



# CASPIAN DIALOGUE 2012

The network of ecological and epidemiological surveillance, response to emergency situations in the field of public health within the Caspian Region  
*(«Caspian Network»)*

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**City:** Moscow

**Date:** April 25, 2012

**Event:**

Fifth CASPIAN Energy

Forum 2012

**Topic of discussion:**



Project of the proposal of the Russian Federation

**The network of ecological and epidemiological surveillance, response to emergency situations in the field of public health within the Caspian Region («Caspian Network»)**

# Conditions necessary for efficient monitoring

- ❑ Continuous monitoring and information exchange
- ❑ Information availability to project participants
- ❑ Information integrity
- ❑ Information security
- ❑ Ensuring trust in the information using the TTP technology  
(Trusted Third Party)

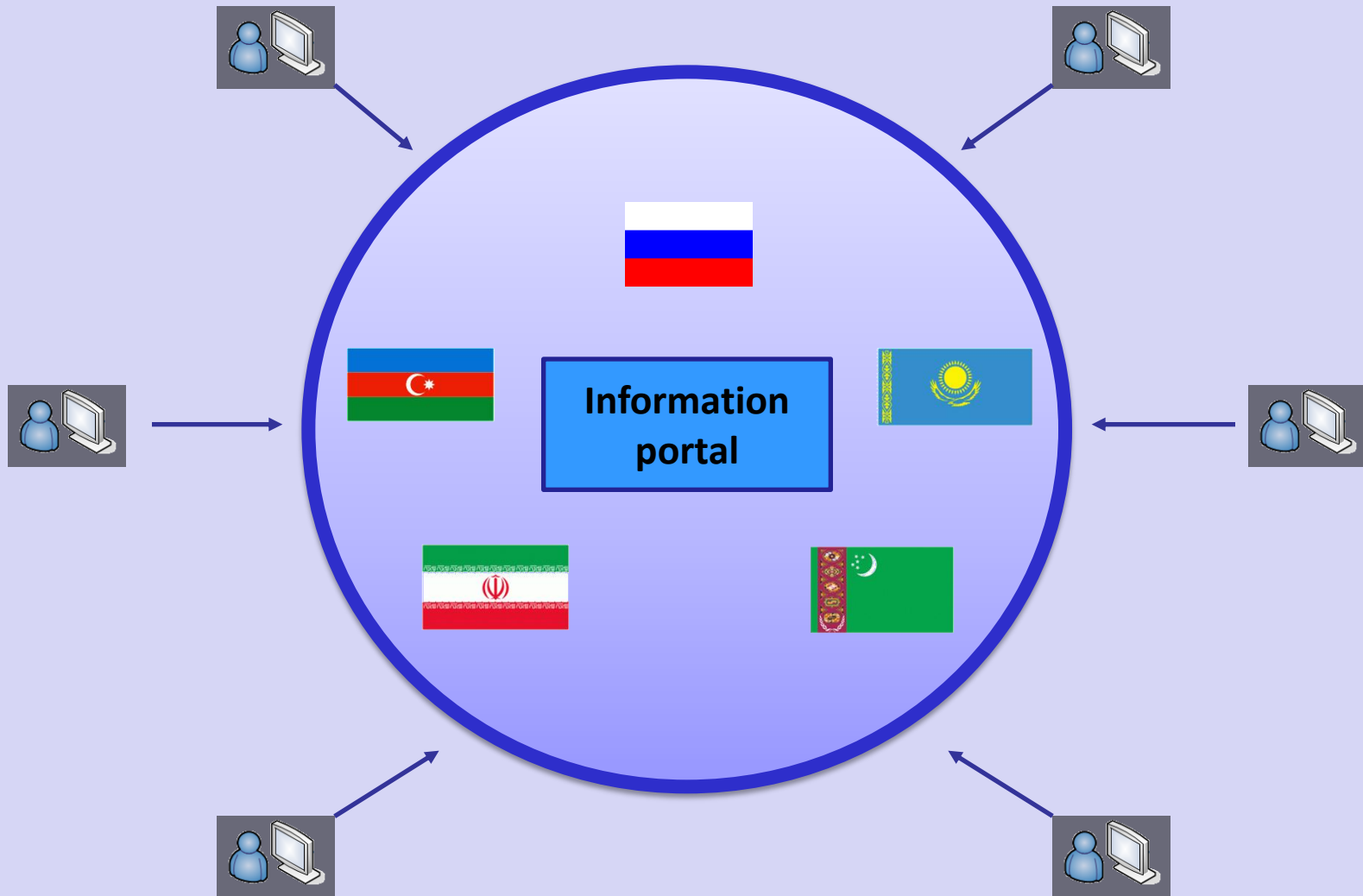
# INFORMATION PORTAL

Purpose: ecological and epidemiological surveillance, public health emergency prevention in the states of the Caspian region

