合肥學院
HEFEI UNIVERSITY


# Distributed Computing
## Lesson 15: 3-Tier Application Structure

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# Outline

1 3-Tier Application Structure

# Overview

- What are 3-tier architectures?
- How can they be constructed with the technologies we already learned?

# Tiered Architectures

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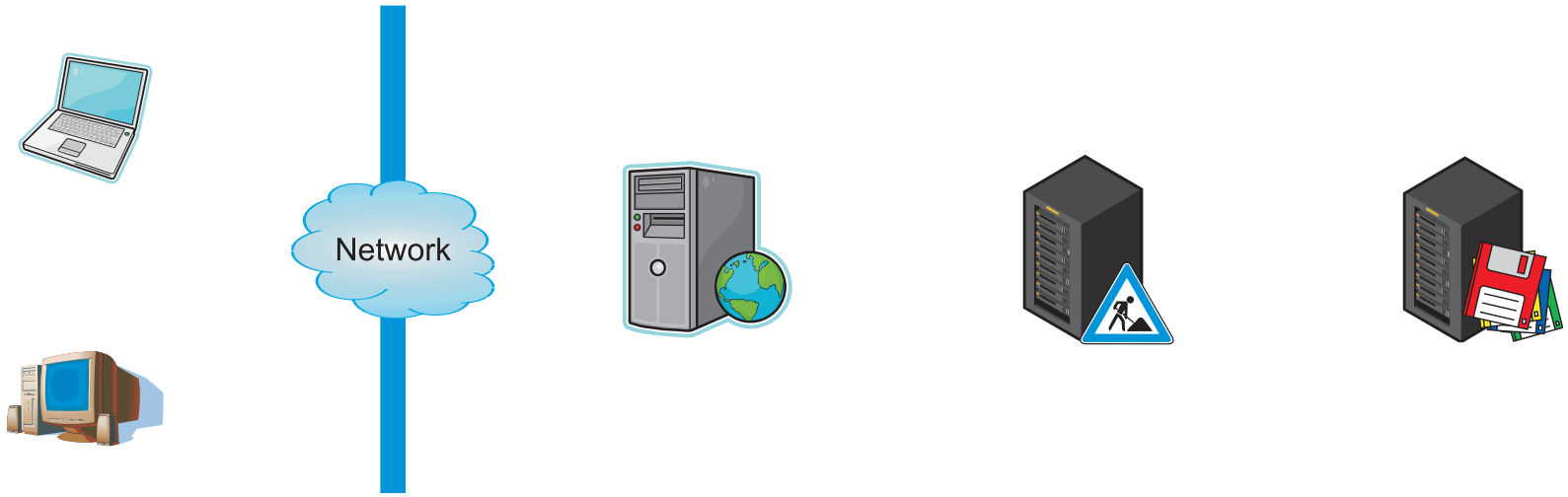
  3. Data/Persistency Tier:
     - database server

# 3-Tier Architectures

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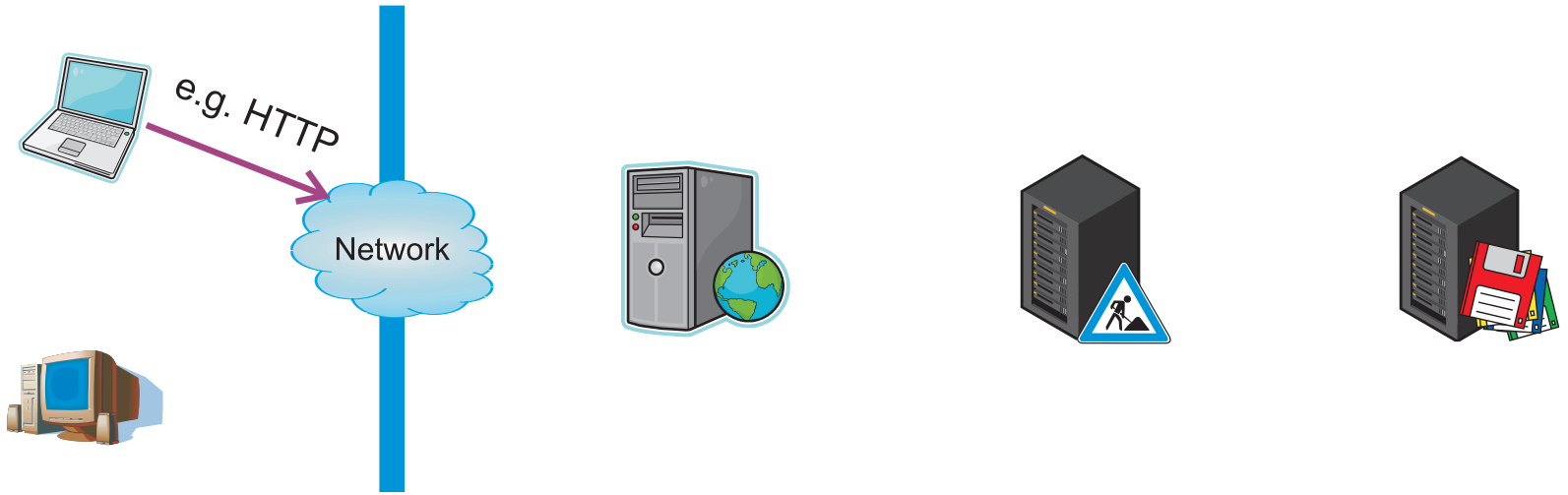


