EUROPEAN COMMISSION - DIGIT

Service Catalogue – IS Hosting Services - Infrastructure Services Provision DIGIT Directorate

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This document presents a high-level overview of the services offered by the Infrastructure Services Provision (ISP) Directorate -DIGIT.C - with regard to Information Systems (IS) Hosting.

INTRODUCTION

Document Rationale

Our Service Catalogue (SC) Foundation Document[1] provides an overview of all the infrastructure services delivered by ISP - DIGIT.C including information system hosting. For each service element, a detailed service catalogue entry is available describing the technical details of these services

A Service Level Agreement (SLA) template for the IS Hosting Service is also available in the Service Catalogue. It identifies responsibilities of both the customer and the service provider and specifies the levels of availability, service ability, performance, operation, etc.

The present document is considered to be the single point of reference for the customer and is meant to help DIGIT customers to shape the expression of their hosting requirements. It provides guidance for choosing technical options of the IS hosting services.

To do so, this document describes the architecture elements and service attributes of typical hosting architectures that DIGIT provides and give information on how different IS hosting service elements are combined into IS hosting solutions which can address the customer's need.

In general terms, these are :

- ***business data processing application :*** **the multi-tier enterprise application,**
- ***dynamic website :*** **the two-tier enterprise web application dynamic website,**
- ***static website :*** **the single-tier enterprise web application,**
- ***interfacing application :*** **the business application oriented to service other applications,**
- ***housing***[2] (although this is not part of DIGIT's IS hosting service).

1 Service Catalogue – Foundation document – ISP DIGIT Directorate
2 Service Catalogue – Information Systems Housing Service – ISP DIGIT Directorate

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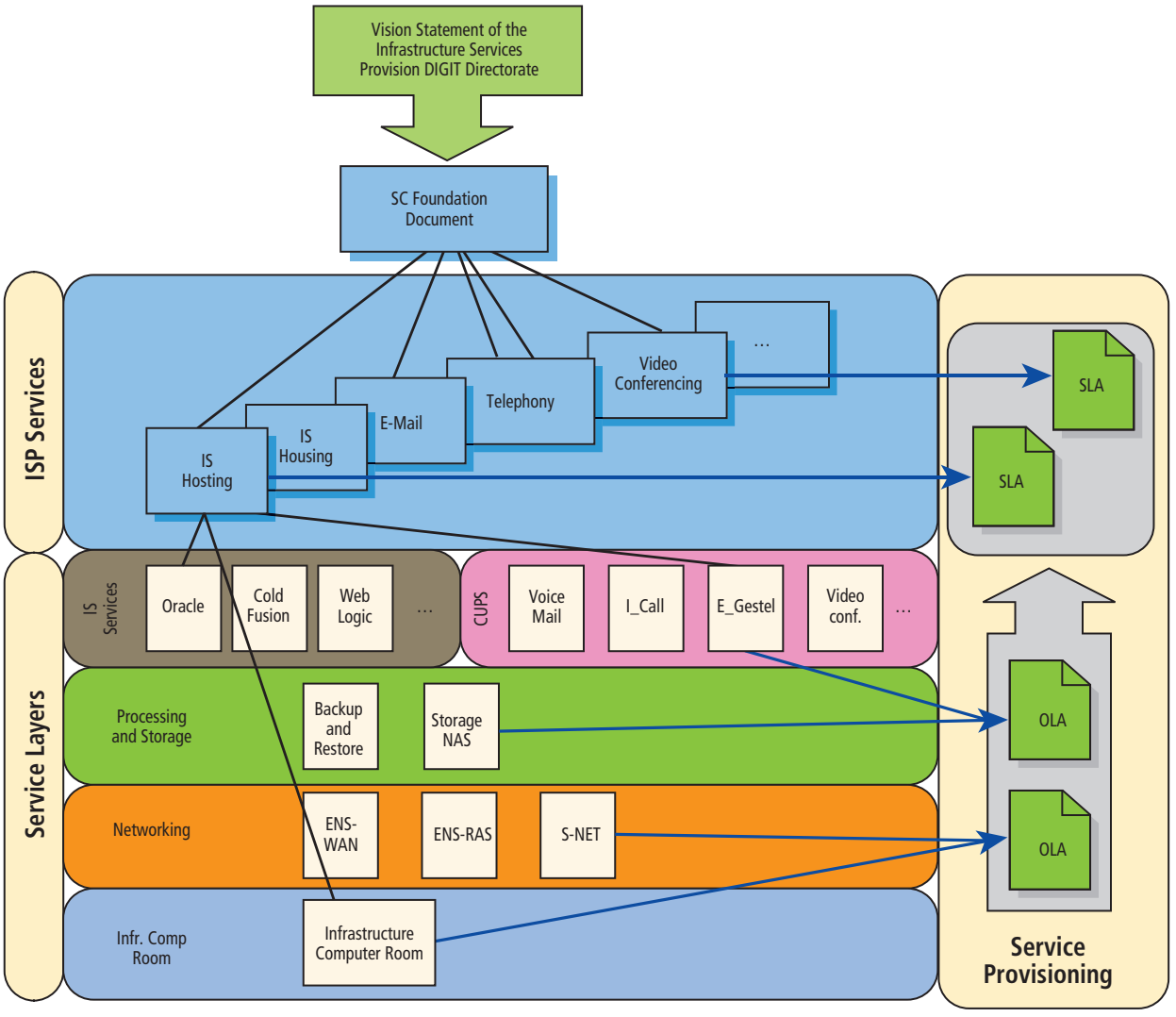

Figure 1 - Position of this document related to other documentation on Infrastructure Services Provision

Document Audience

The intended audience of this document is any party who intends to use or currently uses the information systems hosting service, or has another interest in these services. The main target audience could therefore include the Information Resource Managers (IRM) and the business application owners.

