



IPv6 Zero-Configuration Networks

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Application examples

- ***Home networking:***
 - ✓ For users (the majority!) who do not want to be bothered by device configuration.
- ***Enterprise:***
 - ✓ Capabilities to put in place quickly and change easily the addressing plan (installation, merge and acquisitions, reorganisations, ...).



Why IPv6 zero-configuration is so important?

**WLAN technologies
(802.11, Bluetooth,
UMTS)**

IPv6 technology

Easy to use,
bring IP everywhere

Number of addresses,
address autoconf

But we need more!!

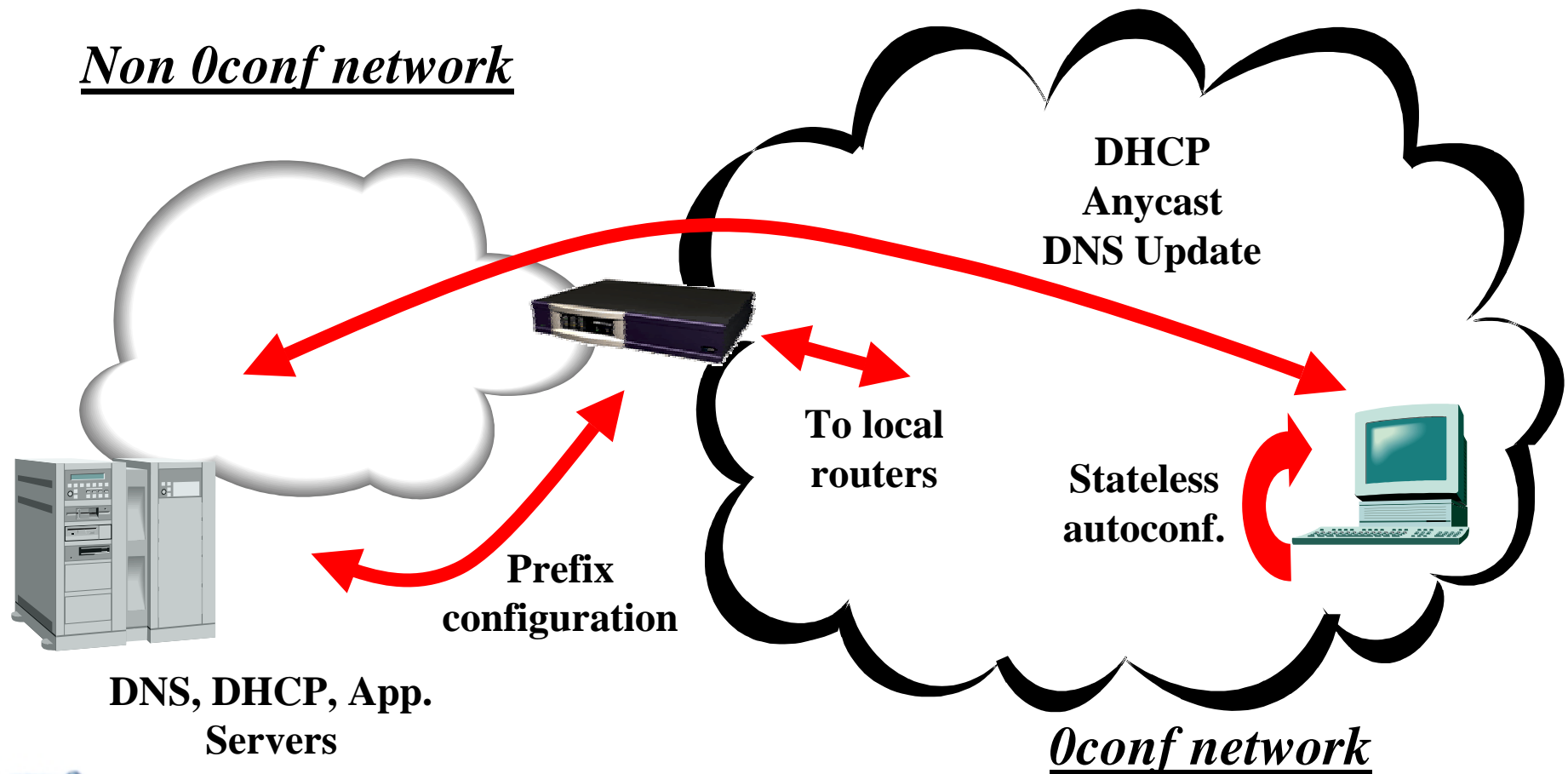
**Zero-configuration
networks**



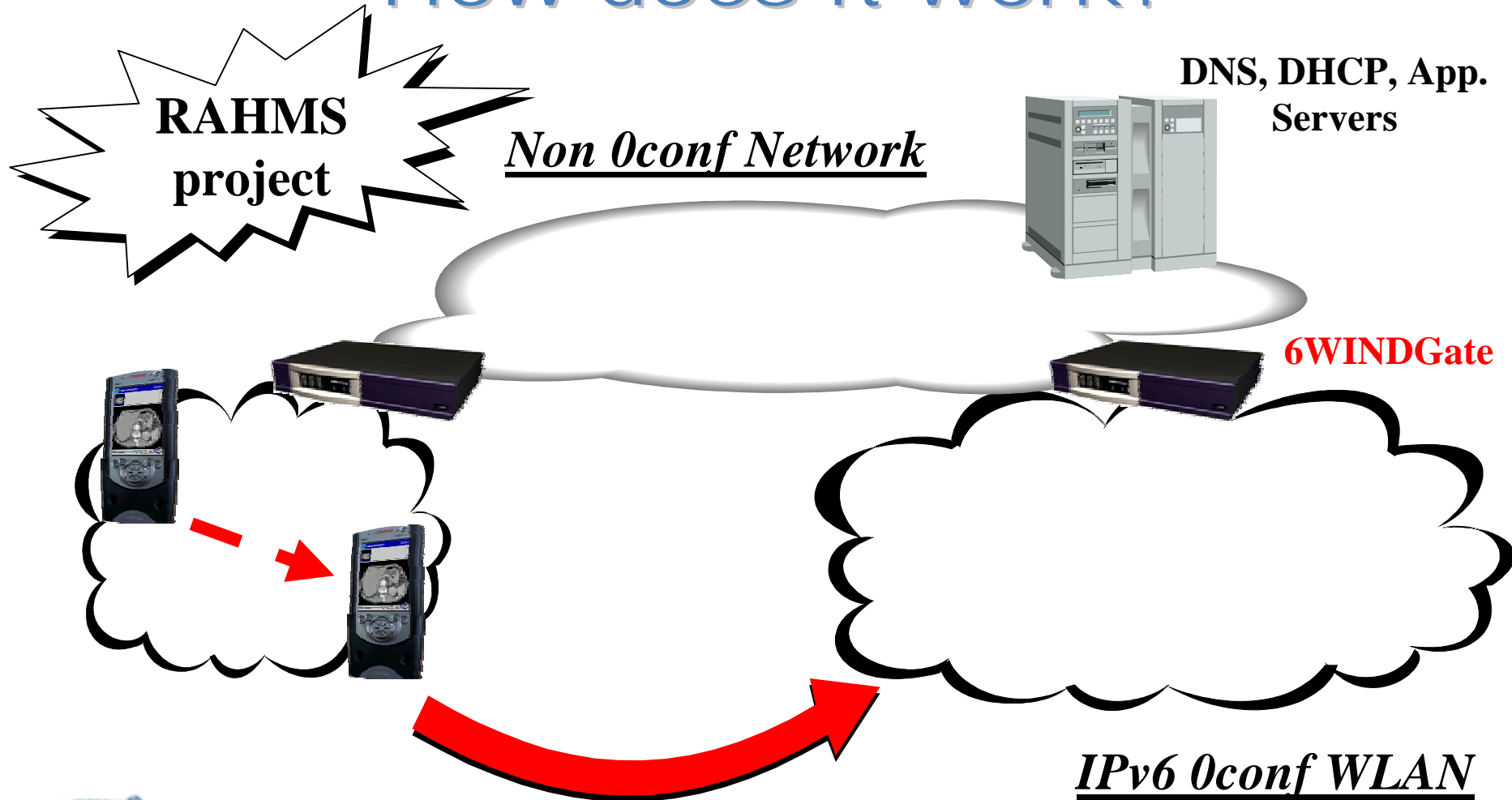
Issues

- ***Simplicity of use means:***
 - ✓ Smart and quite complex network protocols.
 - ✓ Security issues.
- ***What has to be configured?***
 - ✓ Router prefix, Host address, DNS server address, DNS update, Server localisation.
- ***Can everything be 0configured?***
 - ✓ No, in particular some identity and security parameters.