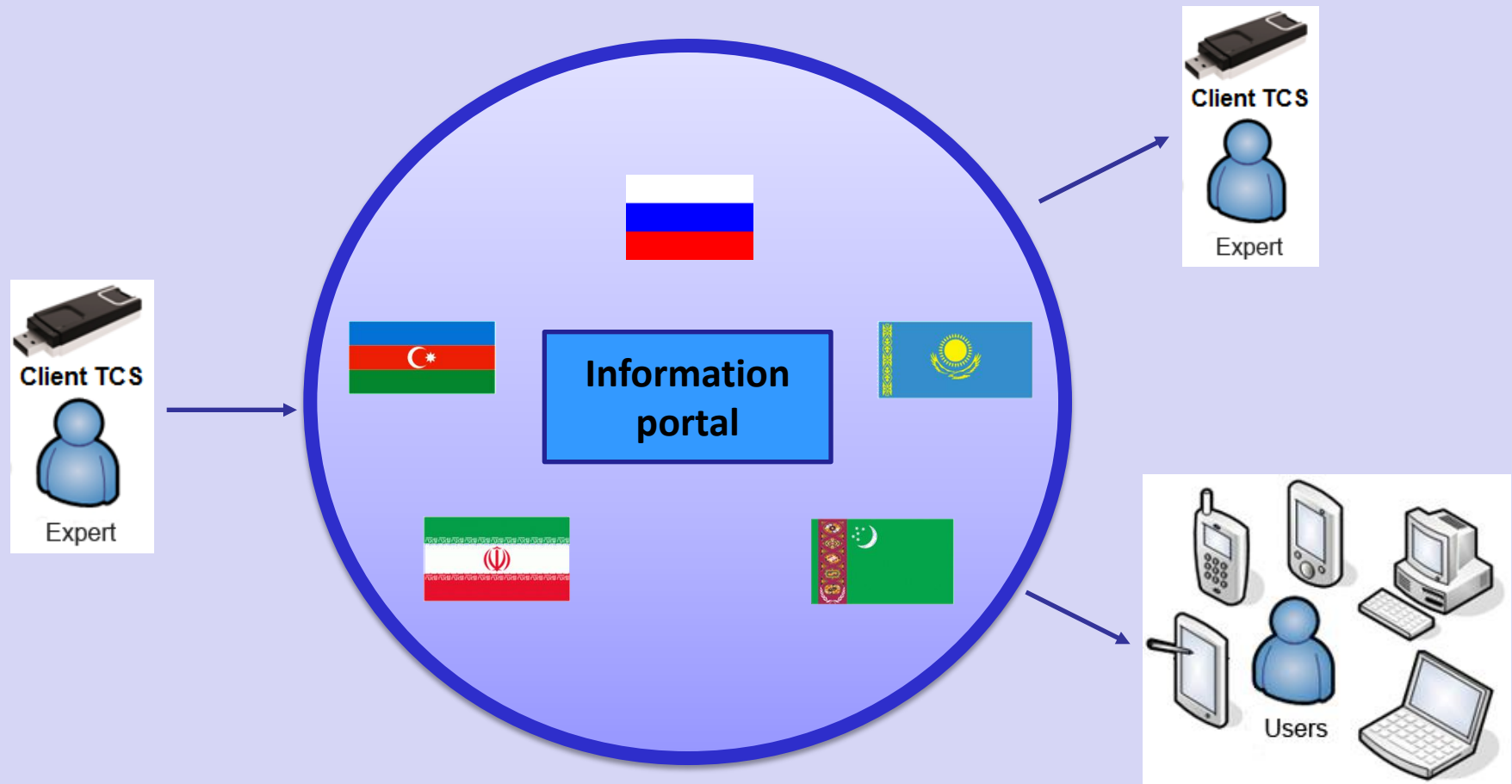


# Generally accessible information circuit

Purpose: to ensure data integrity using protection tools included in the technical features of the portal



