Managing and Securing Windows Service Accounts

Bob McCoy, MCSE, CISSP/ISSAP
Technical Account Manager
Microsoft Corporation

Agenda

- The basics
- Best practices
- Accounts and privileges
- Tools

Why This is Important

"… service accounts are one of the simplest ways to turn a compromise of one computer system into a compromise of an entire network."

"Protect Your Windows Network"

Least Privilege

A recommended security practice in which every user is provided with only the minimum privileges needed to accomplish the tasks they are authorized to perform, and no others.

Least Service

The principle of least service states that the operating system and the network protocols available on any networked device should run only the exact services and protocols required to support the business purpose.

Attack Surface Reduction

- Uninstall unnecessary components
- Disable unnecessary features
- Block access to unnecessary interfaces

Necessary / Unnecessary
Your mileage may vary

Privileges for Services

- How do you know what privilege level a service really needs?
  - User
  - Print operators
  - Backup operators
  - Administrators
  - AD account for network access
  - Domain administrator account
- Software documentation?

Warning

“A process running on clients as a domain administrator is hazardous to your network health. It degrades the security of the entire domain to that of the least secure machine in the domain.”

“Protect Your Windows Network”

Account Types

- Domain or Local
- Admin or User
- Unique or Shared
  - If shared, do you share across security boundaries?

Windows Privileges

- SeBackupPrivilege
- SeRestorePrivilege
- SeDebugPrivilege
- SeTcbPrivilege

```
C:\> showpriv SeRestorePrivilege
```

My Privileges

```
C:\>whoami /priv

(X) SeChangeNotifyPrivilege= Bypass traverse
    checking
(O) SeShutdownPrivilege= Shut down the
    system
(X) SeUndockPrivilege= Remove computer from
    docking
(X) SeCreateGlobalPrivilege= Create global
    objects
```

Good Practices

- Create new account, with leading underscore in name
- Use a very strong password
- Revoke all logon rights – local and network
- Set “Password never expires”
- Set “User cannot change password”

Good Practices

Remove the account from all default groups

Never use an existing user’s account

Built-In Accounts

- System
- Local Service
- Network Service

Local System

- Full access to the computer
  - Includes Dir Svcs on domain controllers
- Host computer account in the domain
  - DOMAIN\<machine name>$
  - NT AUTHORITY\System
- Resource authorization can be managed by security groups

Local Service

- Reduced privileges – similar to a local user account
- Network access via null session – anonymous credentials
- NT AUTHORITY\LocalService

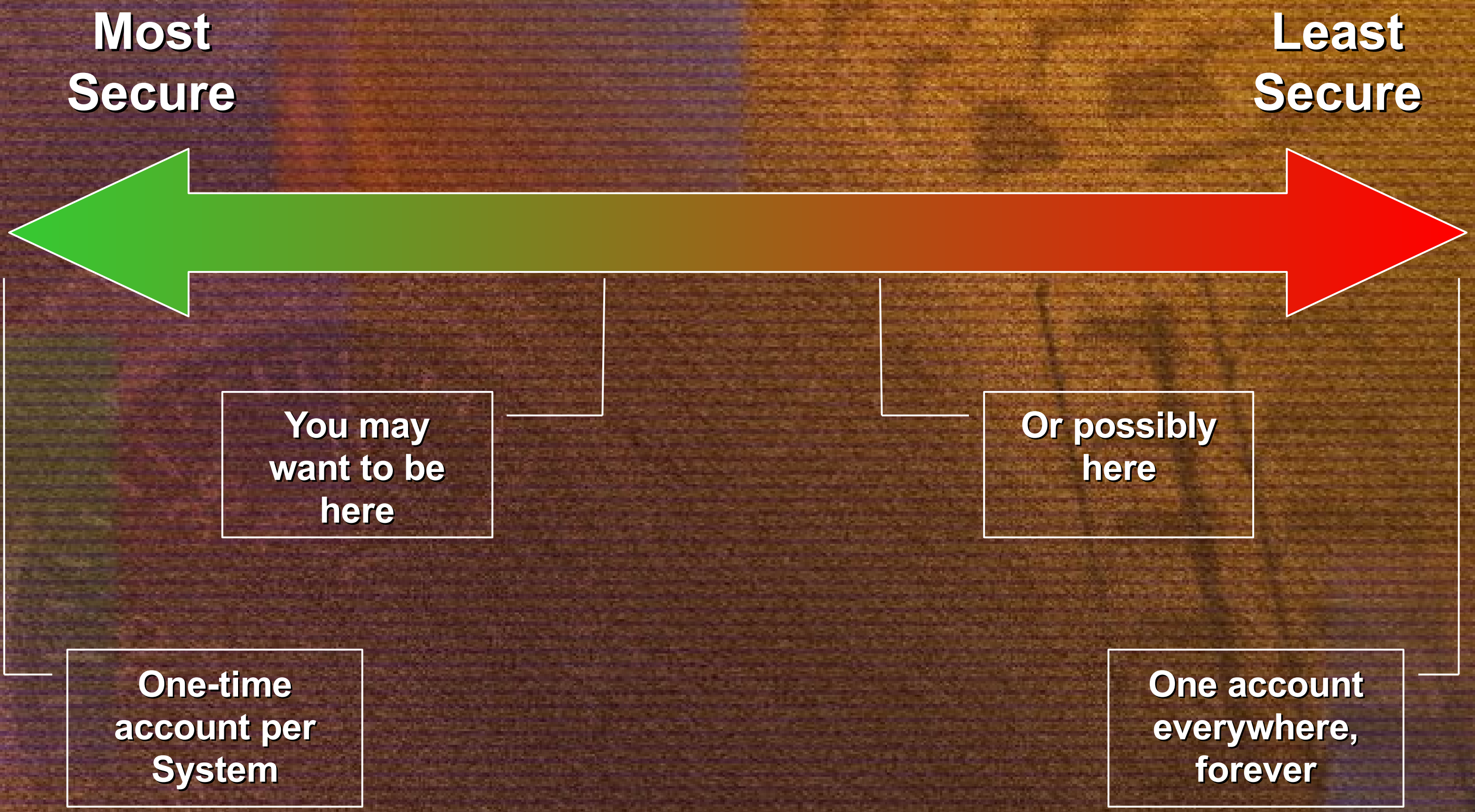
Network Service

- Reduced privileges – similar to a local user account
- Host computer account in the domain
  - DOMAIN\<machine name>$
  - NT AUTHORITY\NetworkService

Task List

demo

Account Security Spectrum



Most Secure

Least Secure

You may want to be here

Or possibly here

One-time account per System

One account everywhere, forever

Mitigation

- Segmentation
- Very strong passwords
- Desired configuration monitoring

Tools

- Services.msc
- GPEdit.msc
- RSoP.msc
- SC.exe
- WMIC.exe
- Task Manager
- Tlist / Tasklist
- Process Explorer
- Passgen
- Windows Power Shell

Tools

demo

Resources

“Protect Your Windows Network”
http://www.protectyourwindowsnetwork.com

Windows XP Security Guide
http://www.microsoft.com/technet/security/prodtech/windowsxp

Windows Server 2003 Security Guide
http://www.microsoft.com/technet/security/prodtech/windowsse

The Services and Service Accounts Security Planning Guide Download
http://go.microsoft.com/fwlink/?LinkId=41312

Threats and Countermeasures (Chapter 7- System Services)
http://www.microsoft.com/technet/security/topics/serversecurit

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