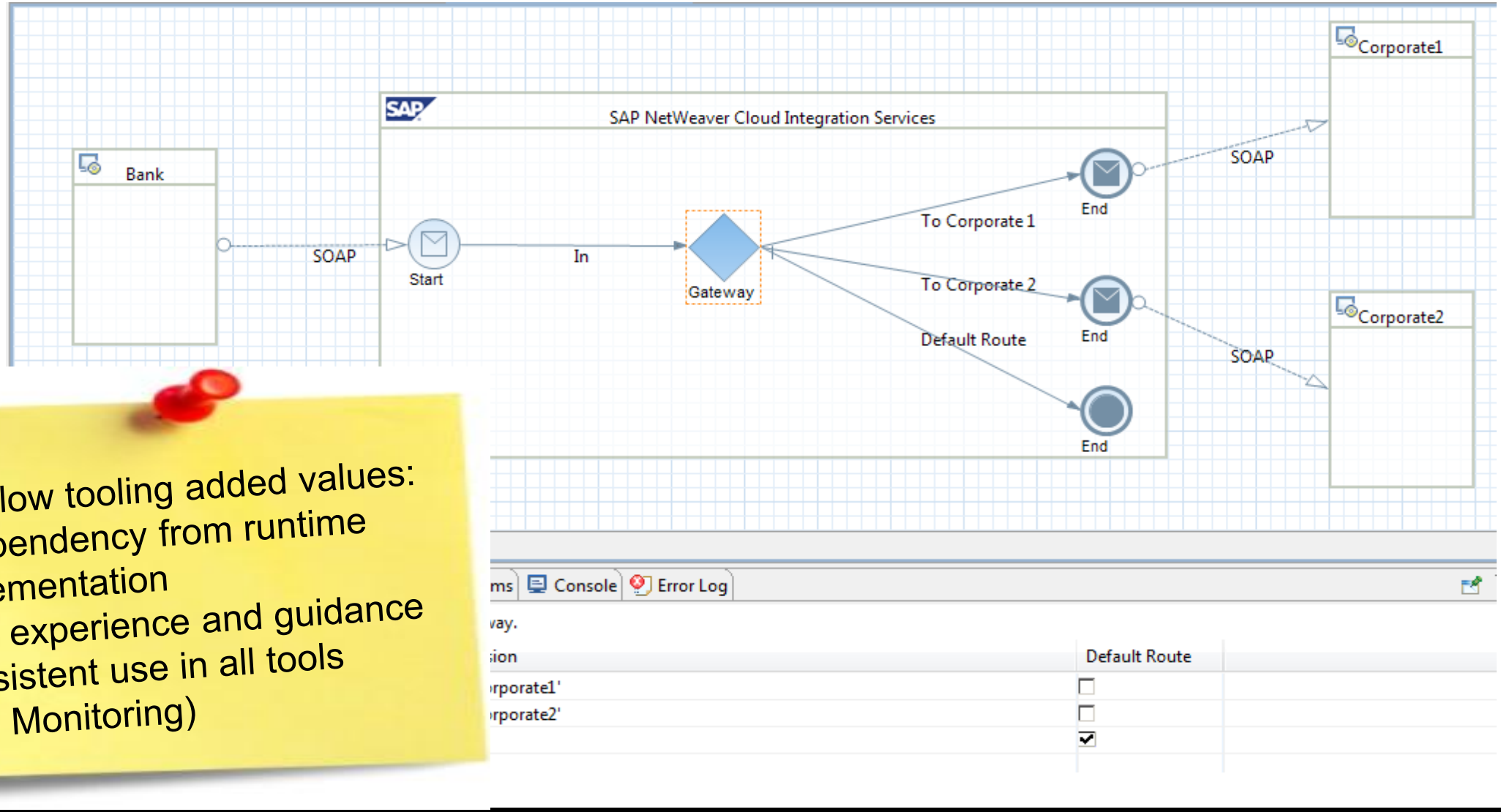
Tooling for SAP Cloud Professional Services / Integration Developer

Eclipse based iFlow Modeling



SAP iFlow tooling added values:

1. Independency from runtime implementation
2. User experience and guidance
3. Consistent use in all tools (e.g. Monitoring)

