

```
последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ
                  Language specification
```

☑ Network diagram (nwdiag)

nwdiag has been created by Takeshi Komiya and allows to quickly draw network diagrams. So we thank him for his creation!

Since the syntax is clear and simple, this has been integrated within PlantUML. We reuse here the examples that Takeshi has documented.

⊼ ☑ Simple diagram

Define a network

```
@startuml
     nwdiag {
       network dmz {
    address = "210.x.x.x/24"
@enduml
                                                 dmz __
                                           210.x.x.x/24
```

Define some elements or servers on a network

```
@startuml
nwdiag {
  network dmz {
    address = "210.x.x.x/24"
ď
               web01 [address = "210.x.x.1"];
web02 [address = "210.x.x.2"];
       dmz
                                  210.x.x.x/24
                                                   210.x.x.1
                                                                   210.x.x.2
                                                   web01
                                                                    web02
```

Full example





```
последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ
🛊 В начало
                                                        nwdiag {
  network dmz {
    address = "210.x.x.x/24"
■ Что нового ?
web01 [address = "210.x.x.1"];
web02 [address = "210.x.x.2"];
Online Server
                                                           network internal {
  address = "172.x.x.x/24";
▶ Запуск
□ F.A.Q.
                                                                web01 [address = "172.x.x.1"];
web02 [address = "172.x.x.2"];
У Скачать
                                                                db01;
db02;
Форум
Theme
                                                        @enduml
# Препроцессинг
Ш\\ Стандартная
                                                                                       dmz _
библиотека
                                                                                 210.x.x.x/24
+ Hitchhiker's Guide
                                                                                                210.x.x.1
                                                                                                              210.x.x.2
♣ PDF Guide
                                                                                                web01
                                                                                                               web02
                                                                                                172.k.x.1
                                                                                                              172.x.x.2
                                                                                     internal
                                                                                 172.x.x.x/24
                                                                                                                db02
```

➣ ☑ Define multiple addresses

```
▣
        @startuml
        mwdiag {
  network dmz {
    address = "210.x.x.x/24"
ď
                  // set multiple addresses (using comma)
web01 [address = "210.x.x.1, 210.x.x.20"];
web02 [address = "210.x.x.2"];
           network internal {
  address = "172.x.x.x/24";
                  web01 [address = "172.x.x.1"];
web02 [address = "172.x.x.2"];
                   db02;
            }
        @enduml
                                                 dmz _
                                         210.x.x.x/24
                                                            210.x.x.1
210.x.x.20
                                                                                210.x.x.2
                                                             web01
                                                                                 web02
                                                                                172.x.x.2
                                                             172.x.x.1
                                             internal
                                         172.x.x.x/24
                                                               db01
                                                                                  db02
```

⊼ ☑ Grouping nodes

```
последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ
🛊 В начало
■ Что нового ?
                                                    @startuml
                                                          nwdiag {
network Sample_front {
  address = "192.168.10.0/24";
                                                   Ľ
Online Server
                                                               // define group
group web {
  web01 [address = ".1"];
  web02 [address = ".2"];
≥ Запуск
□ F.A.Q.
У Скачать
                                                            network Sample_back {
  address = "192.168.20.0/24";
Ф Форум
                                                                                                                                  Simple diagram
                                                               address = "192.168.20.07
web01 [address = ".1"];
web02 [address = ".2"];
db01 [address = ".101"];
db02 [address = ".102"];
Theme
                                                                                                                                  Define multiple addresses
# Препроцессинг
                                                                                                                                  Grouping nodes
Ш\\ Стандартная
                                                                                                                                  Extended Syntax (for network
                                                               // define network using defined nodes
библиотека
                                                                                                                                  or group)
                                                               group db {
db01;
+ Hitchhiker's Guide
                                                                                                                                  Using Sprites
                                                                  db02;
                                                                                                                                  Using OpenIconic
♣ PDF Guide
                                                               }
                                                                                                                                  Same nodes on more than two
                                                            }
                                                                                                                                  networks
                                                          @enduml
                                                                                                                                  Peer networks
                                                                                                                                  Peer networks and group
                                                                                Sample_front _
                                                                                                                                  Add title, caption, header,
                                                                              192.168.10.0/24
                                                                                                                                  footer or legend on network
                                                                                                                                  diagram
                                                                                                                                  With or without shadow
                                                                                                  web01
                                                                                                                 web02
                                                                                                                                  Change width of the networks
                                                                                                                                  Other internal networks
                                                                                                                                  Using (global) style
                                                                                Sample back
                                                                              192.168.20.0/24
                                                                                                                                  Appendix: Test of all shapes on
                                                                                                                  .102
                                                                                                                                  Network diagram (nwdiag)
                                                                                                   db01
                                                                                                                  db02
```

