SEAM 1.0 AND WINDOWS 2000 INTEROPERABILITY TESTING

PRESENTATION OBJECTIVE:

To present the actual testing configurations and the test results of the interoperability between SEAM 1.0 and Windows 2000 Kerberos v5
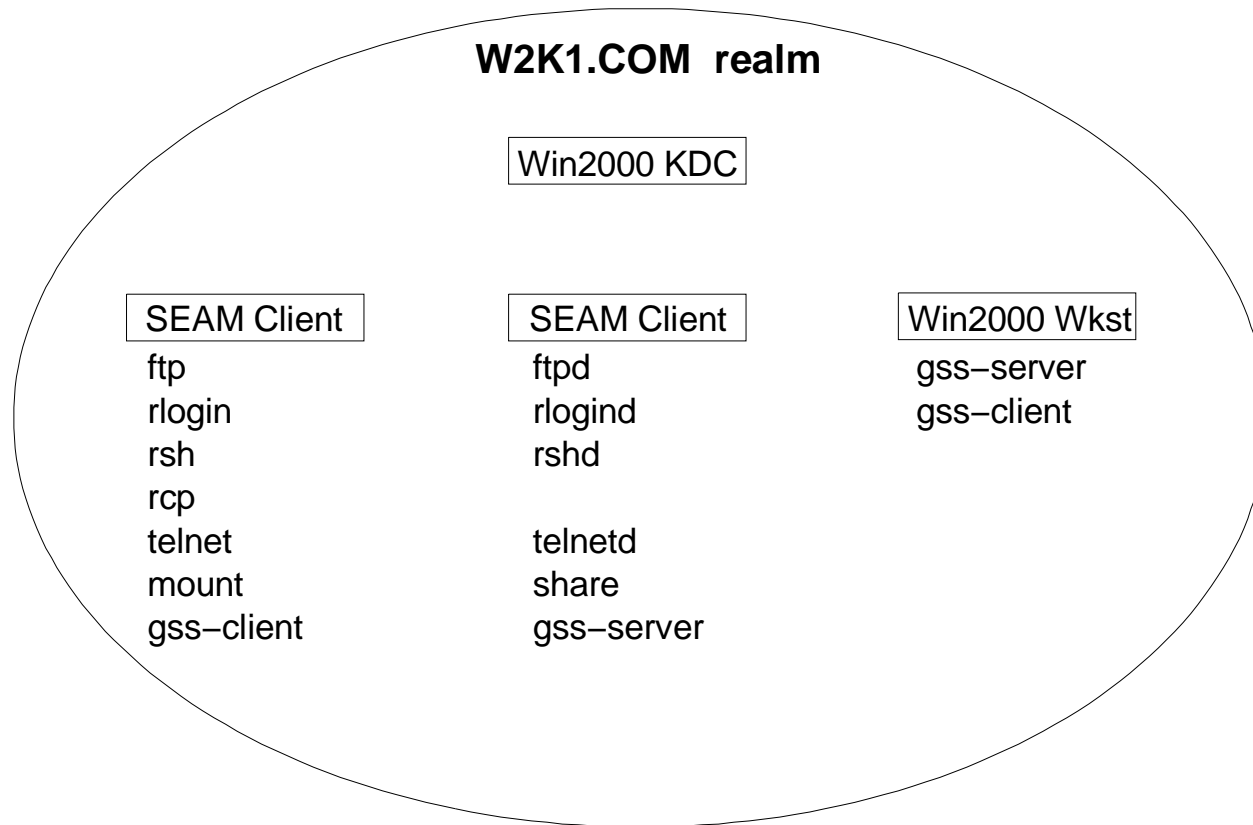
TEST APPLICATIONS:

