Polarion at ADVA

Usergroup Conference in Stuttgart
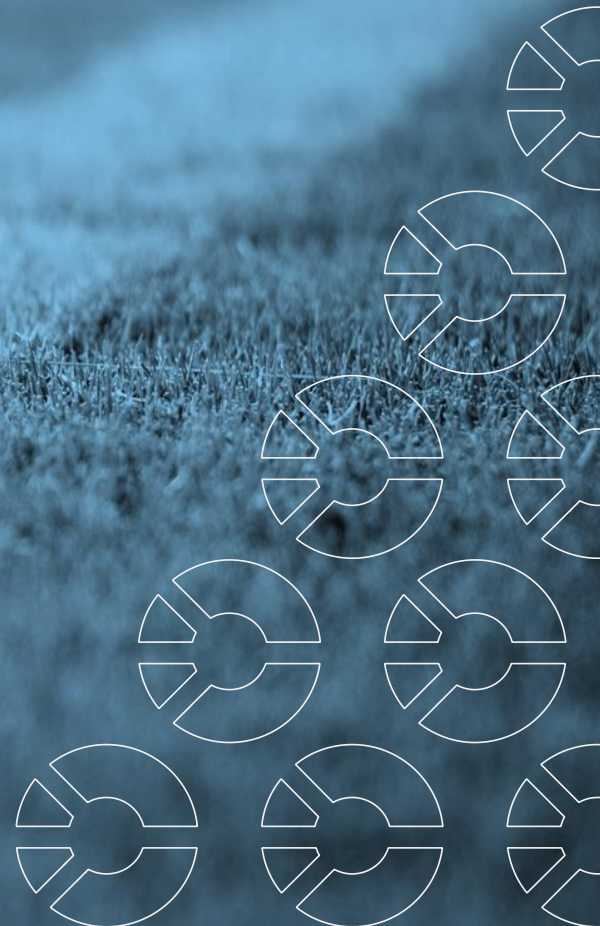
November 2019

Agenda

1. About ADVA

2. History of Polarion introduction at ADVA

3. Facts about Polarion at ADVA

4. Global Traceability

5. Extensions

6. Support and Administration

7. Backbone Configuration

ADVA

About ADVA

ADVA fundamentals

Background

- Headquartered in Munich, Germany
- More than 1,850 employees
- Over EUR 0.5 billion turnover

Our vision

Virtualization and software are keys to differentiated solutions, but hardware will remain strategically important

Our mission

Being your trusted partner for connecting, extending and assuring the cloud

Atlanta   Richardson   Neuchâtel   York   Meiningen   Munich   Gdynia

Haifa   Shenzhen   Singapore   Melbourne

Innovation – speed for customers – trusted partner

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Portfolio overview

Cloud access

Carrier Ethernet access and network functions virtualization (NFV) solutions that enable communication service providers to deliver software-defined, differentiated and performance-assured wholesale, mobile backhaul and business services;

Packet edge with NFV

Network synchronization

Primary reference sources (atomic clocks) and distribution solutions to deliver accurate and scalable time and frequency synchronization for mobile network infrastructure, utilities, financial services, distributed data bases and meteorology;
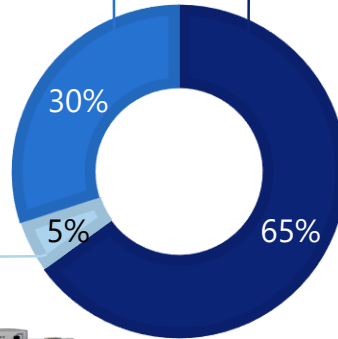