Define group outside of network definitions

```
@startuml
     nwdiag {
  // define group outside of network definitions
Ľ
         color = "#FFAAAA";
         web01;
         web02:
         db01;
       network dmz {
         web01;
         web02;
       network internal {
         web01;
         web02;
          db01;
         db02;
     @enduml
                    dmz
                                                   web02
                                      web01
                  internal ⊏
                            db02
                                       db01
```

Define several groups on same network

Example with 2 group

последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ 🛊 В начало nwdiag {
 group {
 color = "#FFaaaa"; ■ Что нового ? ľ web01; db01; Online Server group {
 color = "#aaaaFF"; ≥ Запуск web02; □ F.A.Q. db02; network dmz {
 address = "210.x.x.x/24" 🏠 Скачать Форум web01 [address = "210.x.x.1"]; web02 [address = "210.x.x.2"]; Theme network internal {
 address = "172.x.x.x/24"; # Препроцессинг **Ш**\\ Стандартная web01 [address = "172.x.x.1"];
web02 [address = "172.x.x.2"];
db01 ;
db02 ; библиотека + Hitchhiker's Guide ♣ PDF Guide @enduml dmz 210.x.x.x/24 210.x.x.1 210.x.x.2 web01 web02 172.x.x.2 internal 172.x.x.x/24 db01 db02

[Ref. QA-12663]

Example with 3 groups



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последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ 🛊 В начало nwdiag { group { ■ Что нового ? color = "#FFaaaa"; web01; db01; Online Server group {
 color = "#aaFFaa"; ≥ Запуск web02; F.A.Q. db02; group {
 color = "#aaaaFF"; **У** Скачать Форум web03; db03; Theme # Препроцессинг network dmz { web01; web02; **Ш**\\ Стандартная библиотека web03; + Hitchhiker's Guide network internal {
 web01; ■ PDF Guide db01; web02; db02 ; web03; db03; } @enduml web01 web02 web03 db01 db02 db03

[Ref. QA-13138]

⊼ ☑ Extended Syntax (for network or group)

Network

For network or network's component, you can add or change:

- $\bullet \ \ \text{addresses (separated by comma} \ \ , \);$
- color;
- description;
- shape.



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Пстандартная библиотека
Нitchhiker's Guide
PDF Guide

последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ

Group

For a group, you can add or change:

- color;
- description.