– SEAM GSSAPI Sample (gss–server and gss–client)
– Windows 2000 SSPI Sample (gss–server and gss–client)
– SEAM Kerberized telnet, rcp, rsh, ftp, rlogin and NFS
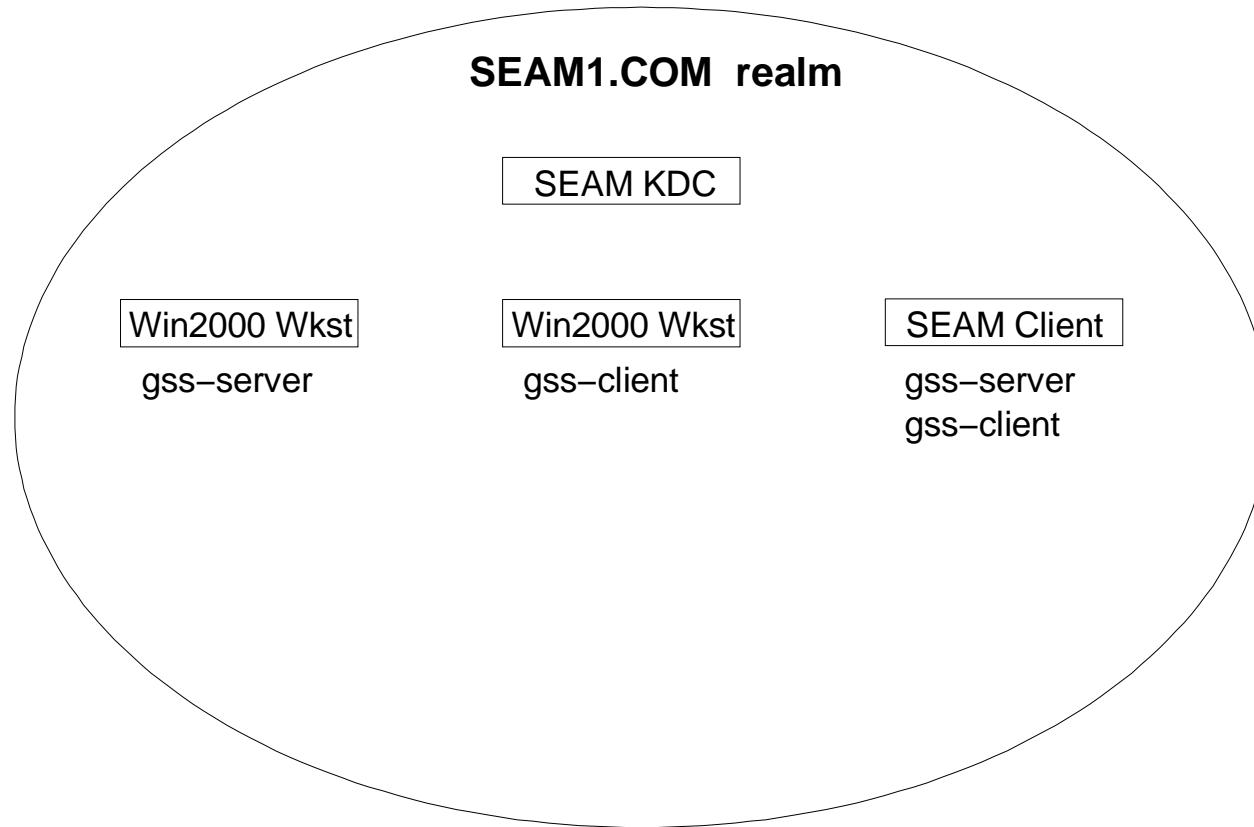
TESTING REALM CONFIGURATIONS:

– Single realm
  . with a Windows 2000 KDC
  . with a SEAM 1.0 KDC

– Directional cross–realm
  . between 2 Windows 2000 KDCs
  . between 2 SEAM KDCs
  . between a SEAM KDC and a Windows 2000 KDC

– Hierarchical cross–realm
  . between 3 Windows 2000 KDCs
  . between 3 SEAM KDCs

Single realm : With a Windows 2000 KDC

W2K1.COM realm

Win2000 KDC

SEAM Client	SEAM Client	Win2000 Wkst
ftp	ftpd	gss−server
rlogin	rlogind	gss−client
rsh	rshd	
rcp		
telnet	telnetd	
mount	share	
gss−client	gss−server	

Test results: All scenarios worked.