OSCILLOQUARTZ
An ADVA Company

Cloud interconnect

Open optical networking solutions based on wavelength division multiplexing (WDM) technology to deliver scalable bandwidth for access, metro and long-haul networks; high levels of open interworking, programmability and ease-of-use;
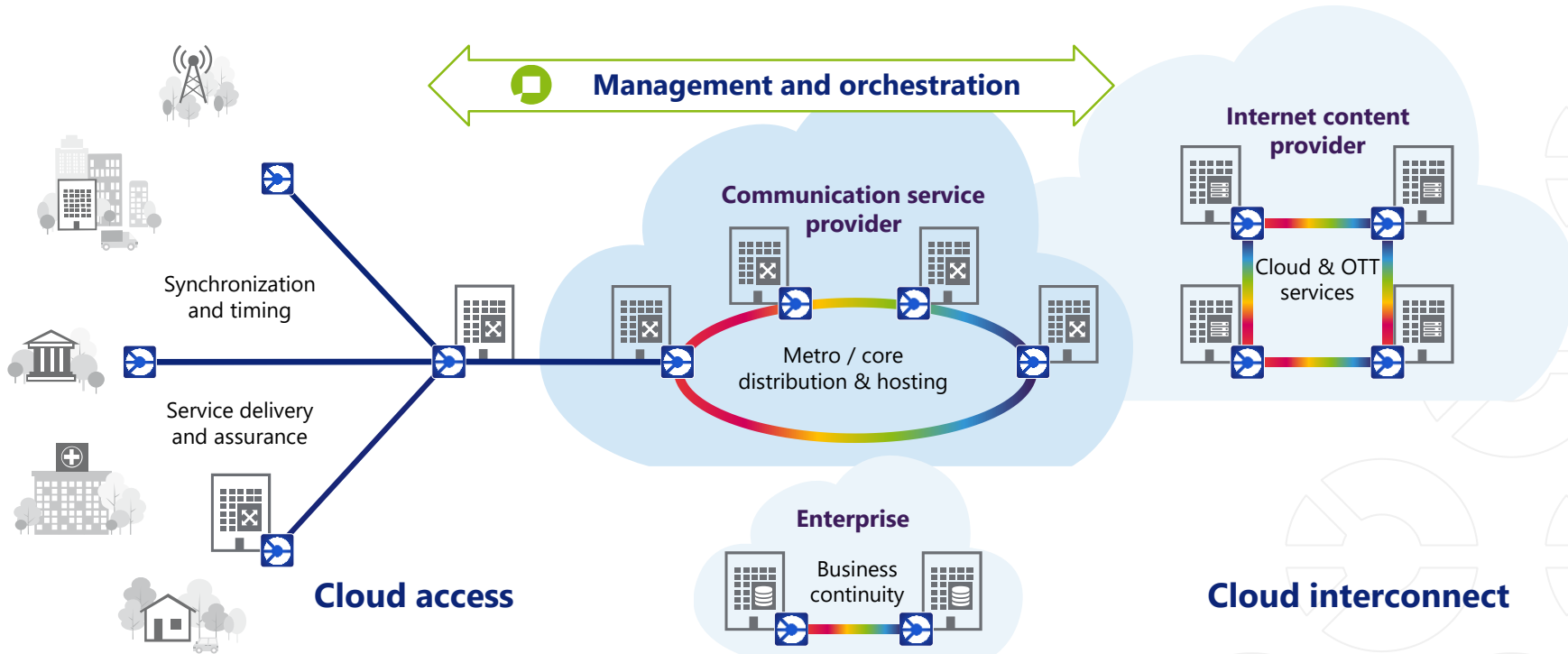
Open optical transport

True Time™

Connect Guard™

30%

5%

65%

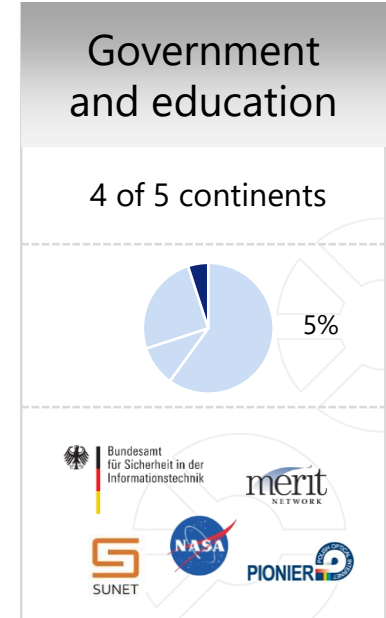Approximate revenue contribution rolling four quarters

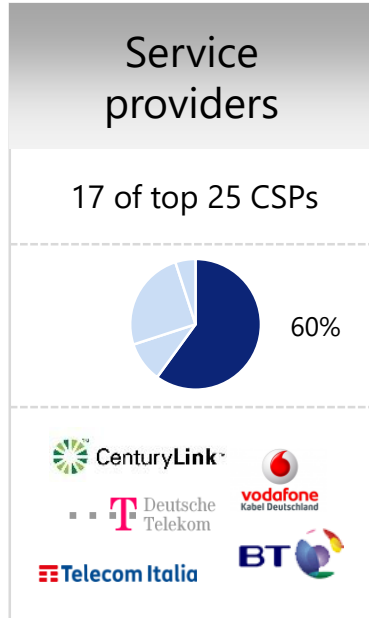## Global provider of solutions for edge network innovation