The DIGIT hosting service is available to the various Directorates-general, offices and executive agencies of the European Commission as well as other European Institutions.

Approach

The starting point for DIGIT to provide information systems hosting services is a customer expressing a need for having an information system hosted (through an approved vision document describing the business application and alternative technical solution).

This potential customer can contact DIGIT.C / CRM (Customer Relationship Management) to inquire about the options available.

DIGIT.C will then provide the potential customer with advice on the hosting project and the definition of its information system architecture. This design process composes the required service architecture by combining several hosting service elements. In exceptional cases, when DIGIT.B is the developer of the requested information system, DIGIT.B will act as the interface between the customer and DIGIT.C.

The selected architecture will have specific attributes that have a direct influence on the way the hosting service is implemented. Throughout this process, several options are offered to the customer in order to select the ones best suited with regard to the specific hosting need.

The information systems hosting services are complemented and supported by services such as networking, storage and other DIGIT.C services.

Finally, customers may request the delivery of hosting services which is supported by a service level agreement (SLA). This service level agreement describes the terms and obligations agreed between the customer and the information systems hosting services provider, i.e. DIGIT.

It should be noted that the approach as detailed above and illustrated in Figure 2 refers to hosting requests in support of policy related initiatives. The process for hosting requests related to administrative initiatives or corporate information systems (where no charging occurs) is slightly different and described further in this document.

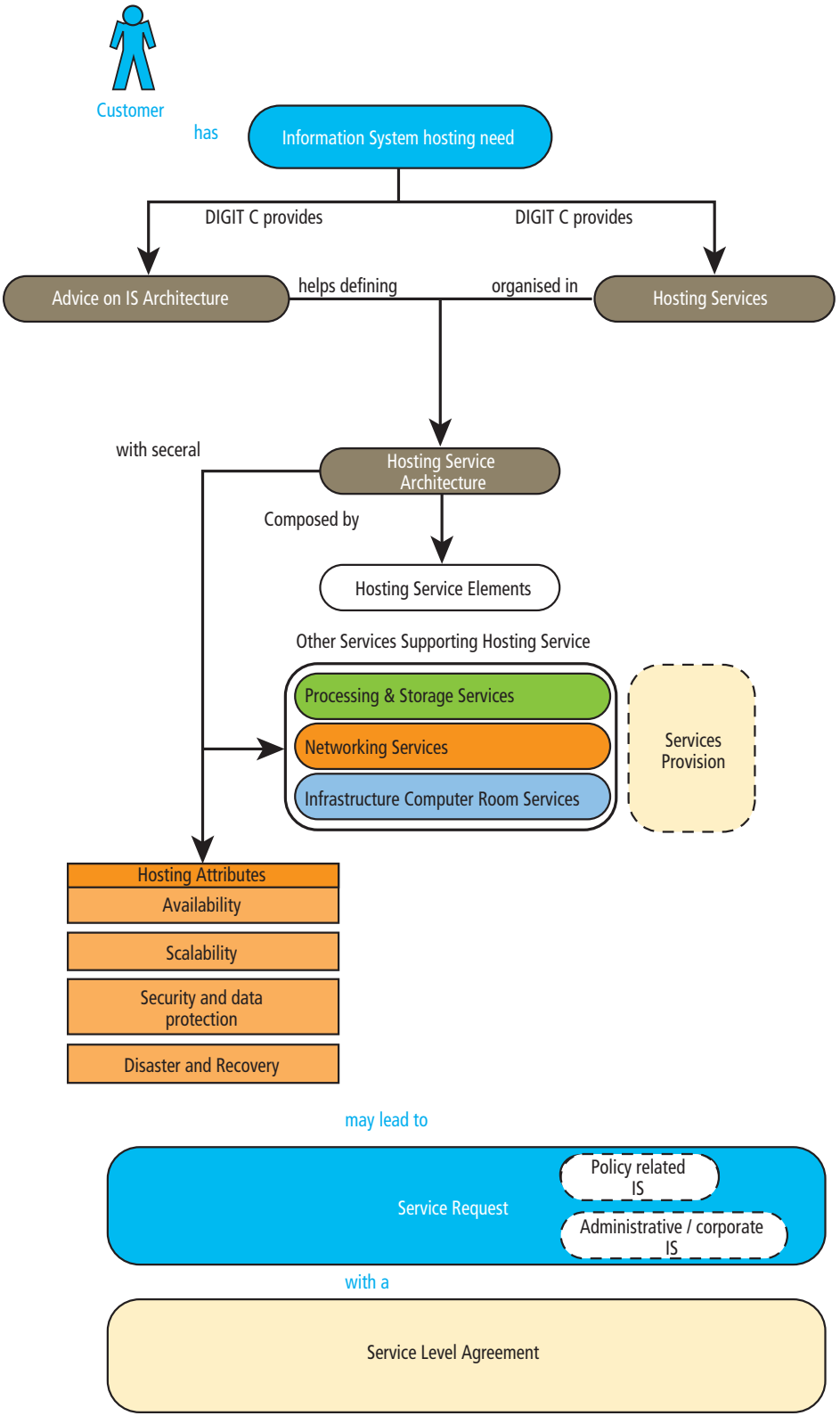

Figure 2 - Document approach

BUSINESS NEEDS

Before deciding on the service elements and attributes of a hosted information system, one needs a good understanding of the hosting needs of the customer. This understanding is the point of departure for an IS Hosting Services request.