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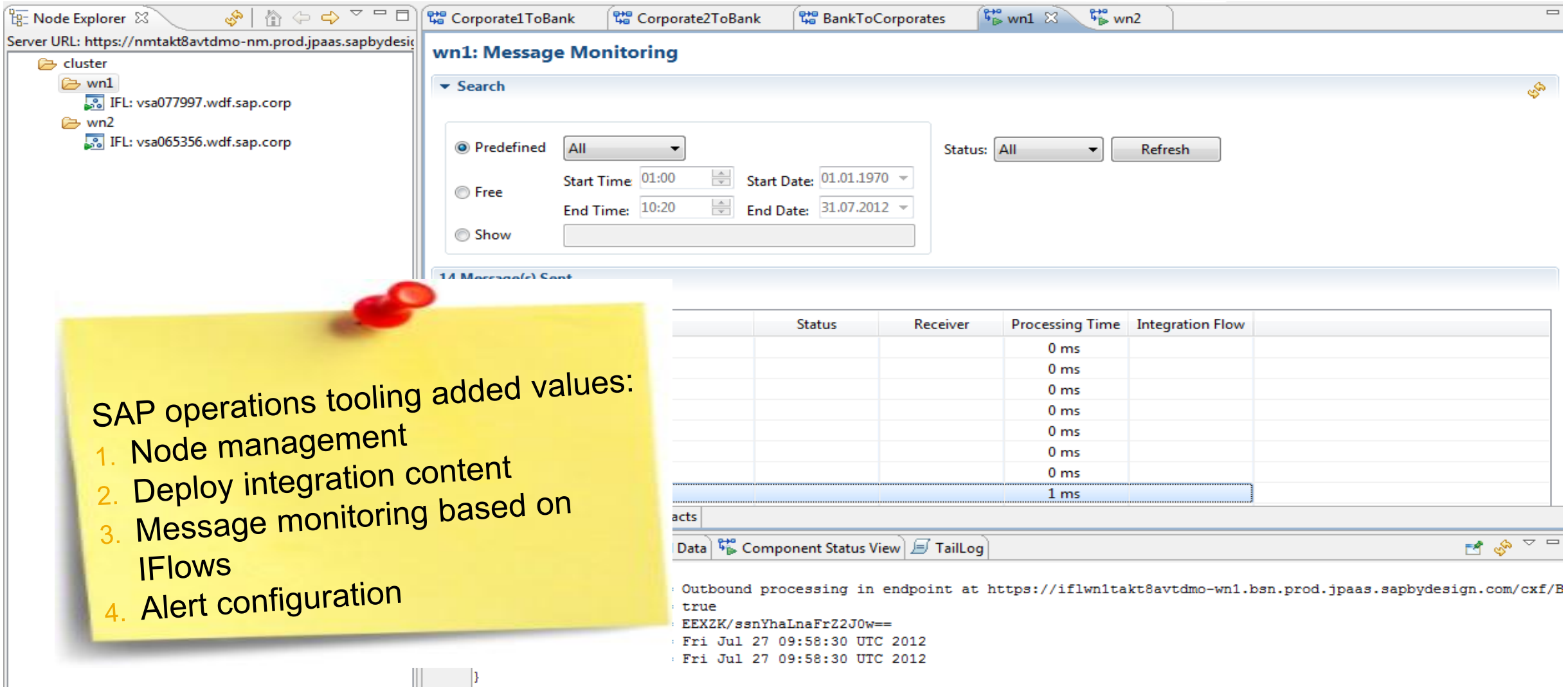
Tooling for SAP Cloud Managed Services / SaaS Admin

Eclipse based Operations UI for Tenant administration, message monitoring and alert configuration



SAP operations tooling added values:

1. Node management
2. Deploy integration content
3. Message monitoring based on IFlows
4. Alert configuration

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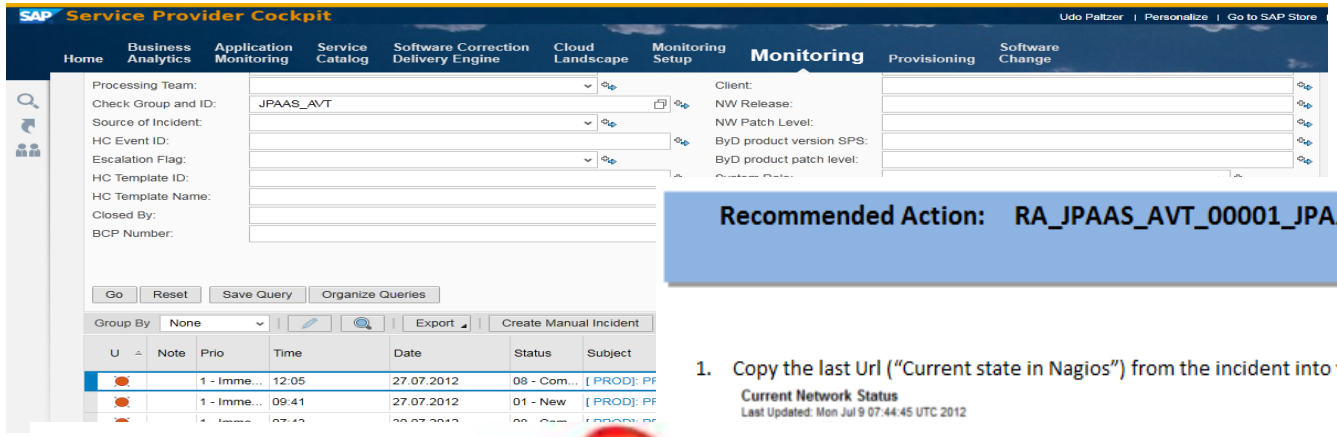
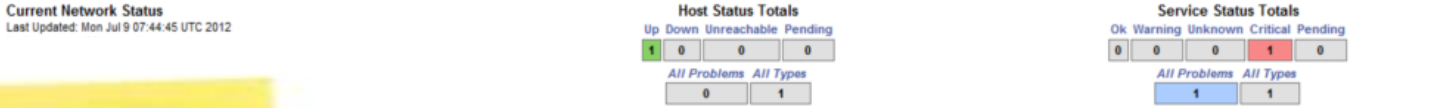
Service Provider Cockpit for SAP Cloud Managed Services