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Solution overview

Management and orchestration

Communication service provider

Internet content provider

Cloud & OTT services

Synchronization and timing

Service delivery and assurance

Metro / core distribution & hosting

Cloud access

Enterprise

Business continuity

Cloud interconnect

Open edge networking – connecting, extending and assuring the cloud

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Our customers

Service providers	Internet and cloud	Enterprises	Government and education
17 of top 25 CSPs	4 of top 5 ICPs	30 of top 50 banks	4 of 5 continents
60%	10%	25%	5%
CenturyLink, vodafone Kabel Deutschland, Deutsche Telekom, Telecom Italia, BT	Microsoft, ZEN INTERNET Limited, HETZNER ONLINE, DE-CIX, INEXIO connecting your business	UBS, DB Mobility Networks Logistics, MEDIA BROADCAST, NYP, Deutsche Bank	Bundesamt für Sicherheit in der Informationstechnik, merit NETWORK, SUNET, NASA, PIONIER

Global success with open edge networking

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Polarion introduction at ADVA

History of Polarion introduction in ADVA

2010 Evaluation for Requirements management
- escaping from offline documents

2012 Feature Management (SFS\EFL)
- reusing SFS cross products
- release management

2014 R&D
- integration for dev teams (starting with software)
- scrum & agile

2016 QA
- global traceability: PI - ... - Defect (starting with software)

2019 Development lifecycle

*SFS – System Functional Specification
*EFL – Element Feature List

From offline documents to global traceability

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Facts about Polarion at ADVA

Number of **users**: >1000 (~200 concurrent at rush hours)
Number of **projects**: 117
Number of active WI **instances**: >1M
Number of WI **types**: >30 (11 global)
Number of **LiveDocs**: ~2000
Number of **pages**: >12000
Number of **revisions**: >2M
Number of **external** repos: >500
Number of **extensions**: >30

Still under control ☺

Global Traceability

Global Traceability
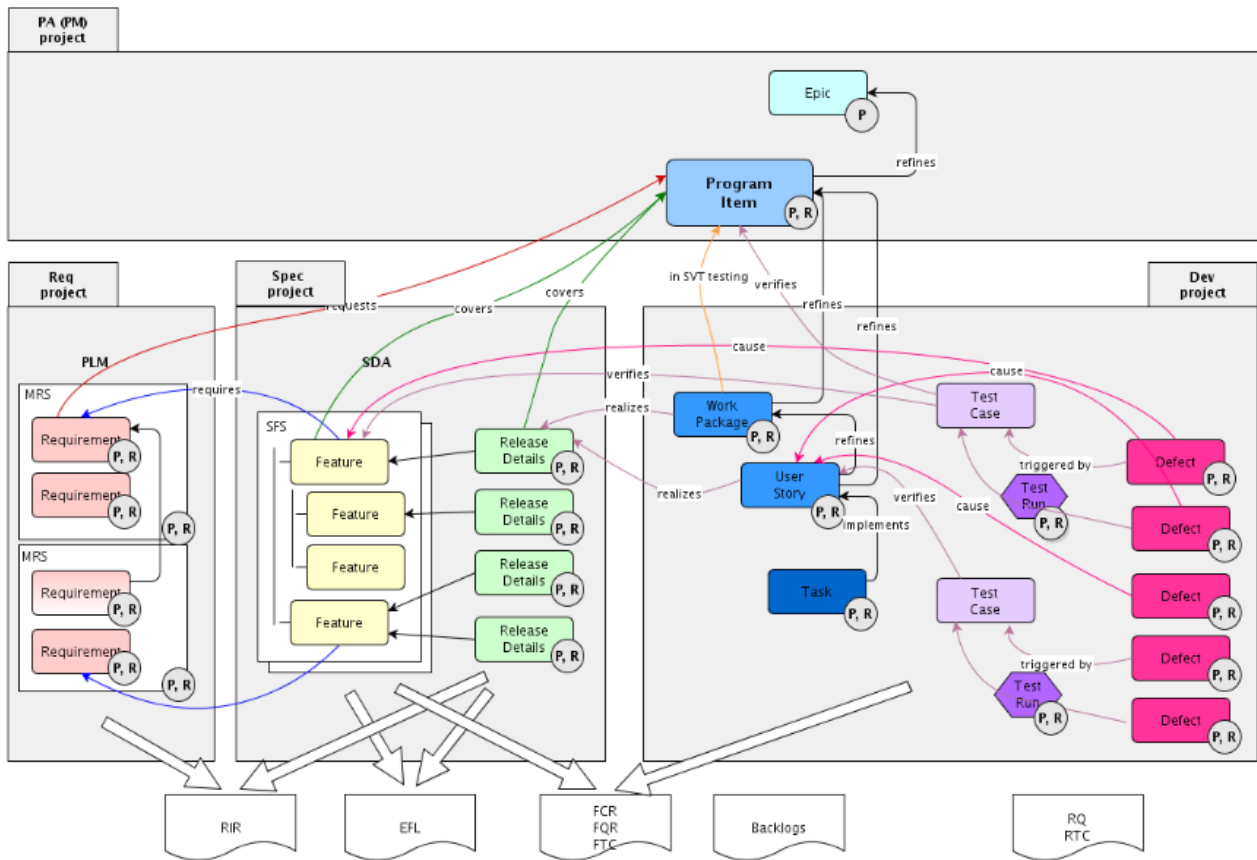
PA (PM) – Product Area (Program Management)
MRS – Marketing Requirements Specification
PLM – Product Line Management
SDA – System Design Authority