Below is a possible categorisation of the most common hosting needs, stated in simple terms, in which most service requests will fall :

- ***Business data processing application*** **/ Multi-tier enterprise application**

  The customer wants to support one or more of its business processes via an enterprise application. This application could be an off-the shelf package or developed in-house. These applications are accessed via a website having a client-server architecture including a core transaction processing/business logic tier.

  The above need is the most usual. However, others may also be required and are listed below:

- ***Dynamic website*** **/ Two-tier enterprise web application**

  The customer wants to convey and receive information through a website. The website is dynamic, meaning it allows not only to view information but also to interact with it by means of querying or entering data.

- ***Static Website*** **/ Single-tier enterprise web application**

  The customer wants to convey information through a website. The website is named static, meaning it only allows to navigate through the different web pages and to display information. It can be compared to a newspaper or a book which only allows reading information.

- ***Interfacing application*** **/ Enterprise application oriented to service other applications**

  The customer wants to send and receive electronic messages between its systems and other external systems.

Another common need is Housing. This is not part of the IS Hosting Services but is mentioned below for the sake of completeness:

- ***Housing***

  The customer wants to use only some basic data centre functionality which includes physical facilities, server hardware and networking. All activities and software to operate these are the sole responsibility of the customer. Within this document no further reference is made towards this service as it is rather classified as another service provided by DIGIT.C[3].

3 More details in the document : Service Catalogue - IS Housing Service - ISP DIGIT Directorate

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IS HOSTING SERVICES

ISP Directorate (DIGIT.C) provides Information Systems Hosting services, including:

- Support services and advice for defining the information system architecture;
- Information systems hosting services of several technologies in a multi-tier environment. With regard to this service, the following sections will provide details on :

  - IS Hosting Service Architectures (examples);

  - IS Hosting Service Elements;

  - Other Services Supporting the IS Hosting Services (Services Structure);

  - IS Hosting Service Attributes.

IS Hosting Service Architectures (examples)

The IS hosting service architecture is a combination of several hosting service elements. This assembly caters for a specific information system hosting need and depends on the software architecture of the hosted information system. Typically, information systems, and especially, enterprise applications, can be decomposed in several abstract categories usually called tiers.

Tier	Description
Presentation tier	Groups the hosting service elements which provide features to clients, most likely via web technology.
Application tier	Groups the hosting service elements which implement the business logic of an application.
Database tier	Groups the hosting service elements responsible for saving, consulting and retrieving data.

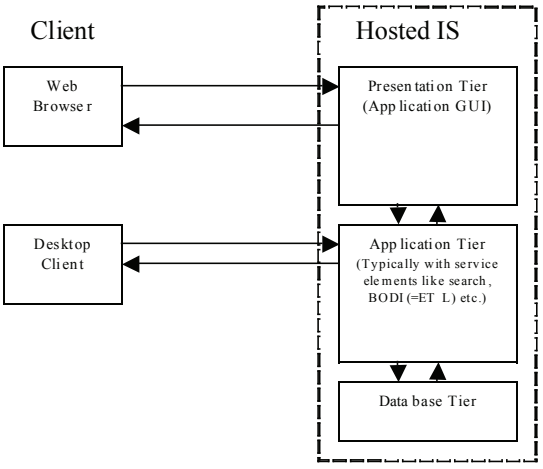
The above grouping organises the different hosting service elements in a chain of providers and consumers, e.g. the application tier provides services to the presentation tier and consumes services from the database tier.

This part of the document presents several examples of typical hosting service architectures which combine the service elements listed in appendix. The actual realisation and complexity of these architectures will vary depending on the options taken within the specific service elements. This section operates at a high level of abstraction and does not aim at providing a comprehensive list of hosting service architectures. The main goal is to demonstrate that the number of architectural tiers applied depends on the specific IS hosting need.

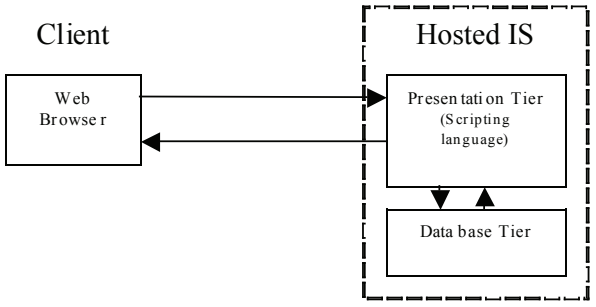
The starting point for the hosting service architectures is one of the four business needs described previously. For each of them, the envisaged hosting service architecture is depicted in the drawings presented in the next sections. The architectural tiers listed in the table above will be represented, instead of the hosting service elements. The drawings show the number of architectural tiers applied and the relationship between them.

DIGIT.C can provide support for defining the right IS hosting architecture. The customer's specific requirements will determine the configuration of the architecture and the subsequent detailed design phase.