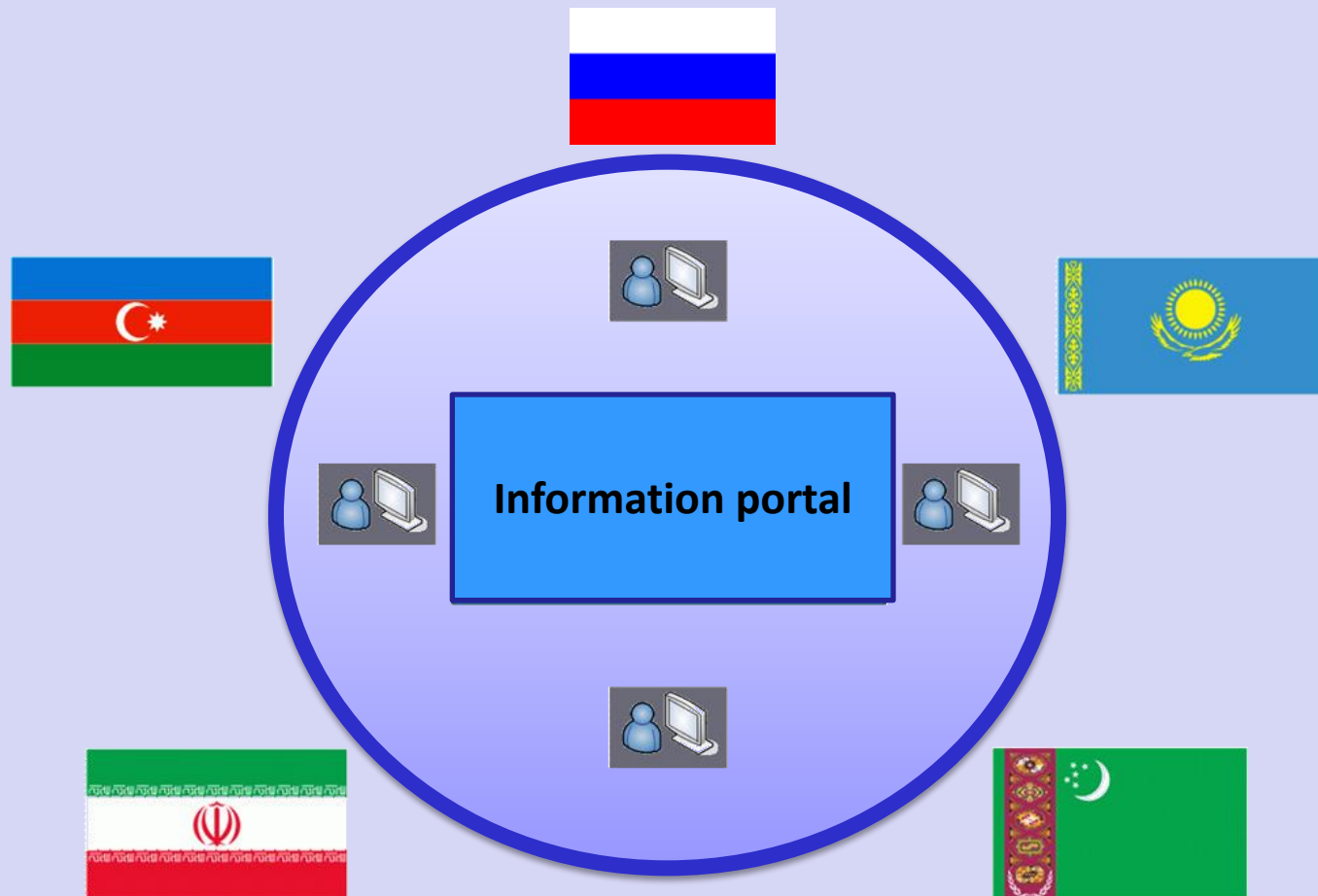
# Possible of information security



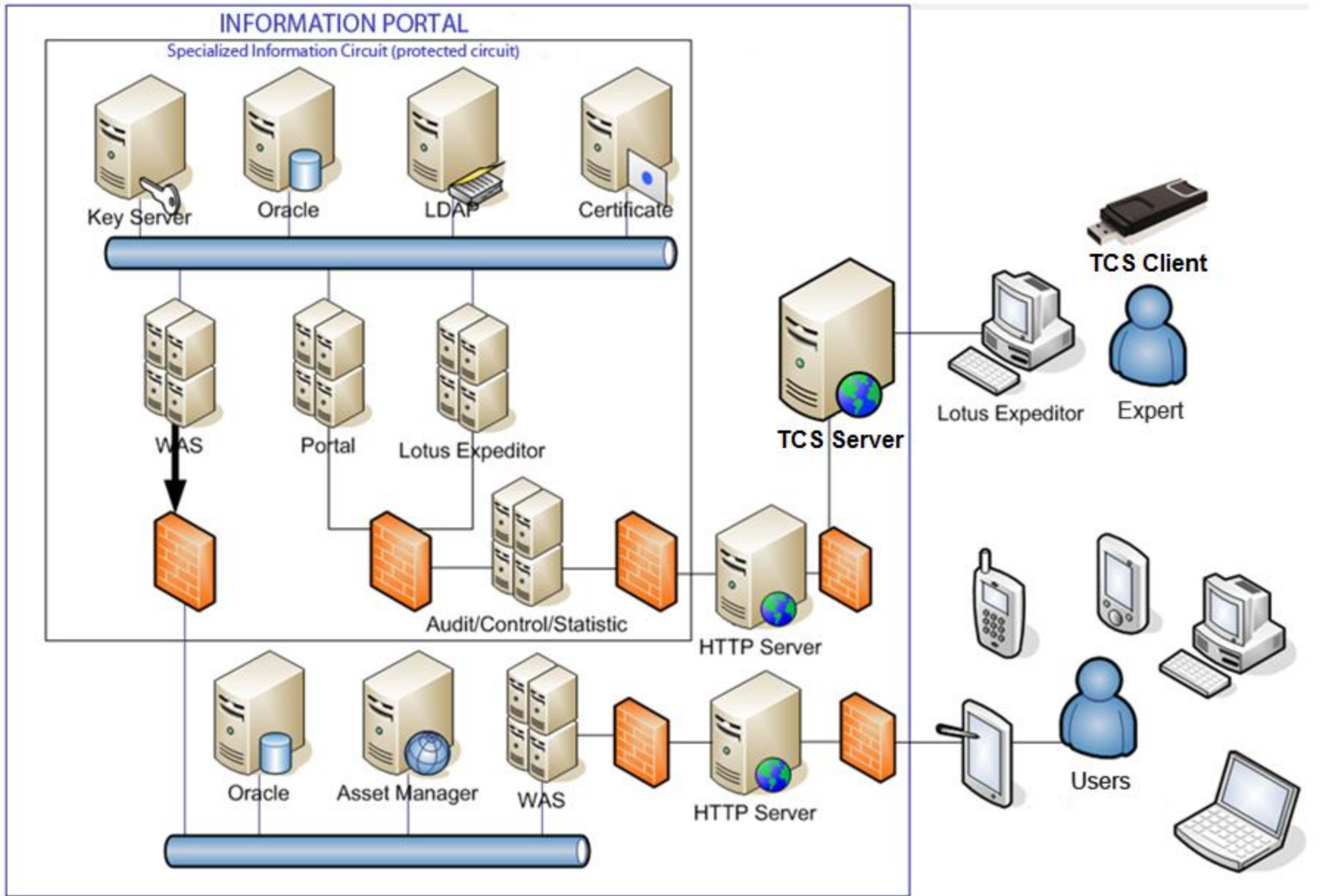
- Protected from external influences information portal
- Information portal provides secure data input from the experts
- Information portal provides data users and experts with the ability to protect

