Information System Integration

The Information System Integration ES bundle seamlessly integrates third-party geospatial information systems (GIS), such as ESRI ArcGIS, command and control information systems (CCIS), and SAP ERP on a single collaborative platform.

Consequently, public security and defense organizations can see the real-time locations of various people, units, and equipment in their GIS system, thanks to Global Positioning System (GPS) technology, while getting updates from SAP ERP with details about the current status and capabilities of those units, also updated in real-time as needed using enterprise services. With this bundle, users can create, maintain, and edit the relationships of organizational units (referred to in enterprise SOA terms as Functional Units) in public security and defense organizations (such as, for instance, brigades, companies, and platoons), deployed or otherwise. In addition, they can read, change, and update the attributes of positions, personnel, and materials within these units.

Three main processes are enabled with the deployment of this ES bundle. They include:

- Executing an initial data load for geospatial and command and control information systems
- Displaying status information about available resources on demand or on regular basis
- Allocating resources to consumers

Audience

The Information System Integration ES bundle can greatly enhance the day-to-day operations of national and international public services, defense, and security organizations, as well as emergency management organizations that must deal with natural disasters, terrorist attacks, and other civil crises. Any industry striving to increase the efficiency of their resource management, particularly those deploying Functional Units, such as military organizations and police, fire, and medical departments, for instance, will benefit from the services in this bundle.

The needs of defense organizations and public services organizations overlap to a great extent. While the examples given in this wiki may describe one or the other, bear in mind that this ES bundle is designed to support both the types of organizational structures that exists in public services organizations (police forces, fire departments, SWAT teams, medical personnel such EMTs, and so forth) as well as those of defense organizations. Examples from one or the other industry may be given, but the services can be deployed effectively in either environment.

Some of the roles that may benefit from the system integration offered by this bundle include:

- Commanding officers
- Interaction center agents
- GIS and CCIS users
- Military leaders of operational tasks

The System Landscape

The Information System Integration ES bundle leverages enterprise SOA through communications between SAP ERP 6.0, SAP Defense Forces and Public Security (DFPS) 6.0, and third-party GIS and CCIS such as ESRI ArcGIS and others.

SAP DFPS component enhances the standard SAP functions by providing functions for the following business tasks and processes:

- Organizational Flexibility (mapping organizational structures and material and personnel resource planning)
  - Each organizational element (department or unit, for example):
    - Has certain properties, responsibilities, tasks, and missions
    - Requires personnel, material, and financial resources in order to perform its tasks
    - Is included in different organizational structures (organizational structure, command and support relationships, and so on) and works in conjunction with other organizational elements in accordance with the relationships thereby defined
  - You can use the functions in the Organizational Flexibility area of the Defense Forces & Public Security component to map these organizational bases and to carry out your resource planning.
  - This complete and integrated mapping provides you with the required basis in the system to:
    - Control processes in Human Resources, Logistics, Accounting, and Funds Management
    - Enable organizational changes to take effect automatically in the relevant processes
    - Enable you to plan and execute operations and exercises from the domestic base

- Accounting and Funds Management
  - The Defense Forces & Public Security component provides armed forces, police, and aid organizations with the functions they need to carry out account assignment and budgeting for objects in the domestic base and operations in a distributed system landscape.

- Materials Management
In the Defense Forces & Public Security component, Materials Management (MM) supports you when supplying armed forces, police, and aid organizations with non-consumable, individual consumable, and bulk consumable goods. Material planners and MRP controllers can plan and carry out initial supplies and other supplies for the domestic base as well as for operations and exercises. All tasks relating to supplies can be carried out in a distributed system landscape.

- **Support for Flight Operations**
  The Support for Flight Operations area supports processes carried out by airborne units in the domestic base, operations, and exercises. This includes the planning, control, and coordination of flight operations, the execution and control of maintenance, and administration. As a result, you can execute flights, from planning through to technical debriefing.

- **Maintenance**
  The Maintenance area of the Defense Forces & Public Security (DFPS) component supports armed forces, police, and aid agencies in performing maintenance tasks in the domestic base, operations, and exercises and enables the consistent distribution of maintenance data in a multi-system landscape.

### Terminology in the Information System Integration ES Bundle

Since this bundle may be deployed by users working in any number of organizations or industries where terminology describing objects that are common to all occasionally varies, some terminology has been standardized to promote simplicity and clarity.

