Infrastructure Services Provision
Service Catalogue

ColdFusion Hosting

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1. INTRODUCTION

1.1. Service Purpose

This service offers the possibility to host ColdFusion applications in DIGIT Information Systems Hosting services. (DIGIT ISHS)

1.2. Document purpose

This document specifies the current service provided by DIGIT ISHS in the context of hosting ColdFusion applications.

1.3. Document organisation

The document is organised as follows:

- Description of the service element
  - who is this service for (see 2.1)
  - link with business continuity plan
  - scope of the service (see 2.2)
  - technical description (see 2.4)
  - pre-requisites, i.e. what must be respected to benefit from the service (see 2.5)
  - security (see 2.6)
  - level of service, i.e. indicators and standard settings
  - roles and responsibilities, i.e. who does what (see 2.10)
- Limits of the service, i.e. what is not provided by the service
- Service Management, i.e. what procedures are to be followed, mainly for Change and Incident management (see 2.11)
- Related documents and web sites (see 2.12)

1.4. Document Audience

The ColdFusion Hosting Service is intended for the Customers of the DIGIT ISHS:

- The Directorates general represented by their General Director or his delegate (e.g. Resource's Director);

- The IRMs;

- The Information System Owners;
1.5. Definitions, Acronyms and Abbreviations

1.5.1. DIGIT ISHS

Digit Information System Hosting Services. Also referred to sometimes as Data Centre and provided by DIGIT C2 (Information systems deployment solutions) under currently DIGIT organization.

1.5.2. ColdFusion Application Server

ColdFusion is a server scripting environment for creating internet applications. Adobe ColdFusion application server enables developers to rapidly build, deploy, and maintain robust Internet applications for the enterprise. Adobe ColdFusion Enterprise edition application server is designed for delivering high-performing websites and applications in a clustered or virtualized environment.

1.5.3. CFML

ColdFusion Markup Language (CFML) includes a set of tags that you use in ColdFusion pages to interact with data sources, manipulate data, and display output. The CFML tag syntax is similar to HTML element syntax. When ColdFusion templates are saved to disk, they are traditionally given the extension .cfm or .cfml.

1.5.4. ColdFusion instance

ColdFusion runs as a J2EE application on top of a JEE application server (Tomcat for CF10, Jrun for previous versions). Each server instance runs on a separate JVM, which executes ColdFusion pages for that instance.

1.5.5. ColdFusion administrator

The ColdFusion administrator is the person administrating the ColdFusion instances. This role is strictly reserved to DIGIT.C staff.

1.6. Glossary

A glossary of DIGIT.C terms can be found at http://www.cc.cec/home/dgserv/digit/tools/glossary/index_en.htm

2. SERVICE ELEMENT DESCRIPTION

2.1. Who is the service for?

The service is used for DIGIT/C environments and for authorised customers over the internal EC network. It is consequently available to the DGs of the European Commission, its offices (e.g. OPOCE) and it's Executive Agencies (e.g. EACEA) through their IRM.
The Traditional Agencies (e.g. AEPC, OEDT …) and the National Agencies are treated as exceptions. Other exceptions (e.g. other institutions) can be considered on a case by case basis.

2.2. Service Scope

2.2.1. Eligible technology

Currently versions 9 and 10 of Adobe ColdFusion Enterprise are supported. Both versions are installed on RedHat Enterprise Linux.

Previous versions of ColdFusion are phased out and are to be upgraded.

2.2.2. DIGIT ISHS environments

DIGIT ISHS offers the following environments for ColdFusion:

<table>
<thead>
<tr>
<th>Environments</th>
<th>High Availability</th>
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<tr>
<td>Development (D)</td>
<td>On request</td>
</tr>
<tr>
<td>Tests (T)</td>
<td>On request</td>
</tr>
<tr>
<td>Production (P)</td>
<td>Yes</td>
</tr>
<tr>
<td>Training (TR)</td>
<td>On request</td>
</tr>
<tr>
<td>Acceptance (AC)</td>
<td>On request</td>
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<tr>
<td>Stress Test (ST)</td>
<td>On request</td>
</tr>
<tr>
<td>Maintenance (M)</td>
<td>On request</td>
</tr>
</tbody>
</table>

DIGIT ISHS will only create the environments requested by the client. The minimum recommended environments are P and T.

