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# Testing Async DDR into the San Jose Dial-in Lab

Document ID: 10314

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## Introduction

### Before You Begin

Conventions

Prerequisites

Components Used

### Configuring Outbound Async DDR

Dial into the San Jose Lab

Bring up the DDR Link

Debugs from the Originating Router

Debugs From the Answer Side (SJ Dial-in Lab)

### Related Information

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## Introduction

**Note:** The information in this document is based on Cisco IOS® Software Release 12.0 running on a Cisco 3620.

To make sure that your router's async outbound Dial-on-Demand Routing (DDR) is working correctly, use the following procedure:

1. Configure outbound async DDR into the San Jose dial-in lab. For more information, refer to Customer Dial-in Lab.
2. Use a separate terminal to dial into the San Jose dial-in lab to watch the DDR call. (This step is optional.)
3. Bring up the DDR link and verify that it works properly.

## Before You Begin

### Conventions

For more information on document conventions, see the Cisco Technical Tips Conventions.

### Prerequisites

There are no specific prerequisites for this document.

### Components Used

This document is not restricted to specific software and hardware versions.

## Configuring Outbound Async DDR

In this example, configure outbound async DDR on line 33:

```
interface Async33
```

```

ip address negotiated
encapsulation ppp
dialer in-band
dialer string 14085703932
dialer hold-queue 10 timeout 40
dialer-group 1
peer default ip address 10.1.1.1
no cdp enable
ppp authentication chap callin
ppp chap hostname cisco
ppp chap password 0 cisco
!
ip route 10.1.1.0 255.255.255.0 Async33 permanent
!
dialer-list 1 protocol ip permit
!
line 33
modem InOut
transport input telnet
speed 115200
flowcontrol hardware
databits 8
parity none
stopbits 1

```

## Dial into the San Jose Lab

From a terminal window, dial in to the San Jose lab. Log in as "cisco" with the password "cisco," and turn on interesting debugs:

```

ATDT 5703932
CONNECT
Username: cisco
Password: cisco

access-3>debug isdn q931
access-3>debug modem csm
access-3>debug modem
access-3>debug ppp negotiation
access-3>terminal monitor

```

## Bring up the DDR Link

On the originating router, turn on interesting debugs and the issue the **ping** command to bring up the link:

```

c3620#debug dialer
c3630#debug chat line 33
c3620#debug modem
c3620#debug modem csm

!-- Used for internal modems only.

c3620#debug ppp negotiation
c3620#debug ip icmp

c3620#ping
Protocol [ip]:
Target IP address: 10.1.1.1
Repeat count [5]:
Datagram size [100]:
Timeout in seconds [2]: 10

```

```
Extended commands [n]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.1, timeout is 10 seconds:
...!!
Success rate is 40 percent (2/5), round-trip min/avg/max = 168/216/264 ms
```