The **Functional Unit** business object is used by services that reference solution-specific data. In contrast, the **Organisational Centre** business object is used by services that reference solution-unspecific data.

Within the industry solution **SAP for Defense & Security** the **Functional Unit** business object represents an organizational element of armed forces, police, and aid organizations. Within this industry solution you use the **Functional Unit** business object to map the business characteristics of organizational elements, mainly human resources management, accounting, materials management, plant maintenance, and flight operations. You map the relationships between **Functional Units** to represent the hierarchical or functional structures of your organization.

The term **Force Element** is a specialization of **Functional Unit** in SAP Module ‘EA-DFPS’.

<table>
<thead>
<tr>
<th>Business Object</th>
<th>Defense Forces &amp; Public Security Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Unit</td>
<td>Force Element</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Object</th>
<th>SAP ERP Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual Material</td>
<td>Equipment</td>
</tr>
<tr>
<td>Organisational Centre</td>
<td>Organizational Unit</td>
</tr>
</tbody>
</table>

See this definition of **Force Element** for more information about all that a **Functional Unit** encompasses.

### Definition of Business Object Organisational Centre

A business unit belonging to an organizational structure of a company. Examples of such organizational structures are the organizational plan or the company’s financial structure. This kind of unit can assume one or more business roles such as organization, cost center, branch, and reporting line unit.

Note: The **Organisational Centre** business object is part of the ERP foundation. The business content described here refers only to the enterprise services relevant to SAP ECC.

### Functionality at a Glance

The Information System Integration ES bundle offers services that allows users to:

- Retrieve information from SAP ERP about relationships between functional units, both lower-level and higher-level.
  - For example, if the entry-level functional unit is a company of troops, users can drill up the hierarchy to view data pertaining to the battalion and the brigade to which it belongs or, conversely, down to the platoon-specific data beneath it.
  - Key values such as name, description, and status (e.g., active, planned, etc.) are available, as well.
- Search for all relevant units and personnel by using attribute filters such as short or long name, position ID, status, and address data such as street name and number, city, or postal code.
- Read, modify, and update details specific to a functional unit.
  - These can include the unit’s ID, name, active period, and status of current task objective.
  - In some cases a unit’s readiness level may also be available, along with other pertinent data such the number and names of attached personnel and their individual training and skills.
- Create, examine, modify, and update the relationships between functional units.
  - If a platoon deployed in a field operation is scheduled to receive supplies or other relief by a second platoon, for instance, a user can quickly see the dates and times of the scheduled activity, along with any other related information. If necessary, the user can switch one relief squad for another or modify any potential inaccuracies, and then save the ensuing results.
- Read attribute details of personnel within a functional unit, along with their position and rank and rank group (e.g., generals, officers,
non-commanding officers, and other enlisted personnel).

- Retrieved data can include the relationship of each individual with given command and control operations, as well as the precise periods of their assignment (including the active dates, and even hours, of each).
- Users can view such information as the first and last name, gender, place and date of birth, address (e.g., street number, city, state, and postal code), nationality, and all skills and qualifications of any identified individual.
- Read either in total or grouped by ranks or rank groups of functional units.
- The bundle enables users to determine the quantity and degrees of ranks in a given unit. For instance, reviewing Battalion A, a user can see that it has 400 enlisted individuals, 200 non-commanding-officers (NCOs), and 30 officers.

For details on Service Operations, Business Objects and Process Components, please check the ES Workplace.

Current Demands in the Public Services and Defense Industries

The New Geopolitical Environment

To better address the realities of today’s geopolitical environment, organizations in the public services and defense industries have developed an ecosystem that is highly complex and includes participants from many different segments. Frequently operations are conducted in a joint or coalition environment in which members contribute complementary capabilities that when put together form a total mission capability package.

The Need for Enhanced Operational Agility

Chief among the priorities of any organization in these industries is the continued enhancement of its operational agility. The source of such agility lies in knowledge that is understandable, contextually relevant, and actionable. From enlisted servicemen to commanding officers, all personnel across a situational landscape must have ready access to information that bears upon the issue at hand. Moreover, they must be able to quickly grasp and interpret that data, and they must be able to act upon it at will. The more fully organizations integrate their structures, command and control approaches, concepts of operation, supporting systems, and personnel, the more agile they become, since the flow of information between them is likely to be at once consistent, accurate, and fluid.