Single realm : With a SEAM KDC

SEAM1.COM realm

| SEAM KDC |

| Win2000 Wkst | | Win2000 Wkst | | SEAM Client |

gss–server   gss–client   gss–server
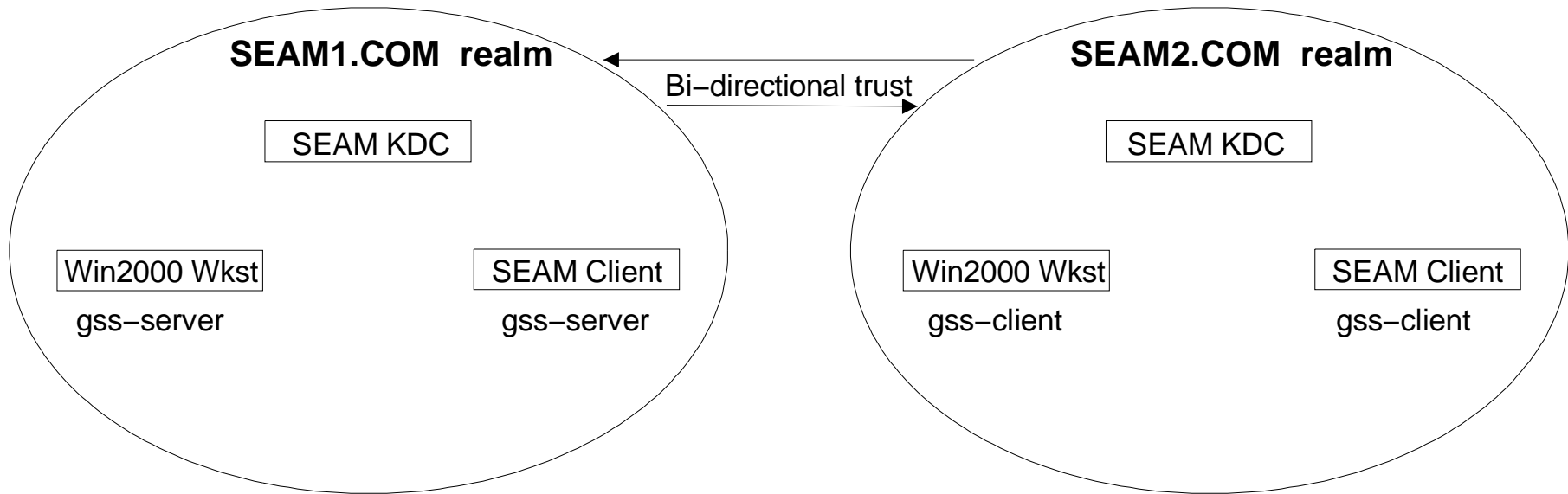   gss–client

Test results: All scenarios worked.

Directional cross−realm : Between 2 Windows2000 realms
(2 Windows2000 domains on 2 trees in a forest.)

