Custom Business Link

Quick Installation Instructions

(cbsQII07-01)

Product:	**CSP EBox Matrix IPDS**
Host:	**AS/400**
Protocol:	**PPR/PPD (TCP/IP for IPDS Data Streams)**

Before you start…

! These instructions are for users of OS/400 V3R7 or above. If you are running older versions of OS/400, please consult the manufacturer's Operator's Manual accompanying the product.

!! Please be aware, that IPDS printing over TCP/IP requires the licensed code PSF/400 (Print Service Facility/400) from IBM. If you do not have PSF/400 installed on your AS/400, jobs will not print.

To check if you have this utility loaded, type GO LICPGM, select option 10, and then search for an entry called Print Service Facility/400. See Appendix A of this document for more information.

!!! If you are running OS/400 V3R7 check for PTF: PSF/400 APAR SA44304 [DSPPTF – F4]

The remainder of this document consists of the following section:

1. Preparation/Worksheet

2. Creating a PSF Configuration Object

3. Creating a Printer Device Description

4. EBox Configuration

5. Starting the Communication

Appendix A: Checking for PSF/400

Appendix B: Menu Tree-Front Panel

1. Preparation/Worksheet

1.1.   Select a static TCP/IP address for the EBox: _____

If the unit will be installed in a routed network, also determine the default gateway

address _____ and the subnet mask _____.

|!| If you are using a DHCP server to automatically assign IP addresses to network devices, omit this step. Instead, refer to the printout of the menu tree (Appendix B.5.) and enable 'DHCP/BOOTP' services, then print a new configuration page to display the assigned IP address.

1.2.   Choose a unique name for the printer attached to the EBox:_____

You will use this name to create a printer device description on the AS/400.

1.3.   Choose a unique name for the PSF Configuration object: _____

You will use this name to create a PSF configuration object associated with the printer device description. A PSF configuration object holds additional parameters required for the proper processing of IPDS print jobs.

2. Creating a PSF Configuration Object

2.1.   At the AS/400 command line, enter the command **CRTPSFCFG**. Press <F4> then <F11> to display the keywords.

```
Selection or command
===> crtpsfcfg█
```

2.2.   Enter a name of your choice in the "PSF Configuration" (**PSFCFG**) field.
2.3.   Select the library (**LIBL**) **QGPL**.
2.4.   Set "IPDS Pass Through" (**IPDSPASTHR**) to ***NO**.
2.5.   Review that "Activation Release Timer" (**ACTRLSTMR**) is set to ***NORDYF**.
2.6.   Set "Release Timer" (**RLSTMR**) to ***SEC30**. This parameter should be set to a value at least equal to the time out value on the printer. This is the time PSF/400 will maintain a session with the Print Server while there are no spooled files with a status of RDY.
2.7.   Set the Acknowledgment frequency (**ACKFRQ**) to **1**.

(Illustration on next page)

```
                    Create PSF Configuration (CRTPSFCFG)


PSF configuration  . . . . . . . .    cbspsf          Name
  Library  . . . . . . . . . . . .      qgpl          Name, *CURLIB
User resource library list . . .    *JOBLIBL          *JOBLIBL, *CURLIB, *NONE
Device resource library list . .    *DFT              Name, *DFT
              + for more values
IPDS pass through  . . . . . . .    *NO               *NO, *YES
Activate release timer . . . . .    *nordyf           *NORDYF, *IMMED...
Release timer  . . . . . . . . .    *sec30            1-1440, *NOMAX, *SEC15...
Restart timer  . . . . . . . . .    *IMMED            1-1440, *IMMED
APPC and TCP/IP retry count  . .    15                1-99, *NOMAX
Delay between APPC retries . . .    90                0-999
Automatic session recovery . . .    *NO               *NO, *YES
Acknowledgment frequency . . . .    1                 1-32767
Text 'description' . . . . . . .    psf config obj for EBox attached printer
```