Common Ground

In short, regardless of their vantage or location, all participating public services and defense organizations need a common ground from which they can see the same information. Each organization can then plan and execute its functions based on this shared perspective, and thus achieve true interoperability. The Information System Integration ES bundle is designed toward furthering all of these objectives.

The Past: Pain Points without the Information System Integration ES Bundle

Because most current GIS and CCIS systems have not been designed to work together or to be integrated with ERP backend systems, data exchange formats have remained complex and the vocabulary required to describe resources is inconsistent. As a result, the public security and national defense arenas have experienced disjointed and ineffective resource management efforts. It is impossible for operations to be fluid when command and control are uncoordinated. Nor can organizations achieve maximum interoperational agility if information and intelligence are disconnected. Without reliable integration, case management and evidence processes break down, strategies for ascertaining identities fail, personnel are not available when needed, and equipment malfunctions. At worst, people get hurt.

Today: The Benefits of Deploying the Information System Integration ES Bundle

Deploying the Information System Integration ES bundle, operational planners can gain real-time overviews of supplier capabilities and resources, resulting in more efficient flows of material and equipment. Operational and resource information is available within a single user interface, so command and control personnel can allocate resources to meet the demands of comprehensive strategies and tactics. Public services and defense organizations can link people, information, and applications across heterogeneous systems while ensuring that mission-critical processes such as force planning and asset management are reliable, scalable, and secure.

The information pipeline that is created via this bundle’s functionality provides a variety of benefits, including:

- Improved collaborative interoperability and horizontal integration
- Integration of human resource, material, maintenance, procurement, and performance management
- Integration of back-office and core operational processes
- Total resource visibility and asset management for real-time situational awareness and transparency
- Enhanced levels of efficiency
- Data delivered wherever and whenever needed provides front-line personnel and headquarters commanders with new levels of situational awareness
Front-line personnel and headquarters commanders are provided with new levels of situational awareness
- Better decision-making
- Accurate accounting of assets and liabilities enables leaders to make informed judgments about planned and unplanned missions
- Leaders can make informed judgments about planned and unplanned missions
- Improved operations support
- Up-to-the-minute status reports keep logisticians and planners informed of fast-changing circumstances that impact equipment and intelligence needs of deployed forces
- Logisticians and planners remain informed of fast-changing circumstances that impact equipment and intelligence needs of deployed forces

How To Use This ES Bundle

This following section will explore three use cases for the Information System Integration ES bundle. Each use case provides concrete examples and shows how different outcomes can be achieved by using the enterprise services in different combinations. While these examples illustrate a few of the ways that this ES bundle could be used, the intention is to show the flexibility and reusability of these business objects and enterprise service operations so that you will have a clearer understanding of how to best deploy them in your own environment. This wiki is also a space for you to share knowledge and collaborate with others who are implementing the Information System Integration ES bundle.

Use Case 1: Executing an Initial Load for Geospatial and Command and Control Information Systems

A terrorist attack has just occurred in a major city and multiple public services, defense, and emergency management organizations have been activated to respond to it. These include federal, state, and local law enforcement departments, fire departments, medical teams, and units from the National Guard, to name a few.

The officer in charge of the operation has quickly established an interactive command and control center with a team of agents on hand to assist. Before the commanding officer can make any further decisions, he must first gain a comprehensive overview of the resources that are immediately available, and then of the those than can be called in to provide back up support if and when they are needed.

Searching for Functional Units

The agent assigned to coordinating available firefighting resources executes a search for all possible functional units located within his specified geospatial boundary. To do so, he invokes the Read Functional Unit service operation, which uses the Functional Unit business object.

Selecting and Loading Levels of Functional Units

The bundle's functionality provides for the display of the hierarchy level of all units, thus enabling the agent to select them from as far up or down in the structure hierarchy as desired. Triggering the Find Multiple Hierarchy Level Assignment by Organisational Centre service operation, which uses the Organisational Centre business object, the agent acquires a list of the firefighting units in the geo-zone and selects those available for immediate deployment. Once he loads them into his GIS, they can be passed on for review by the commanding officer.

Use Case 2: Displaying Available Resources

The commanding officer of the current operation must now ascertain the specific details of the individual personnel in each of the units that have been loaded into the GIS, along with the resources available to support them.

To do so, he has directed yet another agent in the interaction center to display which among them are immediately available for action within a half-mile radius of the attack site.