W2K1.COM realm ← Bi−directional trust → **W2K2.COM realm**

Win2000 KDC   Win2000 KDC

Win2000 Wkst	SEAM Client	Win2000 Wkst	SEAM Client
gss−server	gss−server	gss−client	gss−client
	ftp		ftpd
	telnet		telnetd
	rlogind		rlogin
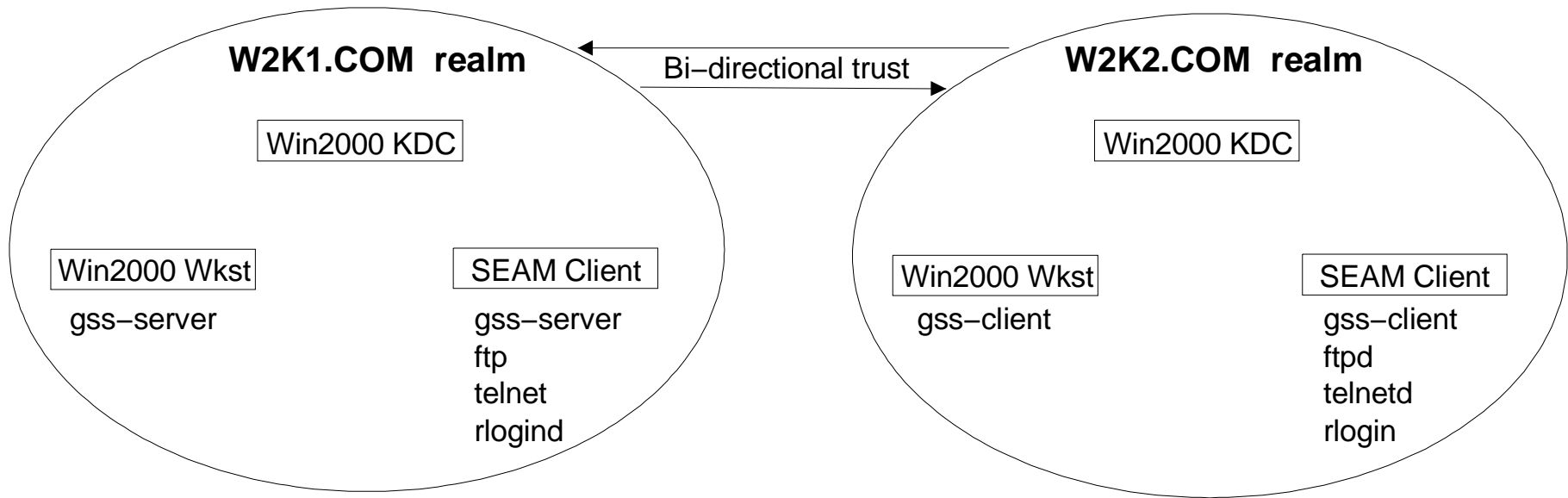
Test results: All scenarios worked.