2.8.   Press **F10** to reveal additional parameters and then page down to the next page. Set "Page Size Control" to *__YES__.

```
                    Create PSF Configuration (CRTPSFCFG)




                         Additional Parameters

Blank page . . . . . . . . . . .     *YES             *YES, *NO
Page size control  . . . . . . .     *yes             *NO, *YES
Resident fonts . . . . . . . . .     *YES             *YES, *NO
Resource retention . . . . . . .     *YES             *YES, *NO
Edge orient  . . . . . . . . . .     *NO              *YES, *NO
Use outline fonts  . . . . . . .     *NO              *YES, *NO
PSF defined option . . . . . . .     *NONE
              + for more values
Font substitution messages . . .     *YES             *YES, *NO
Capture host fonts at printer  .     *NO              *NO, *YES
Font resolution for formatting       *SEARCH          *SEARCH, 240, 300
Font mapping table . . . . . . .     *NONE            Name, *NONE
  Library  . . . . . . . . . . .                      Name, *LIBL, *CURLIB
                                                                   More...
```

2.9.   Press <Enter> to save the configuration.

3. Creating a Printer Device Description

3.1. At the AS/400 command line, enter the command **CRTDEVPRT**. Press <**F4**> then <**F11**> to display the keywords.

```
Selection or command
===> crtdevprt█
```

3. 2. Enter a name of your choice for the printer attached to the print server in the "Device Description" (**DEVD**) field.
3.3. Set "Device Class" (**DEVCLS**) to ***LAN**.
3.4. Set "Device Type" (**TYPE**) to ***IPDS**.
3.5. Set "Device Model" (**MODEL**) to **0**.

```
                Create Device Desc (Printer) (CRTDEVPRT)



Device description . . . . . . . DEVD          cbsipds
Device class . . . . . . . . . . DEVCLS        *lan
Device type  . . . . . . . . . . TYPE          *ipds
Device model . . . . . . . . . . MODEL         0█
```

3.6. Press <**Enter**> to reveal additional parameters.
3.7. Set "LAN Attachment" (**LANATTACH**) to ***IP**.

```
                Create Device Desc (Printer) (CRTDEVPRT)



Device description . . . . . . . DEVD        > CBSIPDS
Device class . . . . . . . . . . DEVCLS      > *LAN
Device type  . . . . . . . . . . TYPE        > *IPDS
Device model . . . . . . . . . . MODEL       > 0
LAN attachment . . . . . . . . . LANATTACH     *IP
```

3.8. Press <**Enter**>.
3.9. Leave "Advanced function printing" (**AFP**) set to ***Yes**.

```
                Create Device Desc (Printer) (CRTDEVPRT)



Device description . . . . . . . DEVD        > CBSIPDS
Device class . . . . . . . . . . DEVCLS      > *LAN
Device type  . . . . . . . . . . TYPE        > *IPDS
Device model . . . . . . . . . . MODEL       > 0
LAN attachment . . . . . . . . . LANATTACH     *IP
Advanced function printing . . . AFP           *YES
```

```
            Create Device Desc (Printer) (CRTDEVPRT)


Device description . . . . . . . DEVD          >  CBSIPDS
Device class . . . . . . . . . . DEVCLS        >  *LAN
Device type  . . . . . . . . . . TYPE          >  *IPDS
Device model . . . . . . . . . . MODEL         >  0
LAN attachment . . . . . . . . . LANATTACH        *IP
Advanced function printing . . . AFP             *YES
Port number  . . . . . . . . . . PORT            5001
Online at IPL  . . . . . . . . . ONLINE          *YES
Font:                            FONT
  Identifier . . . . . . . . . .                 11
  Point size . . . . . . . . . .                 *NONE
Form feed  . . . . . . . . . . . FORMFEED        *cont
Separator drawer . . . . . . . . SEPDRAWER       *FILE
Separator program  . . . . . . . SEPPGM          *NONE
  Library  . . . . . . . . . . .
Printer error message  . . . . . PRTERRMSG       *INQ
                                                         More...
```

3.10. Press <**Enter**>.

3.11. Set "Port Number (**PORT**) to **5100** or change EBox to **5001.** *The PORT number must be the same for the Host and the EBox!!!*