After quickly delineating the boundary in his GIS (no service operations have been required yet), the agent selects all of the units and respective supporting resources that the CO wants to view and then triggers a variety of service operations to filter the resources according to criteria such as type and status.

Displaying and Reviewing Available Personnel

The CO can now look for individuals with particular training, skills, and availability, in a given geo-zone. For example, if the agent has been directed to find someone with CPR training, he can invoke the Find Employee by Elements service operation, which uses the Employee business object. This service returns a list of employees who have undergone CPR training. The CO sees that one of these is an EMT and is available. He then pulls up the EMT’s contact information, by triggering the Read Employee Basic Data service operation. The CO can continue to employ this method at will upon any unit that has been loaded into the GIS and thus determine the amount, type, and characteristics of people and resources needed to build a coherent task force, together with any required support systems.

Displaying and Reviewing Available Material

If the EMT is lacking material resources required to perform the task to which he has just been assigned, the CO can invoke the Find Individual Material by Elements_V1 enterprise service operation, which uses the Individual Material business object. To see details about the tools, equipment, and supplies returned in the pervious search, the CO can trigger the Read Individual Material enterprise service operation.
Use Case 3: Allocating Resources to Consumers

The commanding officer of the operation responding to the terrorist attack described in the previous scenarios is now ready to allocate resources to the units and individuals that require them to perform their tasks. Not only does the CO need to allocate current resources to his considerable manpower, but also he needs to plan for continued backup support, should the operation extend beyond the timeframe that has been estimated to resolve the crisis.

Building a Task Force

There are literally thousands of individuals needed in the field, with just as many units of equipment, vehicles, helicopters, jets, and the like needed to support them. Those units that have been designated as "first responders" must go directly to the site of the attack. And while more units must be deployed in the second tier of deployment to support them, they all need to function as synergistically as possible to meet the demands of the comprehensive strategies and tactics that must be brought to bear upon the situation.

To implement this plan, the CO and his team have to consider a host of factors. For each unit and each individual requiring the support of additional resources and individuals, he must determine the relationships that have been pre-established between them, if any have been at all. For those units that do not have existing relationships with the personnel or equipment required to provide support, new relationships must be established.

For instance, in this case, a specific type of fire engine is required, since it is the only one whose equipment can be used to deal with circumstances at hand. The engine may be in use elsewhere, or it could be receiving maintenance. If so, another must be found to take its place. In such a case, the initial relationship between the unit and the engine to which it belongs must be modified and updated.

Ascertaining Relationships between Units, Personnel, and Resources

To see list of relationships associated with the unit in question, an agent selects the unit and invokes the Find Assignment by Organisational Centre service operation, which uses the Organisational Centre business object. Next, he selects the desired engine from the resulting list, and triggers the Read Organisational Centre Assignment service operation, which will display all of the data that the agent needs.

Creating and Modifying Relationships between Units, Personnel, and Resources

As it turns out, the engine that the unit needs has been sent out for maintenance. Seeing this, the agent quickly searches for and locates another engine of the same type. Next, he verifies the second engine's status and availability by invoking the Check Organisational Centre Assignment. The second engine is fully operable, but committed to another unit. Since the second unit does not need the engine at this time, however, the agent reassigns it to the first unit by invoking the Update Organisational Centre Assignment, and then, using a similar process, assigns two drivers to bring the engine to the attack site.

The Information System Integration ES bundle can be deployed in this fashion to construct an entire task force that is comprised of units from a single organization, or for a force that consists of a variety of units from diverse organizations and countries.

iCOD Logistic Assessment Report (LOGASSESSREP)

The Logistic Assessment Report (LOGASSESSREP) as described in the Allied Data Publication (ADatP-3) is used to standardize the method for informing superior headquarters of the commander's logistics status and to provide an assessment of the overall logistics situation for forces, together with intended or recommended action.

SAP Case Management is used for storing the Logistic Assessment given for an organizational unit for a specific point in time. Each LOGASSESS-Case has a 1:1-relationship to an organizational unit from Organizational Management. The Logistic Assessments of subordinate units can be determined by the command relationship / task organization. Organizational Units without access to an SAP ERP-System have the option to fill in an Adobe Interactive Form, for uploading and creating a LOGASSESS-Case out of it automated. If the user decides to incorporate LOGASSESSREP's of subordinate units to his LogAssRep the two LOGASSESS-Cases are linked. Having released a Logistic Assessment it cannot be changed any longer and the user shall have the option to create the following documents:

- ADatP-3-Message J082 (XML-MTF)
- Adobe form (PDF-File)
- PowerPoint Slide (PPT-File)
The Industry Composite Application Development (iCOD) LOGASSESSREP was designed as a lean logistic reporting application and is based on:

- Organizational structure
- Own logistic situation
- Existing reports from subordinates

Each reporting level aggregates to levels below and creates own assessments.

