



Session 1. The Hub Concept

Prepared by NZ MPI

Growing and Protecting New Zealand



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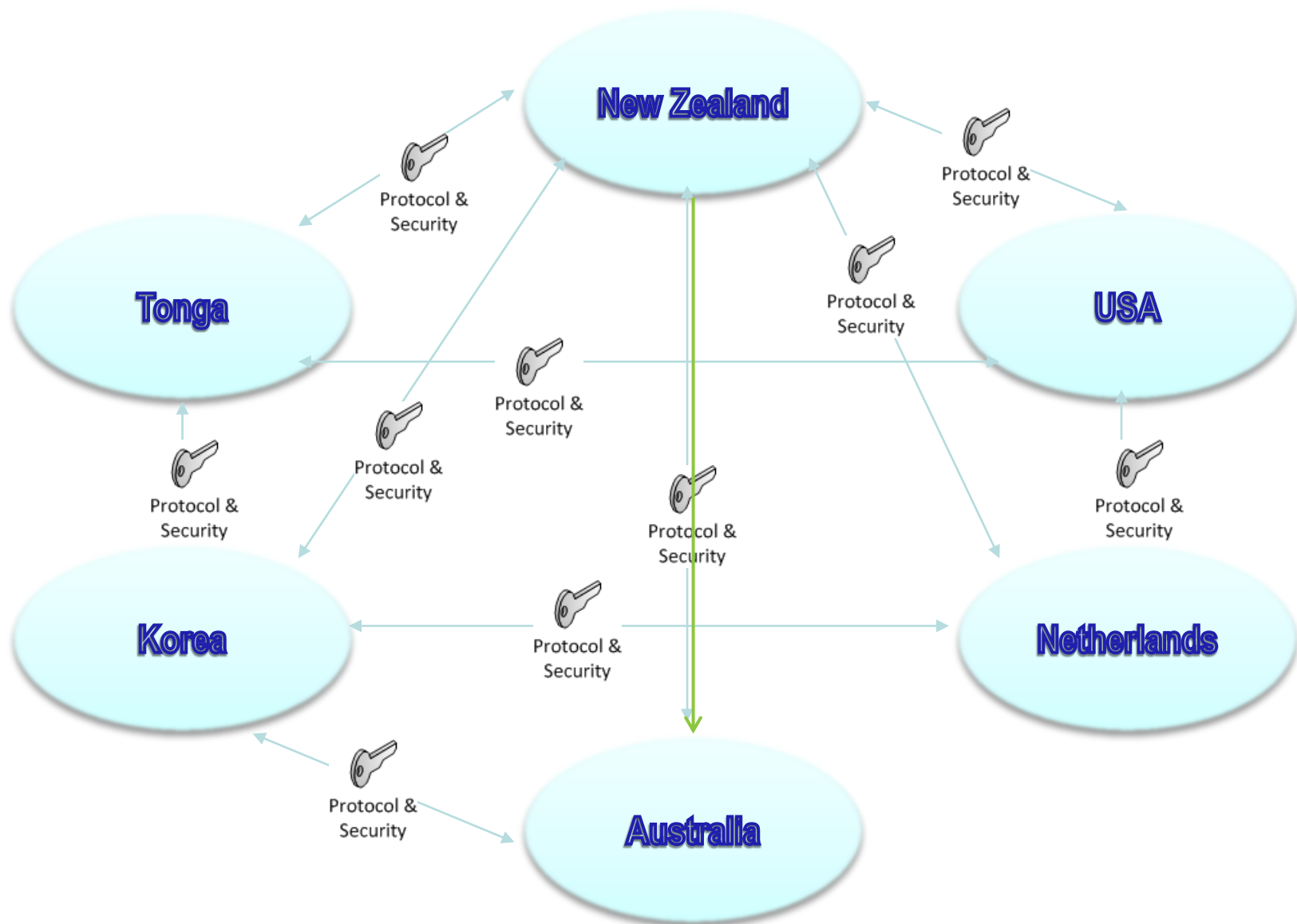
Contents:

- Reasons for having an ePhyto Hub
- ePhyto transmission options
 1. Visual of the Direct NPPO to NPPO ePhyto exchange (**point to point** via Bi-lateral agreement)
 2. Cloud/Hub Communication Concept: NPPO to NPPO through the Hub
- Cloud/Hub communication outcomes
- Hub Concept: “Security Mechanism (1. Envelope)”
- Hub Concept: “Security Mechanism (1. Message)”
- Way Forward?
- Questions