3.12. Set "Font" (**FONT**) to **11** (or any other valid font ID value).

3.13. Set "Form Feed" (**FORMFEED**) to ***CONT**.

3.14. Press **F10** for additional parameters, then **page down**.

3.15. Set "Activation Timer" (**ACTTMR**) to ***NOMAX**.

3.16. In the "Remote Location" (**RMTLOCNAME**) field, enter the TCP/IP address of the printer server (see Preparation/Worksheet 1.1.).

```
            Create Device Desc (Printer) (CRTDEVPRT)




Message queue  . . . . . . . . . MSGQ            *CTLD
  Library  . . . . . . . . . . .
Activation timer . . . . . . . . ACTTMR          *nomax
Image configuration  . . . . . . IMGCFG          *NONE
Maximum pending requests . . . . MAXPNDRQS       6
Print while converting . . . . . PRTCVT          *YES
Print request timer  . . . . . . PRTRQSTMR       *NOMAX
Form definition  . . . . . . . . FORMDF          F1C10110
  Library  . . . . . . . . . . .                   *LIBL
Remote location:                 RMTLOCNAME
  Name or address  . . . . . . .                 128.0.1.104


User-defined options . . . . . . USRDFNOPT       *NONE
                  + for more values              
                                                         More...
```

3.17.   In the "User-Defined Object" (**USRDFNOBJ**) field, enter the name of the PSF Configuration Object created earlier (see 2.2.). Enter **QGPL** in the "Library" field. Enter ***PSFCFG** as the "Object Type".

```
                    Create Device Desc (Printer) (CRTDEVPRT)



User-defined object:              USRDFNOBJ
  Object . . . . . . . . . . . .                      cbspsf____
    Library  . . . . . . . . . .                       qgpl_____
  Object type  . . . . . . . . .                      *psfcfg
Data transform program . . . . . USRDTATFM            *NONE_____
  Library  . . . . . . . . . . .                      _____
User-defined driver program  . . USRDRVPGM            *NONE_____
  Library  . . . . . . . . . . .                      _____
Text 'description' . . . . . . . TEXT                 printer attached to EBox█
_____

                               Additional Parameters        ▶


Remote network identifier  . . . RMTNETID             *NETATR_
Workstation customizing object   WSCST                *NONE_____
  Library  . . . . . . . . . . .                      _____
                                                                     More...
```

3.18.   Press <**Enter**> to save the configuration.
3.19.   The AS/400 host set up is complete.
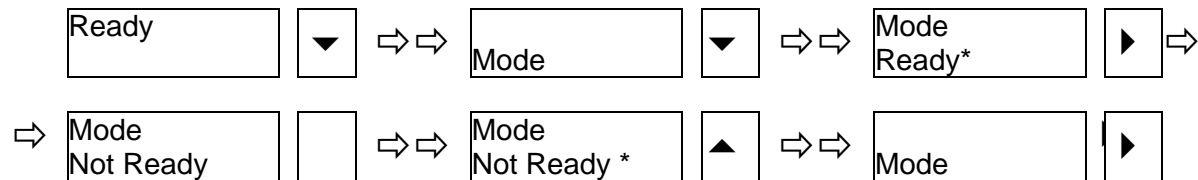
4. EBox Configuration

The minimum configuration consists of the following:
- TCP/IP addressing
- Printer Adaption (Output Driver for attached matrix printer emulation)
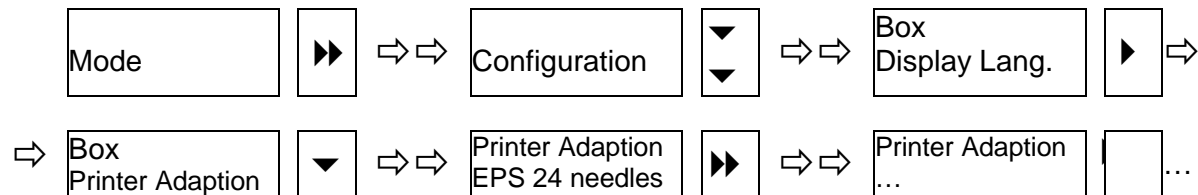- Code Page (Default Host Language)

The above parameters should be set during the initial setup through the EBox' front panel menu. Additional configuration parameters can be reviewed and changed most easily from a web browser.