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```
nwdiag {
  group {
    color = "#CCFFCC";
    description = "Long group description";
    web02;
db01;
  network dmz {
    web01;
    web02;
  network internal {
    web01;
    web02
    db01 [address = ".101", shape = database];
@enduml
                          dmz =
                                Long group description
                                  web01
                                              web02
                        internal 💳
                                   db01
```

последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ

[Ref. QA-12056]

You can use all sprites (icons) from the ${\ensuremath{\mathsf{Standard}}}\xspace \ensuremath{\mathsf{Library}}\xspace$ or any other library.

Use the notation sprite> to use a sprite, \n to make a new line,
or any other Creole syntax.





последовательност прецедентов классов активности активности вытивности вытивности вытивности состояний объ 👚 В начало !include <office/Servers/application_server>
!include <office/Servers/database_server> ■ Что нового ? nwdiag {
 network dmz {
 address = "210.x.x.x/24" Online Server // set multiple addresses (using comma)
web01 [address = "210.x.x.1, 210.x.x.20",
web02 [address = "210.x.x.2", description : ▶ Запуск □ F.A.Q. **У** Скачать network internal { address = "172.x.x.x/24"; Форум web01 [address = "172.x.x.1"];
web02 [address = "172.x.x.2"];
db01 [address = "172.x.x.100", description
db02 [address = "172.x.x.101", description Theme # Препроцессинг **Ш**\\ Стандартная библиотека @enduml + Hitchhiker's Guide ♣ PDF Guide dmz 210.x.x.x/24 210.x.x.1 210.x.x.20 210.x.x.2 web01 web02 172.x.x.1 172.x.x.2 internal 172.x.x.x/24 172.x x.100 172.x x.101 db01 db02

[Ref. QA-11862]

⊼ ☑ Using OpenIconic

You can also use the icons from OpenIconic in network or node descriptions.

Use the notation <code><&icon></code> to make an icon, <code><&icon*n></code> to multiply the size by a factor <code>n</code> , and <code>\n</code> to make a newline:







🛊 В начало nwdiag { ■ Что нового ? group nightly {
 color = "#FFAAAA";
 description = "<&clock> Restarted nightly <&c: web02; Online Server db01; ≥ Запуск network dmz {
 address = "210.x.x.x/24" □ F.A.Q. **У** Скачать user [description = "<&person*4.5>\n user1" // set multiple addresses (using comma)
web01 [address = "210.x.x.1, 210.x.x.20", web02 [address = "210.x.x.2", description = Форум Theme # Препроцессинг network internal { address = "172.x.x.x/24"; **Ш**\\ Стандартная библиотека + Hitchhiker's Guide 🛤 PDF Guide } @enduml 210.x.x.x/24 210.x.x.1 210.x.x.20 210.x.x.2 ₩ web02 web01 172.x.x.1 internal 172.x.x.x/24 172.x x.100 172.x x.101 172.x x.110 db02 db01

последовательност прецедентов классов активности активности выти компонент состояний объ

$\overline{}$ $\ \ \,$ Same nodes on more than two networks

You can use same nodes on different networks (more than two networks); *nwdiag* use in this case *'jump line'* over networks.





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Online Server
Запуск
F.A.Q.
Скачать
Форум
Препроцессинг
Препроцессинг
Поблиотека
Hitchhiker's Guide
PDF Guide

```
nwdiag {
  // define group at outside network definitions
  group {
    color = "#7777FF";
     web01;
     web02;
db01;
  network dmz {
  color = "pink"
     web01;
     web02;
  network internal {
     web01;
     web02;
     db01 [shape = database ];
  network internal2 {
  color = "LightBlue";
     web01;
     web02;
db01;
}
@enduml
                  dmz 💳
                           web01
                                          web02
               internal □
                                                        db01
              internal2 □
```

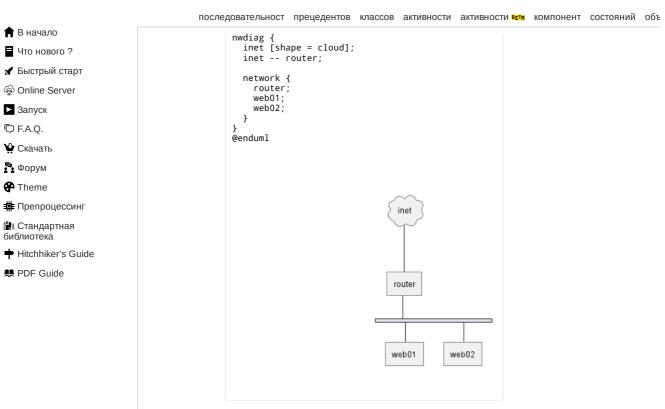
последовательност прецедентов классов активности активности выти компонент состояний объ

Peer networks are simple connections between two nodes, for which we don't use a horizontal "busbar" network



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➣ ☑ Peer networks and group

Without group