Reasons for having an ePhyto Hub

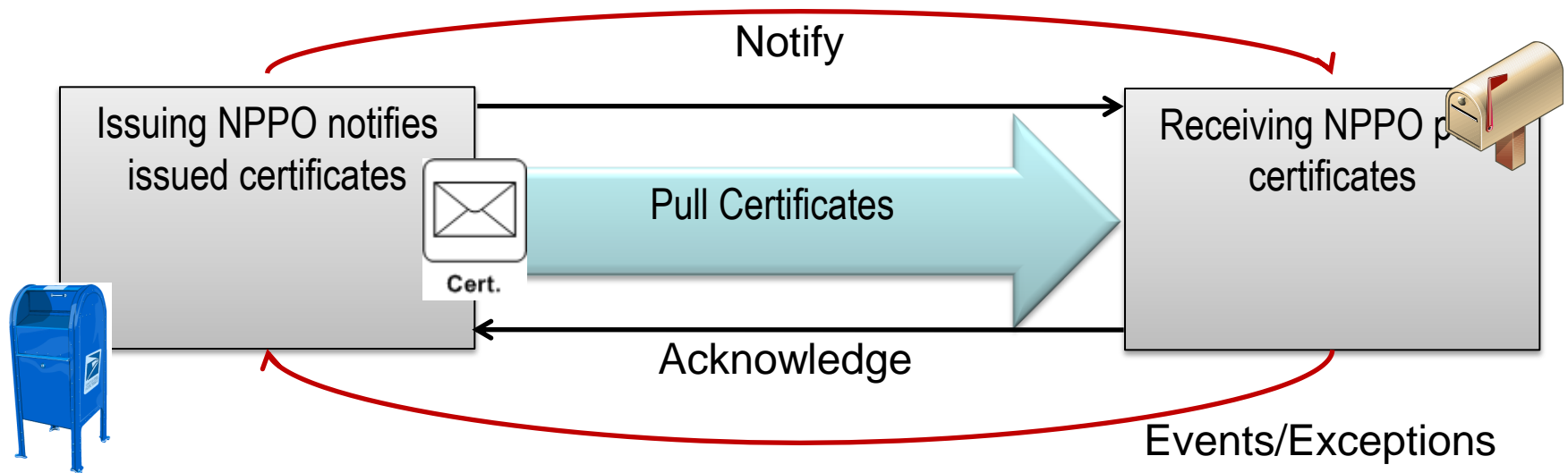
- Provide an effective , efficient & secure method for information exchange between participating NPPOs by eliminating the need for importing countries to access exporting countries systems directly.
 - E.g. Exporting NPPO push the export certificate information to the hub, importing NPPO pulls it from the hub.
- Reduce the complexity and cost of having multiple “Point to Point” interfaces for information exchanges with trading partners.
 - E.g. One standardised, secure interface to the hub for all electronic information exchange activities between participating NPPOs.
- Ability to provide a Portal solution to enable importing countries to receive Ephyto certificate information.

Direct NPPO to NPPO ePhyto exchange (Point to Point via Bi-Lateral Agreement)