Directional cross−realm : Between 2 SEAM realms

SEAM1.COM realm   **SEAM2.COM realm**

Bi−directional trust

SEAM KDC   SEAM KDC

Win2000 Wkst   SEAM Client   Win2000 Wkst   SEAM Client

gss−server   gss−server   gss−client   gss−client
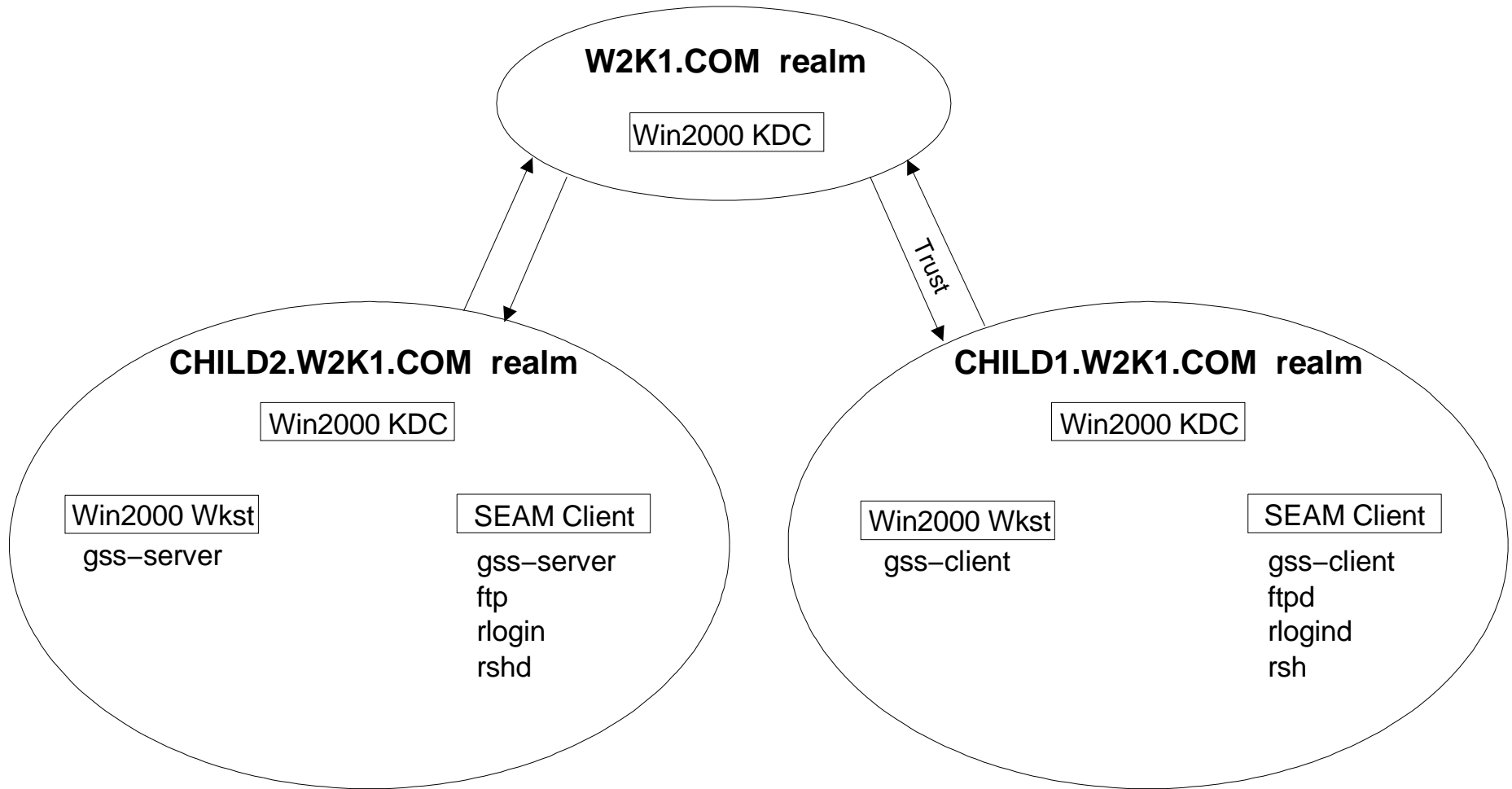
Test results: All scenarios worked.