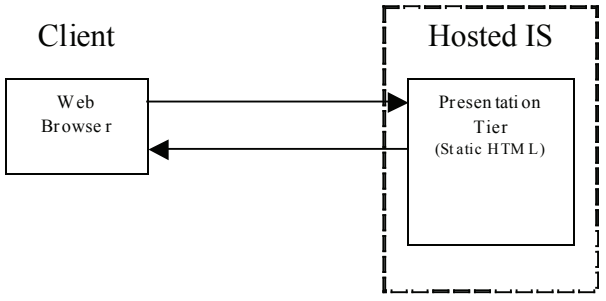
Business data processing application / Multi-tier enterprise application

IS Hosting Need	*Business data processing application* / Multi-tier enterprise application
Architecture Diagram	
Architecture Elements	With Web Client (a.k.a. Dynamic Website with Business Logic): • Web Browser displays the application's user interface via HTTP requests; • The application tier is used for data processing according to the specific business logic; • The application tier uses the "create, retrieve, update and delete" services provided by the database tier where data is saved. With Desktop Client (a.k.a. client /server architecture): • Desktop client connects directly to the application tier. The Desktop client may or may not have its own business logic; • The application tier uses the "create, retrieve, update and delete" service provided by the database tier where data is saved. Web browser clients and desktop clients may co-exist.

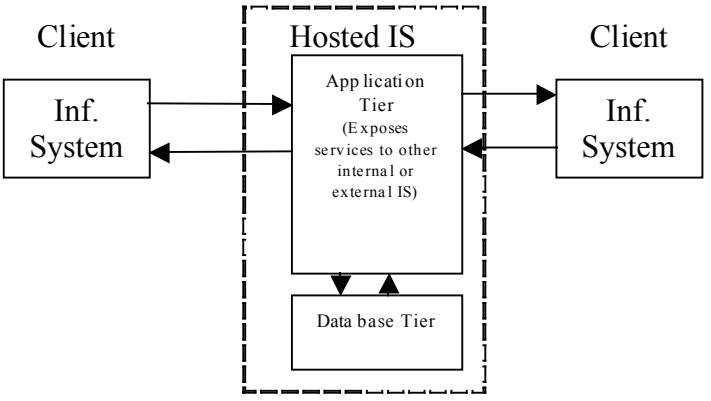
Dynamic Website / Two-tier enterprise web application

IS Hosting Need	*Dynamic Website* / Two-tier enterprise web application
Architecture Diagram	
Architecture Elements	• The client's web browser requests and displays HTML pages via the HTTP protocol of communication; • The presentation tier provides the generated HTML page to the client, typically using a server-scripting environment; • The presentation tier uses the "create, retrieve, update and delete" service provided by the database tier where data is saved.

Static Website / Single-tier enterprise web application

IS Hosting Need	*(Static Website)* / Single-tier enterprise web application
Architecture Diagram	
Architecture Elements	• The client's web browser requests and displays HTML pages via the HTTP protocol of communication; • The presentation tier provides the static HTML page to the client.

***Interfacing application* / Enterprise application oriented to service other applications**

IS Hosting Need	*(Interfacing application)* / Enterprise application oriented to service other applications
Architecture Diagram	
Architecture Elements	• The application tier exposes services to other internal or external information systems. It receives electronic requests, processes them and then passes the result to the requestor information system; • The application tier is used for data processing purposes such as messages validation, transformation, data enrichment, amongst other services; • The application tier uses the "create, retrieve, update and delete" service provided by the database tier where data is saved.

IS Hosting Service Elements

For each tier used within IS hosting service architecture, different service elements can be envisaged to perform the role of the specific tier.

Below is presented a list of the service elements currently supported, in each tier, by DIGIT.C:

- **Presentation Tier:** Webservers, WebLogic Server (web container);
- **Application Tier:** ColdFusion, Verity Search, Web Intelligence, WebLogic Server, Oracle Application Server, Business Objects Data Integrator, Geographic Information System, Windows hosting, Microsoft Office Sharepoint Service, Monitoring and Reporting, Open Source Service;
- **Database Tier:** Oracle, SQL Server.

The final choice of the service elements is fully dependent upon the specific requirements of the hosting need. More details upon the service elements can be found within appendix.

Other Services Supporting the IS Hosting Services (Services Structure)

While the hosting service elements are the core of an IS hosting solution, other supporting services are needed to reach a global IS hosting solution. These service elements will allow DIGIT.C to manage and operate the IS hosting services.

The following service layers can be distinguished:

- **Corporate User Proximity service elements**
  These services enable a strong and direct relation with the end-users. Some examples are mobile telephony services, electronic message handling services, videoconference services, telephone answering services, etc.

- **Processing & Storage service elements**
  The ability to store and process data of the hosted Information Systems. Some examples are provided: the usage of servers, operating systems, the backup and restore of data, etc.

- **Networking service elements**
  The provisioning of a secure, reliable and high performance corporate networking for both internal and external communication. This allows users to connect with hosted Information Systems both internally (within the Commission's network) and externally (outside). Some examples are provided: wireless connectivity, direct internet access, etc.

- **Infrastructure Computer Room service elements**
  The provisioning of the underlying information technology infrastructure to host Information Systems. Some examples are provided: facilities, power, cooling, building, etc.

Also essential for the global IS hosting solution is **the provisioning of processes and tools** to manage the information technology infrastructure, development, and operations. Some examples are provided: change management, incident management, configuration management, etc.