## Debugs from the Originating Router

```
*Mar 12 19:21:06.993: As33 DDR: Dialing cause ip (s=10.22.33.1, d=10.1.1.1)

*Mar 12 19:21:06.993: As33 DDR: Attempting to dial 14085703932
*Mar 12 19:21:06.997: CHAT33: Attempting async line dialer script
*Mar 12 19:21:06.997: CHAT33: no matching chat script found for 14085703932

*Mar 12 19:21:06.997: CHAT33: Dialing using Modem script: d0efault-d0ials0cript & System s
*Mar 12 19:21:06.997: CHAT33: process started
*Mar 12 19:21:06.997: CHAT33: Asserting DTR
*Mar 12 19:21:06.997: CHAT33: Chat script d0efault-d0ials0cript started
*Mar 12 19:21:06.997: CHAT33: Sending string: ATZ
*Mar 12 19:21:07.001: CHAT33: Expecting string: OK
*Mar 12 19:21:08.513: CHAT33: Input mismatch expecting: OK :: ATZ\015\015\012
*Mar 12 19:21:08.513: CHAT33: Input match for: OK:: OK
*Mar 12 19:21:08.513: CHAT33: Completed match for expect: OK
*Mar 12 19:21:08.513: CHAT33: Sending string: AT
*Mar 12 19:21:08.513: CHAT33: Expecting string: OK
*Mar 12 19:21:08.513: CHAT33: Input mismatch expecting: OK :: \015\012AT\015\015\012
*Mar 12 19:21:08.589: CHAT33: Input match for: OK:: OK
*Mar 12 19:21:08.589: CHAT33: Completed match for expect: OK
*Mar 12 19:21:08.589: CHAT33: Sending string: ATDT\T<14085703932>
*Mar 12 19:21:08.589: CHAT33: Expecting string: CONNECT
*Mar 12 19:21:08.589: CHAT33: Input mismatch expecting: CONNECT :: \015\012
*Mar 12 19:21:08.605: CSM_ANALOG_MODEM_IDLE: MODEM_STARTING_CONNECT at slot 1, port 0

*Mar 12 19:21:08.609: Modem 1/0 Mcom: in modem state 'Dialing/Answering'ATDT14085703932\01
*Mar 12 19:21:20.613: Modem 1/0 Mcom: in modem state 'Waiting for Carrier'
*Mar 12 19:21:31.681: Modem 1/0 Mcom: in modem state 'Connected'
*Mar 12 19:21:32.153: ANALOG_CONNECT_INITIATED: MODEM_CONNECTED at slot 1, port 0

*Mar 12 19:21:32.157: Modem 1/0 Mcom: CONNECT at 26400/26400(Tx/Rx), V34, LAPM, V42bis, Or
*Mar 12 19:21:32.205: CHAT33: Input match for: CONNECT:: CONNECT
*Mar 12 19:21:32.205: CHAT33: Completed match for expect: CONNECT
*Mar 12 19:21:32.205: CHAT33: Chat script d0efault-d0ials0cript finished, status = Success
*Mar 12 19:21:32.209: Modem 1/0 Mcom: switching to PPP mode
*Mar 12 19:21:32.209: TTY33: destroy timer type 1
*Mar 12 19:21:32.209: TTY33: destroy timer type 0
*Mar 12 19:21:34.209: %LINK-3-UPDOWN: Interface Async33, changed state to upDialer statech
has been placed Async33
*Mar 12 19:21:34.209: As33 PPP: Treating connection as a callout
*Mar 12 19:21:34.213: As33 PPP: Phase is ESTABLISHING, Active Open
*Mar 12 19:21:34.213: Modem 1/0 Mcom: PPP escape map: Tx map = FFFFFFFF, Rx map = 0
*Mar 12 19:21:34.213: As33 PPP: No remote authentication for call-out
*Mar 12 19:21:34.213: As33 LCP: O CONFREQ [Closed] id 41 len 20
*Mar 12 19:21:34.213: As33 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 12 19:21:34.213: As33 LCP: MagicNumber 0x4D487924 (0x05064D487924)
*Mar 12 19:21:34.213: As33 LCP: PFC (0x0702)
*Mar 12 19:21:34.213: As33 LCP: ACFC (0x0802)
*Mar 12 19:21:34.545: As33 LCP: I CONFREQ [REQsent] id 4 len 37
*Mar 12 19:21:34.545: As33 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 12 19:21:34.545: As33 LCP: AuthProto CHAP (0x0305C22305)
*Mar 12 19:21:34.545: As33 LCP: MagicNumber 0x635DAA5A (0x0506635DAA5A)
*Mar 12 19:21:34.545: As33 LCP: PFC (0x0702)
*Mar 12 19:21:34.549: As33 LCP: ACFC (0x0802)
```

```

*Mar 12 19:21:34.549: As33 LCP: MRRU 1524 (0x110405F4)