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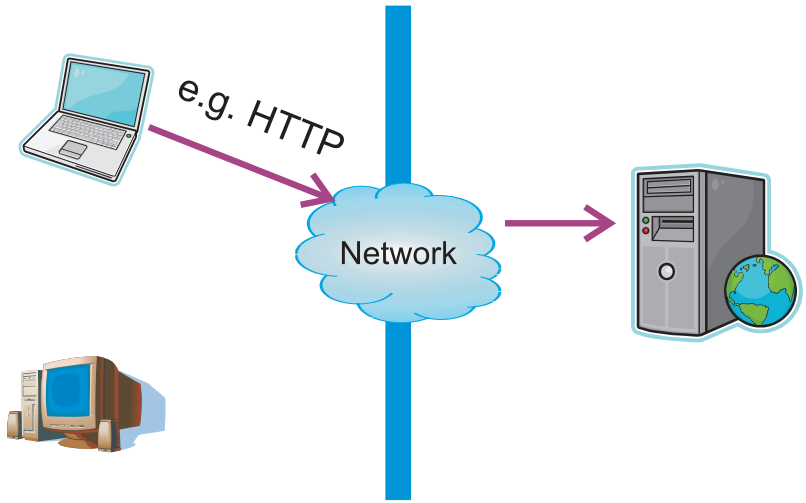


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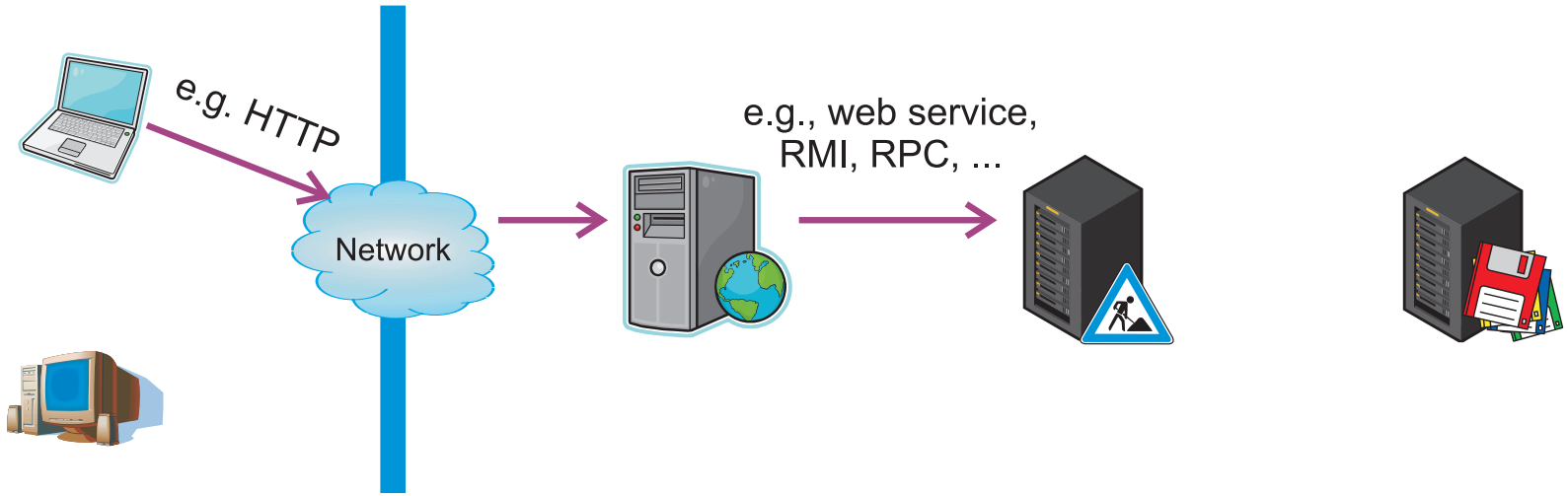


