



Room API

SAP NetWeaver Product Management

This document will cover the following topics:

- **Examples of Integration of Collaboration Rooms into SAP Applications**
- **Collaboration Room Infrastructure**
 - Collaboration Room framework
 - Different layers of Collaboration Rooms
 - User management
- **Collaboration Room APIs**
 - Introduction
 - How to use the Collaboration Room API
e.g. to create Rooms, delete Rooms, add Room parts

Examples of Integration into SAP Applications

Collaboration Room Infrastructure

Collaboration Room APIs

Embedding Collaboration Rooms via Web Services API (Planning Work Center of Business Unit Analyst in ERP2005)

Welcome Mike de Wolf [Help](#) [Personalize](#) [Log Off](#) 

Collaboration | [Advanced Search](#)

Home | Manager | Employee | **Business Unit Analyst**

Overview | Analytics | Service Map

Overview | History | Back | Forward

Detailed Navigation

- Work Overview
- Monitors
- Planning**
- Master Data

Services

[Create Planning Round](#)
[View Planning Data](#)

Portal Favorites

[Rules for Cost Centers](#)
[Income Statement](#)

Planning Rounds

Active Planning Rounds | **Approved Planning Rounds**

Planning Round	Start Date	Due Date	Number	Progress	Open ISRs
Operating Expenses 2006: 1st Planning Round	02/22/05	03/02/05	5	0	14
Research Projects 2006: 1st Planning Round	01/02/05	03/02/05	200	50	5
New Business Case 2006: Rough Cut Planning	01/07/05	02/28/05	55	80	0

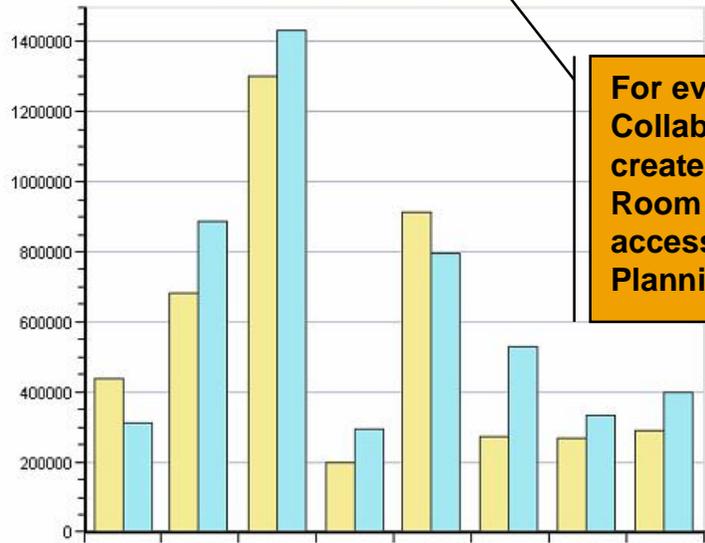
Page 1 of 1

Status of 01/31/05, 4:49 PM [Refresh](#)

Budget Consumption Overview

My Cost Centers - Actual/Plan - Current and YTD Validity of Data: 02/01/2005 04:55pm

Display as:



For every Planning Round a Collaboration Room is created. The Collaboration Room is the central place to access all data related to this Planning Round

Collaboration Room for Planning: Overview Page

The screenshot displays the SAP Enterprise Portal 6.0 interface. The browser title is "Overview - SAP Enterprise Portal 6.0 - Microsoft Internet Explorer". The address bar shows the URL: http://p106845:50000/ir/j/portal?NavigationTarget=CollaborationConnector://portal_content/com.sap.ip.collaboration/Rooms/80db6a25-eda4-2710-9a9a-82cf8013dacf/wor. The page features a navigation menu with options like Home, Collaboration, and Express Planning. The main content area is divided into several sections:

- Room Information:** Displays details for "Express Planning 2006", including the responsible party (BUA01) and a 0% status. A welcome message in German is also present.
- Express Planning: Statusübersicht:** Shows a table with a 0% return rate and a list of users with their progress percentages.
- Room Link List:** Provides links to documents, discussions, guidelines, instructions, links, news, and public documents.

A yellow callout box with the text "The Planning Room Template contains planning specific pages and applications" points to the "Express Planning" link in the Detailed Navigation menu and the "Express Planning: Statusübersicht" section.

Benutzer/Schritt/Teilschritt/Objekt	Status	Abarbeitungsgrad
Dahl, Gary		0%
Smith, Peter		0%
Kerry, Joe		0%
Woo, Steve		0%
Brown, Fred		0%

Example: SAP Learning Solution and Collaboration Rooms

SAP Learning Solution enables you to set up virtual learner communities where students can speedily and efficiently exchange information with each other

The screenshot displays the SAP Learning Solution interface. The main content area is titled 'My Training Activities' and shows a table of training courses. A 'Collaboration' window is open for the 'Personal Protective Equipment' course, listing available collaboration rooms. A red arrow points from the text above to the 'Rooms' link in the collaboration window.