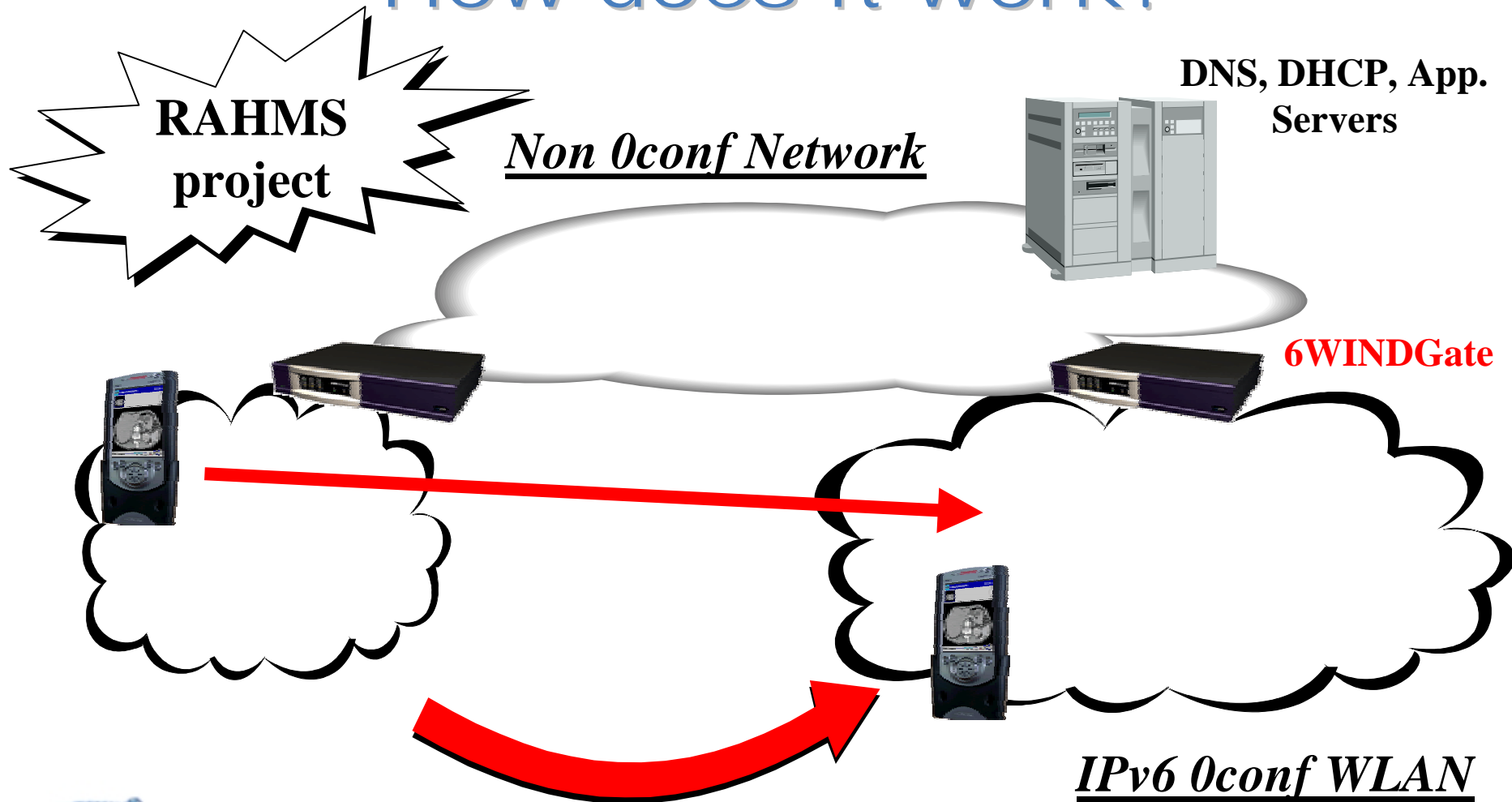
Protocols



How does it work?