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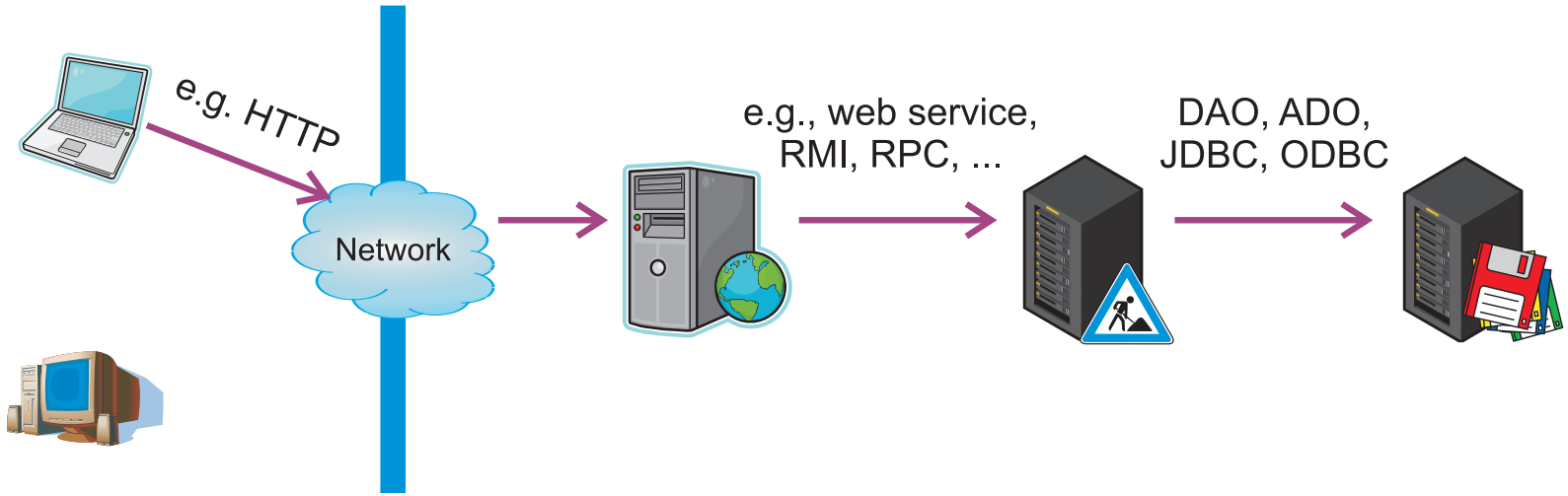


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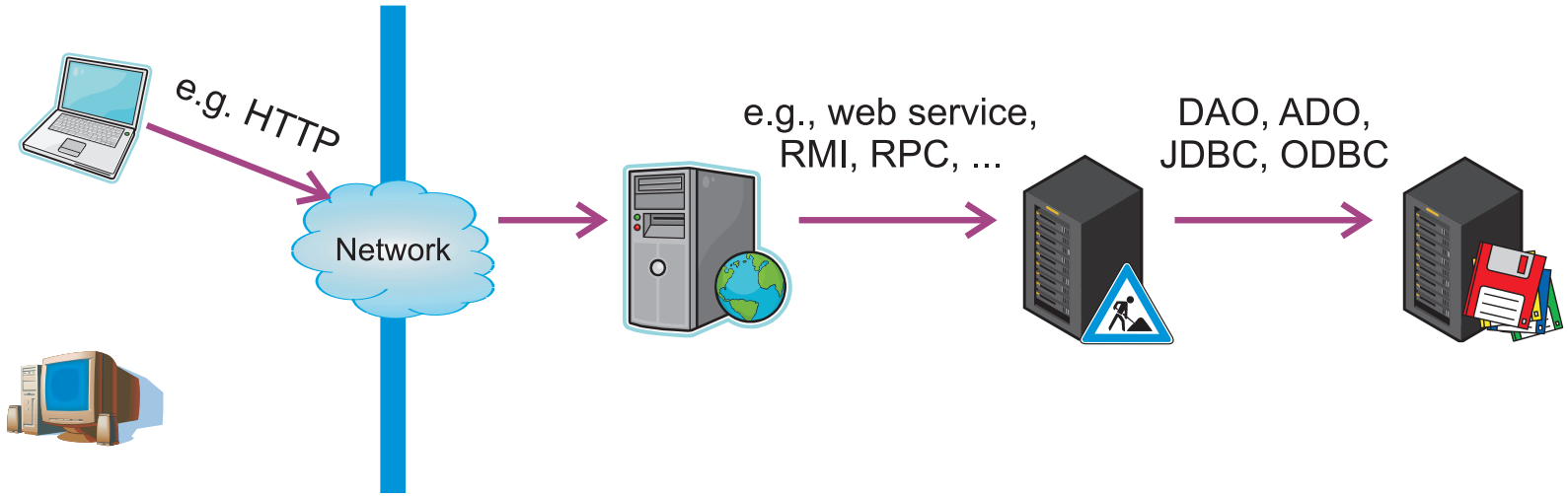