> ! We strongly recommend you print Appendix B at this time, so you can navigate through the EBox' menu structure and select the desired options using the ◄ ► ▲ ▼ * buttons.
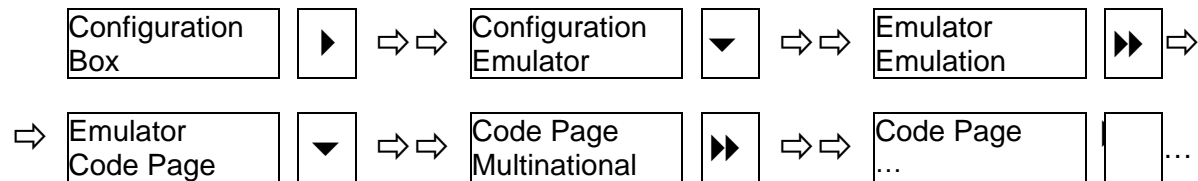
4.1.   First, take the EBox off-line through the following button combination:

| Ready | ▼ | ⇨⇨ | Mode | ▼ | ⇨⇨ | Mode Ready* | ► | ⇨ |

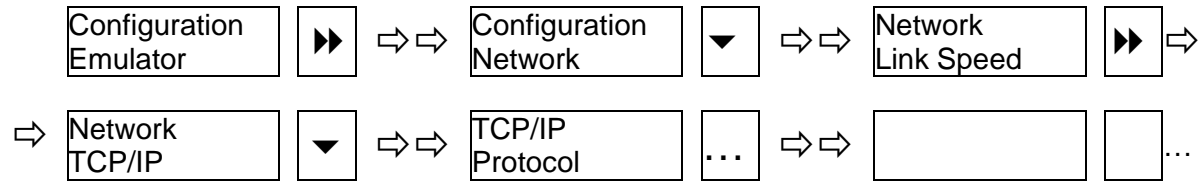| ⇨ | Mode Not Ready | | ⇨⇨ | Mode Not Ready * | ▲ | ⇨⇨ | Mode | ► |

4.2.   Next in the EBox' menu structure is the Printer Adaption (Printer Emulation). From the Mode menu, press the ► button several times until you reach the Configuration menu. Then press ▼ twice to enter the Box menu. Press ► to scroll to the Printer Adaption settings and then ▼ to reveal the first available option. Press ► repeatedly until the driver that best fits the characteristics of the attached printer is displayed. Select that driver by pressing   .
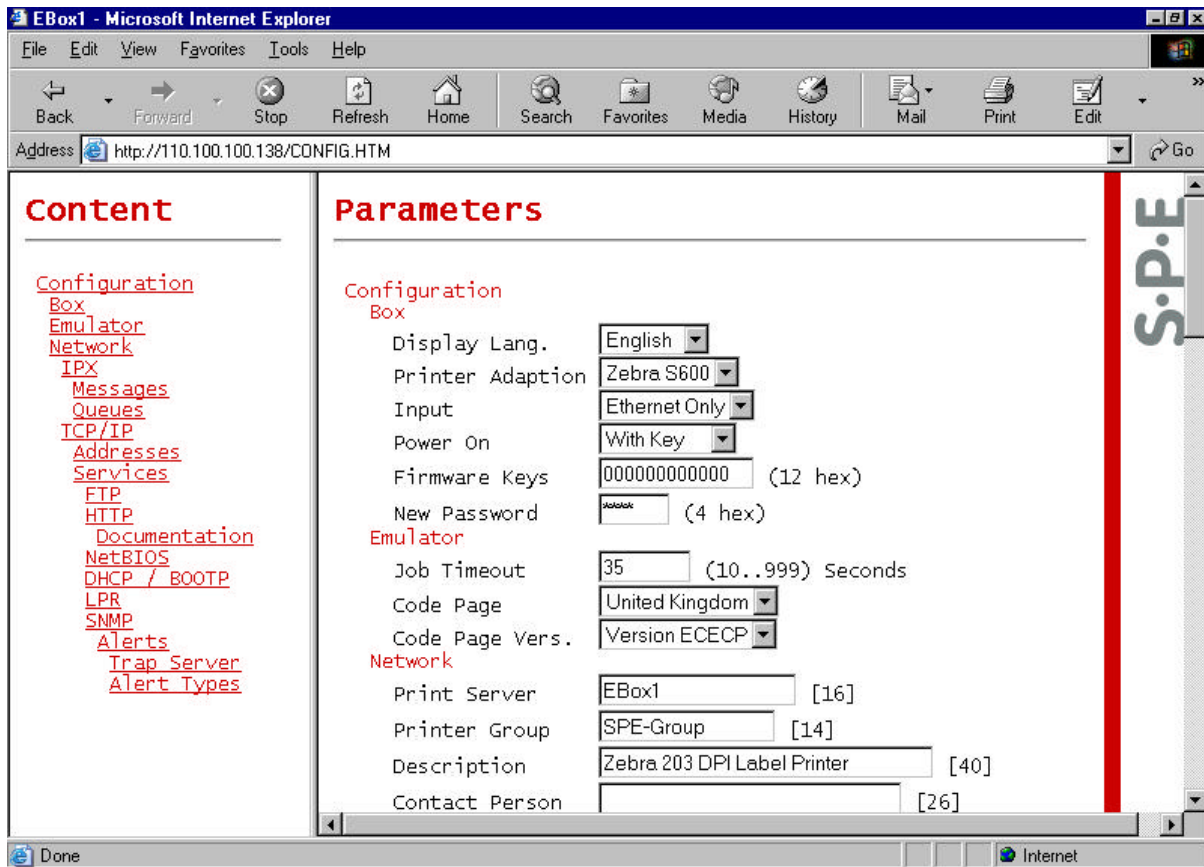
| Mode | ►► | ⇨⇨ | Configuration | ▼ ▲ | ⇨⇨ | Box Display Lang. | ► | ⇨ |