Directional cross−realm : Between 1 Windows2000 realm and 1 SEAM realm

W2K1.COM realm

Bi−directional trust

SEAM1.COM realm

| Win2000 KDC |

| SEAM KDC |

| Win2000 Wkst |

gss−server
gss−client

| SEAM Client |

gss−server
gss−client
ftp
rlogin
share

| Win2000 Wkst |

gss−client
gss−server

| SEAM Client |

gss−client
gss−server
ftpd
rlogind
mount
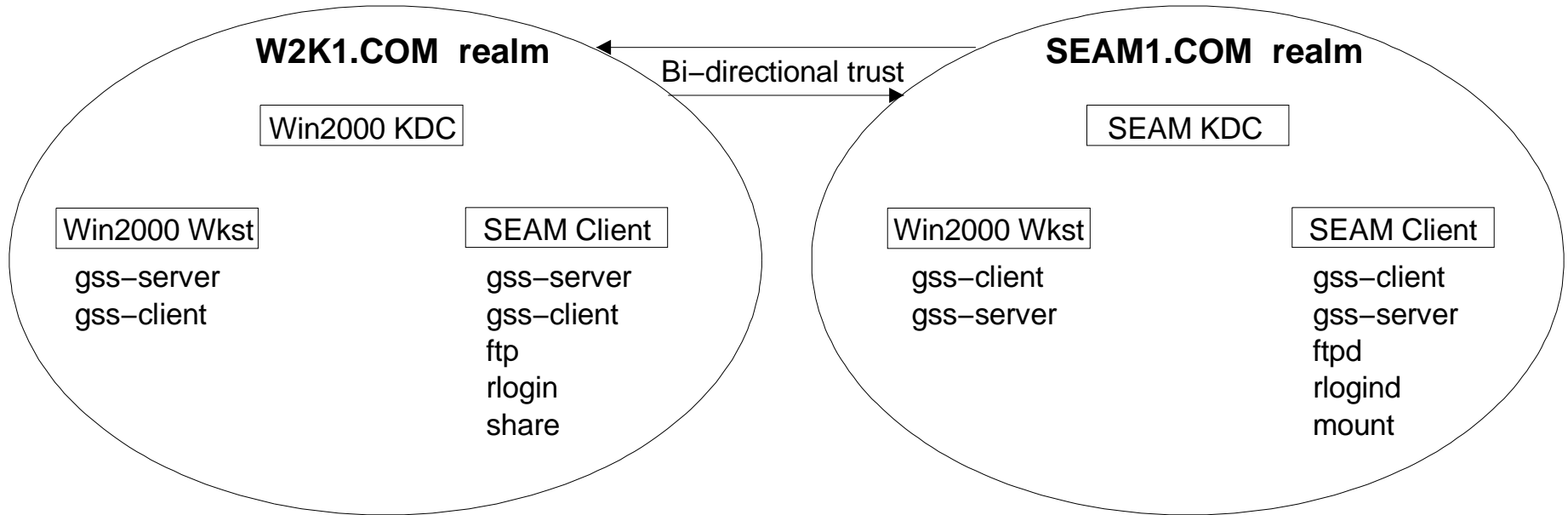
Test results: All scenarios worked.

Hierarchical cross−realm : Between 3 Windows2000 realms
(3 Windows2000 domains on a tree in a forest.)

W2K1.COM realm

Win2000 KDC

Trust

CHILD2.W2K1.COM realm

Win2000 KDC

Win2000 Wkst
gss-server

SEAM Client
gss−server
ftp
rlogin
rshd

CHILD1.W2K1.COM realm

Win2000 KDC

Win2000 Wkst
gss−client

SEAM Client
gss−client
ftpd
rlogind
rsh

Test results: All scenarios worked.