Course	Delivery Method	Schedule	Location	Progress	Duration	Start now	Rooms
Business French	Classroom	Start 08/16/2005 At 10:00 End 10/22/2005 At 12:00	Training Center Vienn	100%	4 min	Start now	
BlackBerry	WBT	Released until Unlimited		--	0 min	Start now	
Dreamweaver MX WBT	WBT	Released until 12/31/2005		--	0 min	Start now	
Personal Protective Equipment	WBT	Released until Unlimited		--	0 min	Start now	Rooms
Microsoft Certification Online Test	Online Test	To be taken by: Unlimited		2	9 min	Start now	

Example (xRPM): Collaboration Rooms Integrated into Project Planning

The screenshot displays the SAP Project Execution interface. The top navigation bar includes 'Home', 'Portfolio Management', 'Project Execution', 'Project Overview', 'Resource Management', 'xRPM Admin', and 'xRPM U/WL'. Below this is a 'Project Dashboard' with links for 'Proposals', 'Project Analytics', and 'Settings'. The main content area is split into two panes: 'Project Info' on the left and 'Project Details' on the right. The 'Project Info' pane shows project details for 'Cygnus', including priority, phase (Design), budget, schedule, risk, and staffing status. A red box highlights the 'Collaboration Room' link in the left sidebar. The 'Project Details' pane shows a form for project configuration, including fields for Project Name, Project ID, Master Project, Subcategory, Project Type, Technology Type, Project Description, Location, Geography, Priority, Execution Status, Project Phase, Time Unit, and Allocation Unit. A 'Save' button is located at the bottom of the form.

**Once you have found the right project resources with xRPM,
invite them into their future virtual working space**

INFORMATION TO ACTION – INFORMATION BROADCASTING

Subscribe
Feedback
Notes
Search



Microsoft Internet Explorer provided by SAP IT

Welcome John Smith

Comparison of Net Sales

The Variance for Accessories and Office Products seem to be critical. As November hasn't closed yet, please watch these figures.

Modified: 11/13/03 11:38:12 AM
Precalculation Date: 11/16/03
Priority: High
Created By: Smith, John
Modified By: Smith, John

Lost Deals

Lost Deals in 2002 and 2003 divided by Reasons

Modified: 11/19/03 3:36:44 PM
Precalculation Date: 11/19/03
Priority: Medium
Created By: Smith, John
Modified By: Smith, John

Sales Analysis

Geographical Sales Analysis with location of Top 50 Customers

Modified: 11/19/03 10:33:06 AM
Precalculation Date: 11/19/03
Priority: Medium
Created By: Smith, John
Modified By: Smith, John



ItelO Welcome Susan Summer

Corporate Home | Business Area | Mailbox | Collaboration | Business Explorer
News | Info Map | About Us | Events | Employee Self-Service | Shopping | My Info | Bulletin Board | Weekly Menu

Documents

Detailed Navigation

- Overview
- Documents
- Discussion
- Sales Reports
- Room Maintenance
- Public Area

Related Links

- Room Member List

Laptops Sales Team

Last Visit: Aug 10, 2005 3:52 PM

Room Documents

Text has been saved

Laptops Sales Team

Name	Size	Rating	Modified
Press Releases			4/14/05 3:53:03 PM
Pricing Guidelines			4/14/05 3:56:51 PM
Publicly Available Competitor Information			4/14/05 3:57:18 PM
ROI Reports			4/14/05 4:10:46 PM
Sales Kits			4/14/05 4:14:22 PM
Sales Training Materials			4/14/05 4:14:22 PM
89% - 39% criteria not met in last quarter	47,2 KB		8/22/05 4:59:04 PM
Laptop Sales Broadcast September	360,2 KB		8/22/05 4:55:20 PM
Sales up 50,000 \$ last Month	572,2 KB		8/22/05 4:56:53 PM

Broadcast into KM
(ad-hoc, scheduled, event-driven)



Microsoft Internet Explorer provided by SAP IT

Sales

Data are from November 16th

Order month	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
2003	\$ 90.189	\$ 89.956	\$ 91.533	\$ 91.197	\$ 89.803	\$ 92.322	\$ 91.583	\$ 91.962	\$ 91.569	\$ 91.652	\$ 42.423
Variance to 2002	34,6%	37,5%	36,5%	38,6%	39,4%	41,5%	39,2%	43,2%	39,2%	42,3%	1,2%
2003	\$ 66.512	\$ 68.780	\$ 69.957	\$ 69.743	\$ 68.442	\$ 67.758	\$ 69.311	\$ 69.514	\$ 69.393	\$ 69.260	\$ 38.026
Variance to 2002	-3,7%	-1,3%	-0,9%	-0,9%	-0,5%	1,0%	-0,1%	2,5%	-0,5%	2,0%	-6,1%
2003	\$ 67.477	\$ 67.527	\$ 68.414	\$ 68.348	\$ 67.464	\$ 69.154	\$ 68.827	\$ 68.973	\$ 68.869	\$ 68.885	\$ 29.581
Variance to 2002	-25,5%	-23,8%	-23,3%	-23,2%	-22,7%	-21,8%	-22,4%	-20,7%	-22,9%	-21,1%	-8,1%
Overall Result	2003	\$ 246.170	\$ 246.262	\$ 249.904	\$ 249.287	\$ 245.810	\$ 252.233	\$ 250.721	\$ 251.469	\$ 250.632	\$ 110.630
Variance to 2002	-1,3%	1,0%	1,6%	1,2%	3,8%	2,4%	5,0%	2,0%	4,4%	5,4%	

Shares in November 2003

Trends in 2003

provided by SAP

Broadcast into KM
Folders within
Collaboration Rooms

Examples of Integration into SAP Applications

Collaboration Room Infrastructure

Collaboration Room APIs

- **Collaboration Room Framework combines the functional capabilities of**
 - Portal and
 - Knowledge Management

- **Collaboration Room API**
 - Provides abstraction
 - Offers scenario-oriented access to room functionality

Three main parts of SAP NW Portal and KM framework are used to store rooms and room-related information

■ Portal Content Directory (PCD)

- ◆ Used to store the portal-related parts of existing room instances such as worksets, pages, and iViews.
- ◆ Also used as a store for the room templates that make the room creation process much easier for end users.