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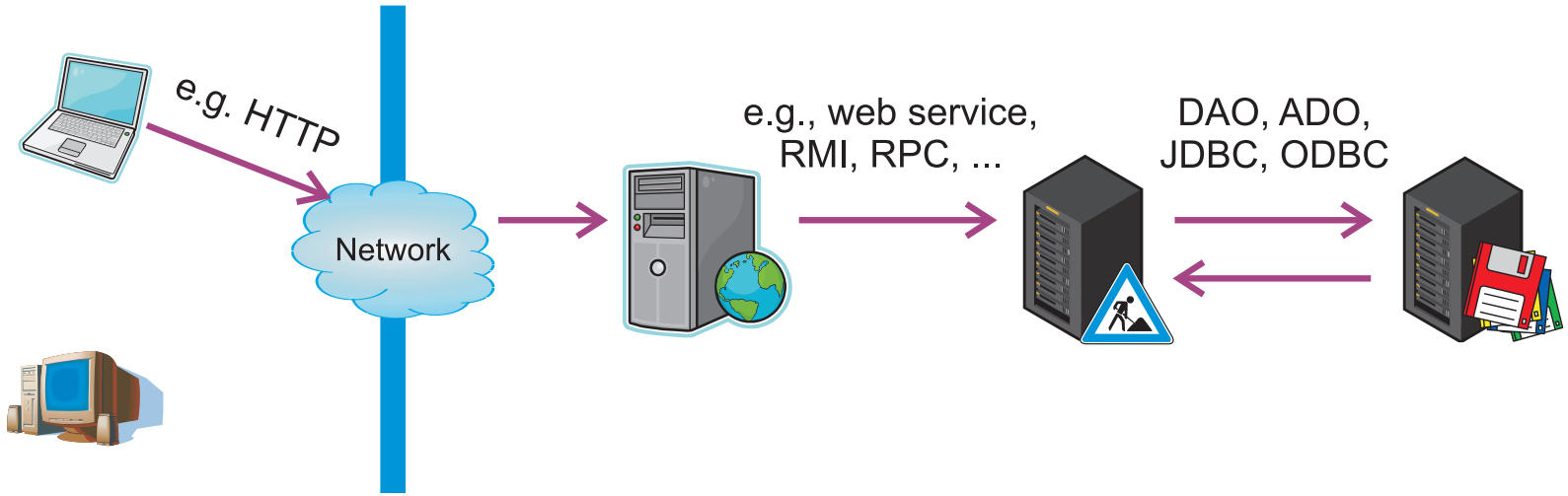


