Browser access to Microsoft® SharePoint® 2010

ABOUT THIS DOCUMENT

This document discusses the deployment options to enable compatible Nokia smartphones to access SharePoint portals. For further information about Microsoft SharePoint solution, please go to www.microsoft.com/sharepoint.

This document applies to Nokia smartphones implemented with S60 3rd Edition Feature Pack 1 and Feature Pack 2 (S60 3.1 and 3.2), S60 5th Edition (S60 5.0) as well as Symbian OS with Symbian Anna software update applied. Microsoft products discussed include Microsoft SharePoint 2010 and Microsoft Forefront Unified Access Gateway 2010.

OVERVIEW

Microsoft SharePoint 2010 enables the mobile workforce to have seamless access from their Nokia smartphones to company shared information. It increases productivity and motivation by providing:

- Mobile optimized web layouts for company shared information
- Browser access to sites, lists, blogs, document libraries and Search
- Accurate version control for team collaboration
- Value derived from efficiencies in document handling

It's a cost-effective solution with no software installation needed on the smartphone, as it's completely browser-based.

SHAREPOINT DEPLOYMENT OPTIONS

SharePoint 2010 is a web application server that consists of various functionalities. Most of the components providing these functionalities run on top of Microsoft IIS (Internet Information Service) web server on Microsoft Windows Server while some other components are stand-alone 'servers' running on Windows Server directly. Microsoft Windows Server 2008 SP2 or 2008 R2, 64-bit server is required for hosting SharePoint 2010 and in addition, it requires a Microsoft SQL Server to function as a database.

Typically the major components are deployed as tiers of web servers, stand-alone application servers (such as search query or indexer servers) and database layer, in two or three tiers. For the smallest-scale, non-sensitive deployments all tiers can be collapsed onto a single server. The SharePoint server(s) build a hierarchy of a farm, site collection and a site. Sites can have sub-sites, document libraries, wikis, blogs, discussion forums, calendars and other lists to form the familiar SharePoint collaborative functionality. Regardless of the information architecture, however, the top-level 'farm' of SharePoint servers needs to be deployed so that users can access it and anything beneath. The following subchapters iterate through the common deployment options for SharePoint farms.

SharePoint as a service: Office 365

Microsoft announced Office 365 in October 2010 as a suite of metered collaboration services that include not only SharePoint 2010, but also other components of the Office suite. These will include Microsoft Exchange 2010, Microsoft Lync (previously known as Office Communication Server) and the respective clients for the services. It is a manifestation of Microsoft's cloud vision and the three screens (web, mobile, PC) being able to access the service.

The service will be offered over the Internet and with a limited number of options to customize it, unlike the in-premises option where almost anything in SharePoint can be customized and a variety of add-on applications run. That said, the out-of-box customizations supported by Office 365 are likely to suffice to most customers, excluding typically the largest ones with special customization or security needs.

Since Office 365 was announced with SharePoint 2010, it will be providing mobile access to all customers using that option. Cloud services are becoming a popular alternative for arranging collaborative IT services. For more information, visit office365.microsoft.com.

SharePoint hosted by an independent service provider

Some companies have specific needs or otherwise are comfortable working with an independent service provider that can cater for special requests when it comes to SharePoint hosting. In this model, there's a wide range of solutions and pricing models available, varying regionally and from service provider to another.

SharePoint 2010 managed hosting is starting to be available by independent service providers in some markets with varying degree of customization options and charging models. Some are also likely to offer migration for their current SharePoint 2007 customers.

In-premises SharePoint solution

When SharePoint is heavily customized, running custom add-ons, tightly integrated to line-of-business apps (LOBs) or when there are tight security requirements, customers may elect to maintain their current in-premises SharePoint model or invest into it from the beginning.

In this model, servers run at the customers own data center which is logically part of or accessible from the client intranet where PCs are connected with wired or often times with wireless LAN.

ARRANGING CONNECTIVITY

Accessing SharePoint 2010 with a smartphone will require either proxied or direct access to the web server running the service. The following sections walk through these main options on a high level.