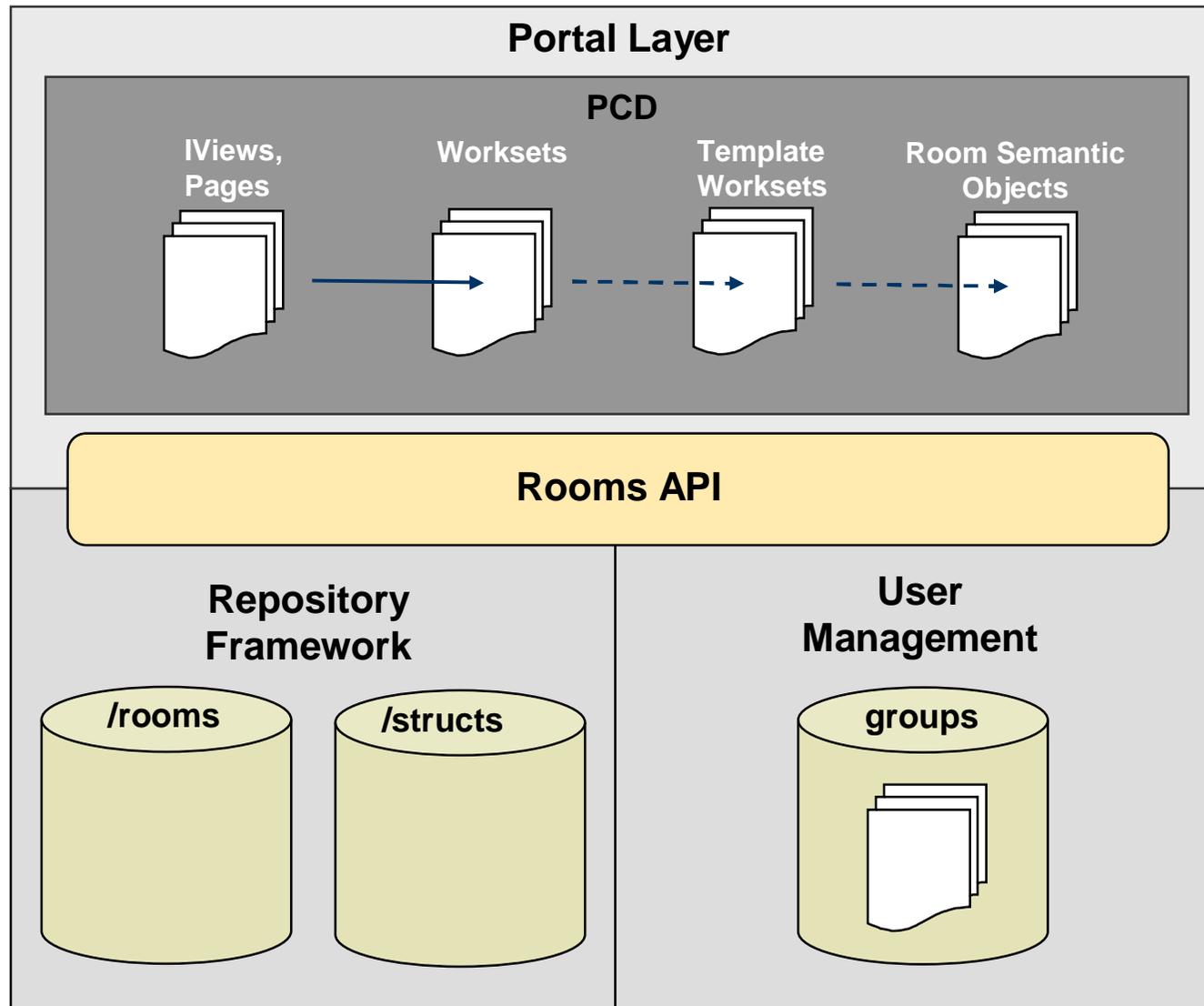
■ User Management

- ◆ Used to store user-to-room and user-to-room role assignments.

■ Repository Framework (RF)

- ◆ Used to create a semantic object for each room.
- ◆ These room objects hold all room information that is not stored in one of the other two layers.
- ◆ This includes the name and description of the room, and other basic information.

Architecture Overview: Portal/RF/UM



Location

- **portal_content/com.sap.ip.collaboration/worksets**
 - Worksets which are used when creating a Collaboration Room Template
- **portal_content/com.sap.ip.collaboration/TemplateWorksets**
 - Worksets of Collaboration Room Templates
- **portal_content/com.sap.ip.collaboration/room_part_worksets**
 - Worksets which are used when creating a Collaboration Room Part Template
- **portal_content/com.sap.ip.collaboration/RoomPartTemplateWorksets**
 - Worksets of Collaboration Room Part Templates
- **portal_content/com.sap.ip.collaboration/rooms**
 - pcd objects of instantiated collaboration rooms (not visible)

Permissions

Configuration permissions guide

- <https://www.sdn.sap.com/irj/sdn/howtoguides> → SAP NetWeaver 7.0
-> User Productivity -> Running an Enterprise Portal -> [How to Configure Initial Permissions for Initial Content in SAP NetWeaver.](#)

8. Set permissions to Collaboration content.

This section is only relevant if you installed Collaboration in your portal.