*Mar 12 19:21:34.549: As33 LCP: EndpointDisc 1 Local (0x130801535441434B)
*Mar 12 19:21:34.549: As33 LCP: O CONFREQ [REQsent] id 4 len 16
*Mar 12 19:21:34.549: As33 LCP: MRRU 1524 (0x110405F4)
*Mar 12 19:21:34.549: As33 LCP: EndpointDisc 1 Local (0x130801535441434B)
*Mar 12 19:21:34.557: As33 LCP: I CONFACK [REQsent] id 41 len 20
*Mar 12 19:21:34.557: As33 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 12 19:21:34.557: As33 LCP: MagicNumber 0x4D487924 (0x05064D487924)
*Mar 12 19:21:34.557: As33 LCP: PFC (0x0702)
*Mar 12 19:21:34.557: As33 LCP: ACFC (0x0802)
*Mar 12 19:21:34.717: As33 LCP: I CONFREQ [ACKrcvd] id 5 len 25
*Mar 12 19:21:34.717: As33 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 12 19:21:34.717: As33 LCP: AuthProto CHAP (0x0305C22305)
*Mar 12 19:21:34.717: As33 LCP: MagicNumber 0x635DAA5A (0x0506635DAA5A)
*Mar 12 19:21:34.717: As33 LCP: PFC (0x0702)
*Mar 12 19:21:34.717: As33 LCP: ACFC (0x0802)
*Mar 12 19:21:34.717: As33 LCP: O CONFACK [ACKrcvd] id 5 len 25
*Mar 12 19:21:34.717: As33 LCP: ACCM 0x000A0000 (0x0206000A0000)
*Mar 12 19:21:34.717: As33 LCP: AuthProto CHAP (0x0305C22305)
*Mar 12 19:21:34.717: As33 LCP: MagicNumber 0x635DAA5A (0x0506635DAA5A)
*Mar 12 19:21:34.717: As33 LCP: PFC (0x0702)
*Mar 12 19:21:34.717: As33 LCP: ACFC (0x0802)
*Mar 12 19:21:34.721: As33 LCP: State is Open
*Mar 12 19:21:34.721: Modem 1/0 Mcom: PPP escape map: Tx map = A0000, Rx map = 0
*Mar 12 19:21:34.721: As33 PPP: Phase is AUTHENTICATING, by the peer
*Mar 12 19:21:34.877: As33 CHAP: I CHALLENGE id 2 len 26 from "STACK"
*Mar 12 19:21:34.877: As33 CHAP: Using alternate hostname cisco
*Mar 12 19:21:34.877: As33 CHAP: Username STACK: lookup failure
*Mar 12 19:21:34.877: As33 CHAP: Using default password
*Mar 12 19:21:34.881: As33 CHAP: O RESPONSE id 2 len 26 from "cisco"
*Mar 12 19:21:35.029: As33 CHAP: I SUCCESS id 2 len 4
*Mar 12 19:21:35.033: As33 PPP: Phase is UP
*Mar 12 19:21:35.033: As33 IPCP: O CONFREQ [Closed] id 7 len 10
*Mar 12 19:21:35.033: As33 IPCP: Address 0.0.0.0 (0x030600000000)
*Mar 12 19:21:35.045: As33 IPCP: I CONFREQ [REQsent] id 3 len 10
*Mar 12 19:21:35.045: As33 IPCP: Address 10.1.1.1 (0x03060A010101)
*Mar 12 19:21:35.045: As33 IPCP: O CONFACK [REQsent] id 3 len 10
*Mar 12 19:21:35.045: As33 IPCP: Address 10.1.1.1 (0x03060A010101)
*Mar 12 19:21:35.053: As33 NBFPCP: I CONFREQ [Not negotiated] id 2 len 4
*Mar 12 19:21:35.053: As33 LCP: O PROTREQ [Open] id 42 len 10 protocol NBFPCP (0x803F010200)
*Mar 12 19:21:35.197: As33 IPCP: I CONFNAK [ACKsent] id 7 len 10
*Mar 12 19:21:35.197: As33 IPCP: Address 10.1.1.31 (0x03060A01011F)
*Mar 12 19:21:35.197: As33 IPCP: O CONFREQ [ACKsent] id 8 len 10
*Mar 12 19:21:35.197: As33 IPCP: Address 10.1.1.31 (0x03060A01011F)
*Mar 12 19:21:35.349: As33 IPCP: I CONFACK [ACKsent] id 8 len 10
*Mar 12 19:21:35.353: As33 IPCP: Address 10.1.1.31 (0x03060A01011F)
*Mar 12 19:21:35.353: As33 IPCP: State is Open
*Mar 12 19:21:35.353: As33 IPCP: Install negotiated IP interface address 10.1.1.31
*Mar 12 19:21:35.353: As33 IPCP: Remove route to 10.1.1.1
*Mar 12 19:21:35.357: As33 DDR: dialer protocol up
*Mar 12 19:21:35.357: As33 DDR: Call connected, 3 packets unqueued, 3 transmitted, 0 discards
*Mar 12 19:21:35.361: As33 IPCP: Install route to 10.1.1.1
*Mar 12 19:21:37.257: ICMP: echo reply rcvd, src 10.1.1.1, dst 10.1.1.31
*Mar 12 19:21:37.425: ICMP: echo reply rcvd, src 10.1.1.1, dst 10.1.1.31