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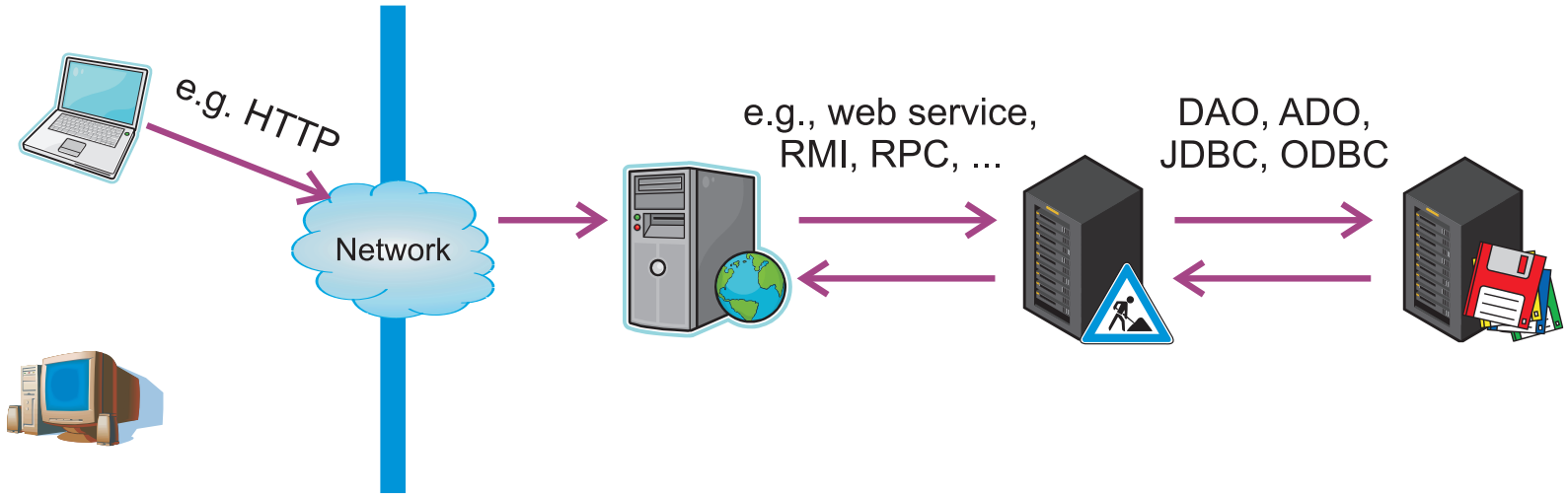


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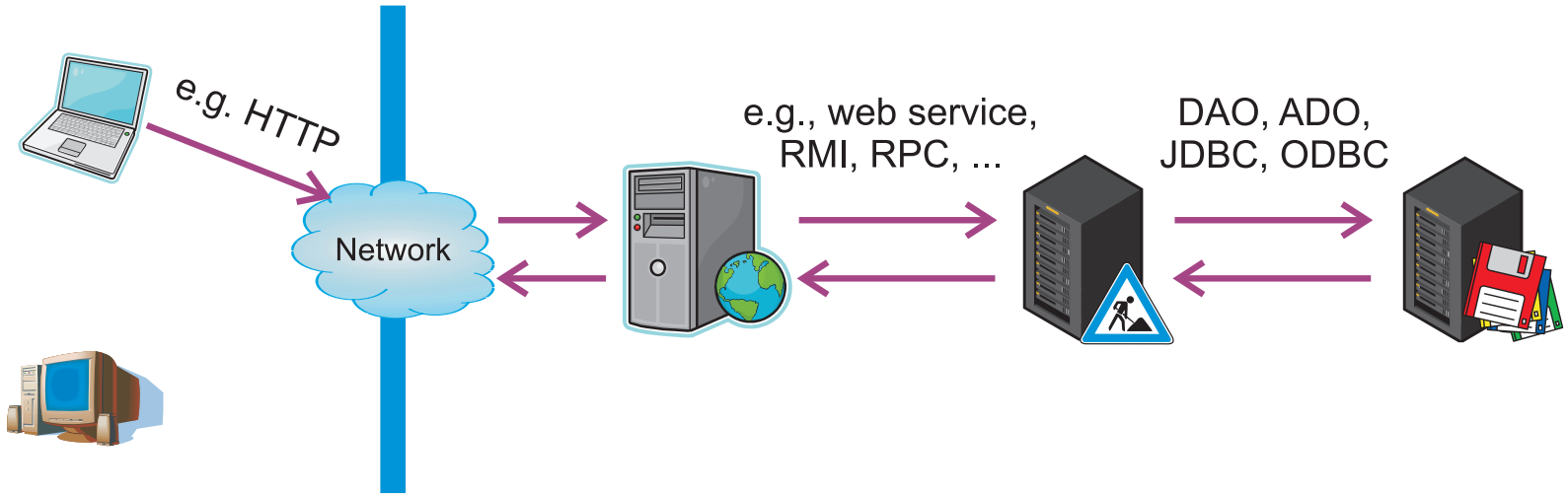