Set the permissions as follows:

- Folder: `/Portal Content/Content Provided by SAP/Collaboration`
 - Role: **Super Admin** [Owner/EU-on]
 - Role: **Content Admin** [Full Control/EU-on]
 - Role: **System Admin** [Read-Write/EU-on]
 - Group: **Everyone** [None/EU-on]

If you have integrated Collaboration Rooms into your portal, do the following as well:

- Folder: `/Portal Content/com.sap.ip.collaboration`
 - Group: **Everyone** group [None/EU-on]

Note:

- The `Rooms` sub-folder should inherit this permission also. This permission setting is necessary for users to be able to navigate within Collaboration-based rooms and view their content at runtime.
- If the rooms are available to authenticated portal users only, you can instead add the **Authenticated Users** group with *EU-on* permission.
- Folder: `/Portal Content/Content Provided by SAP/Admin Content/Collaboration Administrators`
 - Role: **Super Admin** [Owner/EU-on]
 - Role: **Content Admin** [None/EU-on]

Repositories

■ /rooms

- Storage of Collaboration Rooms with properties like description, roles, etc.

■ /room_structures

- Storage of structures of the room e.g. which folders belong to a room.

■ /room_extensions

- Standard repository which is used when creating storages for rooms.

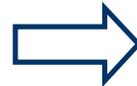
■ /room_stores

- Former store concept storage. Should not be used anymore.

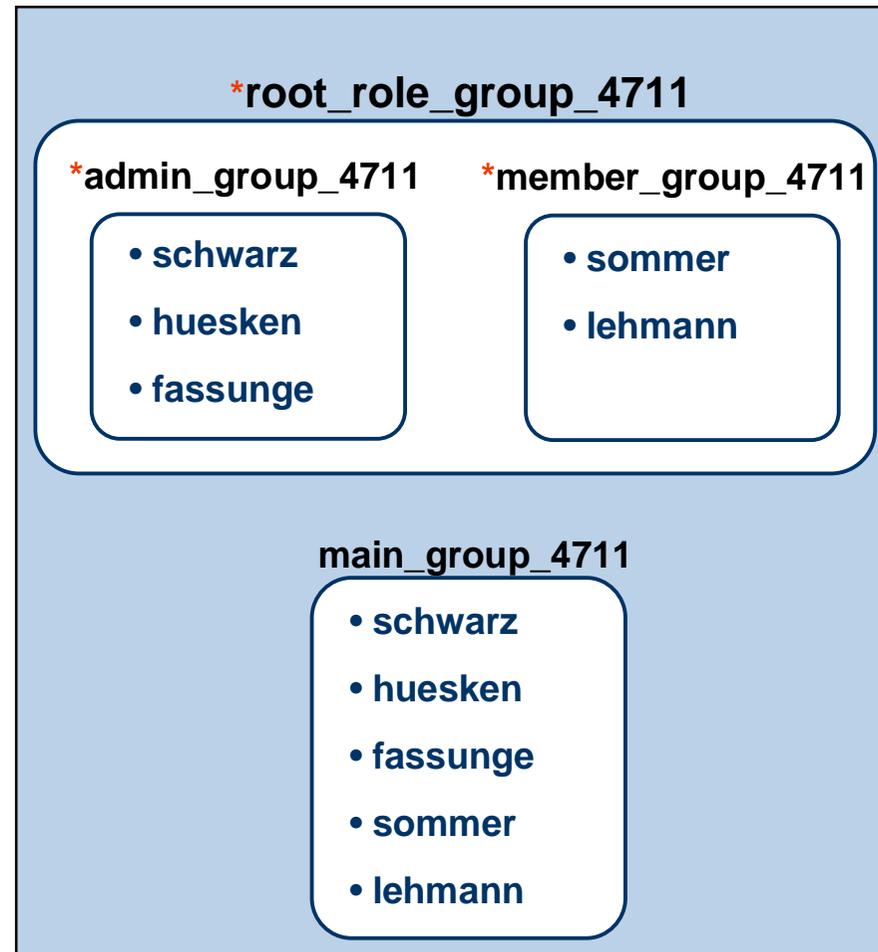
Example Room 4711

RoomRole	User
owner	schwarz
admin	huesken
admin	fassungge
member	sommer
member	lehmann

* hidden group
(not visible in normal
portal navigation)



User Management



Configuration Framework stores information about templates, categories, extensions, etc.

- **System Administration**

- ➔ **System Configuration**

- ➔ **Knowledge Management**

- ➔ **Collaboration**

What happens when a Collaboration Room is being created? – Steps performed by the Collaboration Room framework:

1. Application calls

- **The Rooms API method createRoom() and**
- **Passes all relevant data for the new room as a parameter**

2. The Collaboration Room backend calls the User Management API to

- **Create a user group containing all users of the new room**
- **Create a user group for each room role containing the users assigned to the role in question**
- **Create a so called root role group - a virtual role group which contains all other role groups as children**

3. Repository Framework API is called to

- Create a new folder resource in a special repository that represents the room itself
- Set the name, description, and so on of the room as properties of the new room resource
- Create a link from the room resource to the room *Structure* folder
- Set ACL permissions for the room resource

4. The Portal Connector API is called to

- Copy the template workset (including pages and iViews) into a special PCD folder
- Map all room parameters (including the hidden parameters such as room ID and so on) to the iView parameters according to the mapping rules defined in the template

5. Groupware API is called to

- Send invitation e-mails to all users of the new room

6. Status Engine API is called to

- Create a status event for the room creation

7. At each extension point during the room creation process

- Extension framework calls the extensions defined in the template to enable the connection to backend systems and to add additional functionality to the new room

Examples of Integration into SAP Applications

Collaboration Room Infrastructure

Collaboration Room APIs

Actions

- **Create new rooms**
- **Check for existence of rooms**
- **Retrieve existing rooms by ID**
- **Retrieve rooms for a given user**
- **Retrieve rooms with a given privacy**
- **Retrieve most/least visited rooms**
- **Create or delete typed relations between rooms**
- **Search for typed relations between rooms**
- **Delete rooms**

Room-Instance-Based Information Functionality

- Room name
- Room description
- Creation date of the room
- Version of the room object
- Date of the last modification of the room
- Date when the room was last entered by a given user
- Date when the room was last entered by any user
- Internal/external room access URL
- Unique ID of the room
- Internal/external room parameters
- Room categories
- Template name
- Template description

Room-Instance-Based Information Functionality (cont.)