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DIGIT is currently in the process of implementing the Information Technology Infrastructure Library (ITIL) process framework. ITIL is a set of concepts and techniques for managing information technology[4].

IS Hosting Service Attributes

The decision concerning which IS hosting architecture will fit most the business need of a customer is also dependent upon the requirements a customer has with regards to specific system attributes. These attributes influence the dimensioning and configuration of the different service elements within the hosting architecture.

If a customer has set high demands with regards to these attributes, it will be likely that the hosting architecture is more expensive and complex due to extra components or solid type of servers that will be needed.

The system attributes fall into five categories:

- **Availability**
- **Scalability**
- **Security**
- **Disaster recovery**
- **Data protection.**

4 See also Service Catalogue – Service Management Implementation Foundation Document – ISP DIGIT Directorate

Availability

Concept

The availability attribute ensures that the service elements can perform their function during the agreed timeframe. High availability implies that services are continuously available to customers, with little downtime and swift service recovery. Availability of a service depends on several elements which are mainly: the complexity of the IT infrastructure components, the reliability of the components and the ability to respond quickly to faults.

Description

The level of availability the customer requires depends upon three major elements. The first element is the period during which the information system will be used, e.g. only during the week or 24/7. The second element is the type of environment concerned. The third element is the planned downtime.

A customer may request different types of environments. Below is a non-exhaustive list of environments provided by DIGIT.C. Typically a customer will use a subset of these.

- **Development**
- **Test**
- **Maintenance**
- **Stress-test** (testing the stability of a system through a virtual simulation of a heavily loaded production environment)
- **Acceptance**
- **Training**
- **Production**

The number of environments is usually linked to the in-house or external development of the information system. A minimum number of environments are usually required in both cases.

The standard levels of availability are defined in the IS Hosting SLA template (see Service Catalogue).

The type of environments and availability levels will have an impact upon the sizing and the architecture of the several service elements.

In order to reach the service level commitments or even to increase high availability and disaster recovery ability, the customer can choose three different technical solutions offered by DIGIT. These technical solutions are each related to a specific type of application:

- **Infrastructure (OS) Level Clustering** (a technique to ensure that if one server fails, another server is available to ensure continuity, this solution is standard for production and training environment);
- **Load Balancing** (a technique to spread workload between servers, processes, hard disks or other infrastructure resources, it allows a service to continue even in the face of server downtime due to server failure or server maintenance);
- **Application Level Clustering** (a method of connecting multiple application servers in such a way that they behave like a single system).

Each of the above solutions is described in detail in the "Bulletin Informatique" 3/2007 [5]. The availability of the hosted information system increases when using one, or several, of these solutions. It may therefore mean additional investments in infrastructure and the resources to maintain those.

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Scalability

Concept

Scalability refers to how well an information system can adapt to increased demands of services. There are two classical strategies to achieve the scalability of an information system:

- **Vertical Scalability Strategy,** which means adding additional processing power to an exiting server system, i.e. swapping the configuration of the server.
- **Horizontal Scalability Strategy**, which means adding additional run-time server instances to host the information system. Another way of realizing horizontal scalability is via Load Balancing, which allows server systems to redirect a request to one of several servers based on a load balancing algorithm. The same can also be achieved via Application Level Clustering, which allows turning multiple application servers into a group of servers that acts like a single system. In order to benefit from this technique, applications must be "cluster able".

Description

The need for a certain server configuration (amount of disks, memory and processing units used) is dependent upon the requirement the customer sets with regards to:

- The time it takes to process a transaction;
- The amount of users or instances that simultaneously can use the information system.

5 Articles "Business continuity of ICT infrastructure services ensures public value" and "IT facilities and business continuity "

DIGIT is currently in the process of moving towards virtualised servers. Virtualisation means to create a virtual version of a device or resource (such as server, storage device, and network) where resources are divided into one or more execution environments. Devices, applications and human users are then able to interact with the virtual resource as if it were a physical/logical resource.

Virtualised servers allow more efficient usage of the infrastructure resources through, for example, consolidation of the workload and processing demands.

The virtualisation of the server environment enables DIGIT to easily adapt configurations to meet the potentially changing demands of customers.

Security and data protection

Concept

The fundamental goals of information system security are to ensure that:

- **Data and the available services are protected from unauthorised access,** i.e. confidentiality and are delivered without being compromised i.e. integrity;
- **User or remote identities are true** i.e. authentication, and have the right access to data and services, i.e. authorisation;
- **Actions cannot be denied** by the user or the system i.e. non-repudiation.

Data protection aims to prevent an individual's personal information from passing from an information system (where the information legitimately resides) to other systems without the consent of the individual.

Description

Commission Decision C(2006)3602 for which the implementation rules are under preparation by HR/DS provides the framework for IT security of the information systems used by the services of the European Commission.

On this basis, DIGIT has defined a "General Information Security Policy". Specific areas of information are addressed in "Topic-Specific Information Security Policies". Both DIGIT's General Information security policy as well as the structure of the Topic- Specific Information Security Policies has been approved.

The Regulation (EC) 45/2001 aims to protect personal data within European Union (EU) institutions and bodies. It defines rules to ensure a high level of protection for personal data processed by the Community institutions and bodies and to establish an independent supervisory body to monitor the application of the regulation.

Both of these regulations must be taken into account when designing and delivering the hosting solution.

The table below depicts the major roles of the customer and DIGIT with regards to security and data protection.