By default D, T, TR, A, ST and M do not offer any high-availability. This means that in case of a hardware failure these environments will be down until the underlying problem is solved.

P is by default in a high-availability configuration based on load-balancing and failover on the web server and application server. Two ColdFusion instances on two RedHat servers are used to create a high-availability configuration. Therefore, in case of hardware failure the application will automatically continue to work on the second server.

Nevertheless, TR and AC can also be configured in a high-availability configuration based on load-balancing and failover like P environments if the customer asks for it.

Each application environment is set up in a dedicated ColdFusion instance so that the application is isolated.

All environment hosts are servers dedicated to ColdFusion applications. Other activities are hosted on non-ColdFusion servers.

2.2.3. Consulting

The ColdFusion team from DIGIT ISHS does not provide consultancy services. If a Customer needs consultancy s/he should ask for this service to DIGIT Product Management which can provide this kind of services through its contract for Adobe products.

The ColdFusion team from DIGIT ISHS is able to provide to the customer limited advice and recommendations on aspects such as performance, load balancing and clustering. In that case the customer should create a standard requests for ColdFusion team.
2.2.4. **Initial setup**

This service provides dedicated ColdFusion instances configured according to DIGIT ISHS Reference configuration standards. The service includes the access over the network, monitoring and backup of the infrastructure.

Some specific settings can be modified via standard requests by the customer, though the modifications need to be checked by the technical team and can be rejected if in conflict with any DIGIT ISHS standards.

2.2.5. **Backup & restore**

All the ColdFusion instances are automatically backed up at regular intervals following the standard policies of the Backup & Storage services.

2.2.6. **Upgrades**

The service encompasses the planning and execution of regular ColdFusion and underlying software (JDK, tomcat/jrun) upgrades to more recent versions.

Such upgrades can become necessary due to one or more of the following reasons:

- Security improvements
- Problem in a current version is solved in a higher version.
- Current version is no longer supported
- Customer requests the upgrade

Upgrades can be initiated either by the customer or by DIGIT ISHS. In either case the customer must participate in the process and validate the result. This process may eventually require modifications on the application.

2.2.7. **Migrations**

Due to certain factors it may become necessary to move a ColdFusion application from one instance to another (e.g. performance problems, update of the IS classification). Such migrations are part of the service offered and, as for software upgrades, needs customer participation.

The decision to migrate belongs to DIGIT ISHS. Such migrations require an application downtime. For the migration process it may be necessary to adapt the CFM code to use the new version. All of these consequent changes will be coordinated between the relevant teams of DIGIT ISHS and the Customer.

2.3. **Limits of the service**

The focus of the service is to take care of the ColdFusion Application Servers infrastructure. The responsibility of the business logic or the application coding belongs to the customer.
2.3.1. **Privileges**

DIGIT ISHS only grants privileges to the customers that are necessary for their application to work due to security reasons.

1. ColdFusion administration console: Only the ISHS ColdFusion Administrator team has access to the ColdFusion console. Nevertheless, the client can ask a parameter change in the console through a standard request for the ISHS ColdFusion team.

2. SSH/Telnet: Due to the DIGIT security policies, no telnet/SSH access is granted. However clients can directly update their application code through the ftp services described in section Application deployment.

3. Debugging: On request, the ColdFusion debug output settings can be enabled for specific client IP addresses so that the customer could check the behaviour of its application. The debug output should not be setup on production environments. Additionally DIGIT ISHS ColdFusion can setup the CFTracker monitor on a ColdFusion instance and provide access to the customer. CFTracker monitor allows troubleshooting and fine-tuning applications more easily with improved access to server performance info. Also alerts and other actions to help prevent memory problems can be setup.