- Room privacy
- Lock state
- Hidden state
- Room owner
- Room users
- Room roles
- Initial room role
- Admin room role
- Members of a given room role
- Room roles of a given user
- Check whether a user is room member
- Check whether a room has public content
- Usage information for the room
- Room events
- Room parts
- Position of room parts in the *Detailed Navigation* iView

Modifications of a Room instance

- Room name can be changed
- Room description can be changed
- Room owner can be changed
- Room privacy type can be changed
- Room categories can be changed
- Room parameters can be changed
- Application properties can be set at the room instance
- Hide/unhide room
- Lock/unlock room
- Invite new members to a room
- Remove users from a room

Modifications of a Room instance (cont)

- Change a user's roles in a room
- Add a user to a room role
- Remove a user from room roles
- Register/deregister a user in a community
- Add/remove room parts
- Change the order of room parts in the *Detailed Navigation* iView

Description

- **Entry point for other applications to access the functionality provided by the Collaboration Room framework.**

Accessibility

- **as a KM service and**
- **as a portal service in the portal environment.**
- **It does not work on an instance level, but on a factory level that provides access to specific room instances.**

Prerequisites – Compile Time

- **NW Developer Studio - Include the following jar file in your project**
 - *coll.shared.roomobject_api.jar*
- **Located under in a NetWeaver Portal**
 - *... \WEB-INF\portal\portalapps\com.sap.netweaver.coll.shared\lib*
- **Example in a NW Development Studio**
 - *Project -> Properties -> Java Build Path -> Libraries*

■ Add a reference in the portalapp.xml

```
... <application-config>
```

```
... <property name="ServicesReference,"  
            value="...,com.sap.netweaver.coll.shared,..."/>
```

```
... </application-config> ...
```

■ Example with a KM Service

```
import com.sap.ip.collaboration.room.api.IRooms;  
import com.sapportals.wcm.service.ServiceFactory;  
IRooms roomsAPI =  
(IRooms) ServiceFactory .getInstance().getService(IRooms.KM_SERVICE_ID);
```

■ Example with a Portal Service

```
import com.sap.ip.collaboration.room.api.IRooms;  
import com.sapportals.portal.prt.runtime.PortalRuntime;  
IRooms roomsAPI =  
(IRooms) PortalRuntime .getRuntimeResources() .getService(IRooms.PORTAL_SERVICE_ID);
```

Description

- Provides access to the functionality of a specific room instance.
- E.g. invite new users to a room.

Example

//Get the Rooms 6.0 API

Portal Service IRooms roomsAPI =

(IRooms) PortalRuntime.getRuntimeResources().getService(IRooms.PORTAL_SERVICE_ID);

//Get a Room

IRoom room = roomsAPI.getRoom("4711");

//throws RoomInstantiationException

Description

- Implemented by the RoomInfo object.
- Handles parts of the instance data of a RoomObject.
- Similar to a partial snapshot of a related RoomObject and can be used to create new rooms.
- RoomInfo API provides
 - ◆ mandatory field validation.
 - ◆ consistency checks for the contained data.
- RoomInfo object is also passed to room extensions to provide them with information about the room.

RoomInfo objects do not contain

- Portal-related information (worksets, pages, and so on).
- Room content (documents, business objects, and so on).

Description

- Provides access to the user-related functionality of a room instance
 - ◆ E.g. changing the user-role assignments.
- Implemented by a RoomUsers object
 - ◆ Contains the user-role assignments for a specific room.

Reasons why the user-related functionality has been separated from the RoomObject API

- Keep rarely used methods together, but separated from the RoomObject API methods.
- Changes to the RoomUsers object do not affect the corresponding room immediately.

RoomUsers API is coupled with

- **Status Engine**

- ◆ All changes to the user-role assignments are tracked by the Status Engine.

- **The e-mail messaging features of the Collaboration framework.**

- ◆ For example, when a new user is assigned to a room, an invitation e-mail is sent to the user.

Room Users and Extension engine

- **An instance of the RoomUsers interface is also passed to room extensions at certain extension points to provide a set of affected user-role assignments to the extension (for example, added room users or removed room users).**

Example

```
public void changeUserRoles() throws RoomInstantiationException, UMException
{
    //Get the Rooms 6.0 API Portal Service
    IRooms roomsAPI = (IRooms)
PortalRuntime.getRuntimeResources().getService(IRooms.PORTAL_SERVICE_ID);

    //Get a Room
    IRoom room = roomsAPI.getRoom("4711");

    //Get the initial role of the room
    IRoomRole newRole = TemplateDataFactory.
        createRoomRole(room.getInitialRoleName());
}
```

Example (cont.)

```
//Get the Room Users
```

```
IRoomUsers roomUsers = room.getRoomUsers();
```

```
IUser newUser = UMFactory.getUserFactory().getUserByLogonID("MyName");
```

```
roomUsers.addUserRole(newUser.getUniqueID(), newRole);
```

```
String[] userIds = roomUsers.getAllUsers();
```

```
//iterate over all room users
```

```
for(int i=0; i<userIds.length; i++)
```

```
{
```

```
    IRoomRole[] userRoles = roomUsers.getUserRoles(userIds[i]);
```

```
    //... do something with the user's roles
```

```
}
```

```
//Apply all changes to the Room and send no notification emails
```

```
room.setRoomUsers(roomUsers, false);
```