```
@startuml
nwdiag {
   internet [ shape = cloud];
   internet -- router;

   network proxy {
      router;
      app;
   }
   network default {
      app;
      db;
   }
} @enduml
internet -- router;
   router;
   app;
   app;
   db;
}

default

### Proxy

###
```

последовательност прецедентов классов активности активности ветя компонент состояний объ 角 В начало nwdiag {
 internet [shape = cloud];
 internet -- router; ■ Что нового ? Ľ group {
 color = "pink"; Online Server app; db; ▶ Запуск □ F.A.Q. network proxy {
 router; 🏠 Скачать Ф Форум Theme network default { # Препроцессинг В Стандартная библиотека @enduml + Hitchhiker's Guide ♣ PDF Guide internet router арр proxy □ default

Group on second

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 Нitchhiker's Guide
 PDF Guide

```
nwdiag {
    internet [ shape = cloud];
    internet -- router;

network proxy {
        router;
        app;
    }

group {
        color = "pink";
        app;
        db;
}

network default {
        app;
        db;
}

@enduml
internet -- router;
internet -- router;
internet -- router
router
internet -- router
internet -- router
internet -- router
internet -- router
router
router
internet -- router
rou
```

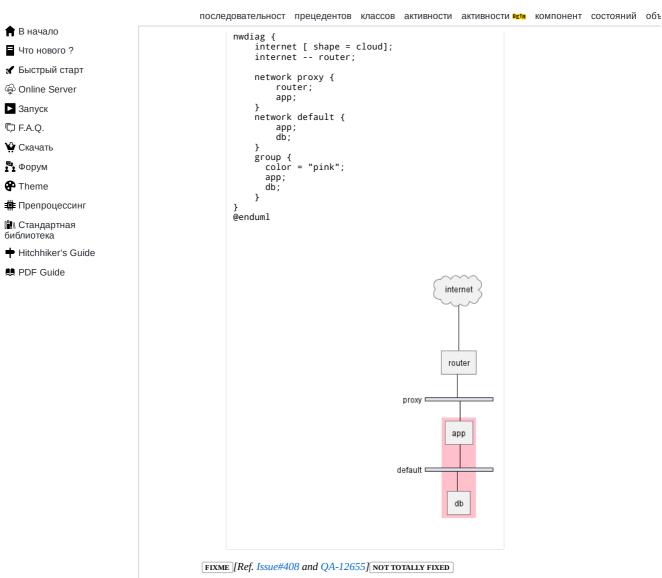
последовательност прецедентов классов активности активности ветя компонент состояний объ

[FIXME] Why the line on proxy for 'db'? ('db' must be only on 'default network') [See example without group]

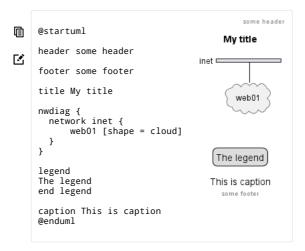
Group on third



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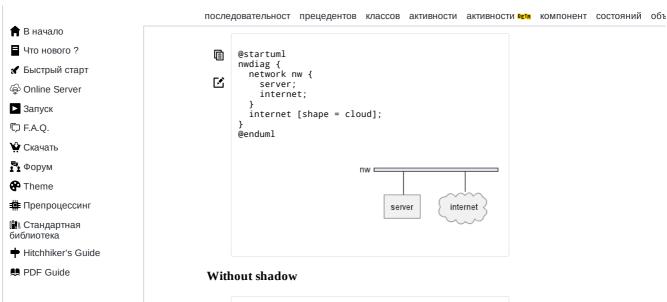


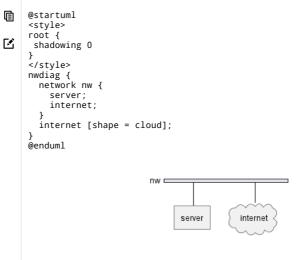
⊼ ☑ Add title, caption, header, footer or legend on network diagram



[Ref. QA-11303 and Common commands]

➣ ☑ With or without shadow





[Ref. QA-14516]

⊼ ☑ Change width of the networks