   Both debugging options can be requested by the customer via standard request.

2.3.2. **HTTP & HTTPS**

(a) Direct HTTP connections must not be used except for debug purposes; ISHS reserves the right to replace servers, or move instances so all connections must be done through reverse-proxies, so that infrastructure management can take place with little to no impact on the systems hosted.

(b) HTTPS connections should be terminated at the reverse-proxy level. These devices used are equipped with accelerated encryption chipsets.

2.3.3. **Tuning**

Under the hood, each application is unique, so there are no "one-size-fits-all" rules for server or application tuning. In the black-box approach, tuning has to be based on experience, and on comparison of different parameters.

DIGIT ISHS will not perform any pro-active tuning of the ColdFusion servers. ISHS responsibility is to run systems, with the best possible uptime. ISHS doesn't have the tools or the availability to perform several tests campaigns and see how they compare.

However, there is a very good opportunity for this within the Change Management Process; namely Stress Testing. At that stage, scripts which can reproduce similar load situations over and over are used. This is an ideal opportunity to find out which parameters might give a boost to the application. Tuning can then be executed if the clients signal problems or if tests show high server loads caused by the ColdFusion server or if it is determined that some tuning will solve performance issues.
2.3.4. **Debugging**

DIGIT ISHS will not perform any debugging activities on the customer's applications. The customer can get debugging facilities through the ColdFusion debug output or the CFTracker monitor.

2.3.5. **Customer data**

DIGIT ISHS will not perform any operations on the customer data. The data transfer can be executed by the customer with the privileges he has through the ftp servers. The ftp servers are described in section [Application deployment](#).

2.3.6. **External dependencies**

DIGIT ISHS will not accept applications with external dependencies. For example, datasources cannot be configured with databases not hosted by DIGIT ISHS and the application should not retrieve content from URLs allocated outside the Data Centre.

Production infrastructures are built for High Availability. In this context, dependency on systems ISHS doesn't have control over, would defeat the purpose and make attempts at restoring service fail.

2.3.7. **Functional separation of deployments**

For security reasons, a ColdFusion instance should only provide one type of contents amongst the following:

- Internal system – restricted to some of the commission users (a.k.a. intragate)
- Intracomm – meant for all commission users
- Europa – meant for every European citizen and more
- Webgate – restricted set of users outside (and possibly inside) the Commission

This is necessary in order for DIGIT to enforce network security. Additional information can be found in the Reverse Proxy Service Catalogue.

2.3.8. **Resilience to Exceptions**

An application designer should make sure all exceptions are properly handled. For instance, reading/writing a file may fail for various reasons. Data Integrity, Clear message to the user and uptime are important parts, even if sometimes implicit, of application requirements.

However, technical information should be stored in logs, and not exposed to —potentially malicious— users.
2.4. Technical description

2.4.1. Hardware platform

CF9 and CF10 run on Linux virtualized servers in VMWare infrastructure. VMs run in clusters of physical servers, which allows VMs to be moved across different physical servers and provides tolerance to certain hardware failures.

2.4.2. Software products

The service comprises the following products and options:

- Adobe ColdFusion 9/10 Enterprise edition
- ColdFusion J2EE cluster
- JRun4 (CF8, CF9)/Tomcat (CF10) application server
- Java JDK
- DataDirect JDBC driver
- Limited verity k2 server (up to CF9)
- Apache Solr full text search engine
- Web services
- Flex integration
- Event Gateways
- Sandbox security

The service does not include the following products and options:

- Installation in different application server that the provided for the specific version
- SMS gateway

All products or options not mentioned in this list will have to be evaluated before they can be used.

2.4.3. Dimension

DIGIT ISHS hosts around 400 ColdFusion applications in production environment. All the environments (D, T, P, TR, AC, ST, and M) are served by around 6500 ColdFusion instances installed on 350 Linux and Solaris servers.