End-to-end visibility

Global WI types

Epic – umbrella for PIs

Program Item – main item for program management

Requirement – product requirements management (MRS documents)

Feature, **Release Details** – features release management (SFS and EFL docs)

Work Package, **User Story**, **Task** – development process

Test Case, **Test Case Group**, **<Test Run>** – testing (QA)

Defect – defects tracking

Global WI types have predefined set of fields, workflow and fixed link roles for connecting to each other. On project level fields can be added

11 global WI types

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Projects Layout

4 project types: PA-PM, Requirements, Features, R&D, QA

All projects are "endless" – several releases can be running in parallel
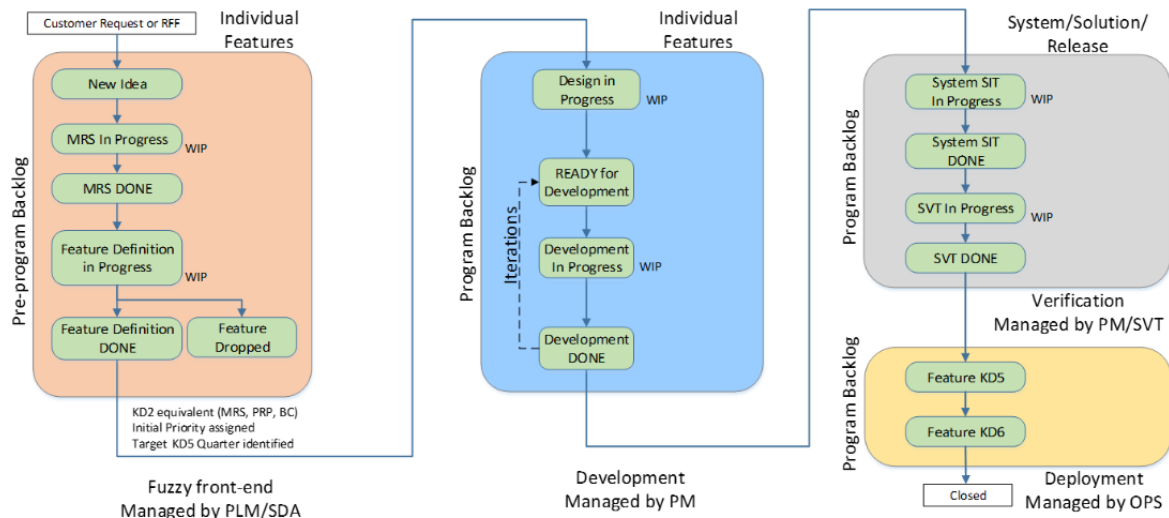
Cross projects linkage for WIs
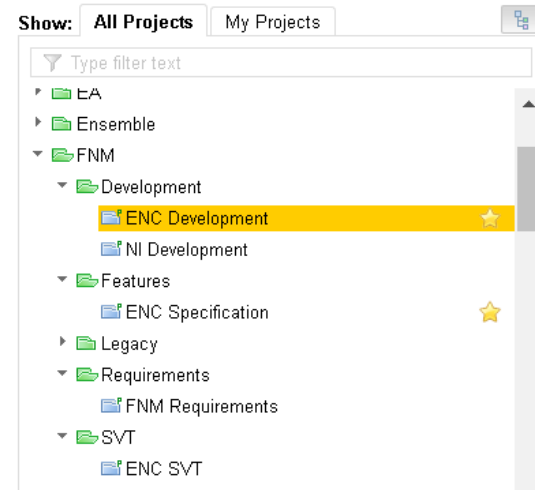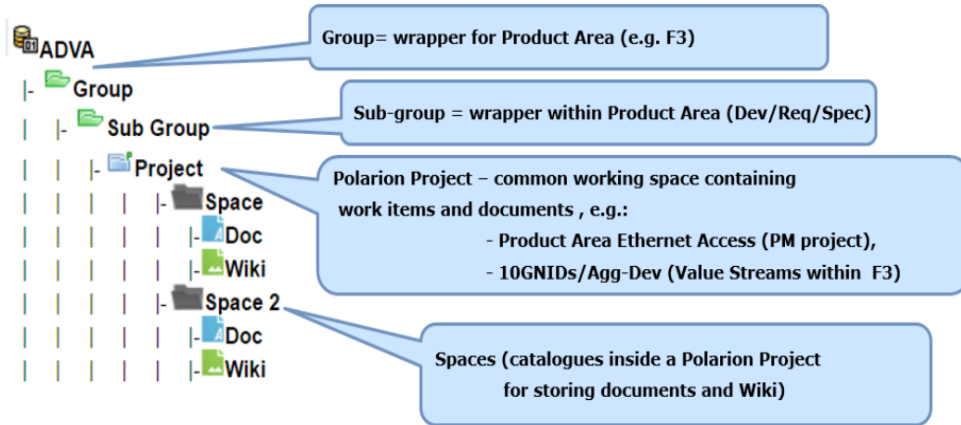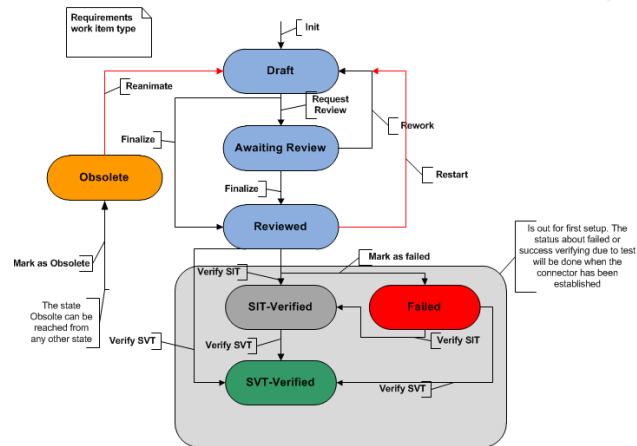