| ⇨ | Box Printer Adaption | ▼ | ⇨⇨ | Printer Adaption EPS 24 needles | ►► | ⇨⇨ | Printer Adaption … | | … |

4.3.   Press ▲ twice to return to the "Configuration – Box" level. Then press ► to move to the Emulator sub-menu and ▼ to enter it. Press ► several times to display the Code Page parameters, ▼ to display the first option and ► repeatedly to scroll to the desired host language. Press   to select that language.

| Configuration Box | ► | ⇨⇨ | Configuration Emulator | ▼ | ⇨⇨ | Emulator Emulation | ►► | ⇨ |

| ⇨ | Emulator Code Page | ▼ | ⇨⇨ | Code Page Multinational | ►► | ⇨⇨ | Code Page … | | … |

4.4.   Press ▲ twice to return to the "Configuration – Emulator" level. Then press ▶
        repeatedly to move to the Network sub-menu and ▼ to enter it. Press ▶ to move to the
        TCP/IP sub-menu and ▼ to enter it. Review that the Protocol is active (▼ then ▲ to
        back out) and set the Addresses (IP Address, Subnet Mask, and Gateway Address).
        When the address blocks are displayed, ▼ will allow you to move from block to block,
        ◀ ▶ will increment the displayed value, and ▲ will allow you to back out to the next
        higher menu level.

| Configuration Emulator | ▶▶ | ⇨⇨ | Configuration Network | ▼ | ⇨⇨ | Network Link Speed | ▶▶ | ⇨ |

| ⇨ | Network TCP/IP | ▼ | ⇨⇨ | TCP/IP Protocol | … | ⇨⇨ | | | … |

4.5.   After setting the minimum configuration parameters make sure to return the EBox
        'READY' mode (see step 4.1. above).

4.6.   You should review and if necessary change additional parameters through your Internet
        browser. Simply enter the EBox' TCP/IP address in the URL field and press <Enter>. [In
        this example the address is 110.100.100.138.] From the displayed screen you can
        access any other settings.

5.   Starting the Communication

5.3.   From the AS/400 command line, type   **PING 'IP Address'**

where "IP Address" is the TCP/IP address of the EBox.

```
Selection or command
===> ping '128.0.1.104'█
```

If you are getting a "no response" result, confirm that the EBox has been configured with a unique IP address and the gateway/router as well as subnet mask are correct. Also verify the EBox is properly communicating with the hub (check the Line Sync light).

5.4.   Vary on the printer device using the command **WRKCFGSTS** *DEV printer device name* <**Enter**>. Then place a <**1**> in front of the printer device and press <**Enter**>.

```
Selection or command
===> wrkcfgsts *dev cbsipds█


Opt  Description      Status                 -------------Job--------------
1█   CBSIPDS          VARIED OFF
```

5.5.   Start the writer using the command **STRPRTWTR** *printer device name* <**Enter**>.

Disclaimer: This document does not replace the manufacturer's User's Guide. It provides quick and comprehensive installation instructions for the most common configurations of select products.