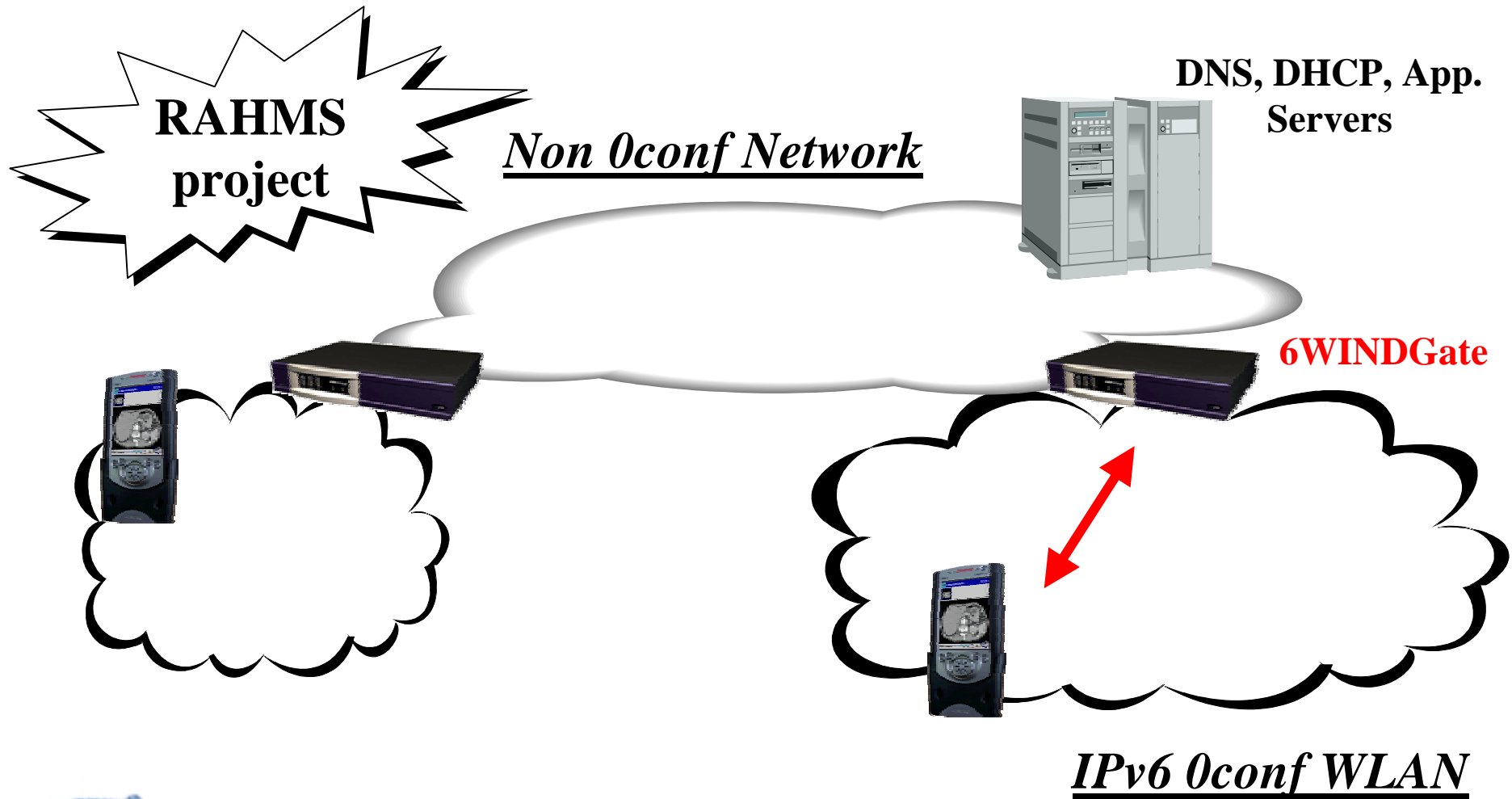


How does it work?