Services from different modules were consumed by the iCOD LOGASSESSREP as follows:

- HCM Core Services
- Records Management
- Pure DFPS industry-specific Services (part of ES Bundle Information System Integration)
- DFPS industry-enhanced (core) Services (part of ES Bundle Information System Integration)

### Overview of services which are used by this iCOD

<table>
<thead>
<tr>
<th>Service Operation</th>
<th>Technical Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read Employee Basic Data</td>
<td>EmployeeBasicDataByEmployeeQueryResponse_In</td>
<td>Provides personal data on an employee. Purpose in this use case: To get name and rank of selected person by using selection criterion PERSNR.</td>
</tr>
<tr>
<td>Find Employee By Elements</td>
<td>EmployeeERPSimpleByElementsQueryResponse_In</td>
<td>This inbound operation uses selected selection criteria to determine all persons (employees). If you implement the Defense Forces &amp; Public Security component and have activated the enhancements for this service available for this component, you can use this inbound operation to determine persons, including the Authority, Responsibility, and Activity rankings specified for them. Purpose in this use case: To select a person.</td>
</tr>
<tr>
<td>Find Employee by Elements</td>
<td>OrganisationalCentreERPEmployeeByElementsQueryResponse_In</td>
<td>This inbound operation determines the assigned persons (employees) for an organizational unit (Business Object Organisational Centre). If you implement the Defense Forces &amp; Public Security component and have activated the enhancements for this service available for this component, you can use this inbound operation to determine the assigned persons (including the Authority, Responsibility, and Activity rankings specified for the positions or persons) for a structure element. Purpose in this use case: To get authorized and actual personnel of organisational unit.</td>
</tr>
</tbody>
</table>
| Find Organisational Centre Basic Data By Elements | OrganisationalCentreBasicDataERPByElementsQueryResponse_In | This inbound operation uses selected selection criteria to determine organizational units (Business Object Organisational Centre).

If you implement the Defense Forces & Public Security component and have activated the enhancements for this service available for this component, you can use this inbound operation to determine structure elements and their readiness.

Purpose in this use case:
To select Organisational Unit |

| Read Organisational Centre | OrganisationalCentreERPByIDQueryResponse_In | This inbound operation uses selected selection criteria to read the data for one or more organizational units (Business Object Organisational Centre).

If you implement the Defense Forces & Public Security component and have activated the enhancements for this service available for this component, you can use this inbound operation to determine structure elements and their readiness.

Purpose in this use case:
To get the name of Organisational Unit selected by ID |

| Find Multiple Hierarchy Level Assignment By Organisational Centre | OrganisationalCentreERPMultipleHierarchyLevelAssignmentByOrganisationalCentreQueryResponse_In | This inbound operation determines all higher-level and lower-level organizational units for an organizational unit (Business Object Organisational Centre). In contrast to the inbound operation Find Assignment by Organisational Centre (OrganisationalCentreAssignmentByOrganisationalCentreQueryResponse_In), not just the Organisational Centre that is directly assigned to it in a hierarchical relationship is read; rather all higher-level or lower-level Organisational Centres up to the level in the organizational structure that you specified in the request are read. You can specify the structure level up to which the Organisational Centre is to be read for the higher-level and lower-level objects independently of each other.

If you implement the Defense Forces & Public Security component and have activated the enhancements for this service available for this component, you can use this inbound operation to determine the command and support relationships of a structure element.

Purpose in this use case:
To get subordinate organisational units of selected Organisational Centre |

Using This ES Bundle with Partner Applications

Data Provisioning and Process Integration between CCIS and SAP ERP

Process Integration provides Command & Control Information Systems (CCIS) seamlessly with resource data and makes information available for the tactical operator in one User Interface. In return operational data (e.g. Geospatial Data) could be used by logistic processes. Business Processes between SAP ERP and Command & Control Information Systems are linked by using SOA.

Business value of using enterprise SOA was demonstrated during NATO's Coalition Warrior Interoperability Demonstration (CWID) in June 2008.