Fixed projects structure

Workflow

- Predefined workflow for global WI types
- Strait forward transitions with limited number of forks or call backs
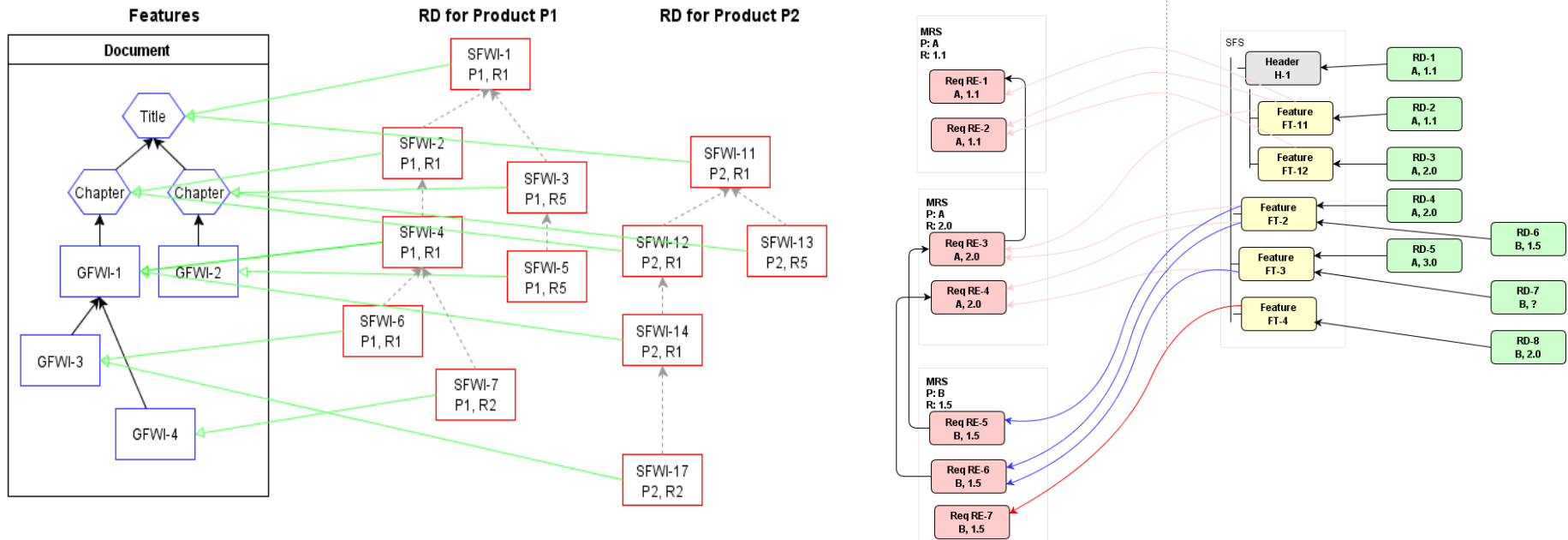- Wide usage of Workflow conditions, functions and macros

Program Item:

Requirement:

where we are what is next

Release management

- Multiple products (with intersecting functionality)
- Multiple releases (running in parallel)

Up to 50000 features for single product in 20 different releases

Reports Management

- Ad-hock reports based on LivePages (widgets) in R&D area
- Heavy reports (e.g. global traceability) as wiki by using direct access to DB extension and scheduled jobs
- Wiki tools for data management (e.g. duplication product features)
- Development only on staging environment and validation
- Export data for external reporting system


Visibility

Extensions

Extensions

Polarion extensions developed in ADVA:

- **Actions Interceptor**
  - Inject functionality (java code) to system save\delete actions
  - Available in PEP
- **Wiki Tools**
  - Advanced data processing for wikis
  - Direct DB access for heavy reports
  - Applying new functionality WITHOUT restart
- **Form extensions**
  - Custom data presentations on WI properties
  (e.g. custom fields for linked WIs or coverage stats)
- **Notification targets**
  - Notifications for users\emails defined in custom fields

Complex reports:

- Test coverage: End-to-end traceability for complete product\release
- EFL generation: Combined feature list for 50K+ items
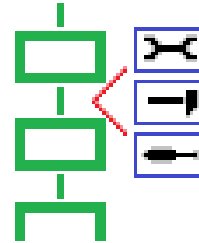
Linked USs

Work Item	Status	Planned In	Priority	Initia
FNMD-45448 - Document how an Admin can Disable the Auto-Logout Feature for Specified Users	Done	R11.3, Iter #5	Medium [50.0]	
SVT-2233 - Testing: CUC 7 - FNMD-45176 - [DTAG] It should be possible to disable auto logout option for specified users	Done	Świeżaki_50	Medium [50.0]	

EFL Info

Feature	Product	Access Points	Releases
Users Excepted from Auto Logout (FNMS-56226)	FNM		11.3.1, 11.3.2, 12.1.1, TBD, Future

ADVAnce IT!