2.4.4. Application isolation

Each application is installed on a dedicated ColdFusion instance. Each instance has separate settings and runs in its own Java Virtual Machine. This way, performance problems on one application are less likely to impact others.

Furthermore, for security reasons, a ColdFusion instance should only provide one type of contents. See 2.3.7 Functional separation of deployments.

Starting in CF10, ColdFusion Sandbox limits the access to filesystem to the application structure, reducing this way the potential impact of malicious code.
2.4.5. **NAS filesystems**

In order to facilitate the deployment of applications by the customer and the sharing of content between several instances for the same application, shared filesystems need to be used.

The structure of this Filesystems will be different varies depending on the version

2.4.5.1. **Up to CF9**

NAS is shared for all CF servers by environment (production, tests…).

- 2 main FS per environment:
  - Webroot: contains application code:
    - `/ec/<ENV>/app/webroot/.../DG/APP`
  - `cf_app_doc` (not used by all applications): contains application internal data
- Some applications already have separate FS, mostly in production

![Diagram](image)
2.4.5.2. From CF10

In order to improve application isolation, separate FS will be used per DG and environment:

- Only one FS per DG and environment:
  - (/ec/<ENV>/app/webroot/DG).
- The filesystem will initially be created with 10Gb
- cf_app_doc will be included within Webroot
- Applications will have separate FS in all environments when:
  - This is requested by IS owner
  - The application needs more than 5Gb
2.4.6. **Standard set-up**

As described under 2.2.2 **DIGIT ISHS environments**, by default Development, Test, Training, Acceptance, Stress Test and Maintenance do not offer any high-availability. This means that in case of a hardware failure these environments will be down until the underlying problem is solved.

Nevertheless the application isolation is applied as shown in the diagram below.

All requests have to go through the reverse proxy as direct HTTP connections to the server should not be used. The apache server and the ColdFusion instance are on the same server and both have access to the source code which is stored on the NAS. Apache forwards CFM files to the ColdFusion instance. HTML file are directly served by the apache server.
2.4.7. Clustering

The ColdFusion cluster allows multiple ColdFusion instances to act as one. The user sessions are replicated between the ColdFusion instances. Furthermore each apache server can contact each ColdFusion instance. So when a ColdFusion instance stops running, the requests are switched to another ColdFusion instance and the application continues to work correctly without any downtime. Sessions are not lost either. This scalable and high-available architecture is configured for production environments.
2.4.8. Connectivity

All the ColdFusion applications are accessible over the Commission's internal network using a reverse proxy mapping. In this network, the centralized ftp servers can be used to update the CFM files.

Applications meant for external audiences will be served through specific Reverse Proxies reserved for this usage (europa, webgate …).

2.4.9. Application deployment

2.4.9.1. FTP access

The installation of the ColdFusion application code can be directly done by the customer in the webroot of its application "webroot/app_context_root" which is stored on a shared NAS between the ColdFusion instances used by its application.

A common ftp server is setup for each version where the ColdFusion administrators will grant privileges to the LDAP groups requested by the customers. The following table contains the configuration to be used depending on the environment and version:

<table>
<thead>
<tr>
<th>Version</th>
<th>Environments</th>
<th>Server</th>
<th>Port</th>
</tr>
</thead>
<tbody>
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<td>Up to CF9</td>
<td>Development (D)</td>
<td>Appftp</td>
<td>2121</td>
</tr>
<tr>
<td>Up to CF9</td>
<td>Tests (T)</td>
<td>Appftp</td>
<td>2122</td>
</tr>
<tr>
<td>Up to CF9</td>
<td>Production (P)</td>
<td>Appftp</td>
<td>2123</td>
</tr>
<tr>
<td>Up to CF9</td>
<td>Training (TR)</td>
<td>Appftp</td>
<td>2126</td>
</tr>
<tr>
<td>Up to CF9</td>
<td>Acceptance (AC)</td>
<td>Appftp</td>
<td>2125</td>
</tr>
<tr>
<td>Up to CF9</td>
<td>Stress Test (ST)</td>
<td>Appftp</td>
<td>2124</td>
</tr>
<tr>
<td>Up to CF9</td>
<td>Maintenance (M)</td>
<td>Appftp</td>
<td>2127</td>
</tr>
<tr>
<td>CF10</td>
<td>Development (D)</td>
<td>cfftp/cffiles</td>
<td>2121</td>
</tr>
<tr>
<td>CF10</td>
<td>Tests (T)</td>
<td>cfftp/cffiles</td>
<td>2122</td>
</tr>
<tr>
<td>CF10</td>
<td>Production (P)</td>
<td>cfftp/cffiles</td>
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<tr>
<td>CF10</td>
<td>Training (TR)</td>
<td>cfftp/cffiles</td>
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<td>CF10</td>
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<td>CF10</td>
<td>Maintenance (M)</td>
<td>cfftp/cffiles</td>
<td>2127</td>
</tr>
</tbody>
</table>

Please be aware that the uploaded files are owned by a different UNIX user than the one running ColdFusion servers.

The ftp servers are hosted on a high-available UNIX zone. In case of a hardware failure, the service will be restarted on another physical server, but the service could be unavailable for some time.
2.4.9.2. Directory structure

Each application has its own root which is accessible through the corresponding ftp server.

The directory structure for the application to work using the standard security is the following:

```
├── collections
│   ├── customTags
│   └── javaLib
└── privateWork
    └── <mapping>
        └── publicWork
```

- The "mapping" directory must match the external URI for the application. It may contain several levels of directories. For example, for [http://intragate.ec.europa.eu/digit/nike](http://intragate.ec.europa.eu/digit/nike), mapping=/digit/nike
- `<mapping>` contains the application source code (.cfm, cfc, html, pdf…). This directory and the subfolders are published. The apache server `http://server:port/app_context_root` points to the `<mapping>` directory
- `<mapping>/cfcache` is used by the ColdFusion server for cfimage and cfgraph tags.
- `<mapping>/cfscripts` is used by the ColdFusion server for cfform, cfimage and Ajax.
- `<mapping>/publicWork` is a public repository. The ColdFusion application can generate files in this directory which would be immediately published through the apache server.
- `privateWork` is a private repository. The ColdFusion application can generate files in this directory which would never been published. To publish the content of the files present in this directory, the application has to use tags like cfdocument or cffile. Sensitive documents can be stored in this directory
- `collections` is used by the full text search engine SOLR or verity. Only the search server can use this directory.
- `customTags` is used to store own made application custom tags. This customTags path is automatically loaded by the ColdFusion instance.
- `javaLib` is used to store own made jar files used by the ColdFusion application. The ColdFusion instance has to be restarted to take into account the newly added jar file.

2.4.9.3. Application Security

ColdFusion's sandbox security uses the location of the ColdFusion pages to control access to ColdFusion resources. A sandbox is a designated area (files or directories) of the site to which security restrictions are applied. By default, a subdirectory inherits the sandbox settings of the parent directory. Starting in CF10 installations, sandbox security will be mandatory. 2 possible level of security will be available:

- Standard security, which will be the default and recommended level. This level warranties that the application code can only access those files necessary and requires a concrete application folder structure explained bellow.
- Low security. In this level, the application code will have full access within the application structure (not outside it).
In the standard security configuration in DIGIT ISHS, two directories have security sandbox enabled:

- customTags
- <mapping>

ColdFusion pages under these directories are the only ones allowed to access ColdFusion resources, with the following access rights.

- customTags/ - read, execute
- <mapping>/ read, execute
- <mapping>/cfcache/ read, write, execute, delete
- collections/ read, write, delete
- <mapping>/publicWork/ read, write, delete
- privateWork/ read, write, delete
- Temporary directory returned by GetTempDirectory(): read, write, delete

Other directories are by default not accessible by the ColdFusion application.