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(address and default route).
The router prefix has been configured.**



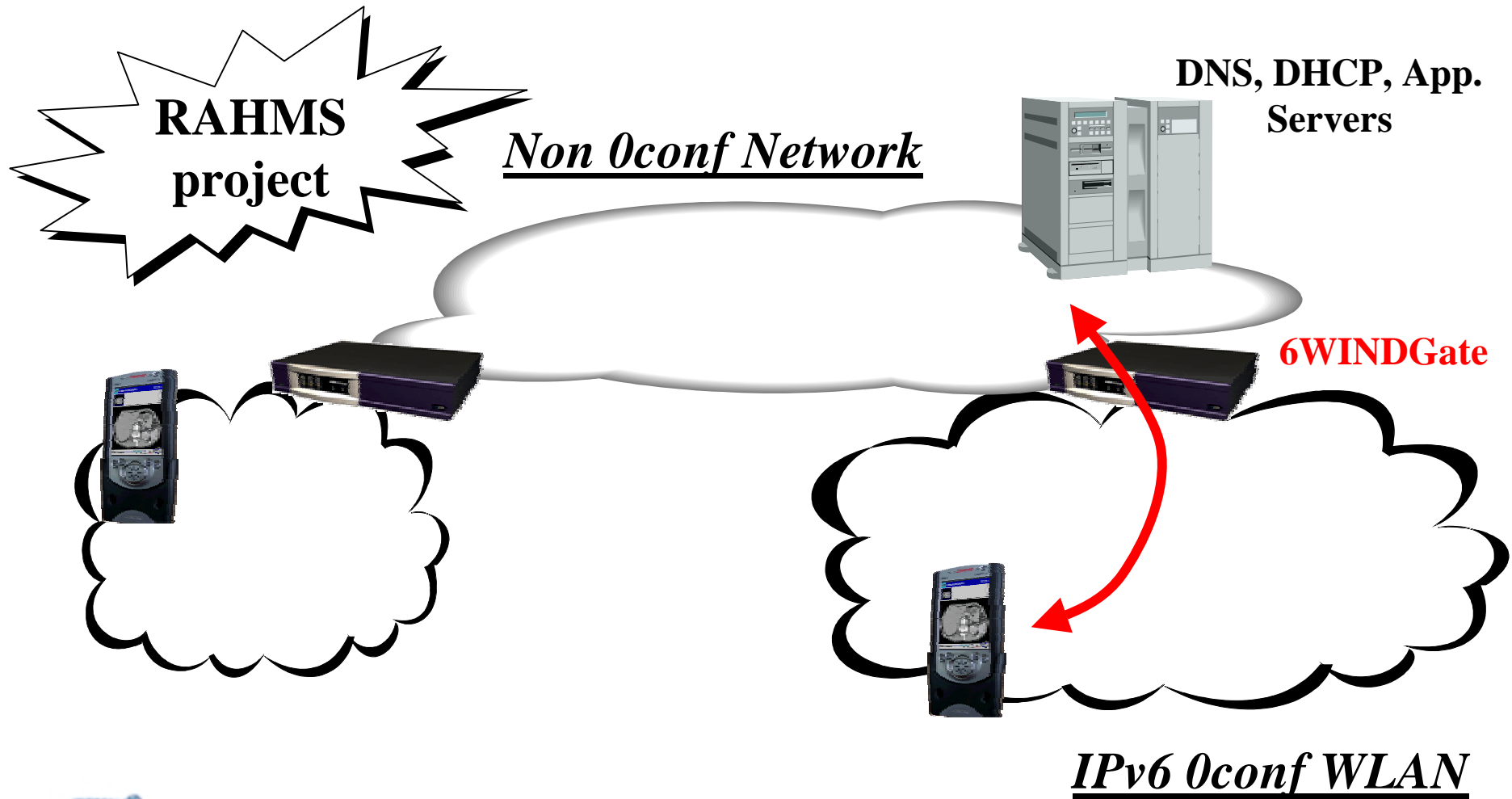


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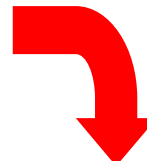