Party	Security	Data protection
Customer	• Act as local informatics security officer **(LISO)**; • Responsible for the execution of the security policy for **information systems** that are under their responsibility; • Specify the security needs; • Manage the security plan; • Draw up, implement and develop the relevant measures for their information systems in accordance with their security requirements (one may delegate all or part of the implementation and management of the security plan to DIGIT, a SLA needs to be drawn between the customer and DIGIT).	• Act as **data controller**; • Engage to fulfil all obligations which are foreseen in the reglementation (EC) 45/2001), in particular, to ensure the legitimacy of the processing and the quality of data; • Inform persons upon their rights to consult and to manipulate data which is at their disposal; • Provide clear instructions to DIGIT concerning the processing of data.
DIGIT	• Act as local informatics security officer **(LISO)**; • Responsible for the security management of the resources they provide; • Set up and maintain an **IT infra-structure**, including a methodology and dedicated resources for the development of information systems, in accordance with the information systems security policy; • Put in place contingency and back-up plans for IT resources managed by them.	• Act as **data processor**; • Implementing all technical and organisational means to put in place the needed security measurements in order to protect the personal data against accidental or intended destruction or loss of data, non-authorised access, etc

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In this context, the reader should also consult the annex for a more detailed overview of the parties involved and their roles. It contains a table with the identification of the different parties and their responsibilities for the security (cf. commission decision C(2006)3602) and for data protection obligations (cf. EC 45/2001).

Disaster Recovery

Concept

Disaster recovery services will ensure a continuity of business operations in case part or the entire IT infrastructure is out of business due to a disaster.

Description

A customer may need its business and its supporting information systems to run continuously. However the level of continuity offered is not equal for every supporting information system. The European Commission has classified a number of information systems according to three categories:

- **Critical,**
- **Essential,**
- **Necessary.**

Information systems not classified fall into the unclassified category. In the Commission's communication SEC(2006)898 and 899 concerning business continuity management a definition of the three categories is presented.

The "IS Hosting BCP implementation study" has moreover defined a number of "recovery classes" which should be the baseline for any new IS hosting request. The decision on the class of the information system is a corporate Commission decision, but the customer may suggest a class in the information system's vision document.

The Commission decision SEC(2006)898 and SEC(2006)899 define the following standard Recovery Time Objectives with regards to disaster recovery:

Recovery Time Objectives	Coverage window	Service Level Commitment
Return to Normal operations (RTO)	24x7	• <=48 hours for critical IS • =1 week for essential IS • > 1 week for necessary IS according to SEC (2006)899 • Best effort for unclassified IS
Data Loss (RPO) for Disasters without impact on the integrity of data (Loss of cooling, loss of computer room, flood, hurricane, etc.)	24x7	Maximum loss of a time span of 1 hour (applicable to critical, essential and necessary IS)
Data Loss (RPO) for Disasters impacting data integrity (data corruption, cyber attack, lightning strike)	24x7	Maximum loss of a time span **of 1 day (applicable to critical, essential and necessary IS)**

It is important for the customer to develop a fallback plan for the period when services are down.

In order to reach the above service level commitments or even to increase high availability and disaster recovery ability, the customer can choose three different technical solutions offered by DIGIT. These technical solutions are each related to a specific type of application:

- Infrastructure (OS) Level Clustering (a technique to ensure that if one server fails, another server is available to ensure continuity, this solution is standard for production and training environment);
- Load Balancing (a technique to spread workload between servers, processes, hard disks or other infrastructure resources, it allows a service to continue even in the face of server downtime due to server failure or server maintenance);
- Application Level Clustering (a method of connecting multiple application servers in such a way that they behave like a single system).

Each of the above solutions is described in detail in the "Bulletin Informatique" of 03/2007[6]. The need for disaster recovery services has an impact on the whole hosting service offered. It may therefore mean additional investments in infrastructure and the resources to maintain those.

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6 Articles "Business continuity of ICT infrastructure services ensures public value" and "IT facilities and business continuity

IS HOSTING SERVICES REQUEST

In line with the IT governance structure within the Commission, DGs should include initial requests for hosting information systems in the Data Centre in their annual *"Schema Directeur"* exercise.

After having obtained an approved vision document which describes the business context, the business application and the envisaged technical solution, a subsequent detailed request for IS hosting is introduced via the MIRELLA[7] system under the form of an RFC[8].

- In all cases the requests for IS hosting (new IS or modification of an already hosted IS) follow the change management process and lead as such to an implementation of IS hosting services.

  In specific cases (e.g. when customer requirements are more complex in terms of service elements and/or system attributes required), a hosting proposal is developed by DIGIT.C.

  This hosting proposal is always established according to Commission IS hosting standards. It contains the proposed technical hosting solution, the service level components and the estimated costs for the delivery of the required services (in particular for policy related initiatives).

  In order to develop the hosting proposal, different departments within DIGIT.C are consulted, such as the administrative and financial coordination team, the customer relationship management team, and the architecture team.

  In parallel with the hosting proposal, a draft service level agreement (SLA) is prepared. The content of the SLA is discussed in more detail further in this document. Both documents follow an iterative process of review and update by the customer and DIGIT.C.

  When both parties have approved the two documents, DIGIT.R sets up the "Protocole d'Accord" (PdA) which is signed by both parties involved. This is considered the final contract. The Protocole d'Accord contains the lifespan of the engagement, an overview of the budgetary resources and both the service level agreement (SLA) and the hosting proposal (HP) as appendices.