```

## Debugs From the Answer Side (SJ Dial-in Lab)

```

*May 16 19:41:06.952: ISDN Se0:23: RX <- SETUP pd = 8 callref = 0x16
*May 16 19:41:06.956: Bearer Capability i = 0x8090A2
*May 16 19:41:06.956: Channel ID i = 0xA98395
*May 16 19:41:06.956: Progress Ind i = 0x8283 - Origination address is non-ISDN
*May 16 19:41:06.956: Calling Party Number i = '!', 0x83, '5555557145'
*May 16 19:41:06.956: Called Party Number i = 0xC1, '4085703932'

```

```

*May 16 19:41:06.956: EVENT_FROM_ISDN::dchan_idb=0x617B1AC4, call_id=0x1B8, ces=0x1
    bchan=0x14, event=0x1, cause=0x0

*May 16 19:41:06.956: VDEV_ALLOCATE: 1/6 is allocated from pool mica_v90_dialin
*May 16 19:41:06.956: csm_get_vdev_for_isdn_call: fax_call=0
*May 16 19:41:06.956: EVENT_FROM_ISDN:(01B8): DEV_INCALL at slot 1 and port 6
*May 16 19:41:06.956: CSM_PROC_IDLE: CSM_EVENT_ISDN_CALL at slot 1, port 6
*May 16 19:41:06.956: Mica Modem(1/6): Configure(0x1 = 0x0)
*May 16 19:41:06.956: Mica Modem(1/6): Configure(0x23 = 0x0)
*May 16 19:41:06.956: Mica Modem(1/6): Call Setup
*May 16 19:41:06.956: Enter csm_connect_pri_vdev function
*May 16 19:41:06.956: csm_connect_pri_vdev:tdm_allocate_bp_ts() call. BP TS allocated at
bp_stream2, bp_Ch28,vdev_common 0x613B00A8
*May 16 19:41:06.960: ISDN Se0:23: TX -> CALL_PROC pd = 8 callref = 0x8016!
*May 16 19:41:06.960: Channel ID i = 0xA98395
*May 16 19:41:06.960: ISDN Se0:23: TX -> ALERTING pd = 8 callref = 0x8016
*May 16 19:41:07.056: Mica Modem(1/6): State Transition to Call Setup
*May 16 19:41:07.056: Mica Modem(1/6): Went offhook
*May 16 19:41:07.056: CSM_PROC_IC2_RING: CSM_EVENT_MODEM_OFFHOOK at slot 1, port
6
*May 16 19:41:07.056: ISDN Se0:23: TX -> CONNECT pd = 8 callref = 0x8016
*May 16 19:41:07.112: ISDN Se0:23: RX <- CONNECT_ACK pd = 8 callref = 0x16
*May 16 19:41:07.116: EVENT_FROM_ISDN::dchan_idb=0x617B1AC4, call_id=0x1B8, ces=0x1
    bchan=0x14, event=0x4, cause=0x0
*May 16 19:41:07.116: EVENT_FROM_ISDN:(01B8): DEV_CONNECTED at slot 1 and port 6
*May 16 19:41:07.116: CSM_PROC_IC4_WAIT_FOR_CARRIER: CSM_EVENT_ISDN_CONNECTED at slot 1, p
*May 16 19:41:07.116: Mica Modem(1/6): Link Initiat