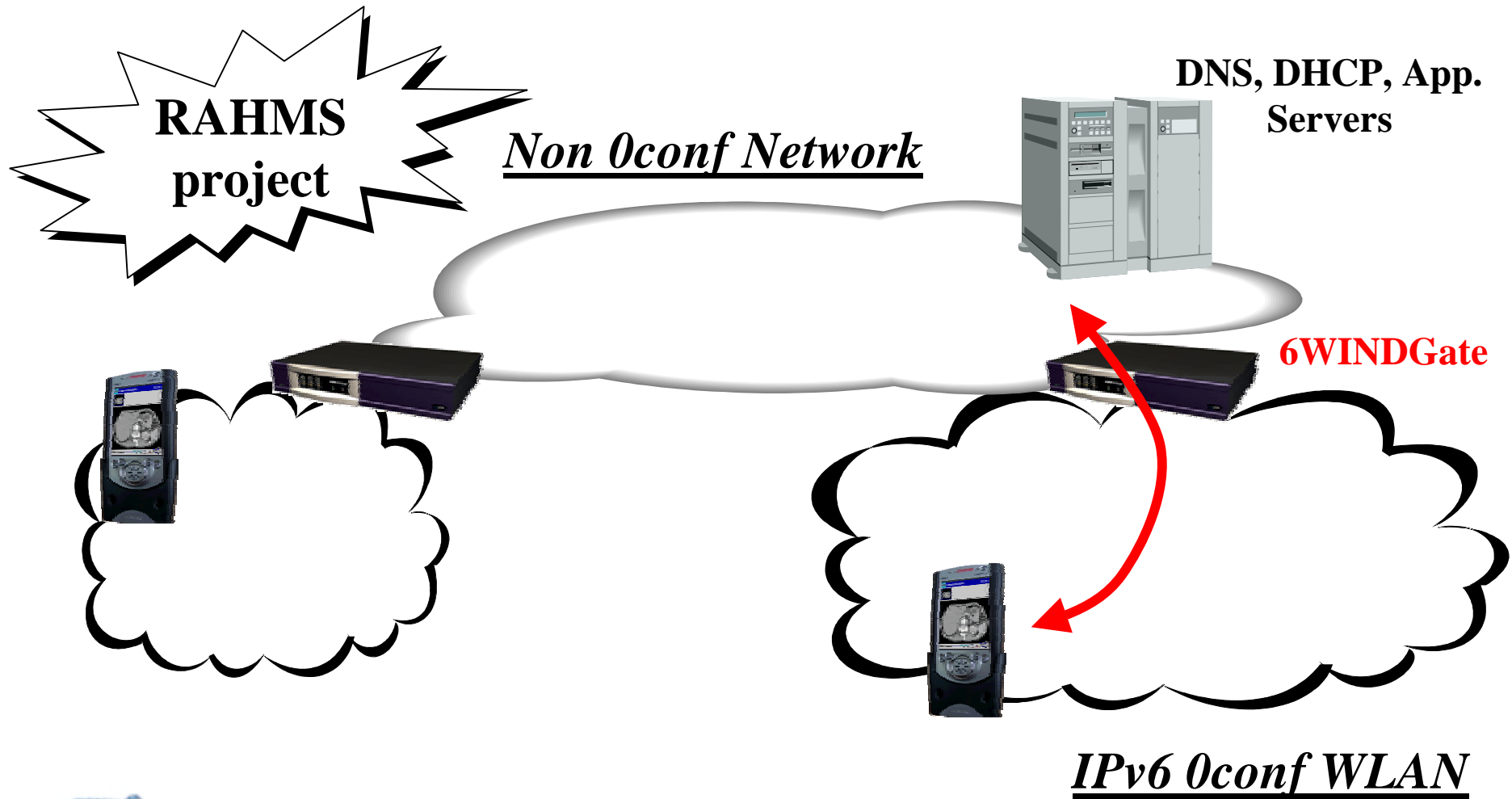
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