Direct access to hosted SharePoint environments, over the Internet

In this deployment scenario, corresponding to Office 365 or some of the service provider options, the mobile and other clients connect to the service cloud over the Internet. This typically means that users authenticate using forms based authentication or client-side certificates for authenticating to the service.

Forms based authentication is supported by all compatible Nokia S60 3.1 or newer smartphones and there is a password manager in the Nokia browser to ease the sign-on task for users.

Nokia smartphones do not currently support client-side certificate –based authentication in the browser.

Proxied connectivity

A web proxy, such as Microsoft ISA Server 2005 or Microsoft ForeFront Universal Access Gateway product is deployed in the network perimeter to proxy connections to the SharePoint 2010 farm. Typically, SharePoint server is made aware of this so it can publish both direct access and 'Internet access' URLs when referring to resources hosted on it, e.g. in notification emails.

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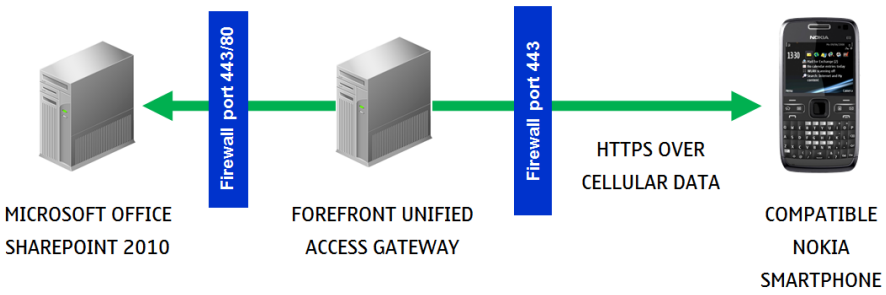

The proxy server needs to be configured for form-based or basic authentication to authenticate users and have a publication exposing SharePoint 2010 server(s) in the farm. Typically, the proxy server is also enforcing TLS (SSL) for the connection, authenticating itself with a server certificate from a public Certificate Authority. Using a private CA necessitates installing its certificate to the smartphones as a trusted certificate and S60 3.1 based smartphones (E71, E63) have limitations to this end.

Certificate Authorities for server certificates supported in S60 3.1, 3.2 and 5.0 based smartphones

E71 PR5 (501.21.001), E72 PR3 (052.005), N97 mini PR2 (12.0.110)

- Baltimore CyberTrust Mobile Root
- Baltimore CyberTrust Root
- Entrust.net Secure Server Certification Authority (2)
- Entrust.net Secure Server Certification Authority (2048)
- Entrust.net Secure Server Certification Authority
- Equifax Secure Certificate Authority
- Equifax Secure Global eBusiness CA-1
- GeoTrust Global CA
- GlobalSign Certificate Authority
- GlobalSign Root CA
- GoDaddy Class 2
- GTE Cyber Trust Global Root
- Nokia Root CA
- Starfield Class 2
- Thawte Premium Server CA
- Thawte Server CA
- ValiCert Class 2
- VeriSign Class 3 Public Primary Certification Authority
- VeriSign G2 Class3
- VeriSign G2 Class4
- VeriSign G3 Class3
- VeriSign G3 Class4
- VeriSign RSA Secure Server CA (expired)

Additional Certificate Authorities supported in Symbian OS smartphones

E7-00 (13.014)

- RSA Security 2048 V3
- TC TrustCenter Class 2 CA II
- TC TrustCenter Class 3 CA II
- TC TrustCenter Universal CA II

Direct access to in-premises SharePoint environments

When SharePoint servers are deployed in the Intranet of the company, smartphones accessing it need to also reach the Intranet. This can be arranged by either IPSec based VPN or campus-WiFi, with the desired authentication methods utilized for the connection. Passwords, PKI certificates and hardware tokens are supported for VPN and a variety of methods for WiFi, depending on infrastructure.