You can change the width of the networks, especially in order to have the same full width for only some or all networks.

Here are some examples, with all the possibilities:

without



последовательност прецедентов классов активности активности выти компонент состояний объ 🛊 В начало nwdiag {
 network NETWORK_BASE { ■ Что нового ? dev_A [address = "dev_A"] dev_B [address = "dev_B"] network IntNET1 {
 dev_B [address = "dev_B1"]
 dev_M [address = "dev_M1"] Online Server ≥ Запуск network IntNET2 {
 dev_B [address = "dev_B2"]
 dev_M [address = "dev_M2"] □ F.A.Q. **У** Скачать Форум @enduml Theme # Препроцессинг NETWORK_BASE = **Ш**\\ Стандартная dev_B dev A библиотека + Hitchhiker's Guide dev_A dev_B ♣ PDF Guide dev_B1 IntNET1 = dev_M1 dev_M dev_M2 dev B2 IntNET2 □ · only the first @startuml width = full dev_A [address = "dev_A"] dev_B [address = "dev_B"] ď network IntNET1 {
 dev_B [address = "dev_B1"]
 dev_M [address = "dev_M1"] network IntNET2 {
 dev_B [address = "dev_B2"]
 dev_M [address = "dev_M2"] @enduml NETWORK_BASE □ dev_B dev_B dev B1 IntNET1 = dev M dev_M2 dev_B2 IntNET2 = · the first and the second

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24.02.2023, 19:11

nwdiag последовательност прецедентов классов активности активности выти компонент состояний объ 🛊 В начало nwdiag {
 network NETWORK_BASE { ■ Что нового ? width = full dev_A [address = "dev_A" uev_A [address = "dev_A"]
dev_B [address = "dev_B"]
} Online Server retwork IntNET1 {
 width = full
 dev_B [address = "dev_B1"]
 dev_M [address = "dev_M1"] ≥ Запуск □ F.A.Q. network IntNET2 {
 dev_B [address = "dev_B2"]
 dev_M [address = "dev_M2"] **У** Скачать Форум Theme @enduml # Препроцессинг **Ш**\\ Стандартная NETWORK_BASE □ библиотека dev_B + Hitchhiker's Guide 🛤 PDF Guide dev A dev B dev_B1 IntNET1 □ dev_M1 dev_M dev M2 dev B2 IntNET2 = • all the network (with same full width) ▣ @startuml nwdiag { Ľ