# Information security methods

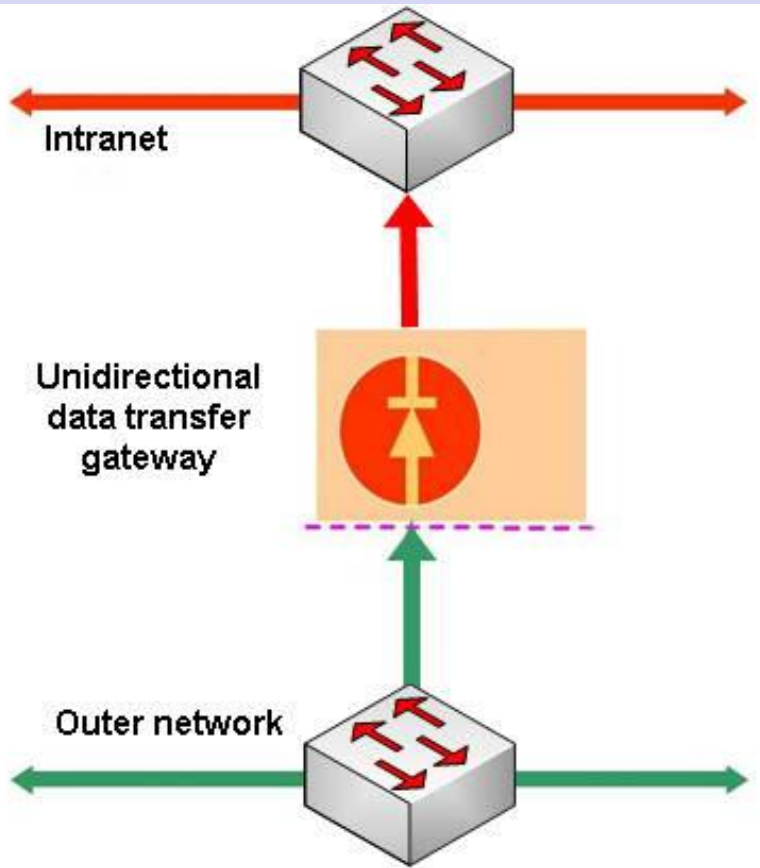
- Identification and authentication of experts and users
- Trusted connection sessions (TCS)
- Differentiation of access to portal resources
- Epidemiological information exchange system



# Server scheme and circuit organization



# Unidirectional data transfer gateway



Assigned for guaranteed data transfer provision from one LAN to another only in one direction in order to avoid limited propagation data leakage.