The level of security can be changed via standard request to ColdFusion team.

Exceptions to allow access to additional directories outside this 2 standard configurations can be analysed on a case by case basis and will need to be requested via standard request.

Allowed exceptions identified so far:

- Shared resources among applications belonging to same DG. The directory with shared components should be placed under:
  
  /ec/<ENV>/app/cf_by_DG/<DG>/

2.5. Pre-requisites

This section describes the constraints that must be respected by the client before using the service. DIGIT C is managing one functional aspect – the hosting services. Clients are encouraged to have a maintenance contract running, especially during the first few months the system is run, as it is likely to face situations unforeseen by the developers.

2.5.1. Technical knowledge

- Clients must possess the know-how to create ColdFusion applications on Unix environments
- Clients should understand the limits of the service, especially regarding the debugging limitations, network constraints and security constraints.

2.5.2. Authority

- The Service remains under the authority of the CAB, it is at liberty to request the CAB (or one of its delegates) opinion on a change requested before deciding whether or not to apply the change.
- Some requests (ftp access rights) will have to be confirmed by Commission officials when issued by contractors.
2.5.3. **Standard ColdFusion installation**

The applications must work with DIGIT ISHS standard ColdFusion installations, including ColdFusion sandbox security configuration.

2.5.4. **Version changes**

DIGIT ISHS will regularly trigger campaigns to update/upgrade the Adobe ColdFusion Software and underlying software versions. The client must accept such upgrades and be available to participate in the necessary tests for his applications.

2.5.5. **Development standards**

DIGIT ISHS does not give public development guidelines. Most documentation available is about what not to do. Developers are expected to have a good knowledge of ColdFusion development.

2.5.6. **Licenses**

Customer need to discuss with DIGIT Product Management all terms relative to licensing.

2.6. **Lifecycle**

2.6.1. **Application deployment**

Application deployment is totally in the hands of the customer through the centralized ftp servers. He can manage the CFM files on any of the environments as described under Application deployment. DIGIT ISHS will only create the environments requested by the client. The minimum recommended environments are Production and Test.

2.7. **Security**

2.7.1. **No administration privileges**

Application must work without UNIX root privileges. Furthermore, specific Unix accounts won't be created on the ColdFusion servers. These are requirements in compliance with Security policies "Security Monitoring" and "Privileged User Access Control" derived from Commission Communication C(2006)3602.

2.7.2. **Access to the ColdFusion administration console**

Access to the ColdFusion administrator remains the exclusive privilege of the ISHS ColdFusion team. So the client is never granted any access to the ColdFusion administration console. These are requirements in compliance with Security policies "Security Monitoring" and "Privileged User Access Control" derived from Commission Decision C(2006)3602.
2.7.3. **Access to log files**

Each ColdFusion server includes a specific webserver, accessible only from internal network, to download server logs.

The access to this service is provided to LDAP groups specified by the customer that can be requested via standard request to ColdFusion team.

2.7.4. **Data integrity**

No specific provisions are made for data integrity on the ColdFusion Servers. The Service relies on the infrastructure as supplied by underlying services, hence clients should go through Oracle Databases & Backup/Restore Service Catalogues.

Furthermore DIGIT ISHS will never manipulate any client data, this responsibility is left with the customer.

2.7.5. **Personal Data**

No personal data is needed nor collected by ColdFusion Servers.

When the application requires authentication, the HTTP access logs will show userids. Logs however, are not published or exposed unless the client requests them to be.

Developers should also consider usage of HTTP POST vs. GET, as passing variables through GET exposes them in proxy and application logs. System Owners of applications processing personal data should be mindful of this issue.

2.7.6. **ECAS**

More and more, applications can rely on ECAS to fit in the Commission picture (and more) when it comes to Single-Sign On.