Appendix A
Checking for Print Service Facility/400

A.1. At the AS/400 command line type **GO LICPGM**, press <**Enter**>.

```
Selection or command
===> go licpgm█
```

A.2. Select option **10**, press <**Enter**>.

```
                    Work with Licensed Programs
                                                System:    S1036533


  Manual Install
     1. Install all

  Licensed Programs
    10. Display installed licensed programs
    11. Install licensed programs
    12. Delete licensed programs
    13. Save licensed programs

  Secondary Languages
    20. Display installed secondary languages
    21. Install secondary languages
    22. Delete secondary languages

                                                          More...
Selection or command
===> 10█
```

A.3. Locate a program called **Print Service Facility/400**.

```
                    Display Installed Licensed Programs
                                                System:    S1036533
Licensed   Installed
Program    Status       Description
5763SS1    *COMPATIBLE  OS/400 - Library QGPL
5763SS1    *COMPATIBLE  OS/400 - Library QUSRSYS
5763SS1    *COMPATIBLE  Operating System/400
5763SS1    *COMPATIBLE  OS/400 - Extended Base Support
5763SS1    *COMPATIBLE  OS/400 - Online Information
5763SS1    *COMPATIBLE  OS/400 - System/36 Environment
5763SS1    *COMPATIBLE  OS/400 - Example Tools Library
5763SS1    *COMPATIBLE  OS/400 - AFP Compatibility Fonts
5763SS1    *COMPATIBLE  OS/400 - Host Servers
5763SS1    *COMPATIBLE  OS/400 - GDDM
5763SS1    *COMPATIBLE  OS/400 - Print Services Facility/400
5763AF1    *COMPATIBLE  Advanced Function Printing Utilities/400
5763DCT    *COMPATIBLE  Language Dictionaries/400
5763DCT    *COMPATIBLE  Afrikaans Dictionary
```

Appendix B
Menu Tree – Front Panel

The following shows gives a brief overview of the menu structure.

Use ◀ ▶ to move left to right on any given level of the menu tree.
Use ▼ ▲ to move down or back up a level.
   indicates that a parameter option can be selected.
… (three dots) indicate that additional choices available are not listed.

B.1. Overview & Ready/Not Ready Mode

Mode ▶	Power Off ▶	Status ▶	Service ▶	Configuration ▶		
▼	▼	▼	▼	▼		
Ready ▶ Not Ready ( )	… ( )	…	…	Box ▶	Emulator ▶	Network ▶
				▼	▼	▼
				See below	See below	See below

B.2. Setting the Printer Adaption

Configuration – Box				
▼				
Display Language ▶	Printer Adaption ▶	Power On/Off ▶	Firmware Keys ▶	Password ▶
▼	▼	▼	▼	▼
Deutsch ▶ English ( )	EPS 24 needle ▶ EPS 9 needle ▶ IBM 9 needle ▶ IBM 238x/4227 ▶ IBM 4247 ▶ IBM 239x ( )	With Key ▶ With Printer ( )	… ( )	… ( )

B.3. Setting the Code Page

Configuration - Emulator			
▼			
Emulation ▶	Job Timeout ▶	Code Page ▶	…
▼	▼	▼	
… ( )	… ( )	Multinational ▶ United States ▶ Germany ▶ United Kingdom ▶ Italy ▶ France ▶ Belgium ▶ Denmark ▶ Sweden ▶ Portugal ▶ Spain ▶ Latin2 ( )	

B.4. Setting the TCP/IP Addresses

Configuration – Network						
▼						
Link Speed ▶	Duplex ▶	TCP/IP ▶				
▼	▼	▼				
…	…	Protocol ▶	Addresses ▶			
		▼	▼			
		Inactive ▶ Active ( )	IP Address ▶	Subnet Mask ▶	Gateway Address ▶	… ▶
			▼	▼	▼	
			(#.#.#.#) ◀ ▶ ( )	(#.#.#.#) ◀ ▶ ( )	(#.#.#.#) ◀ ▶ ( )	

B.5. Activating DHCP/BOOTP

Configuration – Network							
▼							
Link Speed ▶	Duplex ▶	TCP/IP ▶					
▼	▼	▼					
…	…	Protocol ▶	Addresses ▶	Applications ▶			
		▼	▼	▼			
		Inactive ▶ Active … ( )	… ( )	LPR ▶	FTP ▶	HTTP ▶	DHCP/ BOOTP ▶
				▼	▼	▼	▼
				… ( )	… ( )	… ( )	Inactive ▶ Active ( )