Joint cooperation with:

- EADS - German Army C2IS
- Systematic - Sitaware C2IS Suite
- ESRI - Endorsed Business Solution (EBS)
- Screen Paper Communication - MilGISProLage
- FGAN - CliCC

SAP - German Army C2IS by EADS
Description:
The purpose of this showcase was to show:

- initial data fill
- ongoing update and
- integrated operation

of C2IS and logistics/administrative systems on deployed task force level.

Enterprise Service were consumed for:

**Organizational Management**

- Query organisational units (name and hierarchy)
- Read defense specific attributes

**Defense Logistics**

- Operational status and
- Stock levels

**Partner Engagement**

Prototypical extension of the fielded Army Command & Control Information System (Army CCIS) of EADS (e.g. GE/FR-Brigade).

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**SAP - Sitaware by Systematic**

SAP is investing in partnerships with manufacturers of C2ISs; for example, in Scandinavia with the Systematic company and its standard SitaWare and IRIS Forms product families, of which parts were also used in the General Armed Forces C2IS.

SAP generally uses the SAP NetWeaver Basis functions to integrate SAP ERP and the C2IS. Resource information can thus be made available directly in the C2IS from the user interface of the C2IS. Conversely, it is also perfectly feasible that, for example, the item date of a defect item of technical equipment (such as a tank) is transferred to the logistics system. It is to be stressed that this integration was implemented on the basis of standard interfaces, specifically with SOA technology, so that other information systems such as those from national manufacturers can also be integrated in the same way.

Description:
The purpose of this showcase was to demonstrate:

- initial data fill
- ongoing update and
- integrated operation

of C2IS and logistics/administrative systems on deployed task force level.

Enterprise Service were consumed for:

**Defense Logistics (MM and PM)**

- Request Refill (Create Purchase Request)
- Damage Report (Create Maintenance Notification)

**Partner Engagement**

Prototypical extension of a C2IS standard solution (ESRI based) fielded in several countries.
SAP - Endorsed Business Solution (EBS) by ESRI

Description:
The purpose of this showcase was to demonstrate:

- GIS integration of SAP Business Suite Objects

Enterprise Service were consumed for:

Organizational Management

Partner Engagement
SAP Endorsed Business Solution by ESRI.

SAP - MilGISProLage by Screen Paper Communication

SAP - Screenpaper - ESRI solution integration is a proof of principle of bridging from Resource Management into the Geo-spatial space using enterprise SOA.

Description:

- MilGISPro enables planning and refinement of the logistics situation on digital maps
- Georeferenced logistics decision support by using organizational and logistics data provided by SOA

Enterprise Service were consumed for:

Organizational Management

- Query organizational units (name and hierarchy)
- Read defense specific attributes Defense Logistics
- Stock levels

Partner Engagement
Prototypical extension of a fielded georeferenced situation display component "MilGISPro" of the German Armed Forces Joint CCIS (ESRI based).
SAP - CliCC by FGAN

Description
The prototypic system CliCC (Collaboration in Command and Control) is a powerful and robust intelligence fusion management system which provides situational awareness of the current enemy picture in relation to friendly forces through the Common Operational Picture (COP).

The purpose of this showcase was to demonstrate how to integrate a logistics/administrative system by using SOA.

Enterprise Service were consumed for:

Organizational Management
- Find Unit by Name
- Defense specific attributes (Read and Update)

Partner Engagement
Prototypical extension of a fielded situation awareness and military intelligence solution “CliCC” of FKIE (Lotus Notes Client application)

Future Directions
Planned future directions for the Information System Integration ES bundle include creating functionality to further integrate SAP PM and SAP MM so that logistics can be as fully integrated as the connection with personnel are in this release via SAP HCM.

System Requirements
- SAP ERP 6.0
- SAP enhancement package 3 for SAP ERP 6.0
- SAP enhancement package 4 for SAP ERP 6.0
- SAP DFPS
- SAP DIMP
- Human Capital Management (EA-HR)
- Financial Extension (EA-FIN)
- PLM Extension (EA-PLM)
- SCM Extension (EA-SCM)
- Public Services (EA-PS)
- Public Sector Extension (IS-PS)
- SAP NetWeaver Process Integration (formerly XI) (if the SAP Defense Add-on PI content is used for converting SAP ERP data into Military Message Text Formats)
- Other SAP applications or components: only in case of converting data into Military Message Text Formats (MTF), or using PI Content of SAP Defense Add-On
Success Stories

NATO Exercise CWID 2008

What is the CWID?