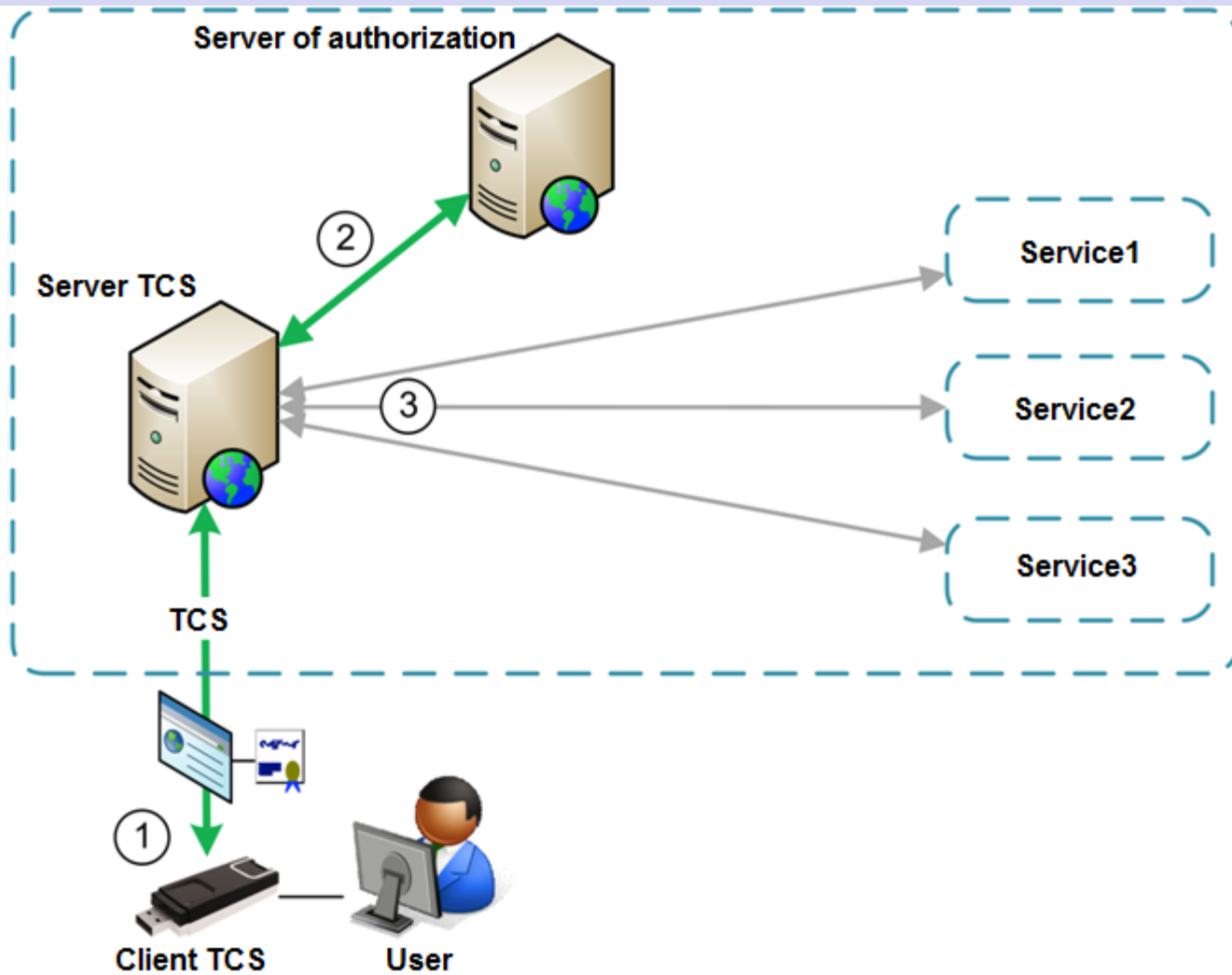
Data transfer rate - 100 Mb/c

Throughput – not less than 35 GB per day

Automatic transfer of files / directories in 24 x 4 mode with transferred information completeness and integrity control.



# Trusted connection session (TCS)



# Trusted connection session (TCS): principals

## TCS client

- Bootable USB-device with on-board microprocessor
- Hardware separated memory area with a single designated access attributes
- Bootable operation system, cryptographic data protection tool and set of functional software in write-protected memory area TCS server

## TCS server

- Trusted server
- Secure network connections with TCS clients
- Client TCS switching to the services of information portal in accordance with the rights of users