*May 16 19:41:08.256: Mica Modem(1/6): State Transition to Connect
*May 16 19:41:12.700: Mica Modem(1/6): State Transition to Link
*May 16 19:41:21.288: Mica Modem(1/6): State Transition to Trainup
*May 16 19:41:23.392: Mica Modem(1/6): State Transition to EC Negotiating
*May 16 19:41:24.472: Mica Modem(1/6): State Transition to Steady State
*May 16 19:41:25.120: TTY31: DSR came up
*May 16 19:41:25.120: tty31: Modem: IDLE->(unknown)
*May 16 19:41:25.120: TTY31: EXEC creation
*May 16 19:41:25.124: TTY31: set timer type 10, 30 seconds
*May 16 19:41:26.688: TTY31: Autoselect(2) sample 7E
*May 16 19:41:26.692: TTY31: Autoselect(2) sample 7EFF
*May 16 19:41:26.692: TTY31: Autoselect(2) sample 7EFF7D
*May 16 19:41:26.692: TTY31: Autoselect(2) sample 7EFF7D23
*May 16 19:41:26.692: TTY31 Autoselect cmd: ppp negotiate
*May 16 19:41:26.692: TTY31: EXEC creation
*May 16 19:41:26.692: TTY31: create timer type 1, 600 seconds
*May 16 19:41:26.824: TTY31: destroy timer type 1 (OK)
*May 16 19:41:26.824: TTY31: destroy timer type 0
*May 16 19:41:26.824: As31 LCP: I CONFREQ [Closed] id 41 len 20
*May 16 19:41:26.824: As31 LCP: ACCM 0x000A0000 (0x0206000A0000)
*May 16 19:41:26.824: As31 LCP: MagicNumber 0x4D487924 (0x05064D487924)
*May 16 19:41:26.824: As31 LCP: PFC (0x0702)
*May 16 19:41:26.824: As31 LCP: ACFC (0x0802)
*May 16 19:41:26.824: Unthrottle 31
*May 16 19:41:26.824: As31 LCP: Lower layer not up, Fast Starting
*May 16 19:41:26.824: As31 PPP: Treating connection as a dedicated line
*May 16 19:41:26.824: As31 PPP: Phase is ESTABLISHING, Active Open
*May 16 19:41:26.824: As31 LCP: O CONFREQ [Closed] id 4 len 37
*May 16 19:41:26.824: As31 LCP: ACCM 0x000A0000 (0x0206000A0000)
*May 16 19:41:26.824: As31 LCP: AuthProto CHAP (0x0305C22305)
*May 16 19:41:26.824: As31 LCP: MagicNumber 0x635DAA5A (0x0506635DAA5A)
*May 16 19:41:26.824: As31 LCP: PFC (0x0702)
*May 16 19:41:26.824: As31 LCP: ACFC (0x0802)
*May 16 19:41:26.824: As31 LCP: MRRU 1524 (0x110405F4)
*May 16 19:41:26.824: As31 LCP: EndpointDisc 1 Local (0x130801535441434B)
*May 16 19:41:26.828: As31 LCP: O CONFACK [REQsent] id 41 len 20
*May 16 19:41:26.828: As31 LCP: ACCM 0x000A0000 (0x0206000A0000)