  After signing the Protocole d'Accord, the financial contribution by the customer is needed in exchange of the requested service or set of services.

  An RFC which will follow the change management process is created in order to implement the IS hosting service.

- The process for hosting requests related to administrative initiatives or corporate information systems is simplified. The main difference with the previous flow is that no Protocole d'Accord is signed and no charging is carried out. A simplified version of the hosting proposal (HP) is created and the request will immediately follow the change management process. It should be noted that a Service Level Agreement (SLA) is still created on request.

7 Mirella: http://mirella.cc.cec.eu.int/forms/index.cfm
8 Request For Change

SERVICE LEVEL AGREEMENT (SLA)

The Service Level Agreement (SLA) is a written agreement between DIGIT and the customer, defining the specific terms and conditions for operating a particular service, including: its scope, terms of service, management of agreement, service standards, performance metrics & KPIs and general issues such as warranties, liabilities and confidentiality.

The SLA is a tool servicing both DIGIT and the customer to agree on the quality of the service to be provided and how to manage any conflicts arising.

About 80% of the content of the service level components is possible to be guaranteed before the development stage, such as the services offered in case of a disaster and the availability of the infrastructure on which the application is hosted. The other 20% of the service level components are to be defined after implementation, stress testing and close monitoring, e.g. time taken to process a transaction within the application.

Therefore, once the information system infrastructure has been developed and is available in production and if the SLA specifies performance KPIs, a defined period of about two to three months is initiated with close end-to-end monitoring of the system. During this period final information is gathered on those missing service level components.

This allows for a new negotiation period and updated version of the service level agreement. At the end of this negotiation period, a final and signed version of the SLA is made available.

It is important to notice that the SLA is a document which is not only created in liaison towards a specific hosting proposal. To all customers for which IS Hosting Services are provided, an SLA is applicable. If DIGIT provides the customer with other services besides hosting it may be advisable to create one SLA covering all services.

FINAL REMARKS

As IT technologies and information systems are subject to rapid change, one can only make a snapshot of the situation as it is today.

This document attempts to separate the rapidly evolving parameters of information system hosting, such as the hosting service elements, from the more stable components such as the service architecture diagrams and its attributes. However, it is important to understand that this document will evolve over time and should be updated frequently.

ANNEX 1 Appendix

Hosting Service, service elements table

Service Elements	Description	Tier
Oracle	A service to provide support in hosting databases on the Oracle RDBMS (Relational Database Management System), used on Solaris platform.	Database Tier
ColdFusion	A service to provide support in hosting Information Systems based on the ColdFusion application server, allowing the creation of Internet applications, in particular dynamic Web sites.	Application Tier
Verity Search	A service to provide support on the Search facility offered by the Verity search engine used on Europa, Intracomm and in applications requiring search capabilities	Application Tier
Web Intelligence (WEBI)	A service to provide support for the hosting of Information Systems using a Web-based query-and-analysis tool, providing an easy to use interface with powerful features built on the Business Objects Enterprise Business Intelligence platform.	Application Tier
Webservers (WEB)	A service to provide support for HTTP servers. This comprises the tools to upload web pages on a staging environment and to trigger their transfer into production.	Presentation Tier
WebLogic Server	A service to provide support in hosting Information Systems based on an application server infrastructure using Oracle WebLogic family products and middleware platform.	Presentation Tier and Application Tier
Oracle Application Server	A service to provide support in hosting Information Systems based on an application server infrastructure using Oracle AS family products and middleware platform..	Application Tier
Business Objects Data Integrator (BODI)	A service to provide support in hosting Information Systems requiring a scalable enterprise-level data integration platform for exploring, extracting, transforming, and delivering data.	Application Tier
Geographic Information System (GIS)	A service to provide support in hosting Information Systems based on a platform for integrating, storing, editing, analyzing, sharing and displaying geographically-referenced information.	Application Tier
SQL Server	A service to provide support in hosting databases on the SQL server RDBMS (Relational Database Management System), used on Windows platform.	Database Tier
Windows Hosting	A service to provide support in hosting Information Systems based on Windows server products like BizTalk	Application Tier
Microsoft Office SharePoint Service (MOSS)	A service to provide support in hosting Information Systems using MOSS services to create websites and collaboration spaces	Application Tier
Monitoring and Reporting	A service offered to: • Monitor the availability of Information Systems and to alert the relevant technical teams in case of failures. • Construct reports to be provided to the DIGIT customers regarding this availability.	Application Tier
Open Source Service (OSS)	A service to provide support in hosting Information Systems based on an Open Source infrastructure stack	Application Tier

Identification of the different parties for the security

(Commission Decision C(2006)3602) and for data protection obligations (EC45/2001)

The Commission decision C(2006)3602 defines specific roles and their responsibilities. The following table is filed by the client and DIGIT.C to clearly identify the parties or persons that will fulfil these roles.