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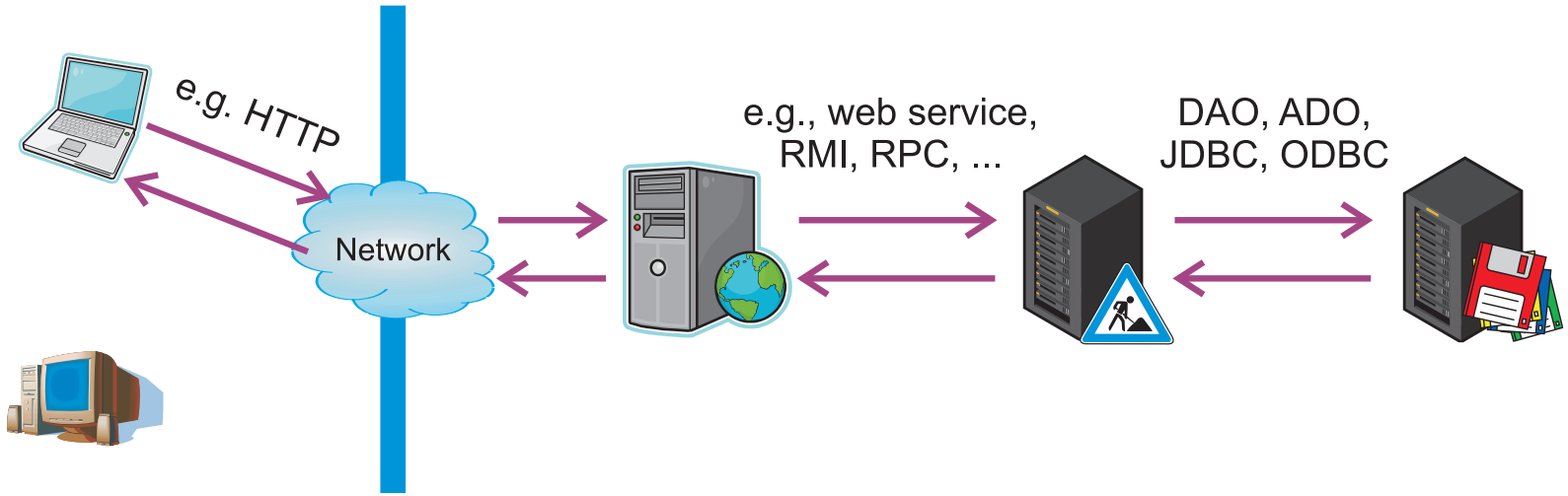


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# Why?

## Colored Logic 2005-08-31 http://thedailywtf.com/Articles/Colored_Logic.aspx

*by Alex Papadimoulis in Feature Articles (136 Comments)*

When developing software that requires a user interface, some of us strive for a Model-View-Controller architecture to ensure ease of change to the UI and data components. Others will couple their business and display logic a little more tightly, using variables and classes to go between the two. And then there are the few (**Adam Courtney's** colleague included) who use the color of a UI component to determine business logic and program flow ...

```
If lblClientName.BackColor = RGB(255, 0, 0) Then 'new client

    'Setup the client account
    Call SaveNewClientData

    'notify use of success
    If lblClientNum.ForeColor = RGB(0, 0, 153) Then
        MsgBox "Client was created but is pending activation."
    ElseIf lblClientNum.ForeColor = RGB(0, 128, 0) Then
        MsgBox "Client was created and was successfully activated."
    ElseIf lblClientNum.ForeColor = RGB(255, 0, 0) _
            And lblClientNum.Caption = "999999" Then
        MsgBox "There was an error creating the client. " & _
               "Please ensure all required fields were entered."
    End If

    'ED: Snip ...
End If
```

source: [6]

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- 3-tier architecture used in many small- and mid-sized business infrastructures
- RMI can be used to build such an infrastructure

# Summary

- 3-tier architectes allow clear separation of concerns
- they allow us to build extensible web applications
- RMI is one way to realize the communication between the front end and the middle tier in a 3-tier architecture

# 谢谢

# Thank you

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Caspar David Friedrich, “Der Wanderer über dem Nebelmeer”, 1818
http://en.wikipedia.org/wiki/Wanderer_above_the_Sea_of_Fog

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