Export NPP0 to Import NPP0: Point to Point

Events/Exceptions

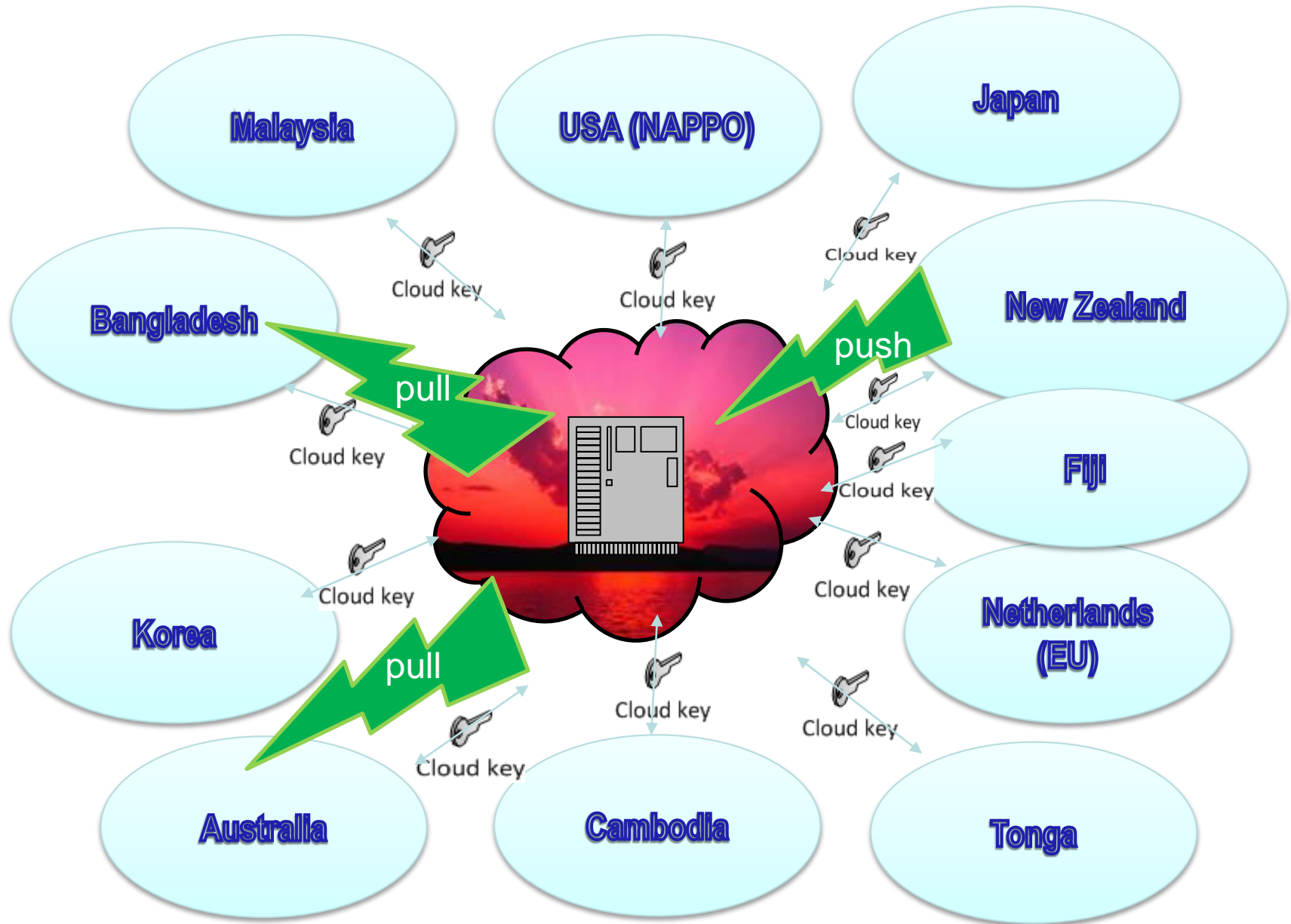


Direct NPPO to NPPO: “Challenges with Point to Point Exchanges”

“Electronic Exchange Communications involve” :

- Each exporting country has to have a stand alone interface for each of their import trading partner countries = multiple interfaces resulting in complexity and increased cost to manage & maintain
- challenges firewall security
- relies on pull technology

Cloud/Hub Communication Concept: NPPO to NPPO through the Hub



“Cloud/Hub” communication outcomes!

- Reduced complexity and rigidity
- Simpler setup for an NPPO and ongoing maintenance for participating countries = lower cost.
- Improved visibility of certificate exchanges.
- Able to separate the message carrier (envelope) from the actual certificate information payload making it more flexible and modular – not hard coded together.
- Simple security through the use of internet standard SSL certificates = lower cost for participating countries.

Hub Concept: Security Mechanism (1. Envelope)

“Envelope” to deliver certificate information:

- Involves a message “carrier or envelope” similar to the traditional postage envelope – identifies;
 - the sender,
 - the receiver, and
 - where the envelope actually originated from.
- Separates the delivery (transport) “carrier/envelope message” from the actual content (certificate information payload) of the message – taking care & enhancing the security element.



Message Carrier/Envelope Contains:

- Protocol-type
- Receiver ID
- Sender ID
- Transaction ID
- Security SSL Certificate (X.509 certificate)
- Encryption Mechanism

Hub Concept: Security Mechanism (2)

Certificate information inside the “Envelope”:

- Contains the specific certificate information being exchanged
- Accommodates exchanges of;
 - normal/standard phytosanitary certificate information, and
 - Re-export phytosanitary certificate information (includes ability to attach the original certificate).



Message Contains:

- Message Header - System level information includes security credentials, transaction context, & session identifiers.
- Message Body – Actual **encrypted** XML message contents (as per ePhyto XML data map) using SSL certificate.
- Attachments – Original certificate in Re-Export certificate situations.

Way forward?

Challenge:

We need a simple easy to use cost effective, scalable and secure IT Hardware & software solution.

Proposal!

- **Set up** a “cloud” based platform (Hub)
- **Use** commercial SSL certificates to make it easier, more secure and less costly to join.
- **Use** a systems integrator/support organisation to provide services & support for the global hub.
- **Define** phytosanitary business rules;
(e.g. Hub support service levels, functionality, ownership & non-liability, conditions for participation, any data retention/archive requirements, audit!)

Questions from CPM

- 1. Can the Hub serve as a system to notify non-compliances back to exporting NPPOs? (EU)**
- 2. How are consignments in transit to be handled? (Burkina Faso)**
- 3. How does electronic phytosanitary certification interface with a trade single window? (Malaysia)**
- 4. Need for comprehensive security testing (Iran)**
- 5. Is it necessary or even feasible to have two systems?
Questioning the need for Hub if we have harmonisation among point to point solutions. (Argentina)**
- 6. How can developing countries enter into electronic certification. (Mauritania)**
- 7. What physical/paper-based systems are also needed to support certification processes, e.g. Inspection? (Senegal)**

Questions from CPM

- 8. Should the importer pay the cost of transmission or the exporter? Be clear on who is benefiting. (Egypt)**
- 9. Is costing accurate? (USA)**
- 10. Need to assess the hub against rules and regulations of each country. (Uruguay)**
- 11. How to ensure electronic transmission and the hub are not used as a technical barrier to trade? (Pakistan)**
- 12. Ability of contracting parties to recover the cost of producing and transmitting certificates.**

Questions?