Role	Party	Name	Main tasks (see C(2006)3602 for details
System owner	Customer		Specify security needs
Data owner	Customer		Ensure the consistency and validity of information; define security needs of the data. Inform the System owner.
System Security officer (SSO)	Customer		Report to the system owner on all security matters.
Project Leaders	Customer		Responsible for the installation and hand-over of information to the system owner.
System supplier	Customer		Construct and ensure the maintenance of the information system
System manager	Customer		Manage the information system
IT service providers	DIGIT.C		Provide and manage IT resources (communication network, equipment and software)
Local information resource manager (IRM)	Customer		Provide IT resources in his DG.
Security Directorate	HR/DS		Ensure that the security plan comply with the information system security policy.
Local informatics security officer (LISO)	Customer		Contribute and oversee the development of the information system security policy within his DG
Local informatics security officer (LISO)	DIGIT		Contribute and oversee the development of the informatics security policy within DIGIT
Data Controller	Customer		Write notification to DPO
Data processor	DIGIT.C		Process data for the system owner.

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ANNEX 2 Glossary

Application:
A program designed to perform a specific function directly for the user or, in some cases, for another application program. An application can be generic (off-the-shelf) or more commonly in the Commission, a tailored system development program. It is typically aimed at and designed for the end-user. By contrast, Information Systems infrastructure includes systems software. These are lower-level programs that interact with the computer at a very basic level. This includes operating systems, file management tools, compilers, and utilities for managing computer resources.

Application deployment:
The process whereby software is installed into an operational environment.

Application server:
A basic application server contains the user's business logic while accessing and optimizing the performance of business applications providing resource utilization of external resources, such as Internet services and end-user applications.

Business continuity:
The process for anticipating incidents which may affect critical business functions and processes and ensuring that the organization is capable of responding to such incidents in a planned and rehearsed manner. A business continuity plan has been set up by DIGIT which states the critical systems within the European Commission and the operational procedures to follow in case of a sudden impact crisis or a predictable crisis.

Business Objects Data Integrator (BODI):
Process to explore, extract, transform, and deliver data in an ETL fashion.

Capacity management:
The process responsible for ensuring that the capacity of IT services and the IT Infrastructure is able to deliver agreed service level targets in a cost-effective and timely manner.

Change management:
The process responsible for controlling the lifecycle of all changes to applications, infrastructure or the broader IT environment.

Common services:
These are the essential services that are necessary to effectively perform day-to-day operational activities and are classified as fixed operational costs. These are services that cannot be eliminated without adversely affecting the functioning of the organization. (e.g. mail, network)

Complaint:
A complaint is a communication from the user about the quality of the hosting service delivered.

Configuration management:
The process of planning for, identifying, controlling and verifying the Configurations Items (CIs) within a service, recording their status and, in support of Change Management, assessing the potential IT impact of changing those items.

Continuity management:
The business process responsible for managing risks that could seriously impact the continuity of business operations.

Extract, Transform, and Load (ETL):
The process of extracting data from a data source, transform it and load it into another data source.

Incident:
An incident is any event which is not part of the standard operation of a service and which causes, or may cause an interruption to, or a reduction in the quality of that service.

Incident management:
The process responsible for management the lifecycle of all incidents.

Information system:
The set of materials, methods, procedures and people organised in order to accomplish the treatment of information. (As described in C(2006)3602).

Information system infrastructure:
An integrated set of components supporting the collection, storage, processing, and communication of information.

Infrastructure:
The basic facilities, services, and installations needed for the functioning of a service or division.

Key Performance Indicator (KPI):
Metrics used to define and measure progress towards an agreed goal.

Operating system (OS):
An operating system is the software component of an Information System that is responsible for the management and coordination of activities and the sharing of the resources of the infrastructure. Operating systems are necessary in order to run applications on a server.

Performance management:
The process responsible for day-to-day management activities related to the performance of the IT environment. This includes monitoring, threshold detection, performance analysis and tuning and implementing changes related to performance and capacity.

Problem management:
The process responsible for managing the lifecycle of all problems. The primary objectives of problem management are to prevent incidents from happening, and to minimise the impact of incidents that cannot be prevented.

Server:
A server can be defined as an individual computer on a LAN (Local Area Network), acting as a service or resource provider to client computers, by sharing the resources within the network infrastructure.

Service desk:
The single point of contact between the service provider and the users. A typical service desk manages incidents and service requests, and also handles communication with the users.

Service request:
A service request is a request from a user for support, delivery, information, advice or documentation which does not involve a failure in the IT infrastructure.

Specialist services:
These are services that go above and beyond a typical service package and are often individually offered on a tailored basis as requested by the client.

Specific services:
These are usually application-specific services that the client requires on an individual basis to support a particular business function they are responsible for. Such services are billed only to those customers who have subscribed to them.

Web server:
An application that provides services to access the Internet, intranet, or extranet. It hosts websites, provides support for HTTP and other protocols, and executes server-side programs (such as CGI scripts or servlets) that perform certain functions.

ANNEX 3 Reference documents

– Service catalogue - Vision Statement of the ISP DIGIT Directorate on how we shall become the natural trusted partner for ICT infrastructure services provision

– Service catalogue - Service Management Implementation Document - ISP DIGIT Directorate

– Service catalogue - Foundation document - ISP DIGIT Directorate

– Service Level Agreement (SLA) - ISP DIGIT Directorate

– ISP Service catalogue

– Articles concerning "Business Continuity" - Bulletin informatique 03/2007 by DIGIT.C

– Commission Decision for IT security of the information systems used by the services of the European Commission C(2006) 3602

– Data protection obligations (EC 45/2001)

DIGIT intranet pages :

A variety of general information can be found, as well as some of the above referenced documents.
http://myintracomm.ec.europa.eu/serv/en/digit/Pages/home.aspx