Support and Administration
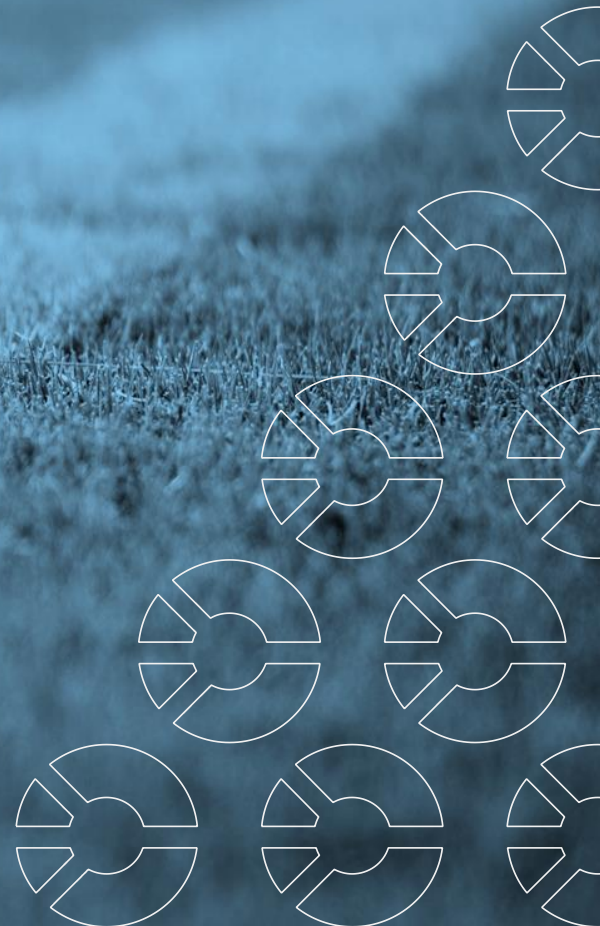
Support and Administration

Support Team: 3 analysts, 3 developers

User Handbook project: Configuration, Layout, HowTos, FAQs

Support project: Tracking problems and user requests for changes

Monitoring tools: PRTG + System Consistency Monitor (nodes availability, projects sync, external repos polling, connector state, ...)

Login Access Link	Status	Last Checked On	Message
Node1	✅	19.11.2019 03:01	Successfuly Logged in
Node2	✅	19.11.2019 03:01	Successfuly Logged in
Node3	✅	19.11.2019 03:01	Successfuly Logged in
Node4	✅	19.11.2019 03:01	Successfuly Logged in
Node5	✅	19.11.2019 03:01	Successfuly Logged in
Node6	✅	19.11.2019 03:01	Successfuly Logged in

Under control

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Backbone Configuration

3 Polarion Servers:

- Production – main server with cluster configuration and data replication
- Staging – clone of production server for internal testing
- Playground – user development activities and evaluations

Production cluster setup

Environment: CentOS 6, JAVA OpenJDK 18.9,
SVN 1.9.7, Postgres 8.4.2
7 active nodes:

- 4 for users requests (loadbalancer)
- 1 for connectors only
- 1 for long running jobs
- 1 for continuously reindex
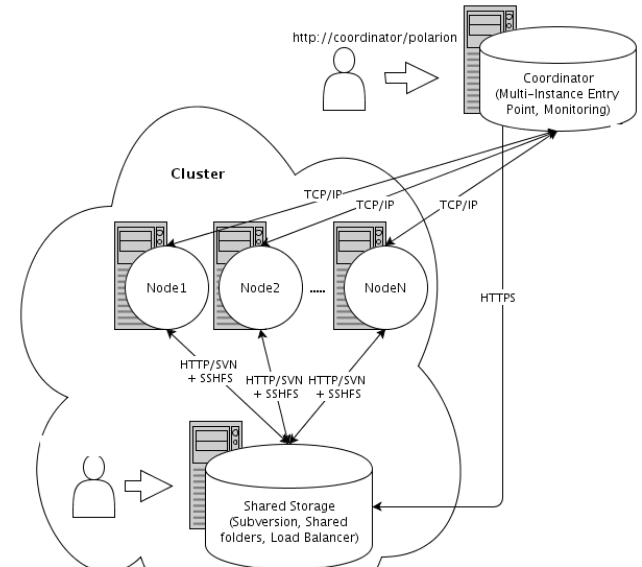
Divide et Impera

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Maintenance Activities

- Upgrading with major Polarion releases. Required mnt window: 72 hours
- Testing upgrade with staging environments (data consistency and extensions compatibility)
- Regular index refresh (incremental reindex with dump taken from node7)
- Cluster configuration allows to apply patches and new extension versions without stopping system (node by node)

Cluster simplifying maintinance

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Next steps

- Risk Management – ongoing
  - Adding the ability to identify and track risks wherever they are identified
- Time tracking
  - Today R&D time tracking is done in SAP, we want to move it closer to the backlog of the developers
- PLM\ALM Integration
  - We are looking into solution to tightly couple our PLM system with Polarion for several reasons:
  - Configuration Management, coupling logical and physical structures
  - ECAD/MCAD, connecting changes and activities to the backlog in Polarion
- Further integration in overall application landscape
  - E.g. CRM – coupling defect management in Polarion with case management in CRM

Lot's of things yet to be done…

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Thank you

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