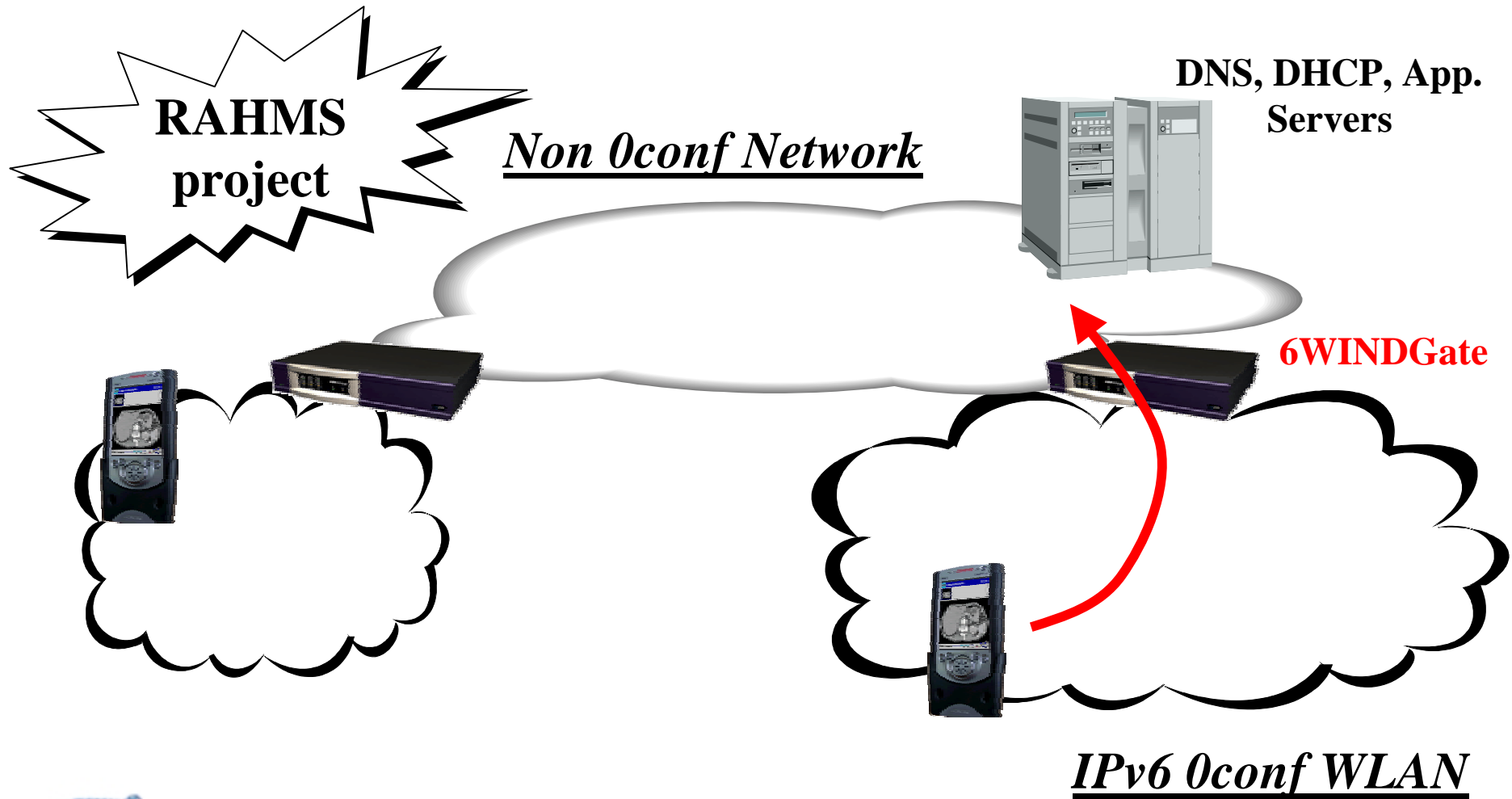