However, ECAS is to be seen as a third-party product when it comes to ISHS, and although clients can sometimes benefit from ISHS extensive experience in the field, one should not expect configuration or debugging to be within ISHS responsibility, ECAS is properly documented on CITnet, at [https://webgate.ec.europa.eu/CITnet/confluence/display/IAM/ECAS](https://webgate.ec.europa.eu/CITnet/confluence/display/IAM/ECAS).

2.7.7. **Auditing**

All ColdFusion actions are audited (Web requests, CFM requests, DB connections). This auditing is for DIGIT internal use only in the context of Security Monitoring. The audit logs are the sole property of the LISO and only he can authorize access to them.

2.7.8. **Security & Vulnerability Testing**

While DIGIT ISHS aims at keeping an all-round secure infrastructure, vulnerabilities in the application are the responsibility of the client. It may be required for systems to undergo some Vulnerability Testing, and accordingly DIGIT ISHS teams, with the support of other DIGIT TEST CENTER team can advise on how best to fix potential issues. At any time, a request can
also be made to re-initiate such Security Testing campaign, clients are advised to liaise with their CRM to trigger such a campaign.

2.7.9. **Application Security levels**

Starting in CF10, ColdFusion sandbox will be mandatory for all applications. Clients will be able to choose between 2 levels of security: standard and limited.

See 2.4.9.3 Application Security for details

2.8. **Service Levels**

The list of environments offered can be found in chapter 2.2.2: [DIGIT ISHS environments](https://myintracomm.ec.europa.eu/corp/digit/EN/isp_service_catalogue/Pages/MORE.aspx)

2.8.1. **Production**

Those environments are built on High Availability based on load-balancing and clustering. In case of hardware failure the end user is directly redirected to the remaining servers. Production environments are covered by 24x7 coverage.

2.8.2. **Training & Acceptance**

Those environments are on normal availability. Nevertheless, TR and AC can also be configured in a high-availability configuration based on load-balancing and clustering like P environments if the customer asks for it.

2.8.3. **Development, Test, Maintenance & Stresstest**

Those environments are on normal availability. No measures to improve availability are taken by DIGIT.C. When such environments fail, no failover mechanism is in place.

2.8.4. **Monitoring & Reporting**

2.8.4.1. **Availability monitoring**

DIGIT ISHS monitors the availability, the accessibility and the existence of enough resources (e.g. enough space on the ColdFusion servers) for each ColdFusion instance. The following metrics are monitored in this way:

- ColdFusion availability: processes running and ability to connect
- Web server availability: processes running and ability to connect
- ColdFusion filesystem capacity

Monitoring on availability is defined and adjusted periodically so that ColdFusion administrators are warned in case of problems and can react according to the service level relevant for the affected environments.

2.8.4.2. **End2End monitoring**

In addition to the availability monitoring a site specific monitoring can be requested per Information System in training and production environments. Information about how to request can be found in:

https://myintracomm.ec.europa.eu/corp/digit/EN/isp_service_catalogue/Pages/MORE.aspx
This End2End monitoring checks the availability of the application through the reverse proxy URL. This is used to feed reports available on http://www.cc.cec/isreports. However, the downtime reported, if any, can be caused by multiple reasons, including some that are under the control of the client or planned maintenance.

2.9. Roles & Responsibilities

2.9.1. ColdFusion installation and configuration

ISHS ColdFusion will take care of the installation and configuration of the ColdFusion instances and all necessary underlying software (JDK, application server…).

2.9.2. Software version

DIGIT ISHS is forced to follow Adobe ColdFusion upgrade policy for support reasons. All the ColdFusion instances will therefore have to be upgraded at regular intervals. Customers have to participate in these upgrades by testing the applications and assuming possible application changes to make their applications work with the new version.

2.9.3. Application Deployment

Once the ColdFusion environment is configured by DIGIT ISHS, all application related operations are to be executed by and under the responsibility of the customer. Through the ftp server, the client can deploy his ColdFusion site on his environment.