# Trusted connection session (TCS)

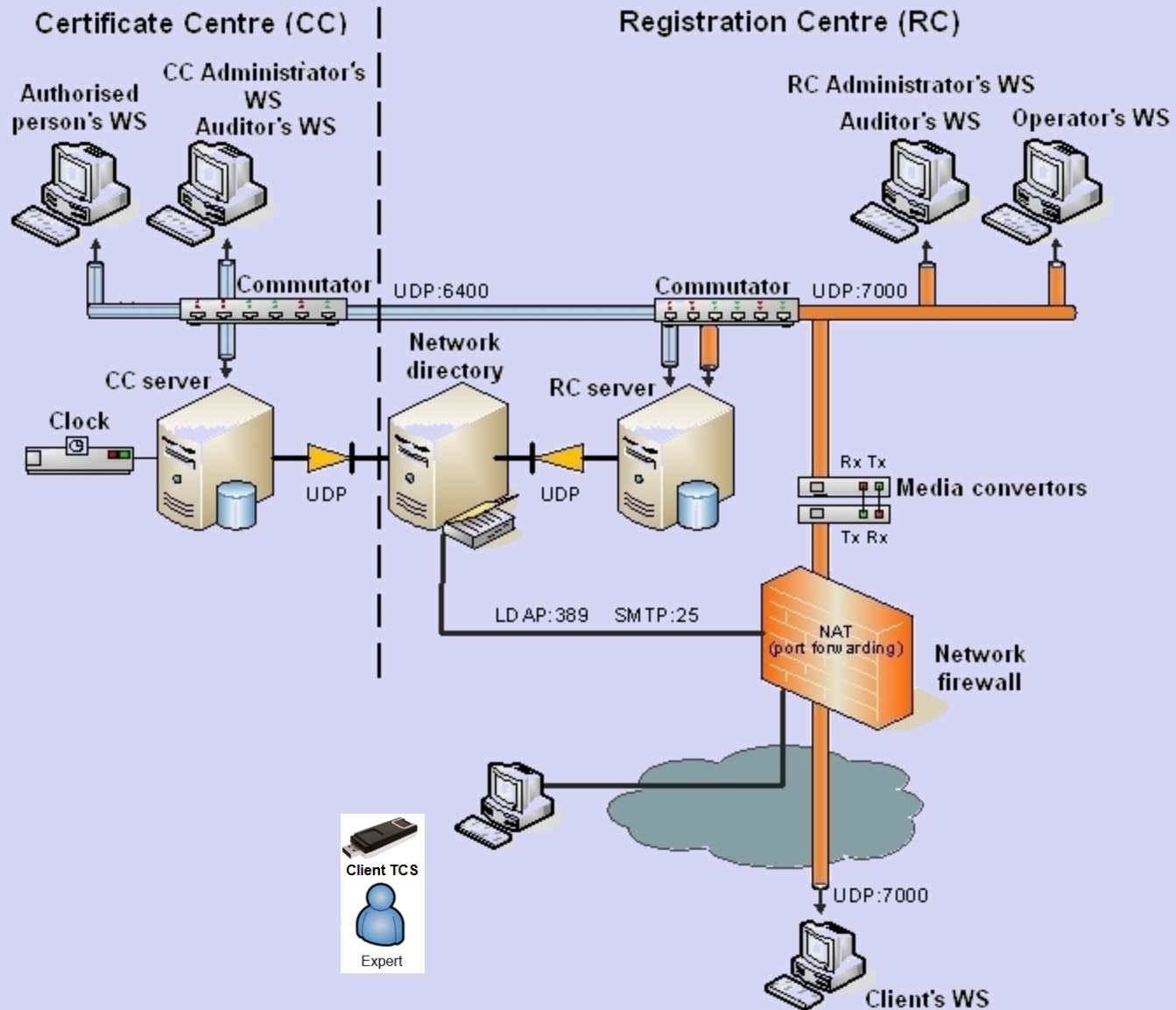
## Advantages

- Patented Russian technology
- Acceptable cost
- Required functional and adequate level of protection for user access to a trusted portal
- Mobility, willingness to work on an arbitrary (including non-trusted) computer
- No restrictions on the user with a computer is a trusted communication session

# Software

- Oracle Database Server
- IBM WebSphere Application Server
- IBM WebSphere Portal Server
- IBM Lotus Expeditor
- IBM Rational Asset Manager
- IBM HTTP Server
- Microsoft Active Directory

# CERTIFICATE AUTHORITY «AUTOGRAPH»



# Certification centre "Autograph" provides :

- realisation of relevant in law qualified electronic signature which has the same legal status as personal handwritten signature towards document in hard copy form ;
- high resistance to discredit of key system ;
- protection of traffic between components of certification centre "Autograph" with use of original data exchange protocol ;
- capability of common networks (Internet) use as a transport links without use of additional cipherers or leased channels ;
- formation of key certificates for electronic signature validation in accordance with recommendations of X.509 version 3, RFC 5280, and also X.500 for certificate owner name and name of a person, who issued the certificate, identification. Formation of withdrawn certificates list according to X.509 version 2 requirements ;
- effective periods of the keys : CC electronic signature key – 3 years, CC electronic signature validation key – 10 years, CC personnel and users electronic signature key – 1 year, , CC personnel and users electronic signature validation key – 10 years.

The implementation of the project will make it possible to create a multilevel information system, which will lead to the following positive results:

- to enhance the infectious diseases and public health emergency monitoring system in the Caspian Region
- to evaluate the ecological and epidemiological situation in the Caspian Region in the real-time mode
- to transfer the received information to the sanitary-epidemiological services of the project participant states in order to develop a joint action plan
- to considerably reduce the costs of ecological and anti-epidemiological measures and liquidation of consequences of public health emergencies
- to considerably raise public awareness of the ecological and epidemiological situation and emergency threats in the Caspian Region

# Uniqueness of results

- The Caspian Network participants receiving operative information on public health emergencies;
- Creation of a national segment of trust in Internet for the states of the Caspian region;
- Implementation of legally significant transboundary electronic document circulation in the field of epidemic safety (TTP technology -Trusted Third Party)

# Demand of results

The potential users of project realization results are:

- state national agencies of response and liquidation of consequences of public health emergencies
- national public health and sanitary-epidemiological surveillance services of the states of the Caspian region
- companies providing tourist services in the states of the Caspian region
- Internet users living in the Caspian region
- persons planning to travel to the Caspian region

**Thank you for your attention!**