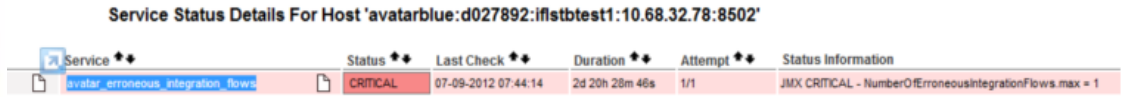
Erroneous integration flows and proposed recommended actions



Recommended Action: RA_JPAAS_AVT_00001_JPAAS_AVT0000101 Erroneous Integration Flows

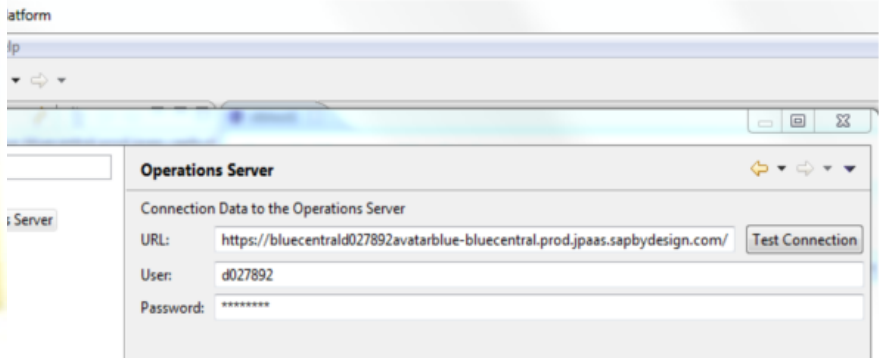
1. Copy the last Url ("Current state in Nagios") from the incident into your browser, open the page, and check if the service "avatar_erroneous_integration_flows" is still in status "CRITICAL":





ore close the incident.

ud Integration Service Operator Cockpit and configure the operations server url via Window→ Preferences→ Operations Server:



Service Provider cockpit added values:

1. Creation of admin user groups
2. Active monitoring of queues
3. Alert dashboard
4. Recommended actions for error resolution

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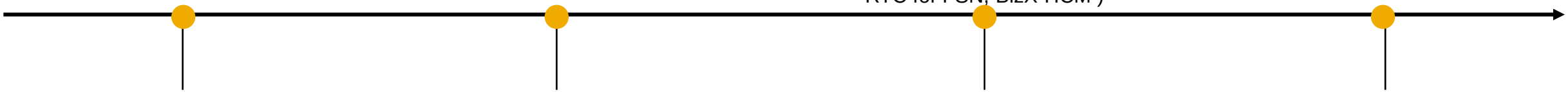
SAP NetWeaver Cloud Integration Service

Technology Roadmap

Predefined integration service for specific SAP Cloud apps e.g. Sales OnDemand, Employee Central, Financial Services Network

Towards a full integration platform



Cloud Integration option for SoD

- Synchronous web services based connectivity
- Mapping & Transformation
- Reliable & secure integration
- Eclipse based Administration & monitoring

Financial Services Network Beta

- Standard sFTP based connectivity for banks
- End to end WSRM based connectivity for banks and corporates

Cloud Integration option for SoD

Financial Services Network

- Operations managed by SAP Cloud Managed Services
- Eclipse based design and monitoring for SoD and FSN
- Standard sFTP client connectivity
- Encryption & decryption via PKCS7

Advanced Integration Platform & Ecosystem

- IDOC/RFC for lower releases of ERP and CRM*
- Dev infrastructure for customers and partners
- IDOC/RFC for FSN corporates with lower releases of ERP*
- Biz-X – HCM and EC – HCM integration

- Additional connectivity
- Marketplace for partner content
- Adapter SDK for partners
- First steps towards web based tooling
- Message tracker for oD/oP use cases

* Will be first delivered in a controlled manner

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Further Information

SAP Public Web

SAP's Cloud Strategy

http://www.news-sap.com/sap-unveils-accelerated-cloud-strategy/

SAP FSN Connector Download and Documentation (SAP Service Marketplace)
https://websmp106.sap-ag.de/~form/handler?_APP=00200682500000001943&_EVENT=DISPHIER&HEADER=N&FUNCTIONBAR=N&EVENT=TREE&TMPL=67837800100900006555&V=INST

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