Description

- Implemented by the room relation manager
- Can be obtained from the Rooms API
- Provides methods for creating or deleting relations between rooms
- Each relation has a specific relation type and relates a source room with a target room

Provides methods for searching existing relations by

- Source room
- Source room and relation type
- Target room
- Target room and relation type

Remark

- No semantic connection (e.g. no role inheritance, content sharing)
- Only a link between two rooms that makes navigation between the two rooms easier

Example

```
import java.util.List;
import com.sap.ip.collaboration.room.api.IRooms;
import com.sap.ip.collaboration.room.api.relman.IRelationManager;
import com.sapportals.portal.prt.runtime.PortalRuntime;
import com.sapportals.wcm.repository.ResourceException;

public void relateRooms() throws ResourceException
{
    String sourceRoomId = "4711";
    String targetRoomId = "4712";

    //Get the Rooms 6.0 API
    Portal Service IRooms roomsAPI = (IRooms)
        PortalRuntime.getRuntimeResources().getService(IRooms.PORTAL_SERVICE_ID);
```

Example (cont)

```
//Get the RelationManager
```

```
IRelationManager relMan = roomsAPI.getRelationManager();
```

```
//Retrieve a list of possible relation types
```

```
List types = relMan.getAllAssociationIds();
```

```
//Relate two rooms with the first available relation type
```

```
relMan.relateRoom(sourceRoomId, targetRoomId, (String) types.get(0));
```

```
//Search for target rooms of room "4711"
```

```
List targetRooms =
```

```
    relMan.getRelatedRoomsFromRoom(sourceRoomId, (String) types.get(0));
```

```
String roomId = (String) targetRooms.get(0); //roomId should be "4712" now
```

```
//Delete relation
```

```
relMan.unrelateRoom(sourceRoomId, targetRoomId, (String) types.get(0));
```

```
}
```

Description

- Provides access to the room-related status events that are automatically logged during system operation

The following functionality is provided

- Retrieval of status events related to a certain room
- Retrieval of room usage data

Status events

- Can be retrieved using the RoomObject API or
- Can be retrieved using the Rooms API (specified by its ID)
- Possibility to filter events by
 - ◆ time stamp,
 - ◆ status action (defined in RoomStatusAction), and
 - ◆ user who caused the events.

Room usage data

- Room specific usage data can be accessed using the RoomObject API and the Rooms API.
- Non room specific usage data regarding the most visited or least visited rooms is accessible using the Rooms API only.

Example

```
//imports for Collaboration Rooms
```

```
import com.sap.ip.collaboration.room.api.IRoom;  
import com.sap.ip.collaboration.room.api.IRooms;  
import com.sap.ip.collaboration.room.api.IRoomStatusEvent;  
import com.sap.ip.collaboration.room.api.RoomStatusAction;
```

```
//imports for Portal
```

```
import com.sapportals.portal.prt.runtime.PortalRuntime;
```

```
public void retrieveUserChangeEvents() throws RoomInstantiationException  
{
```

```
    //Get the Rooms API
```

```
    Service IRooms roomsAPI = (IRooms) PortalRuntime  
        .getRuntimeResources().getService(IRooms.PORTAL_SERVICE_ID);
```

```
    //Get a room
```

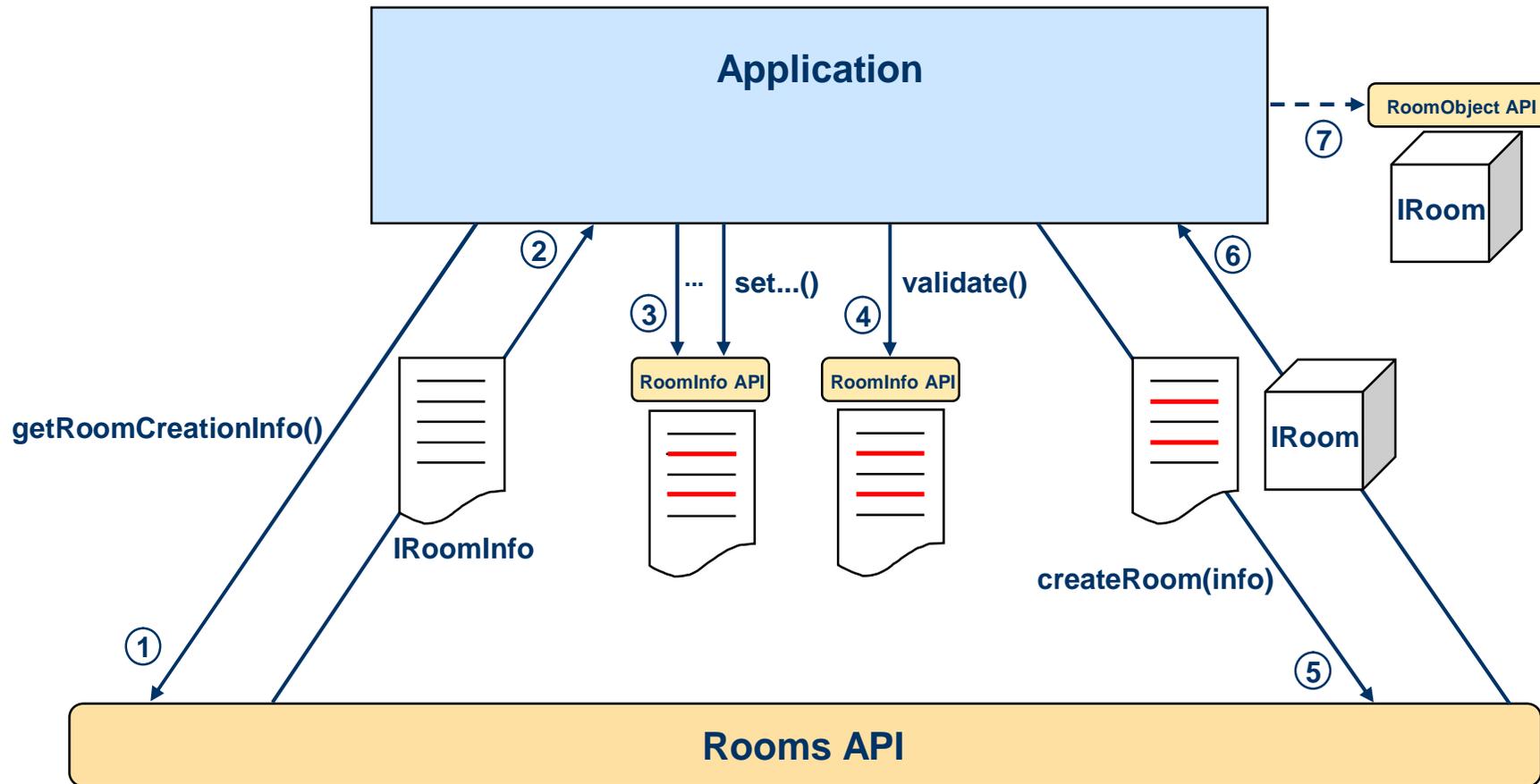
```
    IRoom room = roomsAPI.getRoom("4711");
```