Overview

"The NATO Coalition Warrior Interoperability Demonstration (CWID) is an annual NATO Military Committee approved event designed to bring about continuous improvement in interoperability for the Alliance. Allied Command Transformation (ACT) provides direction and management to the program, while NATO and Partner nations sponsor interoperability trials with specific objectives defined by ACT and National Leads. The NATO CWID program focuses primarily on testing and improving the interoperability of NATO and national C4I systems, with particular emphasis on those that would be deployed within a NATO Response Force (NRF) or Combined Joint Task Force. In addition to bilateral technical testing, NATO CWID provides a venue to conduct technical testing of fielded, developmental and experimental systems in the context of a coalition scenario. The event runs concurrent and shares elements of a common scenario with the Chairman of the U.S. Joint Chiefs of Staff CWID annual event." (Source: Trifold, NATO CWID Management Team, March 2008)

NATO CWID 2008 - Goals and Objectives

NATO CWID goals and objectives are developed and agreed to by the NATO Senior Management Group (SMG). The 2008 goals and objectives for NATO CWID are:

1. Support NRF C4I Interoperability Testing and Validation
   - Involve NATO and Nations assigned to NRF 13 and 14 (NRF 15 and 16 as observer) in the planning and execution of NATO CWID in order to support achievement of C4I Interoperability in preparation for deployment cycle.
   - Conduct testing to assess the interoperability between C4I systems required in NRF 13 and 14 based on the information exchange requirements and interoperability test requirements.
   - Record, store and report interoperability test data to NRF Commander and nations.

2. Support NATO Network Enabled Capability (NNEC)
   - Conduct testing to support achievement of service and interoperability requirements for NNEC.
   - Test and experiment with tools and systems to enable the management and sharing of information across NATO and national security domains within expeditionary operations of NATO-led coalitions.
   - Test and experiment information integration services which promote loose coupling between systems.

3. Strengthen interoperability between current and potential force contributors to NATO and coalition operations
   - Test and assess the interoperability of systems supporting current and future expeditionary operations under NATO's lead including coalition partners

(Source: Trifold, NATO CWID Management Team, March 2008)

SAP's contribution to NATO CWID Exercise

SAP has successfully participated in the Coalition Warrior Interoperability Demonstration (CWID), an exercise conducted by NATO Allied Command Transformation (ACT) from 2005 until 2008.

During the Coalition Warrior Interoperability Demonstration (CWID) in 2008, SAP experts demonstrated the effectiveness of using SOA. In particular, the ability to operate and seamlessly integrate with command and control information systems (C2IS) used by military forces, ensuring rapid transfer of mission-critical information.

In 2008 SAP demonstrated

- the bi-directional data exchange via enterprise SOA utilizing Service Operations of this ES Bundle Information System Integration and
- an example for an Industry Composite Application Development (iCOD): the Logistic Assessment Report

iCOD Logistic Assessment Report

Defense Development and the SAP iCOD Development build up a new iCOD: Logistic Assessment Report

This iCOD is designed to support a typical Defense requirement which is used from Leaders / Managers to generate a bottom-up readiness of their units.

Typically in the Army, this reporting is started at the Company Level. A Company Commander is doing an Assessment of the readiness and is reporting this to the next level e.g. a Battalion. The Battalion Commander is doing the assessment and is summarizing / evaluating the information provided by the Company Commanders. This reporting is based on planned / authorized values of the Table of Organizations and Equipments (TO&E) as well as the actual resources assigned to the unit. But these statistical assessment then get enriched by the qualitative assessment of each commander.

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This iCOD was build as a prototype and was used as a demonstrator at CWID 2008 (Coalition Warrior Interoperability Demonstration). It has been
designed and evaluated with customers from Bundeswehr and NATO commands. The build was executed by Defense Development and SAPs iCOD Development in parallel with the development of the services themselves.

Technically it consumes enterprise SOA from:

- Organizational Management
- Personnel Administration
- Records Management
- Defense Logistics

**Related ES Bundles**

- Investigative Case Management

**Links**

**SDN and SAP Links**

- SOA Homepage on SDN
- BPX Community - Defense
- Defense Wiki
- Process Standards for the Defense Industry

**External Links**

- ESRI/SAP User Group