Hierarchical cross−realm : Between 3 SEAM realms

SEAM1.COM realm

SEAM KDC

Trust

CHILD2.SEAM1.COM realm

SEAM KDC

Win2000 Wkst
gss−server

SEAM Client
gss−server

CHILD1.SEAM1.COM realm

SEAM KDC

Win2000 Wkst
gss−client

SEAM Client
gss−client
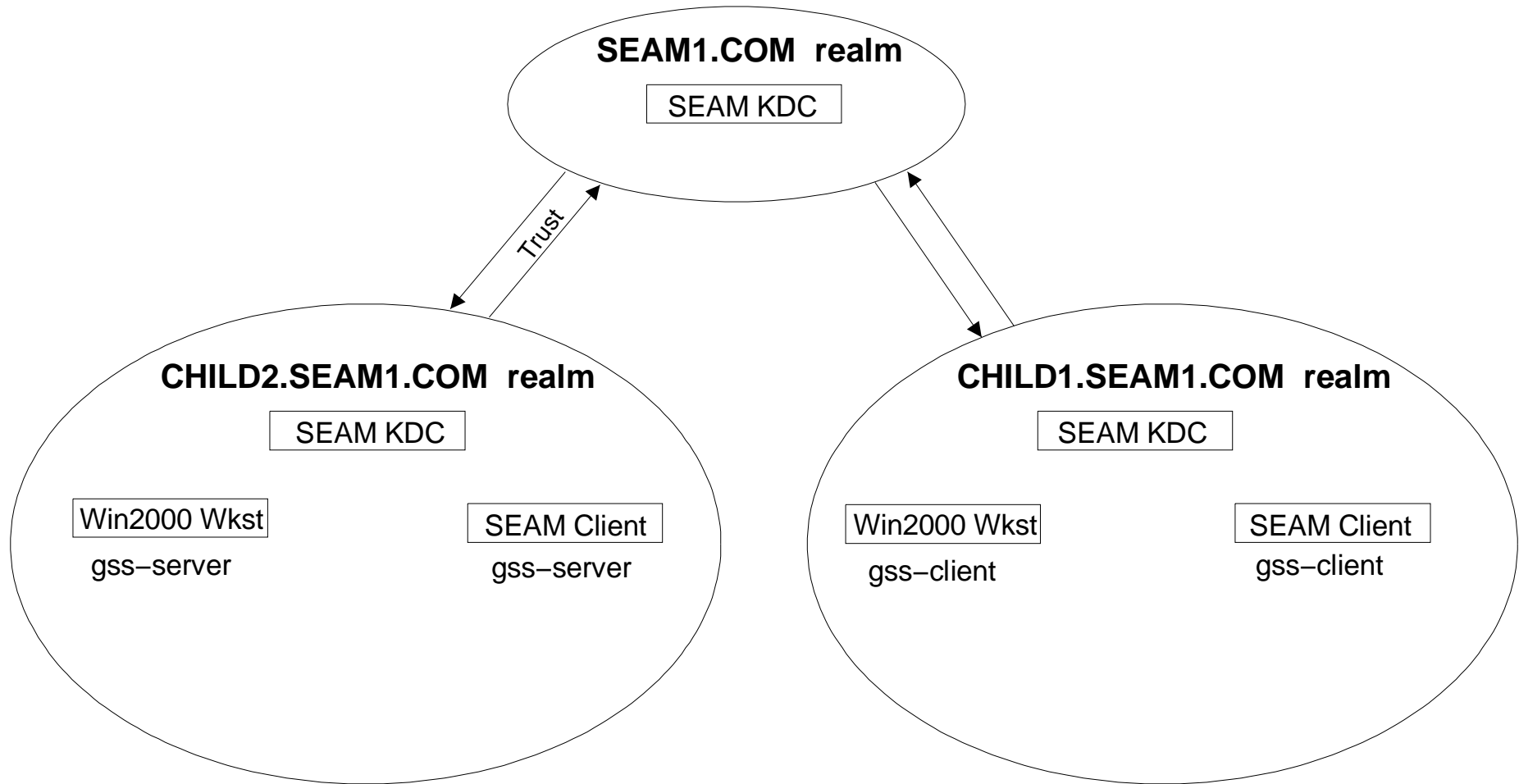
Test results: Testing in progress.

SUMMARY:

– All tested scenarios worked as expected
– Hierarchical realm support for cross–platform trust between the Windows 2000 and non–Windows Kerberos realm is **not** supported

REFERENCES:

– SEAM Guide
  http://docs.sun.com:80/ab2/coll.384.1/SEAM

– SEAM 1.0 Interoperability Notes
  http://www.cthon.org/seam1.0/

– Windows 2000 Kerberos Interoperability
  http://www.microsoft.com/windows2000/library/howitworks/security/kerbint.asp

– Windows 2000 Step–by–Step Guide to Kerberos 5 (krb5 1.0) Interoperability
  http://www.microsoft.com/windows2000/library/planning/security/kerbsteps.asp

– The Security Support Provider Interface
  http://www.microsoft.com/windows2000/library/howitworks/security/sspi2000.asp