```
widdg {
    network NETWORK_BASE {
    width = full
    dev_A [address = "dev_A"]
    dev_B [address = "dev_B"]
    network IntNET1 {
  width = full
  dev_B [address = "dev_B1" ]
  dev_M [address = "dev_M1" ]
    retwork IntNET2 {
  width = full
  dev_B [address = "dev_B2" ]
  dev_M [address = "dev_M2" ]
enduml
                                    NETWORK_BASE □
                                                                                                              _B
                                                                           dev_A
                                                                                                      dev B
                                                    IntNET1 □
                                                                          dev M1
                                                                           dev_M
                                                                          dev M2
                                                                                                      dev B2
                                                    IntNFT2 □
```

☑ Other internal networks

You can define other internal networks (TCP/IP, USB, SERIAL,...).

последовательност прецедентов классов активности активности выти компонент состояний объ 👚 В начало LAN1 = ■ Что нового ? @startuml nwdiag {
 network LAN1 {
 a [address = "a1"]; Online Server network LAN2 {
 a [address = "a2"]; ≥ Запуск switch; □ F.A.Q. LAN2 □ switch -- equip; **У** Скачать equip -- printer; Форум switch @enduml Theme # Препроцессинг **Ш**\\ Стандартная библиотека equip + Hitchhiker's Guide 👭 PDF Guide printer · With address or type LAN1 == 圁 @startuml nwdiag {
 network LAN1 {
 a [address = "a1"]; ď network LAN2 {
 a [address = "a2"];
 switch [address = "s2"]; LAN2 □ switch -- equip;
equip [address = "e3"];
equip -- printer;
printer [address = "USB"]; switch @enduml equip U\$B printer [Ref. QA-12824]

☑ Using (global) style

Without style (by default)

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последовательност прецедентов классов активности активности выти компонент состояний объ 👚 В начало nwdiag {
 network DMZ {
 address = "y.x.x.x/24"
 web01 [address = "y.x.x.1"];
 web02 [address = "y.x.x.2"];
} ■ Что нового ? 🔏 Быстрый старт Online Server ▶ Запуск network Internal { web01; F.A.Q. web02 db01 [address = "w.w.w.z", shape = database]; **У** Скачать Форум group {
description = "long group label"; Theme web01; web02: # Препроцессинг db01; **Ш**\\ Стандартная библиотека @enduml + Hitchhiker's Guide DMZ y.x.x.x/24 ■ PDF Guide y.x x.2 y.x x.1 long group label web01 web02 Internal _ db01

With style

You can use style to change rendering of elements.

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последовательност прецедентов классов активности активности выти компонент состояний объ 🛊 В начало <style> nwdiagDiagram { ■ Что нового ? network {
 BackGroundColor green
 LineColor red LineThickness 1.0 Online Server FontSize 18 FontColor navy ≥ Запуск server {
 BackGroundColor pink □ F.A.Q. LineColor yellow
LineThickness 1.0
' FontXXX only for description or label **У** Скачать Форум FontSize 18 Theme FontColor #blue # Препроцессинг arrow { ' FontXXX only for address **Ш**\\ Стандартная FontSize 17 FontColor #red
FontName Monospaced библиотека + Hitchhiker's Guide LineColor black 🛤 PDF Guide group {
 BackGroundColor cadetblue
 LineColor black LineThickness 2.0 FontSize 11 FontStyle bold Margin 5 Padding 5 } </style> nwdiag { network DMZ {
 address = "y.x.x.x/24"
 web01 [address = "y.x.x.1"];
 web02 [address = "y.x.x.2"]; network Internal { web01; web02 db01 [address = "w.w.w.z", shape = database]; group { description = "long group label"; web01; web02; db01; } @enduml DMZ y.x.x.x/24 y.x.x.1 x.2 y.x web01 web02 Internal db01

[Ref. QA-14479]

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последовательност прецедентов классов активности активности выти компонент состояний объ 🛊 В начало nwdiag {
 network Network { ■ Что нового ? Actor [shape = actor] [shape = agent] [shape = artifact] Agent Artifact Boundary [shape boundary] Online Server [shape = card] [shape = cloud] Card Cloud ≥ Запуск Collections [shape = collections]
Component [shape = component] □ F.A.Q. **У** Скачать @enduml Форум Theme # Препроцессинг **Ш**\\ Стандартная библиотека + Hitchhiker's Guide 🛤 PDF Guide @startuml nwdiag {
 network Network {
 Control [shape = control]
 Tshape = database Ľ Database [shape = database] [shape = entity] [shape = file] Entity File Folder [shape = folder] [shape = frame] [shape = hexagon] [shape = interface] Frame Hexagon Interface @enduml @startuml nwdiag { network Network {
 Label [sh [shape = label] Node [shape = node] [shape = Package package] Person person] queue] Queue [shape [shape = stack]
[shape = rectangle] Stack Rectangle [shape = rectangl [shape = storage] [shape = usecase] Storage Usecase } @enduml Node Package Person Queue Stack Rectangle Storage Usecase FIXME 1. Overlap of label for folder 2. Hexagon shape is missing @startuml mwdiag {
network Network {
Folder [shape = folder]
Hexagon [shape = hexagon] @enduml Network ⊏ Hexagon Folder