Example (cont)

```
// get all user related status events for the room
IRoomStatusEvent[] roomEvents = room.getRoomEvents(
    0, // no time restriction = since room creation
    new RoomStatusAction[] {
        RoomStatusAction.ROOM_ADD_USER,
        RoomStatusAction.ROOM_REMOVE_USER,
        RoomStatusAction.ROOM_CHANGE_USER_ROLE
    },
    null, // all users 50 // at most 50 events
);

for ( int i = 0; i < roomEvents.length; i++ )
{
    // process events
    // ...
    // for instance: print message
    System.out.println( roomEvents[i].getMessage() );
}
}
```

Rooms API Structure – Room Creation



Collaboration Rooms

1. Get RoomInfo Object

- Needed to create a new room
- Call Rooms API method `getRoomCreationInfo()`

2. Rooms API returns an empty RoomInfo object

- Contains no data

3. Application calls at this RoomInfo object instance methods like

- `setName()`, `setDescription()` and other `set...()` to set the required data
- Otherwise default value are taken from the room template (called by `setTemplateName()`)

4. RoomInfo method `validate()`

- Check for missing or inconsistent data in the RoomInfo object
- Returns true, if everything is ok
- If it returns false, a further call to `getValidationErrors()` provides more information about the error

5. Rooms API method createRoom()

- RoomInfo object is passed as a parameter

6. The IRoom Object is created and a reference is passed back to the application

7. Room creation process

- If creation in the rooms backend was successful, an instance of IRoom is returned
- If there were any errors during the room creation process, a RoomCreationException is thrown. The exception contains more information about the error itself, or the causing exception as a nested exception.

8. The application uses the returned instance of IRoom for further tasks (RoomObject API).

Rooms API Structure – Room Creation Example

```
public void createRoom() throws      TemplateNotFoundException,  
                                     NoSuchRoleException,  
                                     UMException,  
                                     RoomCreationException  
{  
  
    String templateName = "Template1";  
  
    String roleName = "Role1";  
  
    //Get the Rooms 6.0 API Portal Service  
    IRooms roomsAPI = (IRooms)  
        PortalRuntime.getRuntimeResources().getService(IRooms.PORTAL_SERVICE_ID);  
  
    //Get Template Related Infos  
    ITemplate template = roomsAPI.getRoomTemplate(templateName);  
  
    IRoomRole role1 = template.getRoomRole(roleName);  
  
    //Get an empty RoomInfo object  
    IRoomInfo roomInfo = roomsAPI.getRoomCreationInfo();  
}
```

Rooms API Structure – Room Creation Example

//Fill RoomInfo object with values

```
roomInfo.setName("New Room Name");
```

```
roomInfo.setDescription("New Room Description");
```

```
roomInfo.setTemplateName(templateName);
```

```
roomInfo.addRoomParameter("ParamName", "ParamDesc", "ParamValue", false);
```

//Set User Role Assignments

```
IUser owner = UMFactory.getUserFactory().getUserByLogonID("SmithJ");
```

```
roomInfo.setOwnerId(owner.getUniqueId());
```

```
roomInfo.addUserToRole(owner.getUniqueId(), role1);
```