Furthermore DIGIT ISHS takes care to provide the access on the ftp servers for the client application maintenance.

However, some general recommendations, and some guides in order to facilitate migration from previous versions will be provided in separate document

2.9.4. Shared NAS maintenance

For ISs that chose using specific NAS filesystem, it will be under the responsibility of the customer to trigger the requests for creating and resizing the filesystem.

For the shared filesystems, ColdFusion team will launch the requests. However, the client should provide sizing information not only on sizing for new ISs, but also on expected growths for existing ISs in order to facilitate capacity management

2.9.5. User management

All access to ColdFusion applications and environments for application maintenance will be granted on LDAP accounts for CF9 and LDAP group basis starting on CF10. This covers:

- Access to ftp servers to upload content
- Access to log server

The access to the application itself is not covered as part of the ColdFusion service and must be configured at application level. However, all ColdFusion applications are accessed through a
WebServer, so access based on LDAP groups can be requested at this level to Web Server Service.

Requests related to creation and maintenance of LDAP groups must be addressed to Identity and User Management service.

2.9.6. Host servers

It is up to DIGIT ISHS to decide on which server a ColdFusion application is hosted, taking into account user requirements. However our machines are under our sole control, and so are their naming, OS-version, file-system structure or any further specifications.

2.9.7. Disclaimer

DIGIT ISHS does not take responsibility for:

- Application performance issues not due to the server
- Application errors not due to the server
- Application tuning
- Application debugging
- Support on the client side
- Data manipulation (modifying application data)
- Application user management.
- In general all interventions that don’t require Administrators privileges
- Application security aspects.

DIGIT ISHS manages the data container (i.e. the ColdFusion server) and the client manages the data (i.e. the application code).

2.10. Service management

2.10.1. Hosting Request

Service requests are made and followed through the JASSPR Portal (http://intragate.ec.europa.eu/jasspr). If you cannot access the application, please contact your assigned CRM who will assist you in resolving the issue.

2.10.2. Environment preparation

Prior to a deployment, the environment, consisting in a number of ColdFusion instances have to be created. This request can only come from Change Coordinators at DIGIT ISHS.

2.10.3. Application Deployment Request

Application deployment is done by the Customer. See also 2.4.9 Application deployment

2.10.4. Incident Management

An incident detected by the client must be reported to the support team through the standard incident management procedure at the CEC, i.e. create an SMT ticket (directly or through ITIC SD) to be assigned to ISH Service Desk.

An incident must always specify as much relevant information as possible but always at least the name of the application, the URL, the error message and the time the error was observed.
2.10.5. Request Management

Standard requests can always be logged via SMT ticket to be assigned to DIGIT ISHS Coldfusion.

In addition, JASSPR portal will gradually introduce forms for most popular requests in order to allow structured standard requests to be implemented with a simplified flow and improve resolution time.

2.10.6. Point of contact

Specific questions and requests for clarification of the service should be addressed to the clients’ Account Manager either directly or via the functional mail box DIGIT ISP CRM.

2.11. Costing

The cost associated to the hosting infrastructure will be evaluated based on the ICT cost model. Your associated CRM will provide you all the necessary support on this subject.

If the deployed applications are commercial packages, the client has to ensure the licenses are taken care of by their own services. ISHS doesn't manage nor hold any liability for third parties license agreements.

2.12. Documentation and useful web sites

- Infrastructure Service Catalogue - Foundation Document

3. ANNEXES

3.1. Annex 1: Supported Software versions

Currently supported version: CF9, CF10

3.2. Annex 2: Supported SW Package elements

proFTPd 1.2.1: supported for uploading CFM pages through the ftp servers

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3.3. Annex 3: Delegated administration Privileges

No administration privileges delegation to clients for the administration part of the ColdFusion instances.

No administration privileges delegation to clients for the access to the ftp servers.

Clients can use the granted permissions to manage the contents of their sites as needed.