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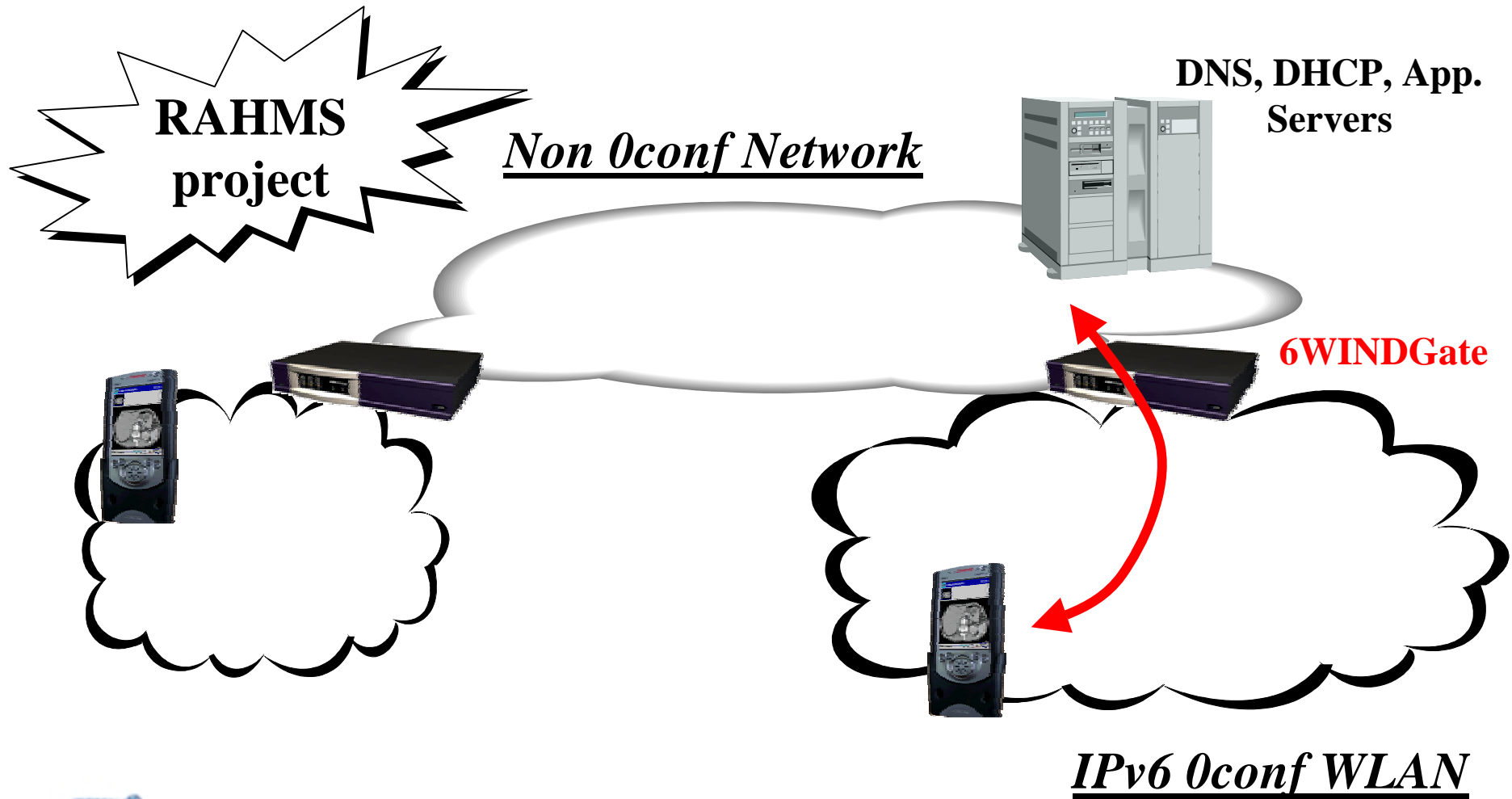
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**Use DHCPv6 or IPv6 anycast to locate an
application server.**





The RAHMS project



RAHMS is a



project



NetCentrex





Topics on study

- ***Some mechanisms and protocols are still drafts and several options have to be tested.***
- ***Router renumbering.***
- ***How to use 0conf and IP mobility together?***
- ***Security basics:***
 - ✓ “Configuration” of basic identity and security features to be used to secure the auto configuration process.



Conclusion

- ***Zero - configuration networks are strategic:***
 - ✓ Make use of the IPv6 auto configuration and related protocols.
 - ✓ Expand the IPv6 market as they really enable IP new applications for mass market.
- ***Solutions are coming soon.***



ANY QUESTIONS???