```

```
*May 16 19:41:26.828: As31 LCP: MagicNumber 0x4D487924 (0x05064D487924)
*May 16 19:41:26.828: As31 LCP: PFC (0x0702)
*May 16 19:41:26.828: As31 LCP: ACFC (0x0802)
*May 16 19:41:27.028: As31 LCP: I CONFREQ [ACKsent] id 4 len 16
*May 16 19:41:27.028: As31 LCP: MRRU 1524 (0x110405F4)
*May 16 19:41:27.028: As31 LCP: EndpointDisc 1 Local (0x130801535441434B)
*May 16 19:41:27.028: As31 LCP: O CONFREQ [ACKsent] id 5 len 25
*May 16 19:41:27.028: As31 LCP: ACCM 0x000A0000 (0x0206000A0000)
*May 16 19:41:27.028: As31 LCP: AuthProto CHAP (0x0305C22305)
*May 16 19:41:27.028: As31 LCP: MagicNumber 0x635DAA5A (0x0506635DAA5A)
*May 16 19:41:27.028: As31 LCP: PFC (0x0702)
*May 16 19:41:27.028: As31 LCP: ACFC (0x0802)
*May 16 19:41:27.188: As31 LCP: I CONFACK [ACKsent] id 5 len 25
*May 16 19:41:27.188: As31 LCP: ACCM 0x000A0000 (0x0206000A0000)
*May 16 19:41:27.188: As31 LCP: AuthProto CHAP (0x0305C22305)
*May 16 19:41:27.188: As31 LCP: MagicNumber 0x635DAA5A (0x0506635DAA5A)
*May 16 19:41:27.188: As31 LCP: PFC (0x0702)
*May 16 19:41:27.188: As31 LCP: ACFC (0x0802)
*May 16 19:41:27.188: As31 LCP: State is Open
*May 16 19:41:27.188: As31 PPP: Phase is AUTHENTICATING, by this end
*May 16 19:41:27.188: As31 CHAP: O CHALLENGE id 2 len 26 from "STACK"
*May 16 19:41:27.348: As31 CHAP: I RESPONSE id 2 len 26 from "cisco"
*May 16 19:41:27.348: As31 PPP: Phase is FORWARDING
*May 16 19:41:27.348: As31 PPP: Phase is AUTHENTICATING
*May 16 19:41:27.348: As31 CHAP: O SUCCESS id 2 len 4
*May 16 19:41:27.348: As31 PPP: Phase is UP
*May 16 19:41:27.348: As31 IPCP: O CONFREQ [Closed] id 3 len 10
*May 16 19:41:27.348: As31 IPCP: Address 10.1.1.1 (0x03060A010101)
*May 16 19:41:27.348: As31 NBFCP: O CONFREQ [Closed] id 2 len 4
*May 16 19:41:27.508: As31 IPCP: I CONFREQ [REQsent] id 7 len 10
*May 16 19:41:27.508: As31 IPCP: Address 0.0.0.0 (0x030600000000)
*May 16 19:41:27.508: As31 AAA/AUTHOR/IPCP: Start. Her address 0.0.0.0, we want 10.1.1.31
*May 16 19:41:27.508: As31 AAA/AUTHOR/IPCP: Done. Her address 0.0.0.0, we want 10.1.1.31
*May 16 19:41:27.508: As31 IPCP: O CONFNAK [REQsent] id 7 len 10
*May 16 19:41:27.508: As31 IPCP: Address 10.1.1.31 (0x03060A01011F)
*May 16 19:41:27.508: As31 IPCP: I CONFACK [REQsent] id 3 len 10
*May 16 19:41:27.508: As31 IPCP: Address 10.1.1.1 (0x03060A010101)
*May 16 19:41:27.524: As31 LCP: I PROTREQ [Open] id 42 len 10 protocol NBFCP (0x803F010200)
*May 16 19:41:27.524: As31 NBFCP: State is Closed
*May 16 19:41:27.668: As31 IPCP: I CONFREQ [ACKrcvd] id 8 len 10
*May 16 19:41:27.668: As31 IPCP: Address 10.1.1.31 (0x03060A01011F)
*May 16 19:41:27.668: As31 AAA/AUTHOR/IPCP: Start. Her address 10.1.1.31, we want 10.1.1.31
*May 16 19:41:27.668: As31 AAA/AUTHOR/IPCP: Reject 10.1.1.31, using 10.1.1.31
*May 16 19:41:27.668: As31 AAA/AUTHOR/IPCP: Done. Her address 10.1.1.31, we want 10.1.1.31
*May 16 19:41:27.668: As31 IPCP: O CONFACK [ACKrcvd] id 8 len 10
*May 16 19:41:27.668: As31 IPCP: Address 10.1.1.31 (0x03060A01011F)
*May 16 19:41:27.668: As31 IPCP: State is Open
*May 16 19:41:27.672: As31 IPCP: Install route to 10.1.1.3
```

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## Related Information

- [Access Technology Support Pages](#)
- [Tools and Utilities – Cisco Systems](#)
- [Technical Support – Cisco Systems](#)

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Updated: Sep 01, 2005

Document ID: 10314

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