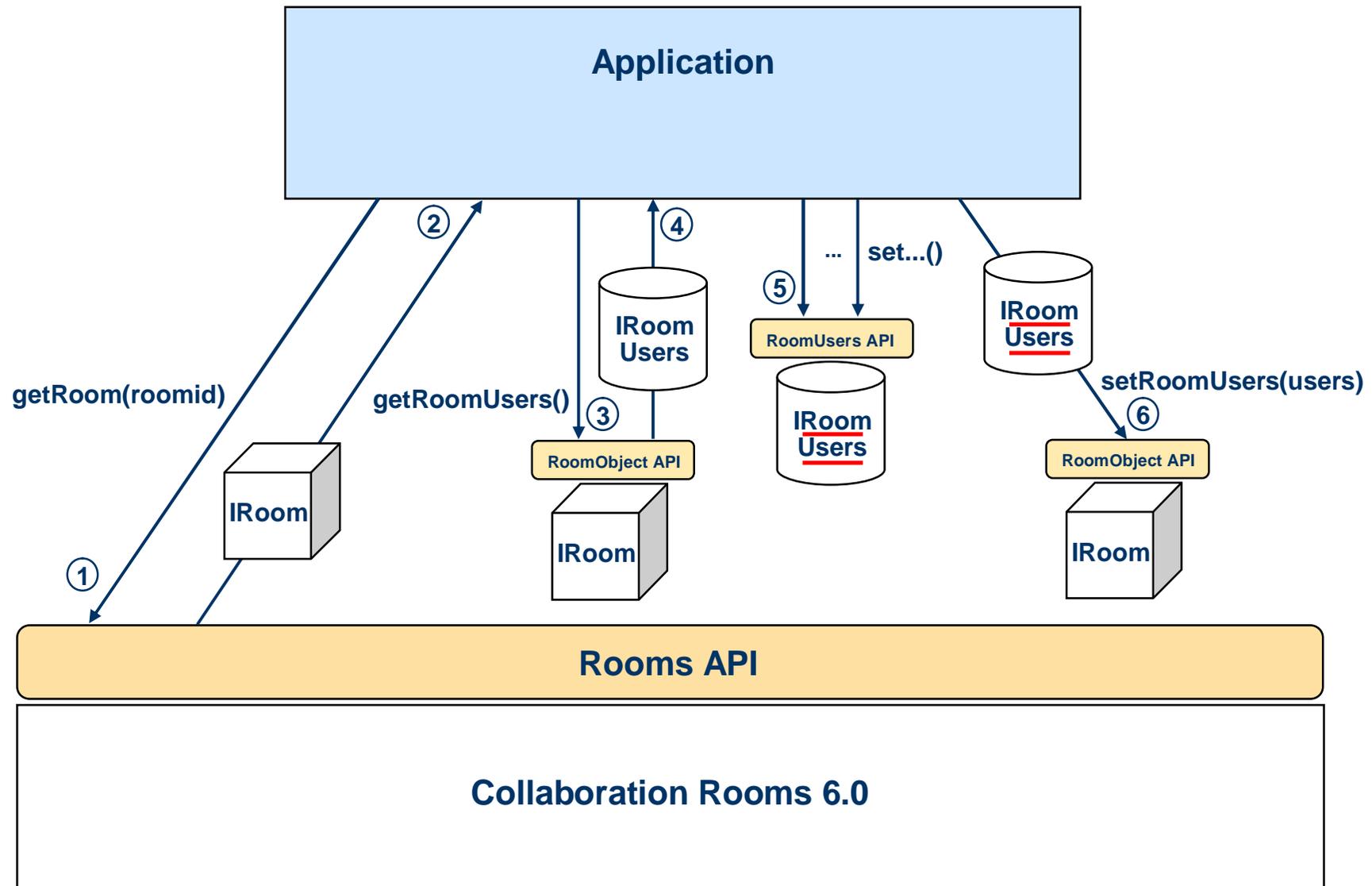
//Finally Create the Room

```
if(roomInfo.validate())
```

```
    roomsAPI.createRoom(roomInfo, true);
```

```
}
```

Rooms API Structure – Change a Room



Rooms API Structure – Change a Room

- 1. Call to the Rooms API method `getRoom()`**
 - Passing the room ID of the room as a parameter
- 2. Rooms API returns an instance**
 - If a room with the given ID exists
- 3. Room instance method `getRoomUsers()`**
- 4. An instance of `IRoomUsers` is returned**
 - Holds the current user-room role assignments
- 5. RoomUsers API**
 - To modify user-room role assignments
 - E.g. `addUserRole()` to invite a new user to the room
- 6. Room instance method `setRoomUsers()`**
 - Passes RoomUsers object as a parameter
 - Applies all changes to the room

Rooms API Structure – Change a Room

```
public void changeUserRoles() throws RoomInstantiationException, UMException
```

```
{
```

```
    //Get the Rooms 6.0 API Portal Service
```

```
    IRooms roomsAPI = (IRooms)
```

```
    PortalRuntime.getRuntimeResources().getService(IRooms.PORTAL_SERVICE_ID);
```

```
    //Get a Room
```

```
    IRoom room = roomsAPI.getRoom("4711");
```

```
    //Get the initial role of the room
```

```
    IRoomRole newRole = room.getInitialRoomRole();
```

```
    //Get the Room Users
```

```
    IRoomUsers roomUsers = room.getRoomUsers();
```

```
    IUser newUser = UMFactory.getUserFactory().getUserByLogonID("SmithJ");
```

```
    roomUsers.addUserRole(newUser.getUniqueId(), newRole);
```

```
    String[] userIds = roomUsers.getAllUsers();
```

Rooms API Structure – Change a Room

```
//iterate over all room users
for(int i=0; i<userIds.length; i++)
    {
        IRoomRole[] userRoles = roomUsers.getUserRoles(userIds[i]);
        //... do something with the user's roles
    }

//Apply all changes to the Room and send no notification emails
room.setRoomUsers(roomUsers, false);
}
```

Further Information

→ Public Web

- **NetWeaver Developer's Guide:**
<http://www.sdn.sap.com/irj/sdn/devguide2004s> → Enabling User Collaboration
- **Commented Coding Samples:**
http://help.sap.com/saphelp_nw04s/helpdata/en/7d/c69c42d706c66ae10000000a155106/frameset.htm

→ SAP Service Marketplace

- **Role-specific Learning Maps (available for purchase):**
<http://service.sap.com/rkt-netweaver> → Available OKPs for SAP NetWeaver

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