SharePoint 2010 deployments in intranet typically utilize HTTP Negotiate authentication method to negotiate either a Kerberos-based or NTLMv2 authentication, for providing Windows users a single sign-on experience. By default, IIS web servers do not have HTTP Basic authentication enabled for that using SSL is seen as unnecessary in private networks but some protection for password data is still needed.

Known issues specific to in-premises SharePoint access

As of Jan 17th, 2011 there are known issues with earlier Nokia smartphone models. The NTLMv2 authentication support is present in Nokia Eseries smartphones based on S60 3.2 (such as Nokia E72 and Nokia E52) but currently there is an issue with the feature, preventing its use under some conditions. It is not supported in Nseries, Cseries and Xseries smartphones that are based on S60 5.0 or earlier (such as Nokia N97 mini, Nokia X6, Nokia X5 or Nokia C5).

Nokia C6-01, Nokia C7, Nokia E7 and Nokia N8 Symbian OS based smartphones have a compatible NTLMv2 support as of their Symbian Anna releases.

For enabling direct access for the older devices now, administrator needs to enable HTTP Basic authentication on IIS, form based authentication on SharePoint or deploy a compatible proxy server for mobile access. NTLMv2 needs to be turned off for the work-around to be effective.

Nokia is committed in serving it's customers by issuing firmware updates that correct known issues and add new features. Availability of the fix for NTLMv2 issue regarding older devices will be announced later.

BROWSER COMPATIBILITY WITH SYMBIAN OS

All Nokia Symbian smartphones are technically compatible with SharePoint 2010 mobile optimized web pages. However, Symbian OS based smartphones such as Nokia C6-01, Nokia C7, Nokia E7 and Nokia N8 are not detected correctly by the currently shipping version of SharePoint 2010 and they are served with a PC experience instead of the mobile web experience.

Microsoft has issued a Hotfix for improving the detection logic and it is available via the standard Microsoft support channels. Information about the Hotfix is to be found at:

- Cumulative QFE Package Number : 28508
- Supporting KB Article that outlines the components of the QFE Package - http://support.microsoft.com/kb/2459108

Alternatively, administrator of SharePoint service can modify browser.compat –file, under IIS virtual directory for SharePoint as follows (modified code in red, new code in yellow):


```
    <!-- SymbianOS Safari Browser -->
    <browser id="SymbianSafari" parentID="Safari2">
        <identification>
            <userAgent match="Symbian" />
            <userAgent match="AppleWebKit" />
        </identification>
        <capabilities>
            <capability name="isMobileDevice"                    value="true" />
            <capability name="canInitiateVoiceCall"              value="true" />
        </capabilities>
    </browser>
    <!-- Symbian^3 Browser -->
    <!-- sample UA "Mozilla/5.0 (Symbian/3; Series60/5.2; NokiaN8-00/011.008; Profile/MIDP-2.1
Configuration/CLDC-1.1 ) AppleWebKit/525 (KHTML, like Gecko) Version/3.0 BrowserNG/7.2.7 3gpp-
gba" -->
    <browser id="SymbianSafari3" parentID="SymbianSafari">
        <identification>
            <userAgent match="Symbian" />
            <userAgent match="BrowserNG/7\.[2-5]|NokiaBrowser/8\.*" />
        </identification>
        <capabilities>
            <capability name="isMobileDevice"                    value="true" />
            <capability name="optimumPageWeight"                 value="1500" />
        </capabilities>
    </browser>
```

Changing the browser.compat –file invalidates the page cache, so SharePoint needs to recompile all pages. This takes some time and processing power, so admins need to consider how to implement the change due.

SUMMARY

For compatible and most convenient access for users the following deployment options are recommended:

- Office 365 or 3rd party hosted SharePoint 2010: use forms based authentication
- In-premises SharePoint 2010: deploy Microsoft ForeFront Universal Access Gateway for proxying mobile browser access.
    - Use certification authorities detailed in section 3.2
- Deploy browser detection changes by applying Microsoft hotfix detailed above or manually